INTERNATIONAL CONFERENCE IN TECHNOLOGY, HUMANITIES AND MANAGEMENT (ICTHM 2024)

CONFERENCE PROCEEDINGS

Embracing Technology for Sustainability in Humanities and Management

29-30 May 2024

Istanbul Medipol University, Turkiye

Main Organisers:

Accounting Research Institute, Universiti Teknologi MARA Malaysia
& Istanbul Medipol University, Turkiye

Co-Organisers:

INTERNATIONAL CONFERENCE IN TECNOLOGIES, HUMANITIES AND MANAGEMENT (ICTHM 2024)

e ISBN 978-629-97229-0-8

9786299722908

ACCOUNTING RESEARCH INSTITUTE (ARI)
UNIVERSITI TEKNOLOGI MARA (UiTM)

(online)

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Jointly Organised by:
Accounting Research Institute, Universiti Teknologi MARA Malaysia
Istanbul Medipol University, Turkiye
Uiniversitas Islam Negeri (UIN) Radenfatah Palembang, Indonesia
IBI Kesatuan, Bogor, Indonesia
International Islamic University Chittagong
Universitas Binaniaga Indonesia (UNBIN) Bogor, Indonesia

E-Proceeding Editors:
Eley Suzana Kasim & Dalila Daud

Published by:
Accounting Research Institute, UiTM
MALAYSIA

Perpustakaan Negara Malaysia

CONFERENCE PROGRAM

Day 1 - 29 May 2024

8:30 AM - 8:45 AM	Registration
8:45 AM - 9:00 AM	Opening Session
9:00 AM - 9:15 AM	Welcoming Speech
9:15 AM - 9:45 AM	Keynote Address I
9:45 AM - 10:15 AM	Keynote Address II
10:15 AM - 10:45 AM	Keynote Address III
10:45 AM - 11:15 AM	Refreshment
11:15 AM - 11:45 AM	Keynote Address IV
11:45 AM - 12:45 PM	MOU/MOA/LOI Signing
12:45 PM - 2:00 PM	Lunch Break
2:00 PM - 3.15 PM	Parallel Session I
3:15 PM - 3:30 PM	Coffee Break
3:30 PM - 5:00 PM	Parallel Session II
5:00 PM - 5:15 PM	Closing Session

CONFERENCE PROGRAM

Day 2 - 30 May 2024

9:00 AM - 9:15 AM	Opening Session
9:15 AM - 9:45 AM	Welcoming Speech
9:45 AM - 10:15 AM	Keynote Address I
10:15 AM - 10:45 AM	Keynote Address II
10:45 AM - 11:00 AM	Break
11:00 AM - 11:30 AM	Keynote Address III
11:30 AM - 1:00 PM	Parallel Session I
1:00 PM - 2:00 PM	Lunch Break
2:00 PM - 4:00 PM	Parallel Session II
4:00 PM - 4:45 PM	Keynote Address IV
4:45 PM - 5:00 PM	Closing Session

WELCOMING MESSAGE

Dean
School of Business & Management Sciences, Istanbul Medipol University, Türkiye

Welcome to the 2nd International Conference on Technology, Humanities, and Management 2024 (ICTHM)! Hosted by Istanbul Medipol University in Türkiye.

We are excited to bring together experts and enthusiasts alike to explore the intersection of technology and sustainability in humanities and management.

From May 29th to 30th, let's embark on a journey of discovery, collaboration, and inspiration. We are honored to have you as part of this enriching experience.

PROF. DR. GOKHAN SILAHTAROGLU

Director
Accounting Research Institute Universiti Teknologi MARA

It is a great honor to welcome you to the International Conference in Technology, Humanities, and Management (ICTHM 2024), co-hosted by the Accounting Research Institute at UiTM and the School of Business & Management Sciences at Istanbul Medipol University. A warm welcome to our esteemed participants from around the globe.

Our collaborative efforts focus on promoting research excellence and societal relevance, addressing global challenges through innovation. I extend heartfelt thanks to the co-organisers, strategic partners, organizing committee, researchers, authors, and reviewers whose efforts have made this conference possible, paving the way for enriching discussions and impactful outcomes.

I encourage all attendees to participate actively, build new connections, and share insights. Let's use this opportunity to advance our fields and foster significant societal contributions.

Wishing you a productive and inspiring conference.

PROF. DR. ZURAIDAH MOHD SANUSI

ABOUT ICTHM

It is our great pleasure to announce the second International Conference in Technology, Humanities and Management (ICTHM 2024) The main objective of ICTHM 2024 is to provide a platform for researchers, professionals, scholars and academicians to exchange and share their knowledge, information, new ideas and experience in person with their peers expected to join from different parts of the world.

ICTHM 2024 explores the intersection of these three crucial fields and how they can work together to shape the future. At this conference, we will hear from academics, experts and thought leaders about the latest advancements in technology, the impact of technology on the humanities and the role of management in bridging the gap between these two fields. The aim of this conference is to foster cross-disciplinary collaboration and provide new perspectives on the ways in which technology and the humanities can work hand in hand for the betterment of society.

We hope that ICTHM 2024 outcome will lead to significant contributions to the knowledge base in these up-to-date scientific fields in scope. In addition, the conference also offers opportunities for academicians and industry experts to meet and interact with local and international participants.

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ANALYZING THE IMPORTANCE OF PARENTAL INVOLVEMENT IN SPECIAL EDUCATION: A CASE STUDY ON A CHILD WITH SPECIFIC EMPHASIS

Manalullaili
Universitas Islam Negeri Raden Fatah Palembang

*Corresponding author: manalullaili_uin@radenfatah.ac.id

Abstract

Parental involvement can have a positive impact on academic achievement and overall development. However, a comprehensive analysis is needed to fully understand the complex effects of parental involvement on children with special educational needs. This study investigates the importance of parental engagement in special education, specifically for children who require specialized support. To gather data, the study will use a case study approach and conduct semi-structured interviews with a purposive sample of parents whose children are receiving special education services. The interviews will take place in a private, comfortable environment that encourages participants to share their experiences and perspectives openly. The objective of this research is to gain a comprehensive understanding of how parental engagement can improve academic performance and overall growth in children with diverse learning challenges. Additionally, the study will explore the influence of family involvement on developing and implementing individualized education plans (IEPs) for children with special needs. The study will focus on a specific case of a child with ADHD (Attention Deficit Hyperactivity Disorder) who struggles with inattentiveness (difficulty concentrating and focusing) rather than hyperactivity or impulsiveness. The findings of this study will help educators and families to enhance their practices and improve educational outcomes for children with special needs.

Keywords: *Parental involvement, special education, children with specific emphasis.*

1.INTRODUCTION

According to Larocque, et al. (2011) Parental participation is crucial in promoting comprehensive development and academic achievement in the different and distinctive demands of each child in special education. This study delves into the deep importance of parental involvement in special education, focusing on a specific case study. Parental involvement, which refers to carers actively participating in their child's educational journey, has received significant attention in educational research. Its importance increases when the youngster needs special educational assistance. The collaboration between parents and educators is crucial in this situation as it immediately influences the child's advancement, welfare, and entire educational journey (Felt et al., 2014).The case study focuses on a kid with distinctive learning difficulties, emphasizing the complex relationship between family engagement and specialized educational solutions. The researcher seeks to analyze this particular situation to understand the complex interactions between parents and professionals and how they impact the academic and socio-emotional growth of the child.

This study is based on the understanding that successful special education programs require desirable and essential collaboration between parents and educators. Studies indicate that parental involvement in a child's learning positively impacts academic performance, behavior, self-esteem, and general happiness with schooling. Parental involvement is important not only in the classroom but also in the home and community contexts (Baquedano-Lopez et al, 2013) Parents, as the main

stakeholders in their child's upbringing, offer essential ideas, experiences, and viewpoints that enhance the skills of educators. Utilizing this combined knowledge through cooperative endeavors creates a complete support system that effectively caters to the various requirements of the child.
This case study explores many aspects of parental engagement, such as communication tactics, advocacy efforts, decision-making processes, and emotional support systems. The researcher seeks to give insights into the transformative potential of meaningful parental engagement in special education to benefit educational practitioners, policymakers, and parents. This study demonstrates the significant influence of family participation on changing the educational path of children with exceptional needs. By acknowledging parents as collaborators in the quest for inclusive and fair education, we make a substantial step towards enabling every kid to flourish and prosper, irrespective of their individual learning obstacles.

The research was conducted in informal school education, specifically at Cipta Mandiri Terapi (CMT) in Palembang, South Sumatra, Indonesia. This school serves as a preparatory program for children with ADHD before transitioning to a formal inclusive school. While the research location is important, the focus of this text is to tell the story of a child named "M" who has ADHD. The researcher explores his parent's involvement in guiding him to become a better child and preparing him for attending an inclusive elementary school. It is recommended that patients aged four or older exhibiting symptoms such as poor concentration, distractibility, hyperactivity, impulsiveness, poor academic performance, or behavioral issues at home or school should be considered for an ADHD diagnosis. Although ADHD is more common in boys, the inattentive subtype is more frequently observed in girls. There is no evidence supporting routine screening for ADHD during check-ups. Still, doctors should be aware of any concerns expressed by patients and their caregivers about academic performance and behavioral issues (Felt et al, 2013). This research focuses on how parents can achieve optimal goals for their children with special needs by getting involved. Problems in this research were formulated as follows:

How can parents' involvement positively impact their children's academic performance and overall growth?

This study aims to examine how parental involvement affects the academic achievement and general development of children with various learning difficulties. The goal is to find successful approaches and treatments to assist their educational progress. This research aims to investigate parental involvement, academic achievements, and the overall development of children who experience various learning difficulties. The objective is to investigate the impact of several types of parental engagement, such as teacher contact, participation in school events, and assistance with homework, on enhancing these children's academic achievement, socio-emotional growth, and overall welfare. The goal is to improve support systems and promote positive outcomes for children with various learning needs.

2. LITERATURE REVIEW

Parental involvement in special education is a multifaceted topic that draws on theories from educational psychology, family systems theory, and social sciences. It is crucial to comprehend the theoretical foundations that highlight the importance of parental participation to understand the dynamics involved in the educational development of children with special needs.

2.1 Ecological Systems Theory

Bronfenbrenner's Ecological Systems Theory is a crucial framework for understanding parental engagement in special education. This theory proposes that a child's development is influenced by multiple interconnected systems, including the microsystem (immediate surroundings), mesosystem (interactions between microsystems), exosystem (external environments indirectly affecting the child), and macrosystem (cultural values and societal norms). Parental involvement in special education occurs within nested systems, where parents play a significant role as major influencers in the microsystem. Ecological systems theory stresses the importance of developing

collaborative partnerships among parents, educators, and stakeholders to support the holistic development of children with special needs by recognizing the interconnectedness of home, school, and community contexts (Durden & Witt, 2010).

2.2 Social Capital Theory

Dika and Singh (2002) social capital theory explains the relational processes that support parental engagement in special education. Social networks and relationships are significant resources individuals can use to accomplish common goals and objectives. Parental involvement in special education is a type of social capital that allows parents to utilize their social connections to obtain knowledge, assistance, and advocacy resources for their child's educational requirements. Parents can build social capital by interacting with educators, support groups, and community organizations, which can help them advocate for inclusive educational opportunities and get specialized services for their kids. The social capital theory emphasizes creating collaborative networks and enhancing social cohesiveness within the special education community to empower parents and enhance positive educational results (Dubos, 2017).

2.3 Self Determination Theory

Self-determination theory offers a perspective for understanding the motivating factors that impact parental participation in special education. According to this theory, individuals are motivated to participate in activities and pursue goals based on their inherent desires for autonomy, competence, and relatedness. In the case of special education, parents' involvement is driven by their aim to empower their child, advocate for their rights, and promote their independence. Parents play a crucial role in promoting an excellent educational experience and long-term success by encouraging parents to respect their child's right to self-determination and autonomy.

2.4 Cultural-historical theory

Cole (1996) stated that a perspective on human development that emphasizes the role of culture and social interactions in shaping cognitive development. It suggests that human cognition is not just an individual process but is also influenced by social and cultural factors. The theory was developed by Lev Vygotsky, a Russian psychologist, in the early 20th century. Cultural-historical theory highlights the significant role of sociocultural context in influencing parental views, practices, and expectations related to education. This theory acknowledges that parental engagement is impacted by cultural norms, beliefs, and historical experiences that mold their views on disability, education, and Child development, which is the process of growth and development that occurs in children "From birth through adolescence. It's a concise statement that refers to the period of life starting from birth and ending with adolescence.

Educators can establish trusting connections with parents and promote inclusive learning environments by adopting culturally responsive techniques and acknowledging the diversity of families in the special education community. Integrating these theoretical views offers a thorough framework for comprehending the complex dynamics of parental engagement in special education. This study investigates the intricate relationship between parental participation, educational practices, and child outcomes in special education by utilizing insights from ecological systems theory, social capital theory, self-determination theory, and cultural-historical theory (Wood et al, 2018).

The researchers have given special attention to the social capital theory among the three theories mentioned. This is because the social capital theory highlights the significance of social interactions and networks. Your research is vital to understanding the interactions among parents, educators, and stakeholders. This hypothesis examines how these connections affect parental engagement, ultimately impacting the child's academic achievements.

The social capital theory emphasizes the importance of trust and reciprocity in social networks. Studying the development or deterioration of trust between parents and educators provides valuable

insights into the dynamics of parental engagement. Understanding these interactions can provide insight into successful methods for promoting cooperation and reciprocal assistance. Social networks offer access to information, emotional support, and practical aid. Parents in special education may use their social connections to understand intricate procedures, obtain specific assistance, and support their child's needs. Studying these resource movements can uncover how social capital empowers parents and boosts their participation in their child's education. The social capital theory acknowledges that social networks function within certain cultural and contextual environments. It provides a framework to study how these factors impact the development and use of social capital among parents of children with special needs.

The social capital theory also offers guidance on possible measures to enhance parental participation in special education (Schaefer,2004). Educators and policymakers can utilize social capital to better support families by identifying important individuals, connecting social relationships, and fostering community unity. The study can help create specific interventions that utilize social networks to improve educational results for children with exceptional needs.

Perna and Titus (2005) suggested that parents and the community with more social capital tend to establish strong academic standards through social influence and are more inclined to advocate for their children. Parental participation, considered a type of social capital, is positively associated with academic perseverance in teenagers (Kisida et al., 2014). Then, Jaeger, in 2011, noted that robust school-based relationships had a favorable impact on parental involvement in schools and academic success in adolescents. Overall, the social capital theory provides a comprehensive theoretical framework for comprehending the dynamics of parental involvement in special education. This research can provide vital insights into theory and practice in this crucial field by analyzing relationships, trust, resource availability, cultural issues, and intervention options.

3. RESEARCH METHOD

When conducting a case study, evaluating cultural norms, societal dynamics, and institutional structures that influence parental engagement is crucial. A case study is a comprehensive and meticulous analysis of a singular occurrence or a limited number of occurrences within an authentic setting. It is methodically collecting data about a specific occurrence, individual, group, or situation over a duration, utilizing various sources of information such as interviews, observations, records, and artifacts. The objective is to comprehend the intricacy of the case and its distinctive attributes, frequently within its inherent context (Simons, 2014). Applicability in Assessing Parental Participation in Special Education.

The abundance of data: Case studies offer extensive and intricate data that enable researchers to thoroughly investigate the intricacies of family involvement in special education. By analyzing a child's development, researchers can gain a better understanding of parent-child relationships and the challenges they face. and the influence of parental engagement. Special education is heavily influenced by the specific environment of each individual kid, as their needs, abilities, and problems are distinct and different from one another (Lust & Blume, 2016). Additionally, Dimmock et al. (1996) believed that case studies enable researchers to investigate the precise circumstances in which parental participation occurs, encompassing family dynamics, socio-economic status, cultural background, and the nature of the child's handicap or learning difference. Awareness of the situation is essential to identify effective techniques for encouraging parental participation in special education.

Longitudinal Perspective: Case studies frequently entail the collecting of longitudinal data, allowing researchers to monitor and analyze changes and advancements that occur over a period of time (Saldana, 2003). The longitudinal viewpoint is especially helpful in special education since it allows for a comprehensive understanding of progress that may occur gradually and be influenced by multiple causes. By tracking a child and their family over a prolonged duration, researchers can gain valuable insights into the lasting impact of parental involvement on the child’s educational and social achievement.

A comprehensive approach: Case studies provide a comprehensive perspective on family engagement in special education. Case studies allow researchers to examine a child's educational experience comprehensively, considering various factors such as emotional support, communication strategies, advocacy efforts, and collaboration with educators and other professionals (Okoro,2006). The comprehensive knowledge gained from case studies has practical ramifications for individuals in the field of special education, including educators, policymakers, and practitioners (Howe et al., 2018). Baker, in 2011, suggested that case study research can provide valuable insights into good practices and areas that need improvement. This information can be used to build strategies and interventions to enhance parental participation and improve outcomes for children with special needs.

In my study on the significance of family engagement in special education, I utilized a qualitative methodology by conducting semi-structured interviews with one parent and two teachers. Employing interviews facilitated a thorough investigation into the participants' ideas, emotions, and experiences, yielding intricate and comprehensive data to augment the comprehension of parental participation dynamics. The interview methodology comprised customized questions intended to elicit complete replies from parents and teachers. The questions were meticulously designed to target certain aspects of parental involvement in special education, encompassing a variety of themes that are pertinent to the research goals.

The researcher prepared 10 questions about the opinions of a parent (single mother; her husband passed away eight years ago) and six questions to two teachers concerning parental involvement by means of a semi-structured interview, and the answers submitted information with regard to the topic through the asking of questions that arise out of necessity outside the scope of the questions predefined by the researcher conducting the study.

4. RESEARCH FINDINGS AND DISCUSSION

The research found from an interview that, in general, this mother is a very active parent and involved in her son's progress. As a parent, there is no greater motivation than being directly involved in your child's development. That's exactly why she was so motivated - she knew she would be monitoring her child's progress every step of the way. To be an effective monitor, she usually comes directly to school, even though it is only in the morning before starting to learn and in the afternoon after school.

To keep track of her child's progress, she prefers direct communication with teachers and staff to get feedback on her child's strengths and weaknesses and how to improve. One challenge is when her child lacks motivation to do homework, and she struggles to manage the child's mood swings at home. She strives to find suitable strategies based on her child's mood and interests to solve problems by consulting with teachers.

This mother strongly believes parents play a crucial role in their child's special education team. Parents can ensure their child's academic, social, and emotional success by working alongside educators. Advocating for their child, collaborating with teachers, and providing ongoing support are all ways parents can help their child thrive. To enable this involvement, schools should provide clear communication, informative workshops, supportive networks, helpful resources, adaptable engagement options, and culturally appropriate support services. Empowering parents to engage in their child's development is essential, and schools should allocate resources to make this possible.

Parents may face a number of challenges that could prevent them from being able to participate in school activities or attend meetings during regular hours. These challenges can include balancing work, childcare, and household tasks, which can be difficult to manage. Limited access to transportation and language barriers can also pose obstacles that make it difficult for parents to attend school events or meetings. Furthermore, a lack of affordable childcare options can make it challenging for parents to attend school meetings or activities.

Based on her experiences, this woman suggests several ways to improve parental involvement in special education programs. These include maintaining effective communication between parents and educators, keeping parents updated on their child's development, and encouraging them to share their concerns. Other suggestions include providing specialized training, engaging parents in creating goals for their child's Individualized Education Program, customizing support plans, organizing parent support groups, ensuring educational resources are accessible, establishing a consistent meeting schedule, and appreciating the valuable contributions of parents.

According to this study, the teachers emphasized the crucial role parents play in supporting their child's special education needs. Parents not only advocate for their child, but they also act as partners in the educational process. They provide valuable insights into their child's strengths, weaknesses, and specific needs, which helps educators to personalize instruction and support. Moreover, parents often facilitate learning at home and collaborate with teachers to implement strategies that promote their child's academic and social development.

Teachers employ various techniques to encourage parental involvement, such as frequent communication via newsletters, emails, or phone calls. They also arrange parent-teacher conferences to discuss progress and objectives, encourage parents to participate in classroom activities or volunteer opportunities, organize workshops or informational sessions on topics related to their child's education, and utilize technology platforms for convenient access to resources and updates. Effective communication with parents regarding their child's progress and issues is essential for fostering a collaborative partnership.

The teachers use different methods such as written progress updates, phone conversations, emails, and face-to-face meetings to communicate with parents. They strive to provide clear and precise feedback on both strengths and areas for improvement while creating an open environment for communication to address any concerns or questions parents may have.

During a memorable encounter, teachers worked with a student who was struggling with reading comprehension. Through regular communication with the parents, we discovered that the student had a deep interest in a particular subject. By incorporating this interest into the reading materials and involving the parents in supporting their child's reading skills at home, we saw significant improvements in the student's comprehension and overall academic performance.

Engaging parents can be challenging due to language hurdles, conflicting work schedules, restricted access to resources or technology, and varying levels of parental involvement or interest. Moreover, establishing trust and fostering a positive relationship with parents who may have encountered adverse encounters with the education system might pose a challenge. Nevertheless, teachers may surmount these obstacles with proactive, adaptable, and culturally aware strategies and cultivate significant collaborations with all parents.

Parents have a crucial role as collaborators in making decisions regarding their child's education. These teachers engage parents by actively seeking their input at individualized education plan (IEP) meetings, requesting their comments on instructional strategies or adjustments, and extending invitations for their involvement in school committees or advisory groups. In addition, teachers guarantee that parents are well-informed about their entitlements and alternatives to their child's education, so they encourage parents to actively engage in making decisions.

5. CONCLUSION

To sum up, this study answers the question: How can parents' involvement have a positive impact on their children's academic performance and overall growth? From the parents' side, the single mother claims that Parents have a vital part in their child's special education team. Parents can enhance their child's academic, social, and emotional success by collaborating with educators. Parents may facilitate their children's success by advocating on their behalf, working together with

teachers, and offering continuous support. To facilitate this level of participation, educational institutions should offer transparent communication, instructive seminars, supporting connections, valuable resources, flexible engagement choices, and culturally sensitive support services. Enabling parents to actively participate in their child's development is crucial, and schools should provide resources to facilitate this. This individual proposes multiple strategies to enhance parental engagement in special education programs. These include establishing and maintaining efficient communication channels between parents and educators, providing regular updates regarding their child's progress, and actively encouraging parents to express any concerns. Additional recommendations encompass offering specialized instruction, involving parents in formulating objectives for their child's Individualised Education Programme, tailoring assistance plans, coordinating parent support networks, guaranteeing the accessibility of educational resources, establishing a regular meeting timetable, and acknowledging the invaluable contributions of parents.

Teachers believe that many strategies can be employed to foster parental engagement, including regular correspondence through newsletters, emails, or phone calls. Additionally, they coordinate parent-teacher conferences to facilitate discussions on academic progress and goals, foster parental engagement in classroom activities and volunteer opportunities, host informational sessions or workshops about subjects concerning their child's education, and leverage technological platforms to provide convenient access to resources and updates. Determining the progress and concerns of a child through effective communication with the parents is critical to establishing a collaborative partnership.

Engaging parents might present difficulties due to language barriers, conflicting work schedules, limited access to resources or technology, and differing parental involvement or interest levels. Furthermore, building trust and cultivating a constructive relationship with parents who have had negative experiences with the education system may be challenging. However, teachers may overcome these challenges by implementing proactive, adaptive, and culturally sensitive tactics and fostering meaningful partnerships with all parents. Parents play a vital role as partners in making decisions regarding their child's education. These educators actively involve parents by soliciting their participation during individualized education plan (IEP) meetings, requesting feedback on teaching tactics or revisions, and inviting them to participate in school committees or advisory groups. Furthermore, educators ensure that parents are thoroughly educated about their rights and options regarding their child's education, encouraging parents to participate actively in decision-making.

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LINGUISTIC ANALYSIS OF ENVIRONMENTAL CONTEXT HUMOUR IN INDONESIA: EXPLORATION OF LANGUAGE STYLE AND CULTURAL SIGNIFICANCE

Susi Herti Afriani[1]*, Umi Kalsum[2],

[1] Universitas Islam Negeri Raden Fatah Palembang, Indonesia

[2] Universitas Sriwijaya Palembang, Indonesia

**Corresponding author: susihertiafriani_uin@radenfatah.ac.id*

Abstract

This paper delves into the linguistic analysis of humour within the environmental context in Indonesia, focusing mainly on using language style and its cultural implications. The study seeks to unravel the intricate interplay between language, culture, and humour by examining a corpus of Indonesian humorous texts centred around environmental themes. There are 22 humorous texts in written discourse that will be used as samples in this research. Linguistic patterns, stylistic devices, and rhetorical strategies employed in constructing environmental humour are identified and scrutinized through humour analysis. The research endeavours to contextualize these linguistic phenomena within the broader cultural landscape of Indonesia, shedding light on indigenous beliefs, societal norms, and environmental attitudes that influence the production and reception of humour. Findings from the analysis highlight the richness of linguistic resources utilized in Indonesian environmental humour, including metaphorical expressions, wordplay, and inventive sentence structures, all of which contribute to the comedic effect. Moreover, the study underscores the pivotal role of language in reflecting and shaping cultural perceptions of the environment, thus offering valuable insights into the dynamic relationship between language, humour, and environmental consciousness in Indonesian society.

Keywords: *Environment, humour, language style, linguistics*

1. INTRODUCTION

Humour, in its myriad forms, serves not only as a vessel for entertainment but also as a crucial instrument in fostering happiness, understanding, and reflection, as well as inspiring social change and innovation. Within the rich tapestry of Indonesian culture, humour manifests in diverse texts, capturing attention through its unique contextual relevance. Among these, environmental humour emerges as a poignant reflection of concerns surrounding nature, climate alterations, ecology, and sustainability efforts, all the while weaving in the intricate threads of Indonesian culture, societal norms, and linguistic nuances.

This study seeks to delve into a linguistic analysis of environmental humour within Indonesia, aiming to dissect the interplay between language and cultural expressions as mediums to communicate significant environmental narratives. Prior research has touched upon the intersection of humor and environmental discourse (as seen in works by Listiyorini (2017), Russel et al. (2018), Winarsih et al. (2018)); however, a focused examination of Indonesian-language humour texts within the environmental domain remains a relatively uncharted territory.

By examining 22 select humour texts dedicated to environmental themes, this research endeavors to map out the landscape of humour, offering insights into how linguistic choices, cultural nuances, and environmental concerns converge in Indonesian humour. The goal is to enhance understanding of the role humour plays in not only reflecting environmental consciousness but also in fostering a cultural dialogue that can contribute to environmental conservation efforts and elevate ecological awareness among the Indonesian populace.

The methodology will incorporate a comprehensive linguistic analysis, focusing on language styles, metaphors, rhetorical strategies, and other humor techniques prevalent in celebrated Indonesian environmental humour. The study will gather data from various media outlets, including websites and Instagram, known for their environmental content focus.

The anticipated outcomes of this research are poised to serve as a vital tool in promoting environmental awareness and motivating sustainable lifestyle changes across Indonesia. Through a deeper understanding of the linguistic and cultural dimensions of environmental humour, this study aims to highlight the potential of humour as a catalyst for environmental engagement and social transformation.

2. LITERATURE REVIEW

2.1 Definition of Environmental Humour in Indonesia

Environmental humour in Indonesia epitomizes a distinctive aspect of societal interaction concerning environmental issues, amalgamating traditional cultural components with contemporary ecological concerns (Petraki and Ramayanti, 2018). This particular form of humour frequently merges folklore, satire, and daily encounters to illuminate urgent ecological dilemmas the nation encounters. Indonesian environmental humour, viewed through a prism of cleverness and sarcasm, functions as a means to both enhance consciousness and promote discussions on subjects like deforestation, pollution, and wildlife preservation (Bonnici et al., 2023). By blending weighty environmental messages with humour, this category captures the interest of a varied audience and facilitates a more attainable and compelling dialogue on sustainability.

Additionally, the characterization of environmental humour in Indonesia is intricately associated with the nation's abundant cultural legacy and deeply entrenched relationship with the environment (Damanik and Mulyadi, 2020). This form frequently relies on conventional narrative techniques, indigenous myths, and local dialects to develop stories that resonate with individuals across different social levels. Whether conveyed through presentations, social networking platforms, or visual arts, Indonesian environmental humour is potent for stimulating behavioural transformations and shaping public perceptions regarding ecological stewardship. By examining the subtleties of this unique brand of humour, scholars can acquire valuable perspectives into how humour can be utilized as a compelling conduit for environmental advocacy and community involvement within the Indonesian setting.

2.2 Humour theory in the Indonesian context

Research on humour theory in Indonesia has garnered significant attention in recent years, indicative of an escalating curiosity in comprehending the cultural subtleties of comedy within the Indonesian milieu. Academicians have scrutinized diverse facets of humour in Indonesian literature, drama, and mass communication, elucidating the roles of humour as a mechanism for societal criticism, identity construction, and opposition. Analyses have probed into conventional comedic genres such as wayang and ludruk, alongside modern manifestations like stand-up comedy and digital platforms, showcasing Indonesia's vibrant progression of humour (Ernawati and Hanifa, 2022). By dissecting language, enactment, and circumstances, scholars have emphasized the dual functionality of humour in Indonesia, serving not solely as a form of amusement but also as a strategy for navigating intricate socio-political terrains and contesting prevailing power dynamics.

Furthermore, explorations into humour theory in Indonesia have accentuated the interplay between humour and cultural standards, unearthing how jests and comic portrayals can uphold or challenge societal principles (Damanik and Mulyadi, 2020). Researchers have scrutinized the function of humour in reconciling conflicts between heritage and modernity and addressing concerns surrounding ethnicity, religion, and gender. Through unravelling the mechanisms of laughter and entertainment in Indonesian society, scholars have shed light on how humour can cultivate unity, tenacity, and opposition. This body of scholarly work enriches our comprehension of Indonesian humour as a multifaceted and dynamic phenomenon that both influences and mirrors the intricacies of Indonesian society and its ongoing cultural metamorphoses.

2.3 Language style in the Indonesian context

Examining language style within Indonesian literature uncovers a diverse array of linguistic intricacies and cultural subtleties (Djenar and Ewing, 2015). As a complex language, Indonesian demonstrates a multifaceted character where diverse styles are utilized to communicate varying degrees of formality, emotion, and context. From the formal and structured language in official papers and academic discussions to the more informal and vivid styles evident in everyday dialogues and modern fiction, the Indonesian language style mirrors the dynamic interaction between heritage and contemporary influences. Authors frequently manipulate language style to evoke particular atmospheres, craft genuine character voices, and encapsulate the core of Indonesian identity. Through a stylistic perspective, Indonesian literature offers insight into the complex connection between language, culture, and societal conventions.

Moreover, the language style analysis in Indonesian literary works expands beyond written texts to encompass oral traditions, artistic performances, and digital communication platforms (Putrayasa, 2021). This interdisciplinary methodology emphasizes that language style serves not only as a means of communication but also as a reflection of historical legacies, political changes, and technological progressions within Indonesian society (Widharyanto and Binawan, 2020). The rise of new media has transformed language patterns, amalgamating traditional linguistic structures with contemporary forms in online materials, social media engagements, and digital narratives. As Indonesian literature progresses, scholars are increasingly interested in exploring how language style adjusts to evolving circumstances, audience anticipations, and global impacts, demonstrating the fluidity of language as a vibrant cultural entity in the Indonesian literary domain.

3. METHODOLOGY

3.1 Research design

This study employs a qualitative research methodology utilizing a discourse analysis approach as outlined by Renkema (2024). Discourse analysis delves into the intricate structures and functionalities of language. The primary dataset consists of 21 humorous texts sourced from diverse media channels. These texts are appended for reference. Table 1 below describes the details of the data (see Appendixes).

To begin, researchers curated samples of written humour pertaining to environmental themes in Indonesia, including memes, cartoons, and social media comments. Next, they conducted an initial analysis of Indonesia's cultural context, delving into values, norms, and other cultural nuances that might shape language and humour within environmental discussions. Following this, a language Style analysis was performed to discern linguistic elements employed in humorous texts, such as metaphors, figures of speech, hyperbole, and irony, elucidating how these elements contribute to conveying humour. Subsequently, content analysis was undertaken to scrutinize the thematic content of humorous texts, unveiling prevalent environmental issues, societal attitudes, and responses to environmental policies. Furthermore, researchers conducted contextual analysis,

examining where these humorous texts are situated, whether on social media platforms, in print media, or within specific communities. Lastly, the study explored how local cultural values are manifested in these humorous texts, providing insights into the intricate interplay between culture and humour."

3.2 Theoretical Framework

Humour, as elucidated by Rod A. Martin (2009), encompasses the intricate dynamics of creating, perceiving, and relishing the ludicrous or comical, as well as embracing the incongruities within ideas, situations, or events. However, the essence of humour manifests diversely. Lippman and Dunn (2000) describe it as a stimulant that fosters pleasure and comfort, while Richman (2000) emphasizes its capacity to engender enjoyment and intrigue across diverse audiences. Moreover, the elusive concept of 'sense of humour' spans multifaceted dimensions, evading a singular definition.

This study delves into the realm of humour theory, specifically focusing on humour sensitivity's role in mitigating stress. As articulated by O'Connell (Utomo, 2009), humour sensitivity enables individuals to swiftly alter cognitive perceptions, distancing themselves from impending threats and imbuing problematic situations with levity to alleviate anxiety and feelings of helplessness. Those endowed with a high sense of humour adeptly refract stressors through a humorous lens, thereby defusing their menacing overtones.

Drawing from Manser's (1989) taxonomy, this research delineates humour into three facets: (1) the theory of superiority and underestimation, wherein laughter ensues when one assumes a superior stance while the subject of jest is relegated to a diminished position; (2) theories revolving around imbalance, despair, and biassociation; and (3) theories concerning the release of tension or alleviation of pressure. Humour, in its myriad forms, can stem from falsehoods or truths, evoke empathy or ridicule, and serve as a conduit for both societal elites and the masses, ranging from the profound satire to the commonplace street banter.

Fuad Hasan's exploration of humour and personality (1981) delineates humour into two broad categories: (1) as a means of asserting dominance through aggressive acts aimed at demeaning others, and (2) as a mechanism for expressing subdued emotions in a lighthearted manner, thus alleviating mental strain. Setiawan's (1990) delineation in *Astaga* magazine further categorizes humour theories into three types: (1) superiority theory, wherein laughter stems from a sudden sense of superiority over another's flaws or misfortunes; (2) mismatch theory, wherein humour arises from the jarring juxtaposition of expectations and reality; and (3) relief or freedom theory, which posits humour as liberation from internal constraints. This study adopts Manser's taxonomy from 1989 as the framework for categorizing types of humour.

4. RESULT AND DISCUSSION

Based on 22 humorous texts found in the media in Indonesia, the data classification results show that the types of humour that appear in this research are as follows:

Table 1. Data classification

Data Number (Environmental Humour)	**Type of Humour**	**Frequency**	**Example of Humour in Indonesian**
HL1	*Superioritas dan Meremehkan* (Superiority and Underestimation)	1	*"Gus Imin ini lucu ya, nanya soal lingkungan tapi kok pakai botol plastik ?"*
HL2	*Ketidakseimbangan, putus harapan* (Imbalance, hopelessness)	1	*"Halaman rumah jaman dulu luas. Sekarang sudah dibangun rumah. Tempat bermainpun hilang"*
HL3, HL4, HL5	*Rasa Simpati dan Pengertian* (Sympathy and Understanding)	3	*"Dulu sawah masih luas dan kini lama kelamaan menyusut ukurannya"*
HL6, HL7, HL8, HL9, HL10, HL11, HL12, HL14, HL15, HL16, HL17, HL18, HL19, HL20, HL21, HL22	*Satir* (Satire)	16	*"Buanglah sampah pada tempatnya, sebelum anda dibuang bersama tempatnya."*
HL13	*Pembebasan Ketegangan* (Tension Release)	1	*Guru: "Murid-murid, coba berikan contoh nama hewan!"* *Murid:"Gajah"* *Guru: "Sekarang coba berikan contoh nama hewan lainnya."* *Murid: "Gajah lainnya."*

4.1 Result

HL1 data is taken from the words of Gibran (Vice Presidential Candidate of the Republic of Indonesia number 2) addressed to Cak Imin (the nickname of the Vice Presidential Candidate of the Republic of Indonesia number 3) during the 2024 presidential candidate debate which contained *"Gus Imin ini lucu ya, nanya soal lingkungan tapi kok pakai botol plastik ?"* (Gus Imin is funny, yes, asking about the environment but why use a plastic bottle?). Gibran's words cannot be separated from political culture in Indonesia. In general, the culture that occurs when conducting political debates is that debate participants will pick out the slightest mistakes from other participants. The language style used by Gibran himself is included in the language style of irony, where the Presidential candidate number 2 uses a form of superiority language towards Cak Imin, where in fact, Cak Imin is older than Gibran himself. Gibran's words triggered a wide public response, because plastic bottles are used a lot in Indonesia. Gibran's words were first broadcast on MetroTV on January 21 2024, during the 2024 presidential candidate debate. Then Gibran's words spread on social media Instagram and were widely used as memes by netizens. Gibran's words about plastic bottles indirectly lead to an expression of satire/satirizing people who use plastic bottles. This means that Gibran pointed out the contradiction in Cak Imin's words in the Cawapres debate. That someone who shows concern for the environment should no longer use plastic bottles, which harm the environment.

HL2 data *"Halaman rumah jaman dulu luas. Sekarang sudah dibangun rumah. Tempat bermainpun hilang"*

was taken from the sixth coverage website which contains *"The courtyard of the house in the past was spacious. Now the house has been built. The place to play is gone."* In the past, many houses in Indonesia had large yards for children to play or places for family gatherings. However, as time goes by, other infrastructure has now been built on this large area of land. Increasing population also affects the amount of land available. The HL2 story above contains the facts of natural imbalance in Indonesia, and the loss of hope (especially for Indonesian children), who cannot play freely in the large yard. The above statement shows that humour acts as an expression of reminder, that people think not to use/use all the land as buildings, and must think about leaving space for a play yard. These humorous quotes appear in online newspapers which can be accessed by anyone. This reflects that the humour tries to show one part of the habits that already exist and are growing in Indonesian society. For example, the culture of *"mutual cooperation".* In certain contexts, this culture requires a large space, for example, during family events/almsgiving and other big holidays. The large yard in the yard of the house is not only used for playing but also for family gatherings. The large yard is also used for weddings, which invite many friends and relatives. From here, a large yard is often needed by Indonesian people, because most people do not use/rent buildings during events. Environmental humour in HL2 data shows an important role in raising public awareness.

The HL5 data which contains *"Dulu sawah masih luas dan kini lama kelamaan menyusut ukurannya" "In the past the rice fields were still large and now over time they have shrunk in size"* contains humour. The humorous quote was taken from the online newspaper karetenam.com. In the past, Indonesian people earned their livelihood through farming, and specifically, in this context rice fields. Even though in certain areas there are still rice fields, now there are not many of them anymore. In Indonesia, currently, rice fields have been turned into residential buildings. The humorous quote above contains a sense of sympathy and understanding. The quote above reminds us of the atmosphere if the rice fields were still large, then there would be lots of activities such as harvesting together. It cannot be denied that with the increase in population, rice fields will inevitably disappear little by little. Indonesia is famous for its unique culture, one of which is the *Panen Raya.* The humour above also indirectly insinuates that if all the rice fields are used up, the culture of harvest might disappear. From here, humour has a role in saving the environment, by continuously reminding it through the media in Indonesia.

Furthermore, HL14 data was taken from the brilio.net website which contains *"Dispose of rubbish in its place, before you throw it away in the same place."* We cannot deny that Indonesia is one of the countries that contributes the most waste. This has been seen among the wider community. This quote contains expressions of satire/satire. One of the factors causing the emergence of many environmental humour quotes in Indonesia is to satirize people who feel free to throw rubbish carelessly. This quote can also be used to admonish people not to make throwing away rubbish a culture that must be preserved. The culture of disposing of waste in its place continues to be promoted by the government and community figures, which is also seen in the HL 14 data.

HL13 data taken from the website Klik Hijau.com also shows humour in the form of conversations containing the following conversations:

Teacher: "Students, try giving examples of animal names!"
Student: "Elephant"
Teacher: "Now try to give examples of other animal names."
Student: "Another elephant."

As we know, in learning if it is too monotonous it will create tension in the room. In the past, teachers in schools tended to be more strict (discipline), so that education meant that children had no room for playing around while learning. However, nowadays, the learning process at school is different, many teachers can liven up the atmosphere in the classroom by joking with the children. The humorous quote in the HL13 data above is part of releasing tension. As we can see from the humor above, children's answers can break the tension and create a cheerful classroom

environment. Every era, culture in educating is different, humor can be used as a way of educating as long as it is used at the right time and in the right atmosphere.

4.2 Discussion

With an emphasis on comprehending how language and cultural expressions are utilised to transmit important environmental narratives, the study aims to provide a linguistic analysis of environmental humour in Indonesia. Based on the results and findings given, this is the conversation. First of all, humour classified as "Superiority and Underestimation (HL1)" frequently draws attention to the disparity between what individuals say they care about the environment and what they actually do. The given example exposes hypocrisy by criticising the actions of a person who claims to care about the environment but continues to use plastic bottles. It illustrates a recurring pattern in which people claim to care about the environment but do not behave in line with that sentiment. Second, the dejection that many Indonesians experience as a result of the country's fast urbanisation and environmental deterioration is probably the source of “Imbalance, Hopelessness (HL2)”. The example presents a romantic memory of a more pristine era, in stark contrast to the contemporary reality of widespread building and disappearing green areas. The statement conveys a feeling of powerlessness in the face of environmental degradation.

Next, “Sympathy and Understanding (HL3-HL5)” seeks to arouse compassion and awareness for environmental problems. The examples show how natural ecosystems, such rice paddies and fields, which were previously abundant but are now gradually disappearing. Humour like this could act as a subdued reminder of how crucial it is to protect the environment for coming generations. Satire humour, which includes “Satire (HL6-HL22)”, is an effective means of challenging social norms and behaviour. Satire can be used to draw attention to the paradoxes and absurdities in how people view nature when it comes to environmental issues. The examples given use humour to highlight the negative effects of ignoring environmental stewardship and to ridicule careless garbage disposal methods. Satirical humour frequently stimulates contemplation and introspection, motivating people to reevaluate their behaviour and views towards the surroundings.

Fourth, the humour of “Tension Release (HL13)” offers a brief respite from the gravity of environmental talks. The joke about the school breaks the seriousness of environmental issues for a little while. It does, however, also quietly reaffirm how crucial it is that younger generations receive environmental education and awareness. In conclusion, a variety of humorous approaches are employed to confront environmental tales in Indonesian environmental humour, as indicated by the language study of this genre. Every kind of humour, from satire to sympathy, has a special place in Indonesian society when it comes to spreading messages about environmental awareness and care. This study highlights the potential of humour as a tool for increasing awareness and motivating action towards environmental sustainability. It also throws light on the complex interaction between language, culture, and environmental discourse.

Finally, while not all data can be meticulously analyzed individually, each representative form of humour examined in this study aligns with the patterns elucidated by Marsen (1989). Humour often emerges when a speech is delivered with a juxtaposition of positions: the speaker assumes a superior stance while the subject of ridicule is placed in a position of diminishment or mockery. Additionally, at the core of all humour lies the principle of bisociation, which involves the presentation of two seemingly incompatible situations or events. This juxtaposition creates fertile ground for a myriad of associations, giving rise to humour in various forms: from playful falsehoods and misdirection to expressions of empathy and comprehension, from a release of tension and stress to expressions both accessible and sophisticated, and from light-hearted jests to the cutting edge of satire.

5. CONCLUSION

In conclusion, this study delves into the multifaceted landscape of Indonesian environmental humor, shedding light on its diverse linguistic manifestations and cultural implications. Through an analysis of various humor categories, including superiority, dejection, sympathy, and satire, it becomes evident that humor serves as a potent medium for conveying critical environmental narratives. From exposing hypocrisy to eliciting compassion and challenging societal norms, humor emerges as a nuanced tool for navigating environmental discourse in Indonesian society.

Furthermore, this research underscores the pivotal role of humor in fostering environmental awareness and catalyzing action towards sustainability. By leveraging language and cultural expressions, humor transcends mere entertainment to become a vehicle for social commentary and change. It bridges the gap between seriousness and levity, offering a means of engaging audiences and prompting reflection on environmental stewardship.

Ultimately, this study elucidates the intricate interplay between language, culture, and environmental discourse, underscoring the transformative potential of humor in shaping attitudes and behaviors towards the environment. As such, it underscores the importance of incorporating humor into environmental advocacy efforts and underscores its significance as a catalyst for societal transformation.

Acknowledgement

This study represents a scholarly endeavor within the domain of linguistics. The principal investigator, an esteemed faculty member specializing in linguistics at the Faculty of Adab and Humanities, Universitas Islam Negeri Raden Fatah Palembang Indonesia, offers profound gratitude to UIN Raden Fatah Palembang for their invaluable support in facilitating the presentation of this paper at the prestigious International Conference on Technology, Humanities, and Management (ICHTM 2024) in Istanbul, Turkey.

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VALIDITY AND RELIABILITY OF SOCIAL ANXIETY SCALE FOR ADOLESCENCE (SAS-A) IN INDONESIAN VERSION

Kusumasari Kartika Hima Darmayanti[1*], Muhammad Oktarico Saputra[1], Erlina Anggraini[2], Jesyia Meyrinda[1], Efan Yudha Winata[3], Inda Purwasih[4], Aulia Octathiya[1], Zaharuddin[1]

[1] Universitas Islam Negeri Raden Fatah Palembang, South Sumatra, Indonesia
[2] Northeast Normal University, Changchun, China
[3] Universitas Teknologi Sumbawa, Nusa Tenggara Barat Province, Indonesia
[4] Lahat Regional General Hospital, South Sumatra, Indonesia

[*]*Corresponding author: kusumasari.kartika_uin@radenfatah.ac.id*

Abstract

Adolescents are going through the identity versus confusion period. In this stage of life, they are influenced by psycho-social issues. Some are more bonded to their peers; on the other hand, some frequently fear interacting with others. This study investigated the psychometric properties of Social Anxiety Scale for Adolescence (SAS-A) in Indonesia version. The participants were 310 adolescents in Palembang City, Indonesia. In this study, the validity test used Confirmatory Factor Analysis (CFA), and the reliability test used Composite Reliability (CR) and Average Variance Extracted (AVE) in Mplus software version 7. The result demonstrates that the 18 items are valid and reliable using a fit model based on the Goodness of Fit Index (GOFI). This valid and reliable SAS-A can be used to assess social anxiety in adolescents, which then serves as the premise for providing psychological interventions based on the results of the SAS-A assessment. In addition, this Indonesian version of SAS-A.

Keywords: *Adolescents, Social Anxiety Scale for Adolescence (SAS-A), pilot study, reliability test, construct validity.*

1. INTRODUCTION

Adolescence is a period of significant physical, social, and emotional growth and cognitive and behavioral changes. According to (Erikson, 1986), the development of ego identity, which has several advantages, including commitment, trust, independence, and fidelity, is one of the significant components of Erikson's psychosocial stage theory. Adolescents create a conscious sense of self through social interaction, which continually evolves due to the new experiences and knowledge they acquire from daily encounters with others.

As a social human being, social interaction is one of the fundamental needs (Xiao, 2018). Each person has unique characteristics and freedom restrictions when establishing social relationships. Several factors can be analyzed as the causes of restriction on freedom, including pleasant feelings, worries, fears of rejection, and other negative emotions that are part of social anxiety.

Adolescents had fewer interactions with their peers, teachers, and families at home during the COVID-19 era (Kristiyani & Darmayanti, 2022). The strict pandemic regulations had an impact on adolescents' mental health, particularly on their social anxiety (Coyle et al., 2022; Hawes et al.,

2022; Kindred & Bates, 2023; Ranta et al., 2023; Zheng et al., 2020). Some teenagers in Indonesia were also dealing with mental health issues during the pandemic era, including social anxiety (Itani et al., 2021; Wiguna et al., 2020). They also encounter several obstacles in keeping healthy relationships with friends, which causes them to receive less peer support (Wiguna et al., 2020).

Compared to adults, teens frequently experience social anxiety. Feeling nervous in social situations is acceptable, adaptive, and helpful in some situations. However, people should seek treatment if their anxiety interferes with their daily lives severely and persistently and affects their social relationships. This anxiety can influence well-being and quality of life (Antony & Swinson, 2018; Butler & Dobson, 2001). It is a long-term and overwhelming fear or worry about social settings, and they may feel uncomfortable around people, have negative thoughts, and avoid social interactions (Dayakisni, 2009; Hartman, 1984). In some cases, people with social anxiety may experience feelings of worthlessness, excessive fear of being negatively judged by others, and intense worry when interacting with new people or in new situations (La Greca & Lopez, 1998). Thus, teens experiencing those symptoms avoid social interactions because they believe others will judge or evaluate them negatively (Heimberg et al., 2014; Nainggolan, 2011).

A study by (Vriends et al., 2013) revealed that 311 Indonesians, or 15.8% of the population, have social anxiety disorder. Women, children, and those with lower socioeconomic status are more likely to experience social anxiety (Hidalgo et al., 2001). Social anxiety can be diagnosed if the anxiety persists for six months or more without being impacted by any other medical illnesses or medications. If anxiety interferes with social, occupational, intellectual, or other daily functioning, it is categorized as social anxiety (Cenderlund, 2013).

Further, the bi-factor CFA result of the Social Anxiety Scale for Adolescence (SAS-A) Indonesia version revealed that the scale has good measurement significance and it has fit the criteria of Good of Fix Index (GFI) and Average Variance Extracted (AVE) based on (Parry, 2017). Thus, this SAS-A can be utilized to measure adolescents' social anxiety in Indonesia (Apriliana, 2019). Social Anxiety Scale for Adolescence (SAS-A) was developed by (La Greca & Lopez, 1998) and has been adapted and validated in several languages and cultures, such as China (Zhou et al., 2008), Finlandia (Ranta et al., 2012), United States (Myers et al., 2002), Spanish (Olivares et al., 2005), and Bangladesh (Alam et al., 2021).

The bi-factor CFA model will be used in this study to investigate the construct validity because the bi-factor model is a confirmatory factor analytic model initially proposed for measurement data (Holzinger & Swineford, 1937). Further analysis reliability was tested using Composite Reliability (CR) and Average Variance Extracted (AVE) of each FNE, SADN, and SADG. This study referred to (Hu & Bentler, 1999) in considering the Goodness of Fit Indexed (GOFI) of the SAS-A Indonesian version. Composite reliability is a measure of the internal consistency reliability of a construct. Composite reliability measures the true value of the reliability of a construct. Composite reliability is considered better in estimating the internal consistency of a construct than Cronbach's alpha. Composite reliability varies between 0 and 1, with higher values indicating higher levels of reliability (Cohen et al., 2007). Then, this study aimed to test whether the Indonesian version of the SAS-A satisfies the psychometric procedures.

2. LITERATURE REVIEW

According to (Durand & Barlow, 2015) those who suffer from social anxiety may have had negative experiences that led to social trauma, such as distress or excessive worry in social situations. (Leary, 1983) defined social anxiety as a condition when the person has intense worry or fear of other people's negative assessment or evaluation or the worst possible consequences during social interactions. According to (Leary, 1983), social anxiety highlighted two situations one's fear

of social judgment and one's avoidance of social interaction. Therefore, (La Greca & Lopez, 1998) developed an instrument for assessing adolescents' social anxiety (SAS-A) based on the previous scale measuring children's social anxiety (SASC-R) that included components of social avoidance and distress that were specific to new situations or unfamiliar peers (SAD-N), and social avoidance and distress general that was typically experienced in the company of peers (SADG). Additionally, the social anxiety scale for adolescence (SAS-A) also has one component called social evaluative anxiety (fear of negative evaluation or FNE) that was used to measure adults' social anxiety (La Greca & Lopez, 1998).

Several measurements have been developed to measure social anxiety, including Liebowitz Social Anxiety Scale (LSAS) (Liebowitz, 1987), Social Phobia Scale (SPS) and Social Interaction Anxiety Scale (SIAS) (Mattick & Clarke, 1998), Social Phobia and Anxiety Inventory (SPAI) (Turner et al., 1989), and Social Anxiety Scale for Children Revised) (La Greca & Stone, 1993). The Liebowitz Social Anxiety Scale (LSAS) has been used in clinical trials of medication for social anxiety disorder. It consists of 24 items with 11 items addressing the social interaction situations and 13 items addressing the performance situations using a 4-point Likert scale (Liebowitz, 1987). The Social Phobia Scale (SPS) and Social Interaction Anxiety Scale (SIAS) were developed by (Mattick & Clarke, 1998). SPS contains 20 items to assess fear of being observed in daily activities, while SIAS contains 19 to assess more general fears of social interaction (Mattick & Clarke, 1998).

The Social Phobia and Anxiety Inventory (SPAI) consists of 45 items that was developed by (Turner et al., 1989) with 32 items addressing social anxiety responses and 13 items agoraphobic (Turner et al., 1989). it was developed specifically to assess the syndrome of social phobia across verbal, motor, and physiological response domains (Lang, 1977). The Social Anxiety Scale for Children Revised (SASC-R) is an instrument to measure the social anxiety of children that was developed by (La Greca & Stone, 1993) and contains 18 items. It was constructed by 3 components: 8 items of Fear of Negative Evaluation (FNE), 6 items of Social Avoidance and Distress to New situations or unfamiliar peers (SAD-New), and 4 items of Social Avoidance and Distress General (SAD-G) (La Greca & Stone, 1993).

Several social anxiety measurement tools have been adapted to the Indonesian version and the psychometric properties have been reported, including The Liebowitz Social Anxiety Scale-Self Report (LSAS-SR) (Srisayekti et al., 2023), Social Anxiety Scale for University Students (SAS-US) that was developed by (Maria & Erlan, 2017) and based on the self-presentation theory by (Leary, 1983), and Social Anxiety Scale for Adolescence (SAS-A) Indonesian version (Apriliana, 2019).

The result of The Liebowitz Social Anxiety Scale-Self Report (LSAS-SR) Indonesia version had good internal consistency, all items had good discrimination, the total score had good convergent validity, the four-factor models were fit to the data, RMSEA, RMR, NNFI, CFI, and AGFI fell in the fit range, and the scale's loading factors were significant. Thus in Indonesia, the LSAS-SR could be utilized in Indonesia to evaluate social anxiety symptoms (Srisayekti et al., 2023). The SAS-US validity result also showed that it was internally valid and reliable (Maria & Erlan, 2017).

3. METHODOLOGY

3.1 Participants

The total of participants in this study was 310 (n =310) adolescents who studied in High Secondary Schools in Palembang City, Indonesia. Of 310 participants, 57.7% were girls (n = 179), and 42.3% were boys (n = 131). 40% of the participants (n = 124) studied in Vocational High School, and 60% of the participants studied in High Secondary School (n = 186). They were in grade 10 (10%,

n = 31), grade 11 (43.9%, n = 136), and grade 12 (46.1%, n = 143). The participants were recruited using incidental sampling (Rakow et al., 2021) and were willing to join this research.

3.2 Procedure

In the current study, a quantitative method was applied to examine the construct validity and reliability of The Social Anxiety Scale for Adolescence (SAS-A). The survey method using closed-ended questions was used to obtain the data. In this study, the participants filled out the informed consent form and demographic data before start filling the SAS-A in Google form. Also, researchers have ensured the confidentiality of participant data.

This research attached a permission letter from Faculty of Psychology at Universitas Islam Negeri Raden Fatah Palembang to conduct research (No. B-1425/Un.09/IX/PP.09/11/2022), intended for the Education Office in South Sumatra Province, Indonesia (No. 4220/0940/SMA.I/Disdik.SS/2022), showing that the researchers are authorized for researching at South Sumatra Province's secondary schools. The research followed the American Psychological Association's publication code of ethics when conducting research and writing manuscripts (i.e., respect on intellectual property, report data according to research findings, use informed consent indicating that participants participate in research voluntarily without coercion, and allow to resign in the middle of the research process) (American Psychological Association, 2019). The researchers alluded to the Declaration of Helsinki (General Assembly of the World Medical Association, 2014) and the Belmont Report (Belmont, 1978), because the research involved human beings.

3.3 Measurement

The Social Anxiety Scale for Adolescence (SAS-A) was used to assess social anxiety, which was developed by (La Greca & Lopez, 1998). This study used the SAS-A of the Indonesian version that was used in the previous study (Apriliana & Suranta, 2019). It consists of 18-item with 5-point Likert scale (1 = never, 5 = often). The SAS-A is a multidimensional measurement with 18 items in 3 components: 8 items of Fear of Negative Evaluation (FNE), 6 items of Social Avoidance and Distress-New (SADN), and 4 items of Social Avoidance and Distress General (SADG) (La Greca & Lopez, 1998).

FNE refers to how adolescents feel anxious when people around them judge them predominantly negatively (La Greca & Lopez, 1998). In this dimension, (La Greca & Lopez, 1998) compiled eight items (12, 14, 09, 08, 17, 03, 06, and 18). Meanwhile, SADN, according to (La Greca & Lopez, 1998), is a condition when adolescents feels distressed and avoids social interaction when faced with new people or people who are not too close to them. 6 items make up this dimension. These six items are (13, 04, 10, 20, 05, and 01). Lastly, SADG is social anxiety experienced by adolescents when interacting with other people, even people they know well (La Greca & Lopez, 1998). Often, individuals will feel uncomfortable and unable to express themselves. The third dimension of the SAS-A consists of four items (i.e., 22, 19, 15, and 21).

3.4 Data Analysis

The SAS-A descriptive analysis results for this investigation were reported as mean score and standard deviation. In this study, the factor score that was calculated to prevent the bias estimation of incorrect measurement served as the statistical analysis score (Gravetter et al., 2020; Raykov & Marcoulides, 2011). This factor score will be used as data to test the proposed research hypothesis. However, the researchers transformed this factor into a t-score, because the true score is standardized so that there are positive and negative values. Raykov and Marcoulides (2011) suggested that the true score of each item was calculated and converted to t-score with the formula t-score = f(10)+50. The t-score was used to equalize the measuring scales and prevent factor scores

with negative values. The mean value and standard deviation for the t-score are set at 50 and 10, and all scores will be positive numbers ranging from 0 to 100. After obtaining the t-score, this standard value will be analyzed. The purpose of using the t-score is to equalize different measurement scales and avoid negative values in the score factors, so that readers can easily understand the interpretation of research results (Raykov & Marcoulides, 2011).

Validity and reliability analysis were examined using Mplus 7 version developed by (Muthén & Muthén, 2017). The second-order Confirmatory Factor Analysis (CFA) model has been conducted to determine the path analysis result of each item with higher order. Following that, the first-order model was conducted to determine the validity and fit model of each item in SAS-A's dimension. The item was considered valid with t-value > 1.96 (Raykov & Marcoulides, 2011). Further, the model met fit criteria with Comparative Fit Index (CFI) > 0.95 and Root Mean Square Residual (RMSEA) < 0.06 (Hu & Bentler, 1999). The Chi-Square has been reported in this study, but it cannot be the standard to determine the fit model because of the sample size (Bentler & Bonett, 1980). For the reliability test, this study used Average Variance Extracted (AVE) > 0.50 and estimate Composite Reliability (CR) > 0.70 (Raykov, 1997), as:

$$CR = \frac{(\Sigma\lambda_i)^2}{(\Sigma\lambda_i) + (\Sigma_1 - \lambda_i^2)}$$

Whereby, λ_i is a factor loading for indicator i. The variable is considered as reliable if the Composite Reliability (CR) > 0,70 (Raykov, 1997).

4. RESULT AND DISCUSSION

4.1 Descriptive analysis

This study used standardized scores for descriptive analysis data. Using the standardized score, the researcher conducted a normality test using the Skewness and Kurtosis coefficients. Then, (Tabachnick & Fidell, 2013) revealed that data is expected when the skewness and kurtosis coefficients are ± 1.5. Therefore, the data distributed in the Indonesian version of SAS-A is concluded to be scheduled with SAS-A (Skewness = –0.147, Kurtosis = –0.658). In detail, all dimensions in the Indonesian version of SAS-A were found to be normally distributed: FNE (Skewness = –0.212, Kurtosis = –0.944), SADN (Skewness = –0.186, Kurtosis = –0.703), and SADG (Skewness = –0.034, Kurtosis = –0.419).

The results of the descriptive analysis are presented in Table 1. The data indicate mean, standard deviation, and percentiles. In descriptive analysis, this research used a standardized score as a t-score. Based on Table 1, the average score, from the total SAS-A and per dimension, is in the 50th percentile.

Table 1. Descriptive Analysis Results

Dimensions/Total	M ± SD	5	10	25	50	75	90	95
FNE	44.912 ± 9.718	27.342	30.938	37.503	43.965	53.305	58.247	59.087
SADN	42.783 ± 9.391	25.165	29.884	36.923	42.95	50.000	56.465	57.504
SADG	40.069 ± 8.867	23.497	27.425	27.425	39.785	45.828	52.357	55.588
Total/SAS-A	44.822 ± 9.564	28.617	31.534	31.534	44.325	51.763	57.502	60.773

4.2 Validity Test Analysis

The results of the SAS-S validity construct were obtained by analyzing factors of 18 items of the Social Anxiety Scale using the bi-factor CFA model. The bi-factor model has been used in this study because some items are multi-dimensional. According to table 3, all items meet the fit criteria model, significant (t-value > 1.96) and positive. Therefore, no items were deleted. The SAS-A met the fit criteria after 10000 iterations, with the estimate χ^2 (116) = 336.583, p-value = 0.000, RMSEA = 0.078 ($p < 0.05$), RMSEA 90 % CI = 0.069 – 0.088, CFI = 0.900, TLI = 0.868, SRMR = 0.052. Table 2 shows the coefficient factor of SAS-A items :

Table 2. Items of the Social Anxiety Scale for Adolescence

Dimension/item	Loading Factor = λ	Standard Error	t-value	p-value
Fear of Negative Evaluation (FNE)				
I worry about what others say about me (SAS-A 12) Saya takut orang lain tidak akan menyukai saya	0.417	0.089	4.691	0.000
I worry that others don't like me (SAS-A 14) Saya khawatir terhadap apa yang orang lain pikirkan tentang saya	0.472	0.095	4.990	0.000
I'm afraid that others will not like me (SAS-A 09) Saya khawatir apa yang orang lain katakan tentang saya	0.488	0.097	5.009	0.000
I worry about what others think of me (SAS-A 08) Saya khawatir orang lain tidak menyukai saya	0.483	0.095	5.063	0.000
I feel that others make fun of me (SAS-A 17) Saya khawatir diejek	0.533	0.094	5.686	0.000
I worry about being teased (SAS-A 03) Saya merasa orang lain mengolok-olok saya	0.595	0.085	7.041	0.000
I feel that peers talk about me behind my back (SAS-A 06) Saya merasa bahwa teman-teman berbicara tentang saya di belakang saya	0.545	0.072	7.525	0.000
If I get into an argument, I worry that the other person will not like me (SAS-A 18) Jika saya bertengkar, saya khawatir orang lain tidak	0.522	0.082	6.403	0.000

akan menyukai saya				
Social Avoidance and Distress-New (SADN)				
I get nervous when I meet new people (SAS-A 13) Saya merasa gugup ketika berbicara dengan teman sebaya yang tidak saya kenal dengan baik	0.615	0.055	11.211	0.000
I feel shy around people I don't know (SAS-A 04) Saya merasa malu dengan orang yang tidak saya kenal	0.546	0.056	9.740	0.000
I get nervous when I talk to peers I don't know very well (SAS-A 10) Saya merasa gugup ketika bertemu orang baru	0.598	0.055	10.888	0.000
I feel nervous when I'm around certain people (SAS-A 20) Saya merasa gugup ketika berada di sekitar orang-orang tertentu	0.679	0.051	13.421	0.000
I only talk to people I known really well (SAS-A 05) Saya khawatir melakukan sesuatu yang baru di depan orang lain	0.720	0.055	13.101	0.000
I worry about doing something new in front of others (SAS-A 01) Saya hanya berbicara dengan orang yang saya kenal dengan sangat baik	0.491	0.079	6.229	0.000
Social Avoidance and Distress-General (SADN)				
It's hard for me to ask others to do things with me (SAS-A 22) Sulit bagi saya untuk meminta orang lain melakukan sesuatu dengan saya	0.682	0.072	9.512	0.000
I'm afraid to invite others to do things with me because they might say no (SAS-A 19) Saya takut mengajak orang lain untuk melakukan berbagai hal dengan saya karena kemungkinan mereka menolak	0.808	0.054	14.957	0.000
I am quiet when I'm with a group of people (SAS-A 15) Saya diam ketika saya bersama sekelompok orang	0.601	0.058	10.426	0.000
I feel shy even with peers I know very well (SAS-A 21) Saya merasa malu bahkan dengan teman sebaya yang saya kenal dengan baik	0.454	0.088	5.182	0.000

4.3 Reliability Test Analysis

The construct reliability test of this study used Composite Reliability (CR) dan Average Variance Extracted (AVE) (Raykov, 1997). It considered reliable if the coefficient of construct reliability is < 0.5 (Raykov, 1997). The values of Composite Reliability of each dimension were presented in the table 4 below:

Table 3. Composite Reliability (CR)

Dimension	Composite Reliability (CR)	Evaluation
Fear of Negative Evaluation (FNE)	0.923	Reliable
Social Avoidance and Distress-New (SADN)	0.878	Reliable
Social Avoidance and Distress-General (SADN)	0.814	Reliable

According to table 3, The Composite Reliability of FNE was 0.93, SADN was 0.0864, and SADG was 0.768. Due to all CR value of those dimensions were more than 0.70, so all the dimensions in the SAS-A were reliable (Composite Reliability > 0.70) based on (Raykov, 1997). Further, Average Variance Extracted (AVE) method (AVE > 0.5) has been conducted to examine the discriminant validity of each dimension. Table 5 presented the AVE value of each dimension:

Table 4. Discriminant Validity of Average Variance Extracted (AVE)

Dimensions	Variance Extracted (AVE)	Evaluation
Fear of Negative Evaluation (FNE)	0.590	Valid
Social Avoidance and Distress-New (SADN)	0.510	Valid
Social Avoidance and Distress-General (SADN)	0.527	Valid

According to Table 4, AVE value of FNE is 0.590, SADN is 0.510, and SADG is 0.527. Thus, all dimensions are indicated valid (> 0.05). The results of this study showed that The Social Anxiety Scale for Adolescence (SAS-A) was valid, and no items were deleted because all items were significant (t-value > 1.96) and positive. The CFA model was also good and showed good consistency. All the items on this scale have met the fit criteria.

Due to the chi-square (χ^2) is not significant, the bi-factor model did not fit with the data. It means that some items measured other constructs besides Social Anxiety Scale. However, it can also be assumed that all the items in SAS-A were valid (but some items in one dimension are multi-dimensional). It can occur because the items measured Social Anxiety and other unidentified factors (bias items). For instance, in the math test there is a description story that evaluates math skills, at the same time it also measures language skills. It was named multi-dimensional because it measured one variable and other unidentified variables. Thus, error measurement can occur in this case. As a result, the modification was conducted by allowing the correlation among the error measurements to become a free parameter. Free parameter means it must be estimated experimentally one by one until the fit model. The large residual of the items can be indicated that the items are multi-dimensional. This study used Mplus software to identify multi-dimensional items based on the modification index in Mplus. The highest correlation among residual items is the hint to release the items.

The Bi-factor fit model has been obtained (χ^2) = 336.583, df = 116, p-value = 0.0000, RMSEA = 0.078 ($p < 0.05$), RMSEA 90% CI = 0.069 – 0.088 ($p < 0.05$), RMSEA Probability <0.05 = 0.000, CFI = 0.900, TLI= 0.868, and SRMR = 0.052) with t-value = 4.691 – 14.957. According to (Jöreskog & Sörbom, 1993), using chi-square is not recommended to examine the fit model with the big sample because the chi-square value is the multiple direct result between the big sample and the resulting log-likelihood. Therefore, this study used RMSEA as fit criteria.

Table 5. The result of Goodness of Fit Index (GOFI)

Index	Suitability Index	Model Index	Evaluation
Coefficient RMSEA	< 0.05	0.048	Fit criteria
90 % CI	< 0.05	0.050 – 0.078	Fit criteria
Probability RMSEA	> 0.05	0.055	Fit criteria
SRMR	< 0.08	0.052	Fit criteria
CFI	1– 0.80	0.900	Fit criteria
TLI	1– 0.80	0.868	Fit criteria

It can be seen that CFA has been used to analyze the participants' response values toward SAS-A. The first and foremost is the model fit with the data. According to the figure above, the model was fit because the RMSEA values were significant. In Table 4 below, the Goodness of Fit Index (GOFI), based on (Hu & Bentler, 1999), shows that Figure 2 has met the fit criteria.

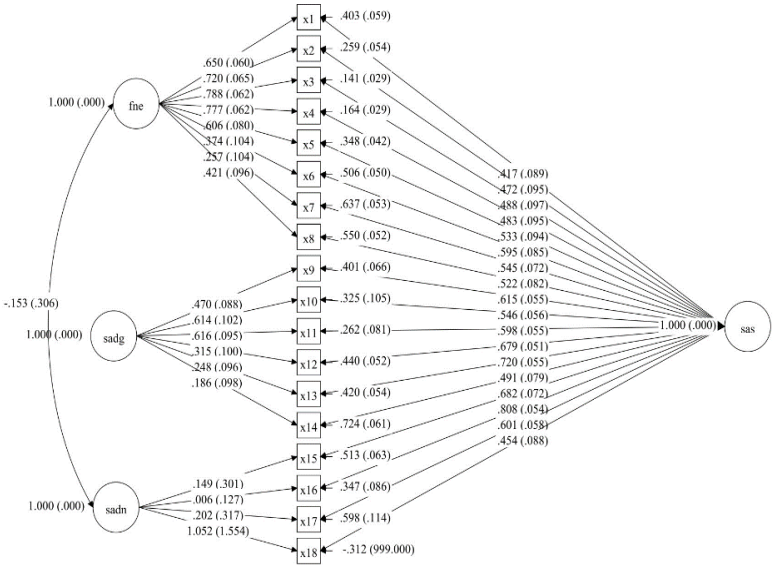

Figure 1. Bi-Factor Model.

Bi-factor analysis is a factor analysis technique that allows us to examine how much a single factor can explain variation in a data set while also considering the influence of other, smaller factors. In factor analysis, we look for factors that can explain as much variation as possible in a data set. However, in some cases, other factors can also explain the variation in the data set but are unrelated to the main factor. In this case, bi-factor analysis can help us estimate the extent to which the main and other factors are related. In bi-factor analysis, we look for the main factors that can explain as much variation as possible in the data set. However, we also consider the influence of other, smaller factors. This main factor is called the general factor, while the others are called specific factors. General factors explain variation in all variables, while specific factors only explain variation in one or several variables (Holzinger & Swineford, 1937).

Further, the loading factor has been used as a validity coefficient. The validity coefficient can be seen from the convergent validity of the model. Several opinions revealed the different values of the loading factor that can be considered valid, some research revealed that the loading factor should be more than 0.70, yet some researchers argued that the loading factor could also be 0.50 – 0.60 (Raykov, 1997). According to Table 3, most of the items in FNE, SADN, and SADG have good validity (> 0.70) and the others were also still acceptable because the loading factor values were > 0.50.

The construct reliability can be estimated after the validity construct has been analyzed and the model was fit. According to (Raykov, 1997), Composite Reliability (CR) and Average Variance Extracted (AVE) can be used to estimate reliability. Based on Tables 4, all dimensions in SAS-A were valid and reliable. This indicates that the Indonesian version of the SAS-A is declared as valid, which means that the Indonesian version of the SAS-A measures the construct of social anxiety accurately. Apart from that, the Indonesian version of SAS-A also indicates reliability. This reliability shows that the Indonesian version of the SAS-A is consistent in measuring the construct of social anxiety in the Indonesian context. Thus, the Social Anxiety Scale for Adolescence (SAS-A) can be utilized to measure adolescents' social anxiety in Indonesia.

Apriliana (2019) tested the psychometric properties of SAS-A in Indonesia. The findings indicated that, with 7-item removed, the Indonesian SAS-A was confirmed to be valid and reliable. The research by (Apriliana, 2019) used a multifactor model. This research, in contrast, was in its early stages and employed a multifactor model. The validity of SAS-A is then tested in this study using the bi-factor model. This study performed a reliability test in addition to a validity test.

Social anxiety can be found on individuals who are nervous and fearful when engaging with others. They are frequently more concerned with what other people think of their condition. Adolescents are more sensitive to internal permission issues, according to (Danneel et al., 2019). Danneel et al. (2019) discovered that social anxiety predicts internalizing difficulties in teenagers, such as loneliness and depression. Furthermore, internalizing issues in adolescents are caused by conditions of addiction to internet-based games (Wang et al., 2019).

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM V), an anxiety disorder is characterized by an excessive amount of fear that a person experiences and interferes with daily activities. Regardless of age or gender, many people might suffer from anxiety problems. Because the causes of this anxiety illness are so diverse, it is classified under numerous different disorders in DSM V. According to the DSM V, phobia disorders, social anxiety disorder, separation anxiety disorder, panic disorder, and generalized anxiety disorder are the different categories of anxiety disorders (American Psychiatric Association, 2013).

From the SAS-A's result, psychological intervention, such as counselling and psychotherapy, is

required to cope with persons who suffer from social anxiety (Nair & Bulgiba, 2022). Several studies indicate that social support (Ren & Li, 2020), coping strategies (Pixley et al., 2023), social self-efficacy (Aune et al., 2021), and training to improve individual social skills (Olivares-Olivares et al., 2019) are factors that contribute to social anxiety.

5. CONCLUSION

This study aimed to examine the validity and reliability of The Social Anxiety Scale for Adolescence (SAS-A) Indonesian version. The SAS-A is the instrument to measure the anxiety of teenagers in social settings. In this study, the SAS-A was found to be a valid and reliable instrument, none of the items of this scale has been deleted. Research in Clinical Psychology and Developmental Psychology can utilize this instrument to investigate the correlation between adolescents' social anxiety and various variables. Further, psychologist, researchers and academics also can take the action to compile a module and give a psychological intervention to decrease the social anxiety of adolescents. Then, they can monitor the effectiveness of the module and intervention in the context of the intervention research strategy.

Acknowledgement

Authors thank to all of parts that contributed in this study.

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SYNERGY MODEL OF ISLAMIC MICROFINANCE INSTITUTIONS AND ISLAMIC SOCIAL FINANCE INSTITUTIONS IN POVERTY ALLEVIATION IN INDONESIA

Deky Anwar[1*], Vera Susanti[2]

[1] Faculty of Islamic Economics and Business, UIN Raden Fatah Palembang,

[2] Departement of Sharia Business Management, Raudhatul Ulum Islamic College

[*]*Corresponding author: dekyanwar_uin@radenfatah.ac.id*

Abstract

This research aims to identify poverty alleviation efforts carried out by Islamic Microfinance Institutions and Islamic Social Finance Institutions and find a synergy model for Islamic Microfinance Institutions and Islamic Social Finance Institutions in poverty alleviation in Indonesia. The research method is uses analytical descriptive with data collection techniques through interviews and documentation with a sample of five Islamic Micro Finance Institutions and Islamic Social Finance Institutions. The results of the research show that Islamic microfinance institutions and Islamic social financial institutions can synergize in seven aspects, including creating a joint database about poor community groups, carrying out joint programs for community groups in the database, allocating social funds from Islamic microfinance institutions mostly to Islamic social financial institutions, financing margin subsidies by Islamic social financial institutions, Islamic social financial institutions are guarantors for financing provided by Islamic microfinance institutions, Islamic social financial institutions provide assistance and training for financing provided by Islamic microfinance institutions and finally community groups with low incomes make investments by becoming members of Islamic microfinance institutions.

Keywords: *poverty, synergy, microfinance, social finance.*

1.INTRODUCTION

Indonesia is the country with the fourth largest population in the world and with the largest Muslim majority. This number presents challenges in managing the economic welfare of the community. Economic prosperity and poverty are still one of the main problems in Indonesia (Asrol & Ahmad, 2018; Fitri, 2021; Mubyarto, 2015). Based on data from the Central Statistics Agency (BPS), it shows that in March 2023 it will be 9.36%. or around 25.90 million Indonesians are still categorized as poor (Statistik, 2023).

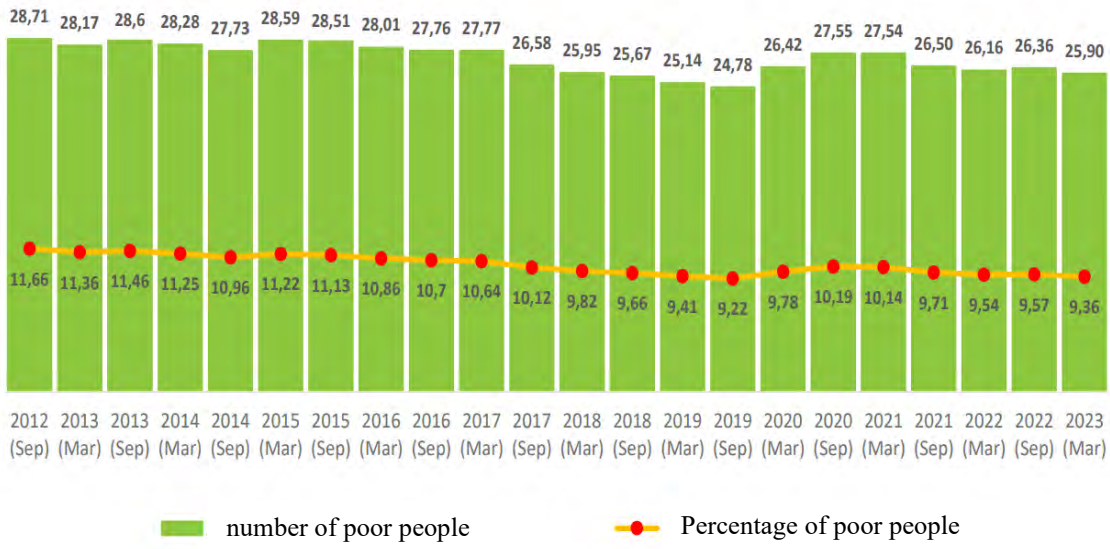

Figure 1. Number and Percentage of Poor People

According to the Indonesian Central Statistics Agency (2023), several factors that influence the poverty level during the period September 2022–March 2023 include: 1. Open Unemployment Rate (TPT), 2. Farmer Exchange Rate (NTP), 3. Inflation rate, 4. Household consumption 5. Social assistance (Statistik, 2023). Besides that, the distribution of poor people is mostly found in rural areas (Thiede, Kim, & Valasik, 2018), amounting to 12.22% or around 14.16 million people (Akbar & Hayati, 2021). And it differs from each island in Indonesia as shown in the data distribution below (Statistik, 2023):

Figure 2. Number and Percentage of Poor People by Island

Islamic Social Financial Institutions (ISFI) also contribute to poverty alleviation in Indonesia. The National Zakat Amil Agency of the Republic of Indonesia (BAZNAS RI) has succeeded in alleviating mustahik from the extreme poverty line of 23% or as many as 21,140 people. Then as many as 25% or 22,844 people were successfully lifted from the poverty line. Meanwhile, 9% or 8,040 people succeeded in meeting the adequacy standards. And as many as 2% or 2,057 people from BAZNAS RI mustahik have been transformed into muzaki. Overall, BAZNAS RI has succeeded in alleviating poverty by 58.76%, while 41.24% have not yet been eradicated but their welfare has increased. Poverty alleviation carried out by BAZNAS RI contributed 0.002% to Indonesia's poverty alleviation which was calculated based on the number of poor people in Indonesia as of March 2023 (Baznas, 2024). The results of the impact study calculations state that ISFI can contribute to poverty alleviation. Even though the percentage is still small, if it continues to be maximized, ISFI can continue to contribute and assist the government in reducing poverty rates in Indonesia (Nengsih, Kurniawan, & Harsanti, 2021), especially the current focus is extreme poverty. This is also supported by the potential for zakat funds that can be carried out by ISFI in 2023 which is only IDR. 30 trillion from its potential of Rp. 327 trillion or only reached 9.1% (Baznas, 2024).

Besides ISFI, Islamic microfinance institutions (IMFI) are also an effective tool for alleviating poverty. IMFI alleviates poverty through its products and financing structures, with various models and types of financing that can be adapted to the needs of poor community groups. IMFI is able to improve the standard of living, level of welfare and economic development of poor communities (Dhaoui, 2015; Jan, Khan, & Ullah, 2018). This is in contrast to conventional microfinance institutions which ignore programs for poor community groups (Mohamed & Fauziyyah, 2020).

There are many poverty alleviation programs that have been carried out in Indonesia, but synergy between Islamic Financial Institutions is considered to have great potential in overcoming poverty (Obaidullah, 2008). The synergy between ISFI and IMFI has not been implemented optimally in Indonesia, each institution operates independently according to the goals they want to achieve. From an Islamic perspective, ISFI and IMFI must carry out programs that are pro-poor (Naceur, Barajas, & Massara, 2017). And this is possible to do effectively if there is good synergy. Based on the background above, this research aims to see which aspects can be used as areas for synergy, as well as what synergy models can be implemented by ISFI and IMFI in alleviating poverty in Indonesia.

2.LITERATURE REVIEW

Poverty is a problem that often occurs in developing countries, including Indonesia. Based on World Bank data, the international poverty line is $2.15 and in Indonesia in 2023 there will be 1.9% or 5.3 million people of the population with an income of $2.15 (World Bank, 2023). Poverty is a condition where people are unable to fulfill their basic needs such as food, health and education (Corral, Irwin, Krishnan, & Mahler, 2020). The Indonesian government has made efforts to reduce poverty with many programs and approaches (Gunartha & Utama, 2020). The poverty is categorized into three groups accompanied by redistribution and risk sharing efforts that must be carried out (Ascarya, Rahmawati, & Tanjung, 2015; Iqbal, 2014), as shown in the picture below:

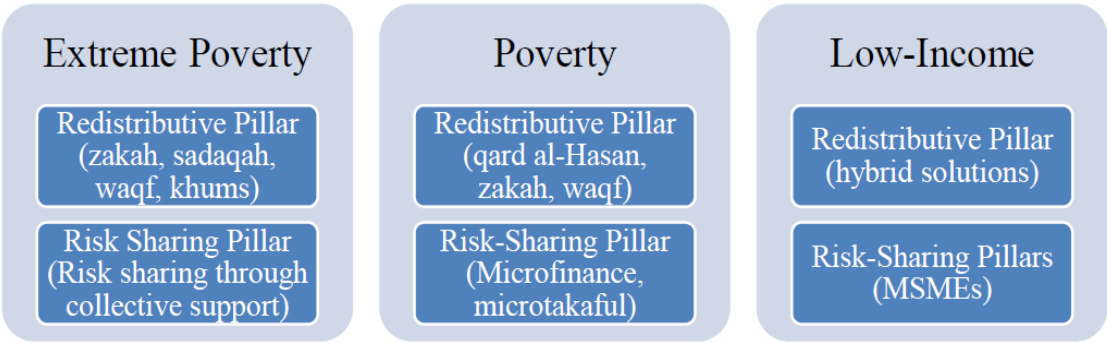

Figure 3. Structured Approach to Enhancing Financial Inclusion

Then (Ascarya et al., 2015) tried to make a connection between the needs of the poor and accessible microfinance services, as in the picture below:

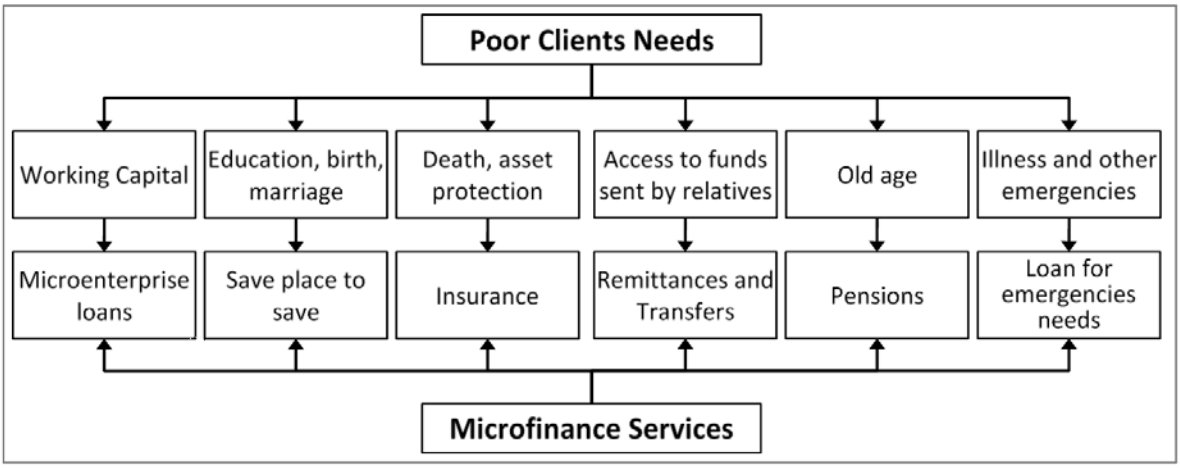

Figure 4. Poor Clients Needs of Financial Services

IMFI is a combination of two developing industries, namely microfinance and Islamic finance (DRISSI, 2017). IMFI is guided by the values of Islamic law, so that every product and approach used must be in line with and must not conflict with Islamic rules such as avoiding usury transactions (Ajija, Sukmana, Sari, & Hudaifah, 2020). IMFI is one of the development instruments for dealing with poverty problems, socio-political empowerment, including improving financial services to poor communities (Ginanjar & Kassim, 2020). Tika Widiastusi et al (2022) stated that IMFI can play a role in reducing the level of poverty that occurs in society. IMFI can make a positive contribution to community empowerment by improving welfare and improving people's living standards (Usman & Tasmin, 2016). IMFI has a more persuasive approach than conventional microfinance institutions in seeking profits, where it is allowed to extend the payment period if the debtor has difficulty paying on time and it is preferred not to be subject to fines (Begum, Alam, Mia, Bhuiyan, & Ghani, 2019). In Indonesia, IMFI has two models, the first is a cooperative model and the second is a microfinance institution model. Each of these microfinance institution models is

regulated and supervised by a different institution. The Sharia Cooperative model is regulated and supervised by the Ministry of Cooperatives, while the Islamic microfinance institution model is regulated and supervised by the financial services authority (OJK). As a result of this, the character and development of IMFI is very different and also the risks it will face. Of course, these differences will also influence the approach to solving the problem of poverty in Indonesia.

Besides the role of IMFI, poverty alleviation can also be carried out by ISFI. ISFI is a type of finance based on the principles of Islamic law to create a prosperous society by providing assistance to the poor and weak (Cattelan, 2019). ISFI's goal is to reduce unemployment and poverty (Tika Widiastusi et al 2022). Helping to develop the socio-economic conditions of poor groups, realizing social justice, equal distribution of income and wealth, and making the economy more developed (Ascarya, 2021). This is done through several instruments such as zakat, infaq, alms, and waqf, as well as qardh (Tahiri Jouti, 2019). ISFI through the function of zakat as an instrument for poverty alleviation is contained in Law of the Republic of Indonesia no. 23 of 2011 in Article 3. In accordance with Article 3b in the Law, it is stated that zakat management is aimed at realizing community welfare and alleviating poverty. Therefore, all forms of activities and other derivative activities that involve the use of zakat funds must be aimed at alleviating poverty that occurs in society.

3.METHODOLOGY

The data in this research is primary data by means of interviews to five IMFIs and ISFIs to collect data from management regarding synergy in poverty alleviation and secondary data which refers to documents, such as scientific journals, books, articles about poverty and Islamic financial institutions in Indonesia. This research uses analytical descriptive methods, especially using an in-depth interview approach with IMFI and ISFI management as well as academics to obtain their valuable knowledge and insights on this issue. Apart from that, literature studies were also applied from a lot of literature, especially literature on poverty, IMFI and ISFI.

4.RESULT AND DISCUSSION

Research by (Ascarya et al., 2015) shows that the majority of IMFIs (61%) collaborate with other ISFIs for social purposes to collect and distribute ZISWaf funds (especially zakat) to intended recipients through various programs. Most IMFIs (61%) collaborate with other ISFIs to organize social and development programs, while 59% of IMFIs channel their own ZISWaf funds.

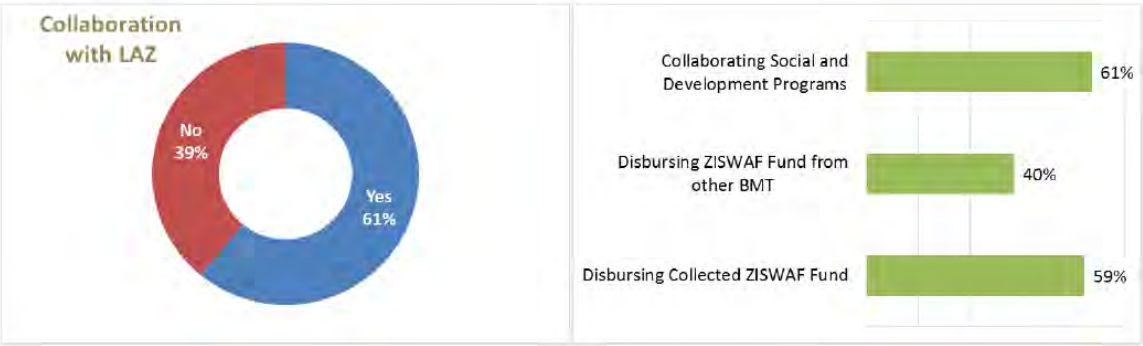

Figure 5. IMFI Collaboration With ISFI (Ascarya et al., 2015)

This shows that cooperation between IMFI and ISFI has been realized, but (Ascarya et al., 2015) do not explain in more detail what and what form of cooperation has been carried out. This research develops a synergy model between IMFI and ISFI in alleviating poverty in Indonesia. The synergy model was developed through interviews and questionnaires and literature studies. The results of interviews and questionnaires concluded that the synergy between IMFI and ISFI has not been fully established and effective. The ineffective synergy between IMFI and ISFI for poor community groups is also influenced by the mentality of community groups who want to feel the direct impact of the program. The synergy program is still limited to providing consumer assistance and also with limited funds to poor community groups without a systematic program to get them out of poverty. The synergy model was implemented without adequate planning and evaluation, so that the success of the synergy carried out is not known with certainty. However, IMFI and ISFI realize that synergy is needed in overcoming poverty. The development of the synergy model is explained in the image below:

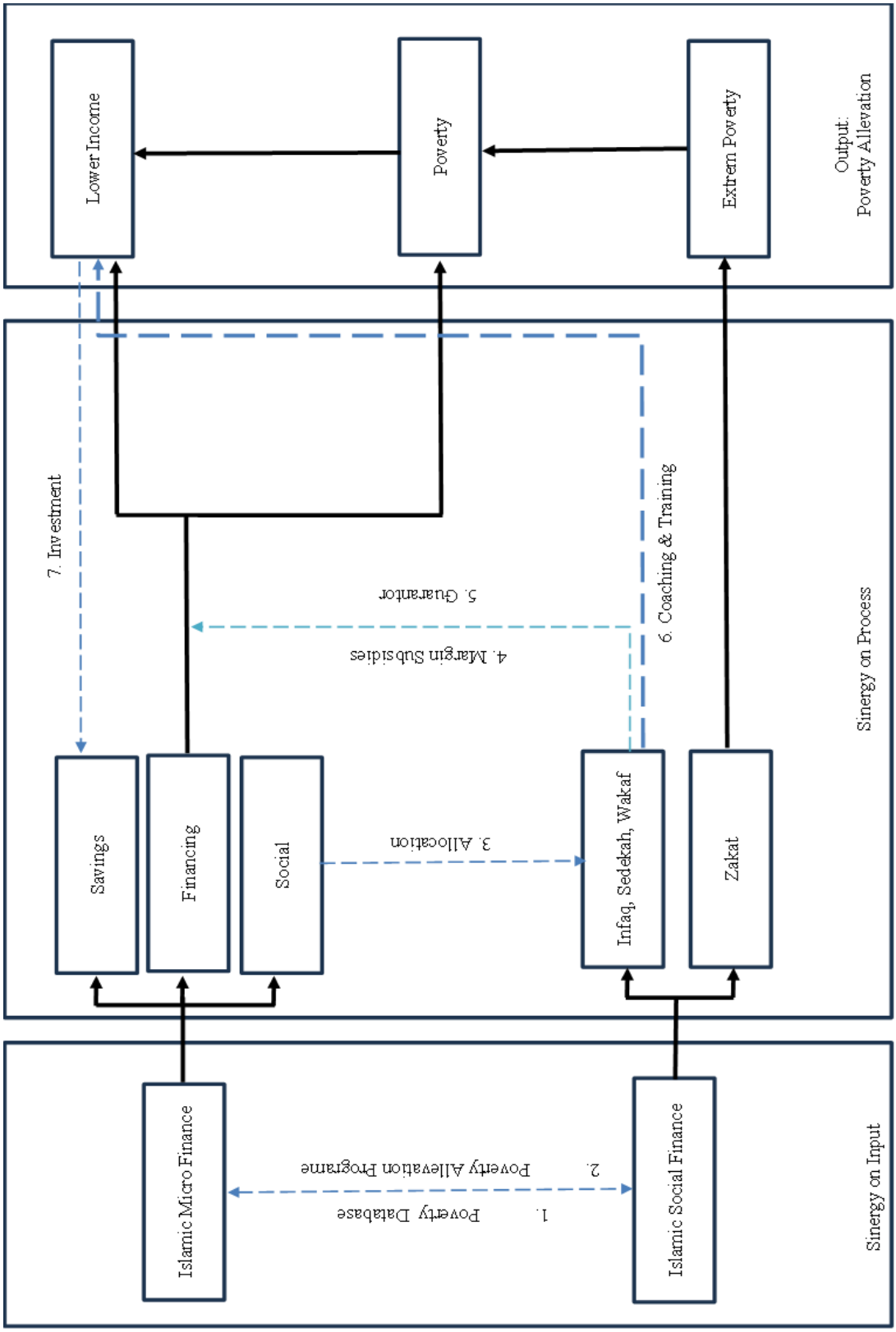

Figure 6. Sinergi Model of IMFI and ISFI 2024
Source: Author, 2024

Based on figure 4.1 above, it can be explained that there are two areas of synergy that can be carried out by IMFI and ISFI. Firstly, synergy is carried out at the input stage, where IMFI and ISFI must have and equate a database of community groups categorized into extreme poor, poor and almost poor or low income groups and also the target areas. This aims to avoid double data on empowerment of poor communities by IMFI and ISFI. If the data from the IMFI and ISFI targets creates synergy, then the poverty reduction program will be more effective and efficient. Second is the implementation of the poverty empowerment program in synergy and based on the existing data base. IMFI and ISFI can carry out program collaboration either directly in the form of the two institutions being involved together in funding and implementation, or indirectly where IMFI and ISFI only provide funding or implementation. This will help increase the effectiveness and efficiency of implementing poverty reduction programs.

The second area of synergy that IMFI and ISFI can carry out is in the process area. In this area, the social programs owned by IMFI must be allocated mostly to ISFI, this is because ISFI has sufficient experience in poverty alleviation so that it can create program optimization which is carried out by providing financial assistance, especially to community groups in the extreme poor category. For this extreme poor group, financial assistance is provided in the form and with the aim of meeting consumption needs.

In this process area, IMFI plays a very important role in poor and low-income groups. IMFI, through its function in providing financing to the community, must optimize the provision of productive financing to poor and low-income groups with a profit sharing contract scheme in the form of mudharabah or musyarakah. The next synergy is about risk mitigation by ISFI by becoming a guarantor for financing carried out by poor and low-income groups, whose funds can be sourced from infaq, alms and waqf funds so that the potential risk of default can be properly mitigated. Apart from being a guarantor, ISFI can also synergize with IMFI in the form of providing margin subsidies for the financing that will be provided, this has an impact on the burden of repaying business debts being lighter for poor and low-income groups.

The financing provided to low-income groups by IMFI is used to open micro, small and medium scale businesses with mentoring and training programs carried out by ISFI so that the businesses undertaken can have a higher level of success. However, it needs to be emphasized that poor community groups will have a better life if they are helped to build assets, skills and knowledge rather than increasing debt (Bresnyan, 2004).

With the success of this business, the next synergy is that community groups with low incomes invest by becoming IMFI members through savings and deposit products owned by IMFI, so that community groups with low incomes can have more adequate capital for business development in the form of savings and IMFI deposits and also increase income through SHU provided by IMFI every year. Access to finance has positive economic and social impacts so that the impact contributes to increased income, asset accumulation, smooth consumption, better health status and better education (Hermes & Lensink, 2011).

The results of the synergy in these two input and process areas carried out by IMFI and ISFI will be able to gradually raise the level of the poor community group from extreme poor to poor and from poor to low income. Therefore, IMFI and ISFI as an organization must be able to make changes and synergies in order to realize common goals (Battilana & Dorado, 2010).

5. CONCLUSION

The main objective of this research is to determine the synergy model of IMFI and ISFI in reducing poverty in Indonesia. Based on the research results, it was found that IMFI and ISFI can make synergistic efforts in 7 aspects which are divided into 2 areas, namely input and process. In the input area, there are 2 aspects that can be synergized, namely, creating a joint database about poor community groups and then creating joint programs for community groups in that database. In the process area there are 5 aspects that are synergized, namely, the allocation of IMFI's social funds mostly to ISFI, financing margin subsidies by ISFI, ISFI can be a guarantor for financing provided by IMFI, ISFI provides assistance and training for financing provided by IMFI and finally the group people with low incomes invest by becoming IMFI members.

Then, from the results of this research several suggestions can be made, including that synergy between IMFI and ISFI must be carried out systematically starting from equalizing data and programs. IMFI and ISFI cannot carry out synergy effectively if it is carried out only in the process area. This systematic effort can be carried out with good, conducive and planned communication between IMFI and ISFI. Then this synergy effort also requires encouragement from the government by making regulations regarding the role of IMFI and ISFI in poverty alleviation.

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CULTURAL POLICY AND POLITICAL ATTITUDES TOWARDS LOCAL CULTURAL PRESERVATION IN SOUTH SUMATERA

Siti Anisyah[1*], Raegen Harahap[2]
[1] Faculty of Social and Political Science, Universitas Islam Negeri Raden Fatah Palembang
[2] Faculty of Economic and Social Sciences, Universitas Islam Negeri Syarif Kasim Riau

Corresponding author: sitianisyah_uin@radenfatah.ac.id

Abstract

This paper investigates cultural policy initiatives aimed at preserving local cultural heritage, with a focus on South Sumatra, Indonesia. Against a backdrop of globalizing forces, the imperative to safeguard indigenous cultural identities has become increasingly urgent. Through a qualitative analysis of governmental actions and cultural expert engagements, this study delves into the strategies employed by local authorities in South Sumatra to protect and promote their cultural heritage. Specifically, it examines the tenure of Alex Nurdin and Herman Deru, who assumed power from 2008 to 2023, as a pivotal period for cultural policy initiatives in the region. The analysis reveals a multifaceted approach encompassing regional policy (Perda) and cultural programming aimed at revitalizing traditional practices and safeguarding intangible cultural heritage. Furthermore, it explores the challenges encountered in implementing these initiatives, including issues of poliitical convergence and limited resource support allocation. The findings underscore the importance of dynamic and inclusive cultural policies in preserving local heritage amidst rapid societal transformations. By documenting the experiences of South Sumatra, this research contributes to broader discussions on the role of cultural policy in fostering local cultural heritage, challenging, and sustainable development.

Keywords: *Cultural Policy, Political Attitude, Preserve Local Cultural, South Sumatera*

1. INTRODUCTION

Preserving both tangible and intangible heritage has been a central focus in the global efforts to safeguard cultural treasures (Alivizatou, 2011). Since its establishment in 1950, United Nations Educational, Scientific and Cultural Organization (UNESCO) has played a pivotal role in shaping international discourse and policy surrounding heritage preservation. The 1972 World Heritage Convention marked a significant milestone, not only in guiding management practices but also in redefining the very essence of cultural heritage. Recognizing the challenges posed by globalization and rapid societal transformations, UNESCO took further strides with the adoption of the Convention for the Safeguarding of Intangible Cultural Heritage in 2003 (Fitri, Ahmad & Ahmad, 2015). This pivotal agreement aimed to address the threats faced by traditional cultures by establishing a framework for safeguarding languages, rituals, and oral traditions on a global scale (Zanchetti & Jokilehto, 1997). It stems from an acknowledgment of the diverse cultural tapestry that enriches our world and the imperative to shield it from the pressures of homogenization (Hutson, Ellsworth & Ellsworth, 2024).

The path leading to the adoption of the 2003 Convention reflects a broader historical trajectory

(Smith, 2015). In the aftermath of World War II, the preservation of monuments, archaeological sites, and other tangible artifacts gained international prominence. However, the significance of cultural heritage extends beyond the tangible; it serves as a bridge between past and present, shaping collective identities and narratives of nationhood (Pietrobruno, 2009). Thus, preserving cultural heritage transcends mere artifact protection; it becomes a cornerstone of national pride, continuity, and sovereignty. The safeguarding of heritage sites was not only about protecting physical remnants but also about preserving the cultural dignity and identity of nations. In this light, the designation and protection of cultural heritage emerge as imperative components of national interest, embodying a commitment to both historical legacy and contemporary identity. UNESCO, as the custodian of world heritage, carries a moral and ethical obligation to uphold these values and ensure the preservation of our shared cultural heritage for generations to come (Idris, Mustaffa & Yusoff, 2016).

In Indonesia, cultural policy has experienced fluctuations, which influenced by excessive attention to political stability (Henley & Davidson, 2008). From the New Order era to the post-reform period, cultural attention policies have not been significant. Instead, the government has focused more on economic development and political stability (Jones, 2012; Jones, 2015). The end of the reform period in 1998 marked a new momentum for attention to culture (Jones, 2013). This was due to the view that reform provided a new opportunity stage to strengthen existence through cultural campaigns. In this regard, some interest groups in various regions of Indonesia felt marginalized and neglected in terms of local culture by the New Order government. In this context, it is not surprising that some local political elites in various regions of Indonesia had often used cultural and ethnic jargon to support and strengthen their authority (Reid, 1998). In same context, decentralization, as part of the reform, has seen strengthening many regional governments in supporting and promoting their respective local cultures (Tyson, 2010). At the same time, academic conferences on identity and local culture have experienced significant development (Jones, Mozaffari & Jasper, 2017). Based on this, the post-reform political dynamics are often referred to as "The Revival of Tradition in Indonesian Politics."(Davidson & Henley, 200; Duile, 2021).

One form of cultural revival in Indonesia's regions can be seen in the emergence of various government regulations and policies supporting the preservation of local cultural heritage (Bourchier, 2007). One such region in Indonesia is the province of South Sumatra. In 1998, the South Sumatra government issued Regional Regulation (Perda) No. 12 of 1988 concerning Traditional Meetings, Traditional Leaders, and Cultural Development in South Sumatra. Moreover, this regulation aimed also to protect and preserve traditions in South Sumatra generally. Over time, various regional regulations have been issued by the South Sumatra Government to protect various local cultural heritages, both tangible and intangible. However, the level of implementation and the expected output from various regulations issued have not met desired expectations and have even tended to be neglected. The government's poor performance is evident in several issues. All of these raise questions about the priority of South Sumatra government policies in preserving local cultural heritage. In 2018, it became a disaster for South Sumatra when Malaysia successfully claimed Songket as its international WBTB.

This fact, on the one hand, is a real illustration of how South Sumatra's government neglects taking serious steps to preserve local cultural heritage. On the other hand, it also indicates the role of the South Sumatra government in preparing important steps to prevent other countries from annexing

local cultural heritage. For over 3 years since Malaysia's claim of Songket as its UNESCO WBTB, the South Sumatra government has continued to receive sharp criticism from the public for its inadequate efforts in handling the Songket claim controversy. Some argue that the South Sumatra government's attention to preserving local cultural heritage reflects a tendency to focus more on infrastructure development first rather than preserving local cultural heritage. Strangely, the South Sumatra provincial government did not respond promptly and seriously to Malaysia's claim, as evidenced by the issuance of Regional Regulation No. 2 of 2021 and inconsistent decisions. The public notices the government's tendency to minimize the scale of the problem and even asks them to relax.

Given the dynamics and facts above, which indicate South Sumatra government's negligence toward preserving local cultural heritage, public policy is the early controlling force. Public policy is a series of actions taken or not taken by the government to address public issues to realize public interests or to help those affected by policy. Therefore, public policy in preserving local heritage in South Sumatra has been a subject of interesting discussions and even heated debates, particularly within the academic community in the region. This is closely related to the contradiction within the South Sumatra government, which leans more towards urban infrastructure development, ultimately affecting the preservation of local cultural heritage. The excessive focus on policies prioritizing modernization is a mindset and leadership framework essential for development. In fact, the development framework implemented by the South Sumatra government has been longstanding.

2. LITERATURE REVIEW

The preservation of local cultural heritage in South Sumatera Province, Indonesia, stands at the intersection of governmental policies, community practices, and socio-economic dynamics. A review of existing literature reveals a multifaceted landscape characterized by diverse perspectives and challenges. Scholars such as Wahyuningsih (2020) have emphasized the significance of public policies in safeguarding cultural heritage, highlighting the role of government initiatives in enacting legislation and establishing regulatory frameworks. However, Woronkomicz (2018) argues that top-down approaches often overlook the nuanced complexities of local contexts and fail to adequately engagement with community stakeholders. Conversely, Mahriadi & Djamaluddin (2023) advocates for a participatory approach that prioritizes community involvement and empowerment in heritage conservation efforts. They argue that bottom-up strategies foster a sense of ownership among local resident, and encourage sustainable practices that align with cultural traditions (Dawson, et, all, 2021).

The impact of globalization emerges as a recurring theme in the literature, with researchers like Riany, Meredith & Cuskelly (2017) examining its influence on traditional practices and cultural identities. Rapid urbanization, tourism development, and economic globalization pose significant challenges to the preservation of local heritage, necessitating adaptive policy responses (Labadi, et. (2021). Moreover, Dowson, et. (2021) underscores the need for comprehensive evaluation mechanisms to assess the effectiveness of conservation policies. They emphasize the importance of monitoring and feedback mechanisms in enhancing policy outcomes and refining implementation strategies over time. Overall, the literature reflects a growing recognition of the complex interplay

between public policies, community practices, and external forces in the conservation of local cultural heritage in South Sumatera Province. Future research should focus on interdisciplinary approaches that integrate insights from anthropology, sociology, urban planning, and policy studies to develop holistic and contextually relevant preservation strategies.

3. METHODOLOGY

This study employs a library research to thoroughly examine the cultural policy in the local areas in Indonesia, which particularly experiencing from South Sumatera province. Library research involves an in-depth analysis of a single case to draw insights applicable to broader phenomena (Gerring, 2016). We have opted for this approach to shed light on an area of research that has received limited attention so far, specifically the role of cultural policy. The case of South Sumatera serves as a representative example, illustrating a stable cross-case relationship (Gerring, 2016), which has allowed for the extraction of valuable insights. The primary objective of this study is to gather empirical evidence utilizing a combination of methods, including public policy implementation, document analysis, and on-site observations. Additionally, pertinent documentaries, records, print and online media news and previous research have been examined to comprehensively understand the complexities involved in preserving cultural heritage. Data analysis has been conducted through several stages, including data reduction, explanation of findings, data verification, and formulation of theoretical and empirical conclusions. This approach allows for a detailed and nuanced exploration of public policy initiatives aimed at preserving local cultural heritage within the local context.

4. RESULT AND DISCUSSION

4.1 Political Attitudes

The South Sumatra government grapples with an intricately woven dilemma as it endeavours to safeguard its cherished local cultural heritage. Balancing the preservation of traditions deeply rooted in the region's history with the pressing demands of modernity and development presents a multifaceted challenge. The province boasts a rich tapestry of customs, rituals, and art forms that have been passed down through generations, encapsulating the essence of its identity and community cohesion. Yet, in the face of rapid urbanization, industrialization, and globalization, there arises a poignant tension between conservation and progress. On one hand, there is a fervent desire to honour and protect the diverse array of cultural expressions that define South Sumatra's unique character. Efforts to safeguard age-old practices, such as traditional dances, music, and crafts, are imbued with a sense of duty to preserve heritage for future generations. These endeavours are not merely about safeguarding tangible artifacts but also about nurturing intangible cultural legacies, fostering a sense of pride, and belonging among local communities. On the other hand, the government must navigate the demands of economic development and infrastructural advancement, which often intersect with the territories where cultural heritage resides. The expansion of urban areas, industrial zones, and transportation networks can encroach upon historic sites, indigenous lands, and sacred spaces, posing a formidable challenge to conservation efforts. Striking a delicate balance between progress and preservation requires astute policy-making, innovative urban planning, and meaningful engagement with stakeholders across sectors. Moreover, the dynamic nature of culture itself presents a conundrum, as traditions evolve and adapt in response to changing social dynamics and external influences. The government must grapple with the delicate task of facilitating this organic process of cultural transformation while

safeguarding the core elements that underpin South Sumatra's cultural identity. Embracing innovation and creativity while honouring heritage can foster a vibrant cultural landscape that resonates with both tradition and modernity.

Those dilemma particularly related to political attitudes of local government that the success of a government is often measured through tangible physical developments. Infrastructure stands as one of the primary indicators of leadership success, serving as a guideline for local government officials to evaluate performance and carry out their duties. In many cases, the visual achievement of physical development is promoted and publicized as tangible evidence of government success. This leads to the perception that local government has succeeded if physical projects have been realized. Consequently, local governments often take pride in these physical development achievements, which then become assets in subsequent political contexts. In this context, the focus and orientation of development in South Sumatra, particularly during Alex Nurdin's leadership (2008-2018), tended towards modern urban infrastructure. The priority was on transforming infrastructure, evident through various large-scale projects such as highways, ports, and other transportation facilities that enhanced regional connectivity and investment opportunities. The development vision of South Sumatra is supported by regional regulations, such as Regional Regulation Number 17 of 2007 concerning the Long-Term Development Plan of South Sumatra Province for the period 2005-2025, emphasizing the importance of economic development and improving the welfare of the people.

4.2 Cultural Policy Initiaves

In navigating this labyrinth of complexities, the South Sumatra government must adopt a holistic approach that integrates conservation efforts with sustainable development goals. Various public policy initiatives has implemented, the government has yet to demonstrate a strong commitment to conserving its diverse cultural legacy, which encompasses a wide range of topics related to cultural heritage, from the protection of historical buildings and sites to the preservation of traditional crafts, languages, and customs. Moreover, the proactive approach taken through the formation and implementation of various policies has not yielded the desired results as policy instruments in ensuring the preservation of the region's rich cultural identity. Therefore, the comprehensive approach through public policies with various elements of cultural heritage preservation and their significance in shaping the identity of South Sumatra has not fully achieved the expected targets.

Table 1. South Sumatera Regulation on Cultural Preservation

No	Government Policies	Content	Governor
1	Regional Regulation Number 12 of 1988	"Traditional Assembly, Traditional Leaders, and Cultural Development in South Sumatra	Alex Noerdin
2	Regional Regulation Number 8 of 2013	Supervision of Building Construction in South Sumatra	
3	Regional Regulation Number 4 of 2015	Preservation of Local Culture in South Sumatra	
4	Regional Regulation Number 4 of 2017	Preservation of Cultural Heritage Sites in South Sumatra	
5	Regional Regulation Number 2 of 2021	Architecture of Ornamented Buildings Reflecting Cultural Identity in South Sumatra	Herman Deru

Sources: South Sumatera Government (2024)

It should be noted that from Alex Noerdin to Herman Deru administration, the main political interests are dominantly modernizing infrastructure development. Therefore, there is no little difference between Alex Noerdin and Herman Deru's administrations during his two terms from 2008 to 2023. In this sense, there was no a strong convergence on the public policy initiatives. During Alex Noerdin, the main focus tended to be on infrastructure transformation include the construction of toll roads, ports, and other transportation facilities contributing to increased regional connectivity and investment opportunities. Modernizing infrastructure, as was the case during Alex Noerdin's administration, tends to focus more on image-building through landmark projects such as the construction of LRT and Jakabaring Sport Centre for international events. This period is characterized by a spirit of building robust infrastructure as the basis for sustainable economic growth. The excessive focus on the modernizing infrastructure development raises concerns about the preservation of local cultural heritage in South Sumatra. Excessive emphasis on development policies prioritizing modernization reflects a government framework inadequately equipped to preserve cultural heritage (Aly, 2011). Even though there have been legislative efforts, such as Regional Regulation Number 8 of 2013 and Number 4 of 2015 and 2017, aimed at protecting cultural heritage, their implementation often falls short. This is particularly evident when modern urban infrastructure development threatens the existence of historical sites and local cultural landmarks.

When Herman Deru came to power in 2018-2023, it was expected that he would pay more attention to the preservation of local cultural heritage by accelerating various political policies. Deru continued to adopt the concept of infrastructure development, albeit not as forcefully as the previous period. However, attention to the preservation of local cultural heritage was not prominently displayed, and only one Regional Regulation related to the preservation of local cultural heritage was issued during this period. The most visible attention currently is the implementation of building ornaments scattered across government offices, state-owned enterprises (BUMN), regional-owned enterprises (BUMD), hospitals, and schools, which are massively apparent. The implementation of these building ornaments representing the local identity is an implication of the issuance of Regional Regulation No. 1 of 2021, which is an effort to create the distinctive symbol of South Sumatra.

These two governors have immense potential progress with the foundation of comprehensive modernizing infrastructure which encompasses all aspect political interests. However, several challenges also potentially come to emerge. Firstly, **modernizing infrastructure.** The level of complexity in government policy towards the preservation of local cultural heritage in South Sumatra is closely related to the strategic position and existence of Palembang city. In this context, Palembang city serves not only as a center of government and economy but also as a guardian of history and historic monuments. Similarly, the development of modern infrastrcuture such as the Light Rail Transit (LRT), Jakabaring Sport Centre, and the expansion of office buildings and housing continually expanded. Therefore, this aspect has not taken adequate steps in preserving historic sites and local cultural heritage. Consequently, the modernizing infrastructure approach in Palembang has led to a decrease in attention to historical aspects, even creating disagreement regarding the use of historical models, which potentially leads to the loss of the rich local identity. At the same time, this approach indirectly creates an international identity that replaces the local characteristics, ultimately threatening the existence of Palembang's cultural heritage and history. Secondly, limited financial support**.** The high priority of the South Sumatra government in the modernizing infrastructure has resulted in a high level of complexity in its implementation. Limited financial support is a major obstacle to the preservation projects and initiatives. As a result, many cultural heritage sites and traditions are neglected, not receiving adequate attention and maintenance. Therefore, the degradation and neglect of cultural heritage sites and traditions in South Sumatra are overlooked, and the government's response does not align with the urgency of the situation.

5. CONCLUSION

South Sumatera boasts a diverse cultural landscape, characterized by a mosaic of traditions, languages, and belief systems. From the vibrant rituals of the Palembang Malay to the ancestral practices of the Rejang people, the region's cultural heritage is both extensive and multifaceted. However, amid rapid urbanization and globalization, many of these traditions face the risk of erosion, prompting urgent questions about the role of cultural policy in safeguarding South Sumatera's intangible heritage. At the heart of this inquiry lie the political attitudes that underpin cultural preservation efforts. Political actors, including government officials, community leaders, and cultural advocates, play pivotal roles in shaping the direction and implementation of cultural policy. Their ideologies, interests, and power dynamics influence the prioritization of certain cultural practices over others, as well as the allocation of resources towards preservation initiatives. Moreover, the relationship between cultural policy and local governance adds another layer of complexity to this discourse. Decentralization reforms in Indonesia have granted greater autonomy to regional administrations, empowering them to formulate and implement cultural policies tailored to local contexts. As such, examining the attitudes of regional political elites towards cultural preservation offers valuable insights into the interplay between state authority, cultural identity, and community aspirations in South Sumatera.

The cultural policy and political attitudes on preserving local cultural heritage in South Sumatra, emperically has faces several serious challenges. Major issues include an overly strong focus on modern infrastructure development, and inadequate budget allocation. Therefore, the government has issued policies and regulations to protect local cultural heritage, the implementation needed to ensure that the preservation of cultural heritage becomes a greater priority in the development of South Sumatra.

Acknowledgement

We would like to express our gratitude to the cultural figures and academics of South Sumatra. They have all provided opportunities to facilitate our field research. Furthermore, we also thank them for their input and support for the implementation of this research paper.

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VULNERABILITY DISCLOSURE TO MITIGATE ISLAMIC BANK RISKS FOR A MORE SUSTAINABLE DEVELOPMENT GOALS

Muhamad Rahman Bayumi*, Ria Agustina, Rizal Alfit Jaya

Faculty of Economy and Islamic Business, Universitas Islam Negeri Raden Fatah Palembang

Corresponding author: muhamadrahmanbayumi_uin@radenfatah.ac.id

Abstract

Disclosure of vulnerabilities to mitigate Islamic banking risks aims to provide experience and knowledge for a sustainable Islamic economy. The financial industry plays an essential role in developing a nation's economy. The progress of various structural and fundamental aspects will largely determine global finance. The progress of Sharia banking requires mastery of knowledge with quantitative and qualitative solutions and strategies. This research aims to reveal the determinants that impact the profitability of Islamic banks in Indonesia and offer strategies and understanding for the sustainable sustainability of Islamic banks. This mixed-method approach investigates problems related to management, behaviour, social and other aspects to collect and analyze quantitative and qualitative data. The findings in this research prove empirically that the profitability risk variable has a significant effect on vulnerability. For the financing risk and liquidity risk variables, each variable has no effect on the vulnerability of Islamic banks. However, all independent variables in this research simultaneously influence the vulnerability of Islamic banks. These findings prove that the key to achieving sustainable development goals through the role of Sharia finance can be followed up by understanding the problem comprehensively. These discoveries furnish bank administrators with an improved understanding of bank risk and serve as a fundamental element for recent regulatory efforts to strengthen risk management.

Keywords: *Vulnerability; Risk Mitigation; Sustainable Development Goals*

1. INTRODUCTION

Disclosure of vulnerabilities to mitigate Islamic banking risks as an effort to achieve Indonesia's more sustainable development goals (Wibowo & Zakaria, 2021). Studies to understand the problems that cause risks are a concrete effort to strengthen global development. As a country with the largest Muslim population in the world, it has enormous potential to support the progress of the Islamic finance industry globally.

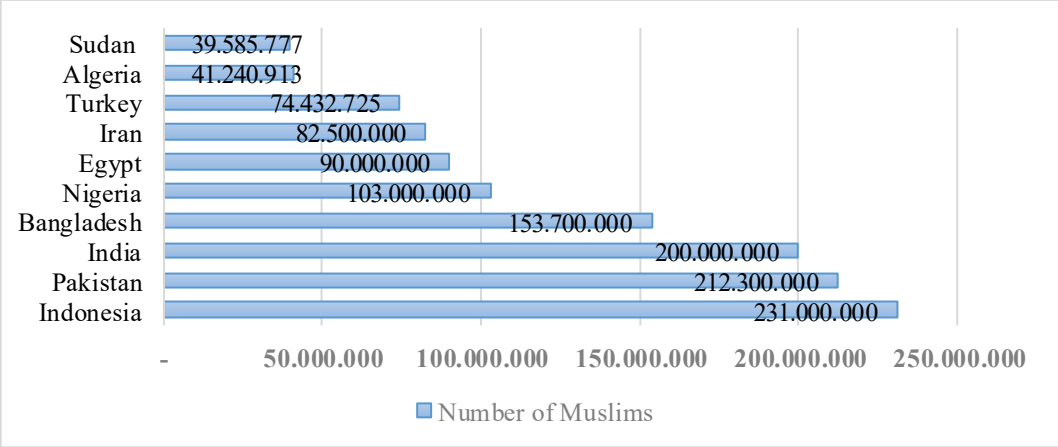

Figure 1. Muslim Countries
Sources: World Population Review (2021)

Indonesia is a nation boasting the most extensive Muslim populace globally (Fig.1). According to a publication by The Royal Islamic Strategic Studies Centre (RISSC) or MABDA entitled The Muslim 500 2022 edition, the Muslim population in Indonesia amounts to around 231.06 million individuals. This figure corresponds to 86.7% of the entire populace of Indonesia. The percentage of the Muslim populace in Indonesia similarly amounts to 11.92% of the global population.

Sharia financial performance based on sharia banking statistics in the 2017-2021 period has shown that return on assets of sharia banks has not shown large growth compared to 2018, in 2018 the growth in return on assets reached more than 100%, while the average growth in non-performing financing decreased by 13.20%, this shows quite positive things, in terms of financing to deposit ratio decreased by 3.08%, the ratio of operational costs and operating income experienced a decrease in growth of 2.87%, for the average growth net operating margin grew by 34.22%. These data have shown that Islamic financial institutions still have a large risk of potentially experiencing inefficiencies in carrying out their role as intermediary institutions.

The Financial Services Authority (OJK) noted that sharia banking asset growth was higher than conventional banks. It was recorded that in December 2022, the growth of sharia banking assets reached 15.63 percent compared to the same period in 2021. Meanwhile, for conventional banks in that period, asset growth was 9.42 percent (Subekti, 2023). The achievements that have been obtained must be maintained and improved through appropriate steps, such as disclosing vulnerabilities to mitigate the risks of Sharia commercial banks as a goal of more sustainable development.

Several factors, including low profits, increasing foreign currency loans, and highly problematic financing, can generally cause bank bankruptcy (Wibowo & Zakaria, 2021). However, studies related to banking vulnerability generally focus more on financial performance, while there are many other factors that have an impact on a bank's vulnerability, which are no less important to study, both intrinsic and extrinsic elements, such as company governance, economic conditions and also socio-political stability.

The purpose of this research is to describe the things that can influence banking bankruptcy. So that mitigation can be carried out to achieve more sustainable development goals. In previous research,

some of this research was often studied using quantitative research. However, this research has differences because this study was carried out using a quantitative and qualitative approach. It is hoped that this study can answer the issue of risk mitigation which has an impact on the vulnerability of Islamic banks in a more comprehensive manner.

The variables used to answer the arguments in this research use an approach to various financial risks. Financial performance can be confirmed as an indicator that impacts the vulnerability of a Sharia bank. This study will use financial ratios as a proxy for disclosing the causes of bank bankruptcy. Several of these ratios comprise Non-Performing Financing (NPF), Return on Assets (ROA), Return on Equity (ROE), Operational Efficiency Ratio (OER), andFinancing to Deposit Ratio (FDR). These variables reflect profitability, financing risks, and liquidity risks that exist in Islamic banks. The vulnerability of Islamic banks in this study uses Z-score ROA.

2. LITERATURE REVIEW

2.1 Syariah Enterprise Theory

Implementing Sharia enterprise theory (SET) where Sharia banking in its operational activities must be based on Sharia principles because Sharia banking has a responsibility not only to company owners but also to stakeholders and Allah SWT. The application of Sharia enterprise theory (SET) principles in Sharia banking will make bank performance healthier, considering that management will always comply with the principles that have been established (Rudi Setiyobono et al., 2019). Banking vulnerability is a managerial responsibility in directing employees to achieve company goals. Sharia enterprise theory, if implemented correctly, can help reduce risks in Islamic banks. Working as well as possible and realizing that Sharia compliance can provide blessings in this world and the hereafter will directly increase the optimal performance of Sharia banking. The goal of Sharia banking is not only to achieve profits but also to strengthen the stability of various aspects and risks in Sharia banks.

2.2 Theory of Financial Intermediation

The classic perspective on the Theory of Financial Intermediation is founded upon the concepts of asymmetric information and transaction costs. They are specifically designed to accommodate institutions that engage in the underwriting of insurance policies, the acceptance of deposits, and the disbursement of cash to corporations. Nevertheless, in recent decades, there have been noteworthy alterations. Although asymmetric information and transaction costs have decreased, intermediation has increased (Allen, Franklin; Santomero, 1994). The role of Sharia banking as an intermediary institution holds a strategic position that does not only act as an intermediary. However, it also strives to promote and accelerate the progress of the sharia financial industry. In the era of globalization and digitalization, the role of intermediation can be measured by various relevant indicators, including risks and participation costs.

2.3 Vulnerability

Vulnerability is a characteristic of a financial system element in the form of a node of vulnerability that amplifies and propagates the initial shock so that it has the potential to magnify the shock in the financial system. Economic vulnerability shows a picture of a condition of the level of economic fragility in the face of danger (Khotimah, 2013). Measuring the vulnerability of Islamic banking can be represented by Z score ROA. The higher the vulnerability of a Sharia bank, the lower the potential for bankruptcy (Khasawneh, 2016). The Z-score can be computed by adding the mean return on assets to the capital-to-assets ratio (equity capital divided by total assets) and then dividing the result by the standard deviation of ROA. The following is the Z-Score ROA calculation formula (Moreno et al., 2022):

$$Zs = \frac{\mathrm{ROA} + \mathrm{Eq/TA}}{\sigma\mathrm{ROA}}$$

2.4 Previous Research

This research empirically tests the vulnerability of Islamic banks in Indonesia as measured by the Z-score return on assets. The empirical evidence illustrates that the prospective z-score has the capacity to predict the future trajectory of the standard z-score by a quarter. Moreover, the prognostic effectiveness of bank risk mitigation exceeds that of the conventional z-score. The Z-score exhibits a strong correlation with the probability of default and market-based risk indicators, and it can provide a predictive indication of a bank's future profitability (Hafeez et al., 2022). Therefore, a higher Z-score ROA indicates a greater likelihood of bankruptcy. The research findings on return on assets (ROA) indicate that there is a significant and negative association between Islamic banking background, corporate governance data, corporate social disclosure, bank size, bank age, and return on assets. Regarding the return on equity (ROE), the research findings suggest that the past performance of Islamic banks, their financial ratios, corporate governance information, corporate social transparency, zakat information, and the size of the banks all have a notable and negative effect on the return on equity (Al-Homaidi et al., 2020).

The findings of prior studies indicate that there is no significant and meaningful correlation between credit risk and liquidity risk, either contemporaneously or with a time lag. Nevertheless, these two perils individually impact the stability of banks, and their interplay contributes to the instability of banks (Ghenimi et al., 2017). Additional research indicates that there is a significant impact of liquidity on bank performance, which might potentially be mitigated by credit risk. (Safitri & Primadhita, 2022). Based on theoretical explanations and previous research. So, the following hypothesis is proposed:

H1. There is a significant impact of rentability risk (ROE) on bank vulnerability.

H2. There is a significant impact of financing risk (NPF) on bank vulnerability.

H3. There is a significant impact of liquidity (FDR) on bank vulnerability.

H4. There is a significant impact of rentability (OER) on bank vulnerability.

3. METHODOLOGY

This research reveals the factors that can cause Islamic banking to go bankrupt. The issue of bank vulnerability must be addressed appropriately and quickly because the risks that arise in Islamic banks will have a systemic impact if not mitigated. The location of this research is Indonesia. The choice of Indonesia as the research location was motivated by the phenomenon of Sharia banking, which is currently developing, and also the low value of Sharia banks themselves. This ultimately gives rise to an interesting paradox to research.

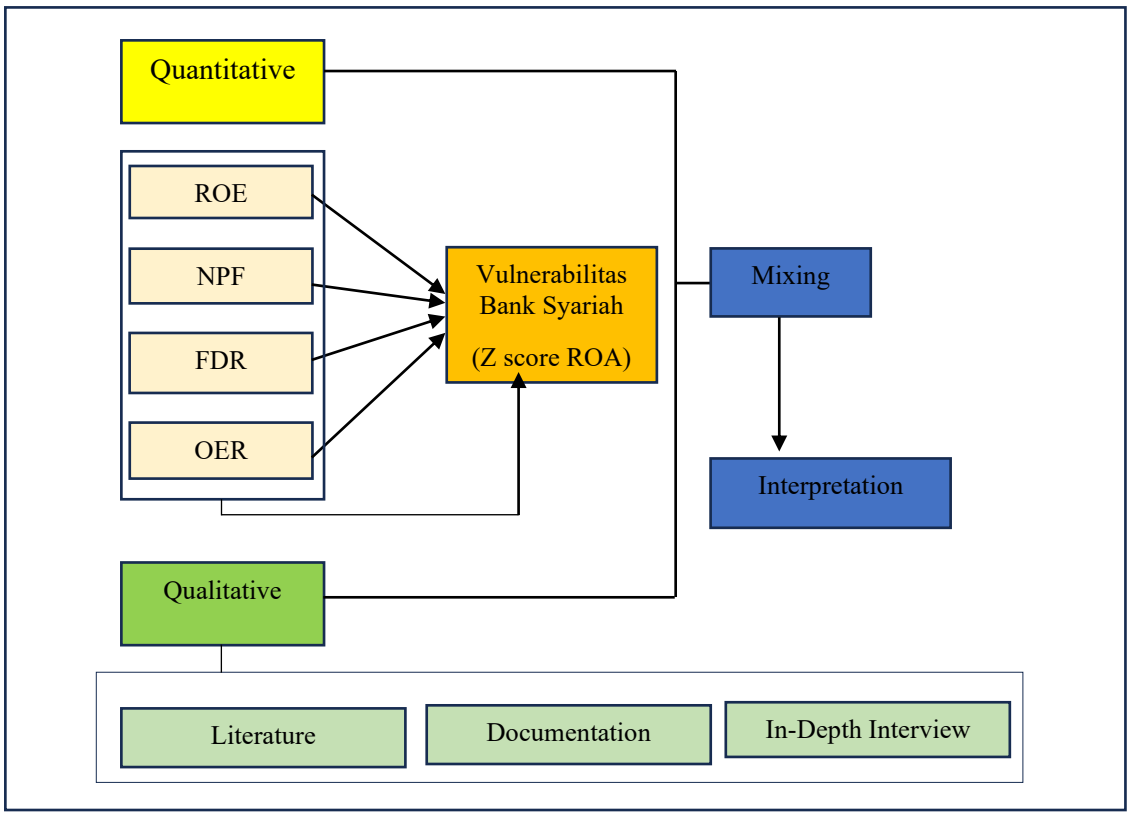

Figure 2. Estimating Model: Concurrent Triangulation Design
Source: Authors

This research is mixed-method research. This design was determined for several reasons, including problems that arise from Islamic banking cannot be resolved with a numerical and rigid approach. The problems that arise are issues that can also be relevant if analyzed using a qualitative approach. So, the mixed-method design is very appropriate to answer the problems of risks that arise in Islamic banks. Data sources in research encompass primary and secondary data. Initial data was acquired through observations and interviews. Secondary data is acquired from financial reports pertaining to the data needed for quantitative data analysis, including Return on Assets (ROA), Operational Efficiency Ratio (OER), Return on Equity (ROE), Non-Performing Financing (NPF), and Financing to Deposit Ratio (FDR). In this research, the population is all Sharia banking in Indonesia from 2015 to 2021. In total, there are 12 sharia banks in 2015-2021. However, in this research, several research criteria must be met, including:

1. Sharia Bank has been established for more than ten years.
2. Sharia Bank, which has published its financial reports on the official website from 2015 to 2021
3. Sharia banks that publish complete financial reports.

Data collection methods are desk reviews, observations, interviews, and collecting data in financial reports, which are then calculated according to the guidelines. The desk review process is done by first reading the data sources; observations are made by observing various phenomena in sharia banking. Interviews were carried out by preparing an interview guide. The informants were

obtained from various sources who were practitioners of Sharia banking and Sharia finance experts. Quantitative data variables are displayed in Table 1.

Table 1. Quantitative Variables of Research

Variable	Ratio (Symbols)	Definition	References
Vulnerability	VUL	Z-score ROA is a relative measure that states the deviation of data from the average value of ROA which is measured based on the standard deviation value	(Moreno et al., 2022; Shawtari, 2018)
Rentability Risk	ROE	Return on Equity	(Shawtari, 2018)
Financing Risk	NPF	Non-Performing Financing	(Priyadi et al., 2021; Shawtari, 2018)
Liquidity Risk	FDR	Financing to Deposit Ratio	(Le et al., 2023; Priyadi et al., 2021)
Rentability Risk	OER	Operating Expenses to Operating Revenue, familiarly called OER	(Priyadi et al., 2021)

$$VUL_{it} = \beta_1 ROE_{it} + \beta_2 NPF_{it} + \beta_3 FDR_{it} + \beta_4 OER_{it} + e$$

The methodology employed for data analysis in this study is depicted in Figure 2. Qualitative data analysis in this study uses the Miles and Huberman method: data reduction, data presentation, and verification. Quantitative data, which is panel data processed with EViews can be utilized to experimentally examine the impact of various risk variables specific to Islamic banks on their susceptibility. The regression technique of combining sequential time data with cross-sectional data is called panel data regression. There are three methods for selecting the best panel data estimation model: Hausman Test, LM Test, and Chow Test. General assumptions that must be met by panel data regression include testing for multicollinearity and heterogeneity. Hypothesis testing and panel data analysis encompass the employment of the F-test, T-test, and coefficient of determination.

4. RESULT AND DISCUSSION

4.1 Disclosure of Factors Affecting Sharia Bank Vulnerability

Descriptive statistics show that Islamic banking financial data in Indonesia is very volatile. The maximum and minimum value ranges are very different. This data shows that risks arise in Islamic banks through profitability, financing and liquidity risks. Apart from this data, through qualitative data findings, other risks, such as the Qanun case in Aceh, arise from legal/sharia risks (OJK, 2023). Operational risks also often occur in Sharia Banks. This shows that many risks exist in Islamic banks that must be prevented and overcome.

Table 2. Descriptive Statistic

Variable	Observations	Mean	Maximum	Minimum	Std. Deviation
VUL	49	0.00	1.64	-3.93	1
ROE	49	-3.50	28.48	-94.01	19.21
NPF	49	2.82	9.54	0.01	1.87
FDR	49	89.38	196.73	38.33	20.05
OER	49	103.32	217.4	64.64	27.67

Table 3. Selection of Panel Regression Estimation Model

	Effect Test	Prob.
Chow Test	Cross-section F	0.49
	Cross-section Chi-square	0.35
Prob. Cross-section F dan Cross-Section Chi-Square > 0,05, then the selected model is the Common Effect Model		
	Random Effect	Prob.
Lagrange Multiplier Tests	Breusch-Pagan	0.37
Prob. Breusch-Pagan > 0,05, then the selected model is the Common Effect Model		

Table 4. Correlations Matrix

	ROE	NPF	FDR	OER
ROE	1			
NPF	-0.288743	1		
FDR	-0.119727	0.135556	1	
OER	-0.849554	0.249638	0.151667	1

The results of the multicollinearity test indicate that the correlation coefficient for each variable is below 0.85. Therefore, it can be inferred that there is no issue of multicollinearity among the research variables. Put simply, there is no discernible association among the independent variables in this particular study.

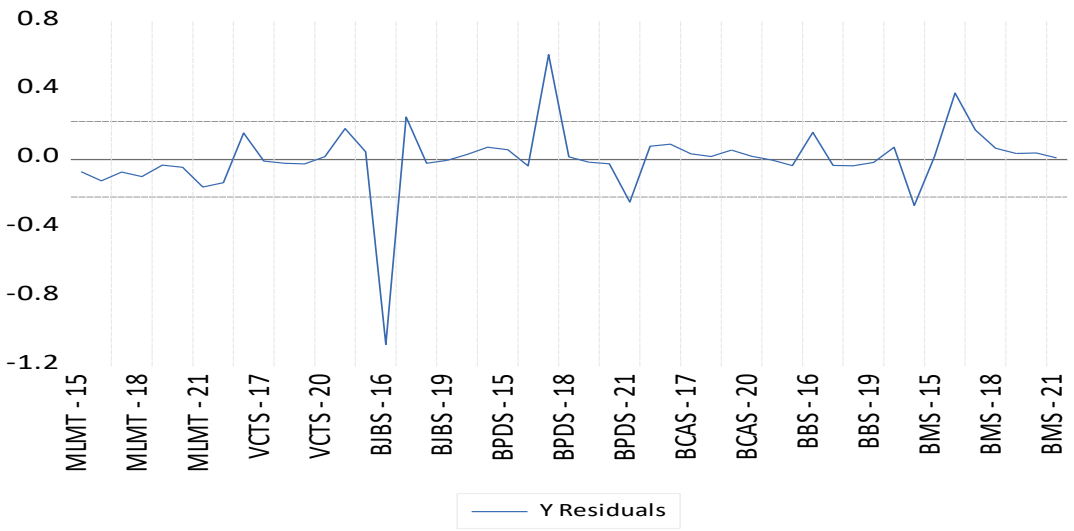

Figure 3. Heteroscedasticity Test

The azure residual graph indicates that it does not surpass the boundaries (500 and -500), implying that the residual variance remains constant. Consequently, heteroscedasticity does not manifest or satisfy the heteroscedasticity test.

The t-test findings on the profitability risk variable using the ROE proxy yielded a computed t value of 10.80600, which above the critical t value of 2.011741. Furthermore, the p-value of 0.0000 is below the set threshold of 0.05. Therefore, the null hypothesis (H0) is refuted, and the alternative hypothesis (H1) is affirmed. This implies that the variable of profitability risk, using return on equity (ROE) as a proxy, has an impact on the susceptibility of Sharia Banks. The t-test findings on the financing risk variable, represented by NPF, yielded a computed t value of 1.256751, which is below the threshold t value of 2.011741. Furthermore, the p-value of 0.2155 exceeds the predetermined significance limit of 0.05. Consequently, we dismiss the alternative hypothesis (H2) and affirm the null hypothesis (H0). This suggests that the element of financing risk does not affect the vulnerability of Sharia Banks.

Table 5. Regression Result using CEM

Dependent Variable: Vulnerability (Z-score ROA)			
Variable	Coefficient	t-Statistic	Prob
ROE	0.034147	10.80600	0.0000
NPF	-0.022361	-1.256751	0.2155
FDR	-0.000811	-0.505273	0.6159
OER	-0.012326	-5.661008	0.0000
Adjusted R-squared	0.951957		
F-Statistic	238.7782		
Prob (F-statistic)	0.000000		

The t-test results for the liquidity risk variable, using the FDR proxy, showed a calculated t value of 0.505273, which is lower than the critical t value of 2.011741. Furthermore, the p-value of 0.6159 above the preset threshold of 0.05. Thus, we refute the alternative hypothesis (H3) and affirm the null hypothesis (H0). This suggests that the element of liquidity risk does not affect the vulnerability of Sharia Banks. The t-test results for the profitability risk variable, using the OER

proxy, showed a calculated t value of 5.661008, which above the threshold t value of 2.011741. In addition, the calculated significance value was judged to be 0.0000, which is lower than the predefined significance level of 0.05. Consequently, the null hypothesis (H0) was disproven, and the alternative hypothesis (H4) was validated. This suggests that the operational efficiency ratio (OER) proxy, which represents the variable of profitability risk, affects the vulnerability of Sharia Banks.

The calculated F value is 234.7782 > F table, 2.583667, and the sig value is 0.000000 < 0.05. So H0 is rejected, and Ha is accepted, meaning that the profitability risk, financing risk and liquidity risk variables simultaneously affect vulnerability. The adjusted R square value is 0.951957 or 95.1957%. The coefficient of determination value shows that the independent variables consisting of profitability risk, financing risk and liquidity risk can explain the vulnerability variable of Islamic banks in Indonesia of 95.1957%. In contrast, the remaining factors are elucidated by additional variables that were not incorporated into this research framework.

4.2 Vulnerability and Risk: Change and Challenges to Achieving Sustainable Goals

Risks in Islamic banks are bad possibilities that must be anticipated and resolved. Various Sharia banking problems that occur can often have a systemic impact and cause a multiplier effect. The protest against the rule that only Sharia banks in Indonesia occurred in Aceh is one form of reputation risk that has surfaced and been dragging on for a long time and has not yet been resolved because there are still contradictions between the government, academics and the OJK.

Operational risks can cause failure in the implementation of Sharia banking service activities. Compliance risks, legal risks, and lack of ethics have occurred in Indonesia. This is shown in table 6. Some of the cases shown are samples of significant events that could damage the image of Islamic banking. The vulnerability study cannot be separated from the risks in Islamic banks. The vulnerability of Islamic banks will significantly depend on the quantity and magnitude of risks faced by Islamic banks. Often, Islamic banks only seem to sell religion without paying attention to its fundamental value/intrinsic value (Bayumi, 2016; Bayumi & Diem, 2023). On the other hand, there are Islamic banks that persistently promote Islamic banking but are misunderstood by academics.

"The challenge for Islamic banks is resources. 90% of employees have not mastered the concept of sharia or know about sharia, but in practice, this is the practice of conventional banks, especially in financing" (Kanda, 2023)

This inability creates many risks that cannot be measured in advance before the risk occurs. In general, there are three banking products. The core products are collecting funds, distributing funds, and providing services. Financing practices also need to be more understood.

Table 6. Several Islamic Banking Cases

	Cases of Sharia banking transgressions	Sharia Financial Institution	Year
1	Corruption in the financing facilities provided to PT Hasta Mulya Putra by the PT Bank Syariah Mandiri Sidoarjo branch is suspected of costing the state IDR 14.2 billion. (Ayyubi, 2021)	Bank Syariah Mandiri Sidoarjo	2013
2	75 billion dollars was embezzled by two employees of an Islamic bank. (News, 2015)	Bank Syariah Mandiri Jakarta	2014
3	Ex-Sharia BUMN Bank Branch	Bank Syariah Mandiri	2015

	Cases of Sharia banking transgressions	Sharia Financial Institution	Year
	Arrested in a Fictitious Credit Case of IDR 27 billion (CNN Indonesia, 2022)	Medan	
4	Bank staff in Riau committed fraud of IDR 6.79 billion. (Adha & F, 2023)	Bank CIMB Niaga Syariah Cabang Pekanbaru	2020
5	Values and ethical concerns from speeding up the conclusion of murabaha contracts without lowering (Zuraya, 2021)	Islamic Financial Institution	2021

Source: Several Online Media, 2013-2021

"For example, when financing a car purchase at a sharia bank, people who understand the opinion think that the car should be at the bank, the bank buys it first in the name of the bank and then sells it again with the customer. They don't understand that there is a wakalah agreement, that if the bank buys it first, there will be taxes later. resale is subject to sales tax again, as a result the price of the car becomes much more expensive. That's why there is a wakalah agreement that accommodates it." (Kanda, 2023)

The results of this interview clarify the problems Islamic banks face for sustainable progress. The main issue is the quality of human resources and literacy, which will be related to a person's knowledge and experience. The risks that arise in Islamic banks require appropriate mitigation efforts, so they do not have a systemic impact. Risk management's success can strengthen Islamic financial institutions when facing various challenges and changes.

Chief Executive of Banking Supervision, OJK, said that issues related to the impact of the global economy and the domestic economy must be accelerated in various fields to see that the current banking market structure can be said to be still inefficient. Certain efforts must be made to improve the efficiency of the market structure. Various related parties must work together to help improve banking efficiency and banking integrity to achieve sustainable development goals (Rae, 2023).

4.3 Disclosure of Factors Affecting Sharia Bank Vulnerability

This study identified the factors that influence the vulnerability of Islamic banks and discovered that the profitability variable, specifically represented by Return on Equity, has a substantial impact on their susceptibility. The vulnerability of Islamic banks is primarily determined by the amount of return on equity and the efficient management of operational costs. This statement elucidates that there is a direct correlation between a higher return on equity and increased vulnerability, resulting in a diminished risk for bankruptcy in Islamic banks. The results of this study support previous research (Trabelsi & Trad, 2017; Yosi Maytesa & Asmuni, 2023).

Non-Performing Financing and Financing to Deposit Ratio, which are proxies for the financing risk and liquidity risk variables, do not significantly affect vulnerability. These findings strengthen the understanding and insight that risks arising from financing and liquidity do not directly affect the vulnerability of Islamic banks. Liquidity and financing in Islamic banks are risks that are not very prominent in causing a bank to become vulnerable.

The higher the ratio of operating expenses to operating revenue indicates the more significant the operational burden of Sharia banks, which can reduce the value of the vulnerability of Sharia banks. This means that the higher the operational expenses of Islamic banks, the lower their vulnerability, which increases their bankruptcy rate. This supports previous findings that Islamic

bank valuation is more appropriate to use to measure the value of Islamic banks (Bayumi, 2016).

Risk mitigation is carried out to reduce, move and divert risks that have been identified. Risks can be reduced but not eliminated, giving rise to residual risks. Risk mitigation or risk management can be done through interviews, brainstorming or distributing questionnaires to experts in the field so that they know how to handle these risks. Risk mitigation strategies are essential because companies will be able to identify the right strategy to deal with these risks (Mohamad Tulus, 2023).

Things that can be done in risk mitigation or risk handling are as follows (Mohamad Tulus, 2023):

1) Risk Retention
   Actions to withhold risk or risk retention are taken because the impact of the risk is still within acceptable limits.

2) Risk Reduction
   Reducing risk is done by understanding the risk itself and taking preventive action to reduce the risk that is expected to occur. This risk reduction has the possibility of remaining risks but within acceptable levels.

3) Risk Transfer
   Moving risk or risk transfer is an action taken to transfer some or all of the risk to a party that can control it.

4) Risk Avoidance
   This action of avoiding risk or risk avoidance is carried out by avoiding or rejecting activities with a high level of loss.

4.4 Vulnerability and Risk: Change and Challenges to Achieving Sustainable Goals

The findings in this research indicate that profitability variables play an essential role in determining bank vulnerability. There are many risks and even problems with Islamic banking in Indonesia that must be overcome. Solving the problems faced must use integrative and interconnective methods because many Islamic banking problems are not resolved based on the source of the problem (Bayumi, 2018). The challenges arise because Indonesia still needs the right human resources to manage Sharia banking properly.

The challenge in resolving Islamic banking risks is that there is no habit of sitting down together and listening to the problems faced starting from the grassroots. However, on the other hand, deliberation is often interpreted as an activity to increase costs. Synergy is needed to jointly encourage the progress of an inclusive and moderate Sharia financial ecosystem to achieve sustainable goals.

Achievements of more sustainable development can be achieved if research findings, knowledge, insight, experience, and experts can meet in one room to solve the problems faced. The digitalization era is a real challenge facing the 6.0 era. Gen Z and Gen Alpha are starting to dominate this digital world, two segments classified as digital natives. This generation is characterized by liking to move activities from the virtual environment to the real world or vice versa. Therefore, Marketing 6.0 offers marketing strategies relevant to their characters and preferences, such as multisensory, interactive and engagement. This is the real challenge facing the future (Kurniawan, 2023).

Sustainable development is a concept that consists of three main pillars: economic sustainability, social sustainability, and environmental sustainability. These pillars are closely linked and dependent on each other., which depend on and strengthen each other (Ferawati, 2018). SDGs are integrated and interconnected and cannot be separated (Bayumi & Diem, 2023; Bayumi & Jaya, 2018), This entity's primary role is to ensure balance and stability across several dimensions such as economic, social, and environmental, with the ultimate goal of attaining sustainable development. The achievement of the Sustainable Development Goals (SDGs) is dependent on the interrelation between them, with global governance and partnerships playing crucial roles (Ordonez-Ponce et al., 2021).

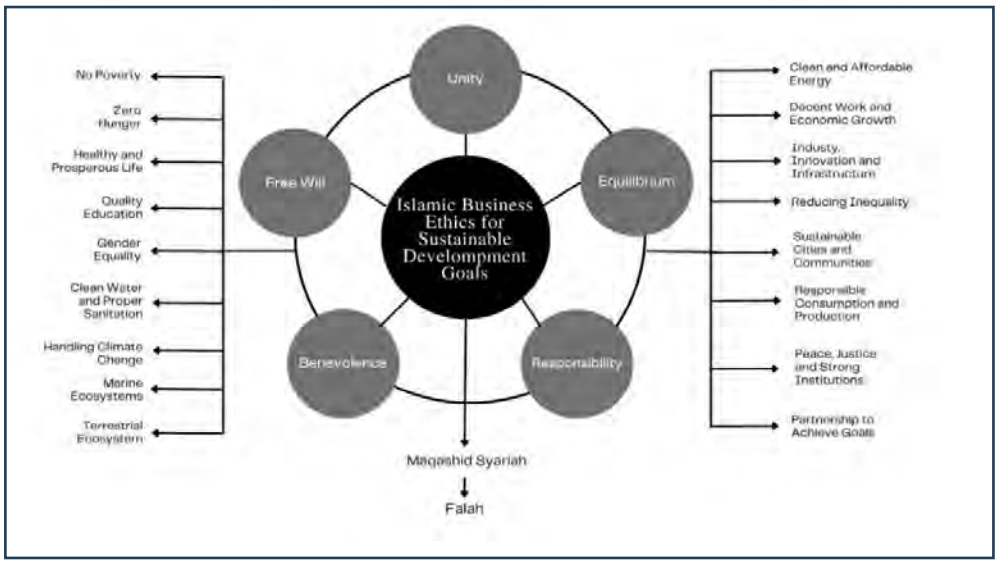

Figure 4
Integration-Interconnection of Islamic Business Ethics for SDGs
Source: Developed by authors

The United Nations has developed Sustainable Development Goals (SDGs), where the SDGs aim to make efforts to eradicate poverty, solve various problems in the world, protect the earth, and ensure that by 2030, everyone enjoys prosperity and peace. The SDGs consist of 17 interconnected global goals that serve as a roadmap to a more egalitarian and sustainable future for all (Al-Raeei, 2023; Ferdous, 2021; Mohamad Taghvaee et al., 2023; Singh et al., 2022).

The policy to achieve sustainable development goals through Sharia banking means that the 17 SDG programs are responsible for creating global balance. The risks in Islamic banks cannot be resolved with one paradigm and method. Everything requires an integrative and interconnective approach so that every management level in Sharia banking optimizes its actions to achieve the SDGs. The findings in this research philosophically initiate the implementation of Sharia banking activities by Islamic business ethics (Bayumi & Diem, 2023), as shown in Figure 4.

The recommendations of this research are the basis for efforts to achieve more sustainable development. The following recommendations are offered (Bayumi & Diem, 2023):

1.1. Constructing Integration and Interconnection of Indonesia's Current Economic and Control Systems (Bayumi, 2018);
1.2. The scientific revolution (Muala, 2017), can begin with adequate educational

standardization to prevent the recurrence of generations of people who are unable to comprehend the context of the issue, particularly when it comes to issues of religion, science, and culture.;

1.3. Take heed of the manner in which individuals are progressing, acknowledging that each person has a duty to guarantee the well-being of others;

1.4. Create a system of objective, integrated assessment;

1.5. The presence of an effective control system in commercial operations;

1.6. Maintain a comprehensive and trustworthy data bank;

1.7. Make an effort and pledge to honor religious moderation in any way that it manifests itself. (Wahyuddin, Imam; Cahyono, Fajar; Alfaris, 2022);

1.8. Promoting parity across diverse domains; and

The presence of social security measures like as zakat, waqf, and efficiently structured infaq.

5. CONCLUSION

The results of this study provide empirical evidence that vulnerability is significantly impacted by the profitability risk variable. For the financing risk and liquidity risk variables, each variable does not affect the vulnerability of Islamic banks. However, all independent variables in this research simultaneously influence the vulnerability of Islamic banks. This indicates that the risks in Islamic banks do not stand alone and then become a problem of vulnerability and even bankruptcy of Islamic banks. This research can confirm previous findings and contribute to supporting the progress of sharia banking not only in Indonesia but also globally. This research was also conducted using a mixed-method approach to provide a more comprehensive explanation so that the research findings answer quantitative questions and sensitive qualitative problems. The limitation of this research is the sample because Sharia banking is still in development, so not all Sharia banks meet the sample criteria. Recommendations for further research are expected to accommodate a wider variety of cases and samples to produce a comprehensive understanding.

Acknowledgement

The paper entitled Vulnerability Disclosure to Mitigate Islamic Bank Risks for a More Sustainable Development Goals is a scientific work which is the result of research supported by the Raden Fatah State Islamic University, Palembang. We thank the Chancellor of the State Islamic University, Raden Fatah Palembang, who fully supported the completion of this paper, so that we received accommodation and funds to present this paper at the International Conference in Technology, Humanities and Management (ICTHM 2024) in Istanbul, Turkiye. We hope that the full support from the University can be a motivation for us to continue working and bring the name of the university to the global level.

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BANK CAPITAL ADEQUACY RATIO AND BANK PERFORMANCE IN ASEAN FOUNDING COUNTRIES

Chandra Febrianto, Felisitas Defung*
Mulawarman University, Indonesia

Corresponding author: felisitas.defung@feb.unmul.ac.id

Abstract

The economic progress and development of the country are primarily dominated by the existence of commercial banks so that the banking industry is obliged to maintain stability in both performance and contribution made to the country. This is certainly a big challenge because banks are required to be able to stay away from bankruptcy, even financial crises. Therefore, this study was conducted to identify the elements that determine the Capital Adequacy Ratio and bank performance as well as the relationship between the two variables. There are 115 observations used in this study, consisting of 23 commercial banks in Indonesia, Malaysia, Singapore, Thailand and the Philippines over the period 2018 to 2022, with one dependent variable which is CAR and independent variables including Domestic Credit to Private Sector by Banks, Return on Assets, Total Assets, and non-performing loans. The results show that Capital Adequacy Ratio and Bank Performance have a significant relationship simultaneously and changes in ROA, Total Assets and non-performing loan ratio have a significant influence on the dependent variable. So this finding shows that each commercial bank can control variables to be able to maintain stability through the bank's capital adequacy level.

Keywords: *Economics, Banking, Journal, CAR, ASEAN, Bank Performance.*

1. INTRODUCTION

Financial crisis of developed countries around the world that occurred in 2008/2009 gave rise to new financial stability policy measures. The one that stands out the most is the bank's capital-based policy instrument aimed at improving long-term financial stability (Comba, 2018). Capital in the banking industry is very important because it acts as a buffer against risks that may occur. Bank capital do an important role for economics in a huge scale. For simply reason, a bank's ability to absorb economic shocks and its risk-management incentives are both influenced by how much capital it possesses (Thakor, 2014).

Saleh & Abu Afifa (2020), acknowledging that financial sector development plays an important role in reducing income inequality because financial services make people more productive, such as developing businesses, and explaining that financial sector development plays an important role. When monetary policy is carried out in an optimal manner to meet bank demand, it raises the real rate of interest outside of what Taylor's law requires and is more than what is needed to stabilize inflation (Mendicino et al., 2020). Ridzuan et al. (2021) explained that a well-developed financial sector could have the effect of narrowing inequality in the long term through the ease with which companies can access capital, which is an important input to increase productivity and company performance. However, according to Etudaiye-Muhtar et al. (2017) the majority of the banking

sectors of ASEAN countries are developing countries, so the system is relatively underdeveloped.

Therefore, the purpose of this study is to examine the impact that the growth of the banking and financial sectors has had on the capitalization ratio of banks in relation to their objects in ASEAN member nations.

The higher ratio of bank capital adequacy, the better is the bank's ability to bear the risk of credit or earning assets. Obtained from the annual reports of Bank Mandiri and Bank Rakyat Indonesia, Bank Mandiri has a smaller capital adequacy ratio in a time series from 2018 to 2021 when compared to the larger bank in terms of total assets, Bank Rakyat Indonesia. This data shown that larger banks tend to have higher capitalization ratios. This contradicts Rahman et al. (2015) research, where demonstrate that large banks maintain less capital and take more risk.

Figure 1. Total Assets of Bank Mandiri & BRI Indonesia

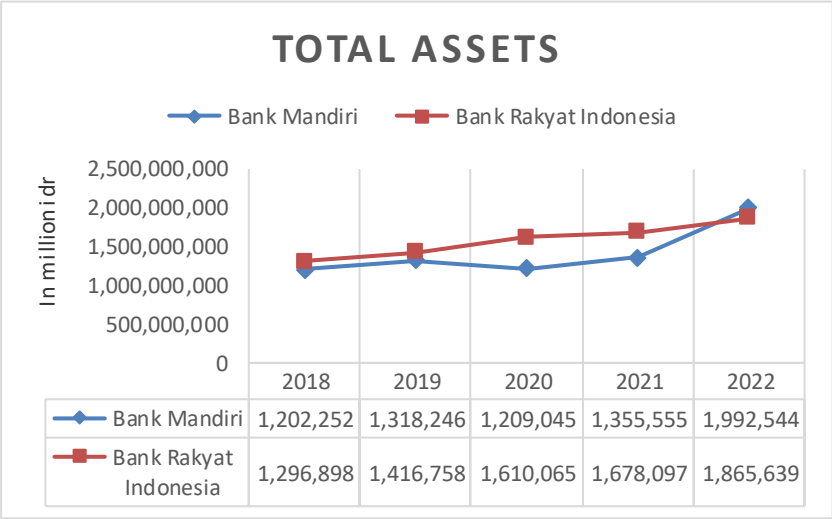
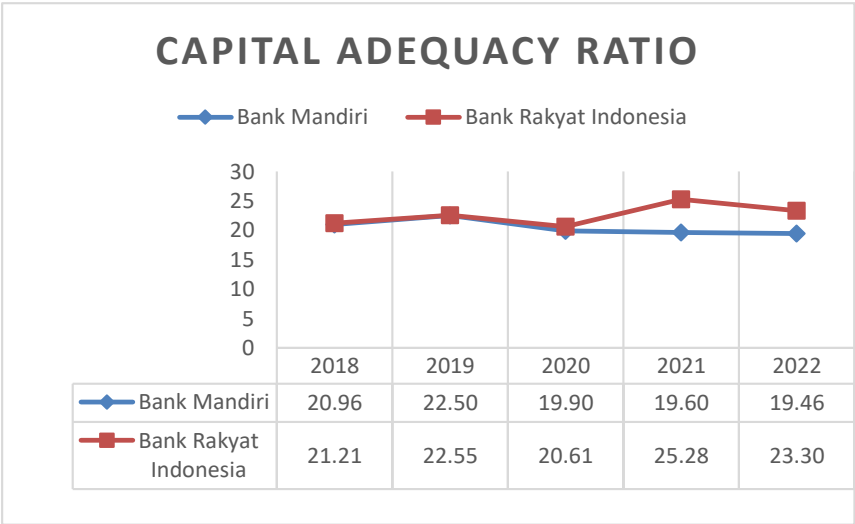


Figure 2. Capital Adequacy Ratio of Bank Mandiri & BRI Indonesia



Ridzuan et al. (2021) explained that a well-developed financial sector could have the effect of narrowing inequality in the long term through the ease with which companies can access capital, which is an important input to increase productivity and company performance. However, according to Etudaiye-Muhtar & Abdul-Baki (2021) the majority of the banking sectors of ASEAN countries are developing countries, so the system is relatively underdeveloped. Therefore, the purpose of this study is to examine the impact that the growth of the banking and financial sectors has had on the capitalization ratio of banks in relation to their objects in ASEAN member nations.

Based on the background information that has been provided, a number of issues can be recognized and determined;

1. Does financial sector developments affect the capital adequacy ratio significantly?
2. Does bank profitability affect the capital adequacy ratio significantly?
3. Does bank size affect the capital adequacy ratio significantly?
4. Does bank risk affect the capital adequacy ratio significantly?

2.LITERATURE REVIEW

Economic growth is supported strategically by the financial sector, which also acts as a stimulant for the economy. Banks are required to employ sound banking practices to sustain a system of the economy due to the impact on systemic risks that can disrupt a country's system of economy if a bank's collapse. The most relevant metric to assess bank performance is profitability (Haryanto et al., 2019). In order to speed up a nation's general economic growth, Banks serve as intermediary companies, collecting money from the general people in the form of savings and then returning it back to them in the form of credit or other products. (Margono et al., 2020).

2.1 Financial Sector Development

In the country's economic activities, well-functioning financial intermediaries stimulate technological innovation by identifying and financing the businesses with the best change for successful implementation of innovative products and processes (Y. Chen & Hsu, 2015). Changes in the domestic and global environment have an impact on capital adequacy. The current and anticipated economic conditions of the overall economy as well as the particular area that the bank serves will surely have an effect on the current situation of banks.

Whether it comes to encouraging economic development, credit to private ownership and government-affiliated companies greatly exceed credit to the public sector. The research also concluded that a country's economy can develop significantly if private ownership has access to financing developments in the economic sector so that this encourages the banking industry to play a more important role as a financial intermediary. Therefore, the variable domestic credit to private sectors by banks (% of GDP) are chosen to interpret financial sector development variable in this research.

2.2 Bank Profitability

One of the key factors affecting capital adequacy ratio is bank earnings. Several researchers have investigated correlation between profitability and bank capital in the banking industry. One of the examples, K Ozili (2021) concludes in their study that the profitability of African commercial banks is positively impacted by regulatory bank capital. According to Berger & Bouwman (2013), because bank capital maintains small banks alive, it has an impact on their performance. It also improves the performance of large and midsize banks, especially in times of crisis. According to Mendicino et al. (2020), bank capital and bank performance do not have a linear relationship. They demonstrate an inverse relationship between capital and profitability in large banks and a

positive relationship in small banks.

2.3 Bank Size

According to Rahman et al. (2015) research, Bank size has significant negative effect on bank capitalization. Otherwise, Terraza (2015) presented different results. The primary source of liquidity is large banks; yet, as the study paper shows, larger banks' profitability decreases when liquidity levels rise, whereas smaller banks' profitability decreases when liquidity levels rise. There are positive relationship between capitalization ratio and profitability.

Authorities are motivated to avoid financial institution failures during financial crises since doing so would put the financial system and, by extension, the larger economy, at serious danger. The size of the bank can have significant effects on its capitalization level and risk-taking behaviors. This is due to the relationship between investment opportunities, risk diversification and also access to equity capital to bank size. For related example, Banks that are larger in size can operate with a much lower level of capital due to their easy access to the capital market (equity). As a result, these large financial institutions are able to engage in a wide range of operations and diversify their holdings to lower credit risk.

2.4 Bank Risk

Credit is commonly the process either directly or indirectly in borrowing and lending money. Commercial banks routinely allowing clients to acquiring new loans for the purpose to complete investment banking operations. Based on Chen (2012) research, there are several possible sources of risk in banking sector, such as liquidity risk, credit risk, political risk and market risk. But unfortunately, the highest risk that bank would face in banking industry is credit. In the case of banks, credit risk and related issues may be of greater concern due to a higher level of risk perception. This is due to certain customer characteristics and business conditions that they perceive, which in most cases require full empirical testing. In addition, while banks have the ability to absorb losses from normal profits, unexpected losses can arise that cannot be absorbed from normal profits (Asikhia, 2013).

Credit risk is the risk related with a loan issued by a bank that will not be repaid in whole or in part on time. In another words, credit risk is the loss suffered by a bank if a borrower fails to repay its debt by a specified date or maturity of the loan, which can lead to bankruptcy if not managed properly. The persistent appearance of bad loans is one of the primer reasons leading to the failure of the banking system. The habit of banking is delicate because more than 85% of a bank's liabilities are made up of depositors. Although banks using loans as their major source of revenue, they are also susceptible to a number of risks that can threaten the organization if not properly analyzed and handled. In the meanwhile, banks' ability to survive is mostly dependent on how well they manage risk., majority of bank managers overlook this aspect of their work in favor of their personal agendas. This can be overcome by adopting risk management plan, in which banks can or completely or partially avoid the negative impacts of credit risk. It requires a synchronous and comprehensive credit risk management framework and is crucial to the survival and improvement of banks' performance.

2.5 Capital Adequacy Ratio

Bank Capitalization mainly includes capital from retained earning and stock issuance. There are two basic concepts in the literature that used in bank capitalization: Real capital and legal capital. Real capital generally known as physical capital and includes equity. It is sometimes referred to as the capital ratio and is generally expressed as the equity to total asset ratio. Legal capital is capitalization that measured on a banking risk basis and maintained according to rules determined by a country's banking supervisory authority. The concept of capital is measured by the risk-based

capital ratio, which is the capital to risky asset ratio. Rahman et al. (2015). Bank capital affects three things at the very least: the bank's safety, its capacity to refinance at a reasonable cost, and its readiness to liquidate or demand repayments from borrowers.

Capital Adequacy Ratio (CAR) or bank capitalization is an critical fundamental for banks. Because it can support the seamless running of a bank, capital performs a crucial role in the banking industry (Sari, 2013). The CAR ratio measures a bank's capacity to cover the capital loss risk associated with its banking activities as well as to supply capital for the bank's needs in business development. CAR is also referred to as the ratio that considers the amount of independent capital, capital from external sources (such as the public), loans (debt), and other sources that are used to finance all risky bank assets.

The CAR ratio shows the bank's ability to use financial resources for business development needs, and anticipate possible losses from the credit channel. The higher a bank's CAR, the more likely it is to pay. Banks that have a high capital adequacy ratio are better able to finance banking operations and can withstand the risk of any credit or operating asset exposure. A strong capital adequacy ratio suggests that the bank will be able to mobilize money from this source for producing asset portfolios with flexibility, as the bank's capital is also highly significant. (Hashmi et al., 2021).

Banks that can meet the CAR show that the bank is in compliance with the bank's regulations. Banks are increasingly complying with regulations to demonstrate healthy business. An indicator of a bank's health connected to the RCA. A bank that has a high CAR is demonstrably healthier. The higher the CAR, the better the ability to absorb risk.. In addition, a bank with a high CAR will generate a healthy, developing and competitive banking structure at national and international levels (Haryanto et al., 2019).

2.6 Hypothesis Development

2.6.1 The Effect of Financial Sector Development on Capital Adequacy Ratio

A detailed information needed for capital planning, so that the actions to be taken can be in accordance with expectations (Comba, 2018). The magnitudes of both investment and consumption move in the same direction over the near term: either downward into a recession or both upward into full employment and even further into an inflationary spiral. Alraheb et al. (2019) indicated that in MENA nations, institutional factors have a major impact on bank capital ratios. The study's overall findings are consistent with past research suggesting that indicates Nigeria's economy could grow considerably if funding for private ownership was granted access in significant economic sectors. The banking sector is the main provider of credit for private ownership. It is an essential channel for financial intermediation and the mobilization of capital for lucrative ventures (Ogbeide-Osaretin & Aliu, 2022). The previous study has shown how financial sector has no significant effect on capital adequacy ratio (Baum et al., 2016).

H1: Financial Sector development has positive impact to Capital Adequacy Ratio.

2.6.2 The Effect of Bank Profitability on Capital Adequacy Ratio

The most relevant metric to assess bank performance is profitability (Haryanto et al., 2019). In order to speed up a nation's general economic growth, Banks serve as intermediary companies, collecting money from the general people in the form of savings and then returning it back to them in the form of credit or other products. (Margono et al., 2020). The banks might attempt to increase profits, or they might use a different tactic that focuses on the bank's retained earnings. The bank can try to lower the amount of profit it distributes as dividends. Increasing the difference between the interest rates it charges on loans and the interest rates it pays on funding would be the most straightforward method to achieve this (Cohen & Scatigna, 2016). The previous study has shown that bank profitability has significant impact on banking capital adequacy ratio (Etudaiye-Muhtar et

al., 2017). The same outcome has been observed in Egyptian banks as well; in order to meet the risk associated with a rise in return on assets brought about by an expansion of the loan and asset portfolio, banks must raise their capital adequacy ratio (Balili & Tola, 2023).

H2: Bank Profitability has positive significant impact to Capital Adequacy Ratio.

2.6.3 The Effect of Bank Size on Capital Adequacy Ratio
Large banks are encouraged to obtain more equity capital in order to reduce their exposure to excessive risk, and this thing cause the franchise value hypothesis holds that the size of the bank has a favorable impact on the bank capital ratio. An increase in bank size will increase the bank's ability to increase external financing at lower costs through the large number of branches, which will result in a decrease in CAR. Numerous studies have demonstrated a negative relationship between bank size and CAR. The larger the bank, the more diversified the risk (Bitar et al., 2018). In any other case, El-ansary & El-masry (2019) hypothesized a positive relationship between size and CAR since bigger banks will likely engage in more operations and activities that increase risk. Depositors will consequently demand a guarantee, raising the bank's CAR. In the previous research, Size variable are negative and significant, demonstrating the significant negative impact that bank size has on capital (Rahman et al., 2015).

H3: Bank Size has negative significant impact to Capital Adequacy Ratio.

2.6.4 The Effect of Bank Risk on Capital Adequacy Ratio
Analysts view the ratio of credit to customer deposits as a key indicator of a bank's profitability, particularly when it comes to external advantages like securities operations and because banks continue to play a crucial role in funding economic activity, bank performance is a major concern for those involved in the economy and for policymakers (Terraza, 2015). Non-performing loans variable are negative and significant, demonstrating the significant negative impact that bank risk has on capital (Rahman et al., 2015; Shingjergji, 2015).

H4: Bank Risk has negative significant impact to Capital Adequacy Ratio

3.METHODOLOGY

This study's analytical tool employs the Multiple Linear Regression method of analysis. Multiple regression analysis using the SPSS will produce a model/equation that will be used to see the relationship between the independent variables and the dependent variable. To ascertain the direction and degree of the independent variables' influence on the dependent variable, multiple linear regression analysis was carried out. Multiple linear regression tests, descriptive statistics, UI data quality, and hypothesis testing were used to statistically evaluate this study.For data with several predictor variables and a single end unit of observation, a multiple linear regression model is an extension of the simple linear regression model. The correlation between independent and independent variables can be estimated using models/equations, which already mentioned in the previous sub-chapter. OLS became a model in the regression method in this study with the aim of minimizing the sum of squared errors. When estimating the interval and evaluating the population regression parameters, the linear regression model that is employed with the OLS approach needs to satisfy the BLUE (Best Linear Unbiased Estimator) assumption (Lakshmi et al., 2021).

This is the table to determine variable value;

Table 1. Calculation Formula

CAR	$CAR = \frac{(Tier\ I\ Capital + Tier\ II\ Capital)}{Risk-Weighted\ Assets} \times 100$	(Balili & Tola, 2023)
Financial Sector Development	$Domestic\ Credit\ to\ Private\ Sector\ by\ Banks\ (\%\ of\ GDP)$	(Etudaiye-Muhtar et al., 2017)
Bank Profitability	$\frac{Net\ Income}{Assets} \times 100$	(Tahir et al., 2020)
Bank Size	$Log\ Natural\ Total\ Assets$	(Shingjergji, 2015)
Bank Risk	$\frac{(Total\ Substandard + doubtful + loss\ credit)}{Total\ credit} \times 100$	(Nugroho et al., 2021)

The sample in this study is 23 banks in five of ASEAN countries including Indonesia, Singapore, Malaysia, Thailand and Philippines. The determination of the 115 banks included in this research sample was carried out through the following classification;

1. The company has been listed on the stock exchange in each country.

2. The company is one of the largest banks in terms of total assets.

3. The bank's complete financial reports and data are available for the period 2018 to 2022.

The quantitative data types employed in this study are obtained from a variety of secondary data sources. Information gathered from a second party source that can be access in books, journals, articles, reports, and other publications. However, the data set was obtained through the annual report of each bank in the period 2018 to 2022 and also domestic credit to private sector by banks ratio on the *data.worldbank.org* website.

4.RESULT AND DISCUSSION

In order to reduce the possibility of producing misleading findings, it is necessary to report the most relevant descriptive statistics in a systematic way. Since the outcomes of statistical analyses serve a crucial role in deciding the future direction of the sciences, the appropriate application of descriptive statistics enables administrators and providers to more properly analyze the impact of policies and programs. (Franzese & Iuliano, 2018). Data processing tools using Statistical Program for Social Science (SPSS) with linear regression model.

4.1 Descriptive Statistic

Table 2. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
DCR	115	.0	133.8	79.985	44.2357
ROA	115	.13	4.00	1.3885	.83789
Ln_Total Assets	115	23.28	27.04	25.1257	.82906
NPL	115	.30	10.09	2.4484	1.38486
CAR	115	13.00	25.80	18.2265	2.53659
Valid N (listwise)	115				

Based on table 1, it can be seen from the 23 banks studied, the minimum value of the data obtained is 0.0. This is due to the unavailability of data on domestic credit to private sector by banks in 2021 and 2022 belonging to Singapore. The maximum value in this research data is also in the financial sector development variable at 133.8, which is the ratio of domestic credit to private sector by banks in Malaysia in 2020 when the covid outbreak hit the world. Banks in the Philippines have the lowest average capital adequacy ratio compared to banks in other countries in this study at 15.76%. The lowest CAR ratio in the entire sample used is 13.00% in the data of Rizal Commercial Banking Corporation (RCBC) in 2022. This ratio fell after the covid-19 period that hit the economy where RCBC's capital adequacy ratio had jumped sharply at 17% and 18.40% in 2020 and 2021 respectively.

4.2 Multicollinearity Test

The multicollinearity test is part of classical assumption tests such as the normality test and heteroscedasticity test which have been described in the previous sub-chapter. If a regression model detects a correlation between independent variables, it can be tested using the multicollinearity test. There should be no correlation between independent variables in a suitable regression model, and there should be no symptoms of multicollinearity. Multicollinearity occurs when two or more independent variables are correlated in a regression model. A little multicollinearity will sometimes cause a big problem, but when it is too much or too high it will be a problem to solve (Jamal I., 2017).

Table 3. Coefficients Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-9.237	6.322		-1.461	.147		
	DCR	.009	.005	.160	1.878	.063	.755	1.325
	ROA	2.002	.260	.661	7.701	.000	.742	1.348
	Ln_Total Assets	.895	.246	.293	3.641	.000	.848	1.180
	NPL	.596	.153	.325	3.901	.000	.787	1.270

a. Dependent Variable: CAR

Testing for symptoms of multicollinearity can be seen with the Variance Inflation Factor (VIF) value which must not exceed 10 and the tolerance value must be more than 0.10. In table 4.2.2, There are no indications of multicollinearity in this study, as can be observed from the VIF values for the four independent variables, which have values no higher than 10, and the tolerance values, which show values no lower than 0.10.

After testing the suitability of the data, a test will be carried out to determine the influence of the independent variables consisting of Financial Sector Development (Domestic Credit to Private Sector By Banks (DCR)), Bank Profitability (ROA), Bank Size (TA) and Bank Risk (NPL) on 23 banks in 5 Southeast Asian countries partially.

- From the data presented above, it can be seen that the alpha value for the DCR coefficient is higher than 0.05 (0.063 > 0.05), so it can be concluded that H0 is accepted and H1 is rejected,

which means that the Financial Sector Development do not partially affect the Capital Adequacy Ratio.

- It is certain that the ROA coefficient's alpha value is less than 0.05 (0.000 < 0.05), so it can be concluded that H0 is rejected and H1 is accepted, which means that the Bank Profitability has an effect on the Capital Adequacy Ratio partially.
- The table shown that the alpha value for the TA coefficient is lower than 0.05 (0.000 < 0.05), so it can be concluded that H0 is rejected and H1 is accepted, which means that the Bank Profitability has an effect on the Capital Adequacy Ratio partially.
- As can be observed, the NPL coefficient's alpha value is less than 0.05 (0.000 < 0.05), so it can be concluded that H0 is rejected and H1 is accepted, which means that the Bank Profitability has an effect on the Capital Adequacy Ratio partially.

4.3 Simultaneous Significance Test

The results of the simultaneous significance assessment can be seen in the ANOVA table to see whether the significant value is lower than 0.05 or higher than 0.5 to draw conclusions about the influence of the independent variable on the dependent variable.

Table 4. ANOVA Table

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	292.076	4	73.019	18.195	.000[b]
	Residual	441.432	110	4.013		
	Total	733.508	114			

a. Dependent Variable: CAR

b. Predictors: (Constant), NPL, DCR, Ln_Total Assets, ROA

In the results shown in table 3. above, it can be seen that the significant value is lower than 0.05 (0.05 > 0.000). So it can be concluded that the H_0 is rejected and H_1 is accepted, which means that the variables Financial Sector Development, Bank Profitability, Bank Size and Bank Risk simultaneously significant influence the Capital Adequacy Ratio.

4.4 Multiple Linear Regression Equation Test

Referring to the table shown above, a regression equation can be formulated to determine the effect of DCR, ROA, TA and NPL on CAR as follows:

$$Y = -9.237 + 0.009DCR + 2.002ROA + 0.895TA + 0.596NPL + \varepsilon$$

Description:

Y = CAR (Capital Adequacy Ratio)

a = Constant

X_1 = DCR (Domestic Credit to Private Sector by Banks (% of GDP))

X_2 = ROA (Return on Assets)

X_3 = TA (Total Assets)

X_4 = NPL (Non-performing Loans)

ε = Error term

From the coefficients of the multiple linear regression equation displayed, it can interpreted as follows;

1. Regression coefficient for a constant is -9.237, indicating that if the DCR, ROA, TA and NPL variables are zero then the CAR is -9.237 times. Meanwhile,
2. The DCR variable of 0.009 indicates that the CAR will increase by 0.009 times if the DCR variable increases by 1 unit while the other X variables remain static.
3. The ROA variable is 2.002, indicating that if the ROA variable increases by 1 unit while the other X variables remain constant, the CAR will increase by 2.002 times.
4. The TA variable worth 0.895 shows that if the TA value increases by 1 unit while the other X variables remain constant, the CAR will increase by 0.895.
5. The NPL variable, which has a value of 0.596, indicates that the CAR will rise by 0.596 if the NPL value rises by one unit while the other X variables remain identical.

Based on the findings of the showed preceding analysis, there are four variables that influence the capital adequacy ratio, specifically financial sector development, bank profitability, bank size and bank risk. This can be seen in the significant value of each independent variable that is less than 0.05. There is no variable has no effect on the adequacy ratio due to the significant value of each of the independent variables is lower than 0.05.

5.CONCLUSION

Conclusions on the research findings presented in the previous section can be made based on;

A. Based on the t test (partial), it was found that the variables financial sector development (DCR), bank profitability (ROA), bank size (TA), and bank risk (NPL) on the capital adequacy ratio (CAR) were:

1. Financial sector development has a positive effect on the capital adequacy ratio.
2. Bank profitability has a significant positive effect on the capital adequacy ratio.
3. Bank size has a significant positive effect on the capital adequacy ratio.
4. Bank risk has a significant positive effect on the capital adequacy ratio.

B. Based on the results of the F test, the independent variables, namely financial sector development, bank profitability, bank size and bank risk simultaneously significant influence the capital adequacy ratio.

C. Based on the regression coefficient on each variable, it can be explained that the variable that has the most dominant influence on the capital adequacy ratio is bank profitability. It can be seen by looking at the highest beta coefficient when compared to other independent variables with a value of 2.002 which is the highest number.

Acknowledgement

Very deep gratitude to The Lord who has given His grace and his presence so that this journal can be completed well and properly.

I'd like to thanks for the Department of Economics and Business and my supervisor at Mulawarman University for permission to publish this paper.

I would also like to thank my supervisor as well as the corresponding author of this paper, Mrs. Defung for the guidance and knowledge that has been given.

And finally, thank you very much to my closest family and relatives who also supported the process of writing this scientific paper.

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THE EFFECT OF ORGANIZATIONAL CHANGE IN HUMAN RESOURCES DEPARTMENT (HRM) AND WORKING CULTURE ON ORGANIZATIONAL COMMITMENT THROUGH THE MEDIATING VARIABLE RESISTANCE

Salshabila Anggrahini Subekti*, Tetra Hidayati, Wirasmi Wardhani

Mulawarman University, Indonesia

*Corresponding author: anggrahinisalshabila@gmail.com

Abstract

The company's performance is very dependent on employee commitment, which is currently still not optimal. This quantitative study was designed to examine the effect of organizational change in Human Resource Department (HRM) on organizational commitment, the effect of organizational culture on organizational commitment, the effect of organizational change in HRM on organizational commitment when mediated by resistance and the effect of organizational culture on organizational commitment when mediated by resistance. This research involved sample of 33 employees at Retail Company in Samarinda who were used as research subjects. Data was collected using a questionnaire distributed via Google Forms. Furthermore, this research was analyzed using descriptive statistics and the Partial Least Squares (PLS) as analysis tool. The research results found that organizational change in Human Resource Management has a positive and significant effect on resistance, organizational culture has a positive and non-significant effect on resistance, organizational change has a negative and significant effect on organizational commitment, organizational culture has a positive and non-significant effect on organizational commitment, resistance has a positive and non-significant effect on organizational commitment. The resistance also is able to mediate organizational change and organizational culture on organizational commitment.

Keywords: *Organizational Change in Human Resource Department, Working Culture, Resistance, and Organizational Commitment*

1. INTRODUCTION

In the era of globalization and increasingly intense business competition, organizations are confronted with the need to continuously adapt and change in order to survive and thrive. Organizational changes often involve changes in structure, processes, and work culture. These changes can be driven by the need for efficiency within the company or business expansion, which requires the company to adjust to the dynamics of growth. However, these changes are often met with resistance from employees, which affects their commitment to the organization. This is because not everyone expects or welcomes change and tends to prefer to remain in an environment that offers stability. Organizational changes can encompass the introduction of new technologies, restructuring, company mergers, or changes in internal policies. These changes can alter the dynamics of work culture, values, and established norms within an organization. In this context, employee resistance emerges as a natural reaction to such changes, which can affect the level of employee commitment to the organization. Nevertheless, this can certainly become an issue for any

company or organization currently facing internal structural changes, including one of Indonesia's multinational companies, Kawan Lama Group.

Kawan Lama Group is a well-known multinational company based in Indonesia. Kawan Lama Group is a national-scale multinational company established in 1955 by its founder, Wong Jin. It currently operates in six business sectors: Industrial & Commercial, Consumer Retail, Food & Beverage, Property & Hospitality, Commercial Technology, and Manufacturing & Engineering. It operates in various industries, including retail, distribution, and manufacturing. The company has a diverse portfolio of businesses, ranging from home improvement and building materials to electronics and office supplies.

Like many organizations, Kawan Lama Group has experienced the need for organizational changes over time. These changes can be driven by factors such as market dynamics, technological advancements, or the pursuit of operational efficiency. Some common types of organizational changes that Kawan Lama Group may have encountered include the implementation of new technology systems, reorganization of departments or business units, mergers or acquisitions with other companies, or adjustments in internal policies and procedures.

In the company's history, Kawan Lama Group began as a small business in a grocery store started by Mr. Wong Jin in Glodok, Jakarta in 1955. The store, measuring 3x3 meters, initially specialized in selling only one type of product, namely household tools. Over time, as the business was carried on by the second generation of Mr. Wong Jin, namely Kuncoro Wibowo, the store grew into a private company named PT. Kawan Lama Sejahtera in 1980. As the company's business focus expanded, PT. Kawan Lama Sejahtera eventually changed its name to Kawan Lama Group, encompassing various subsidiaries under the Kawan Lama Group umbrella, each operating in six different business sectors.

The business expansion carried out by Kawan Lama Group demonstrates the company's ongoing commitment to developing business in Indonesia. Each subsidiary, with its own distinct characteristics, contributes to making Kawan Lama Group a diversified multinational company. Therefore, in order to address the growing business demands and diverse work culture, Kawan Lama Group has a Human Capital Department that functions to support the human resource needs within the operational business units.

The Human Capital Department, also known as the Human Resources (HR) Department, is one of the support departments within Kawan Lama Group that oversees all employee-related activities. This department plays a crucial role in the organization by managing the human assets within the company. Its responsibilities include planning, implementing, and evaluating HR development programs, recruitment and selection, performance management, compensation and benefits administration, fostering a positive work culture, enforcing company policies, and more.

The role of the HC department makes its existence important and vital within the organization. However, in June 2023, the HC department underwent organizational changes, resulting in changes to its structure and functions. Prior to the changes, each employee handled all employee-related activities, known as Human Capital Generalists. However, after the organizational changes, the department's functions became specialized in three areas: training, recruitment, and services. Additionally, this organizational change also affected the chain of command, as it shifted from being divided by geographical areas to random areas based on the predetermined Manpower Planning (MPP) quota.

This change certainly has an impact on the employees within the department. Since the organizational changes, there has been an increase in employee turnover, with employees leaving the company. Based on a brief interview with one of the employees in the department, this

phenomenon has had a significant effect on the employees. They are required to change their work style from handling various tasks in a general capacity to focusing on specific areas. Furthermore, based on further information, the turnover is likely occurring due to the increased workload and the growing number of Manpower Planning (MPP) processes, which have overwhelmed the employees.

Meanwhile, the same sentiment is shared from the operational team's perspective, as they are also affected by these changes. Based on interviews with one manager and employees at the location, it was found that the organizational changes impacted coordination and employee-related needs for the operational team. Prior to the organizational changes, the operational team was accustomed to the values and working methods of a single HC (Human Capital) responsible for their city. However, after the organizational changes, the operational team was required to adapt to and align with multiple HC units instead of just one. Since the organizational changes, there have been alterations in recruitment practices that affect the team's composition, the availability of skills, and the ability to meet the Manpower Planning (MPP) requirements.

Additionally, there have been changes in communication among team members due to differences in the working methods of the HC units, resulting in less effective communication. These factors have led to dissatisfaction among the operational team and disagreement or resistance towards the organizational changes. This certainly poses a threat to the company because the management expects employees to adapt to the organizational changes, continue working as usual, and demonstrate loyalty to the company. However, the rejection or resistance from employees causes the changes to alter the existing organizational culture.

Employee commitment plays a crucial role in achieving organizational goals, as committed employees tend to be more productive, loyal, and positively contribute to the organization's success. Therefore, understanding how organizational changes and work culture can affect employee commitment through the mediating variable of resistance is important to further study.

The importance of this research lies in the effort to identify the factors that mediate the relationship between organizational changes, work culture, and employee commitment. Resistance, as a mediating variable, is considered a bridge that connects the influence of organizational changes and work culture to employee responses in the form of commitment. By understanding these dynamics, organizations can develop more effective strategies to manage change, reduce resistance, and enhance employee commitment. Thus, this research is expected to contribute to the literature on human resource management and assist organizations in designing policies and practices that support change adaptation, minimize resistance, and enhance employee commitment.

2. LITERATURE REVIEW

2.1 Organizational Change (X1)

Change is an inevitable aspect of modern business, and if not handled with care, it can negatively impact employee commitment. This idea has attracted the attention of researchers and management professionals in recent years.

According to Weich and Quinn (1999), change originates from a failure to adapt, which means that actual change never truly begins because it never ceases. Change necessitates an ongoing process of adaptation, leading to subsequent alterations in company structures and the innovation of internal and external business processes (Dune, 2013). In a business environment characterized by relentless and accelerating change, organizational structures must possess the agility to support and empower employees in driving change. Embracing change is crucial, as it enables organizations to not only adapt but also proactively lead change. However, change itself can be costly, not only in

financial terms, but also in terms of the emotional strain it places on employees. It can be demanding and challenging for management and disruptive to overall company productivity.

In management literature, organizational change has been defined and discussed from various perspectives, including management theory, organizational psychology, and sociology. This literature review will explore several key concepts, theories, and approaches related to organizational change. Organizational change is not just about changing structures but also about changing organizational culture. Attempts to change organizational culture, when there is a lack of proper understanding of the power of culture and its role in the organization, often lead to failure. This issue has prompted many strategic planners to place specific emphasis on identifying the core values of the organization.

Several significant theories have emerged to elucidate the concept of organizational change. One highly renowned theory is Lewin's theory of organizational change, which posits that such change encompasses three distinct stages: unfreezing, where the existing status quo is disrupted; the change itself; and refreezing, where the organization establishes the change as a new and stable state. This theory serves as the fundamental basis for numerous subsequent approaches to organizational change.

In addition to Lewin's theory, another widely adopted approach is Kotter's model of the eight steps for managing change. This model places significant emphasis on effective communication, strong leadership, and active employee engagement throughout the change process. Another approach is the ADKAR model (Awareness, Desire, Knowledge, Ability, Reinforcement), which underscores the pivotal role of individual awareness, desire for change, knowledge acquisition, ability development, and reinforcement in achieving successful organizational change.

2.2 Organizational Culture (X2)

The study of organizational culture has gained considerable attention in the field of management research in recent decades, focusing particularly on the influence of culture on individual behavior and organizational performance. Organizational culture is commonly defined as a compilation of collectively shared values, norms, beliefs, and practices among members of an organization. Hofstede (1980) identifies several dimensions within organizational culture, including the balance between task orientation and relationship orientation, individualism and collectivism, assertiveness and uncertainty avoidance, as well as long-term orientation. This comprehensive definition underscores the intricate nature of organizational culture and emphasizes the significance of comprehending cultural variations within a global context.

According to organizational theorists, culture plays a crucial role in shaping an organization. Firstly, it sets the boundaries and parameters within which the organization operates. Secondly, it cultivates a shared sense of identity among its members, fostering a feeling of belonging and unity. Lastly, culture engenders a sense of commitment and dedication towards goals and values that transcend individual self-interest. In essence, culture is perceived as a powerful influence that guides the attitudes and behaviors of employees, providing them with appropriate criteria that can either propel the organization towards advancement or impede its progress.

A robust organizational culture plays a pivotal role in shaping the conduct of employees, aligning their behaviors, fostering shared beliefs, nurturing work commitment, establishing staff organizational identity, and influencing individual perspectives. It serves as a mechanism to prevent organizational chaos, diminish external control by promoting self-regulation, minimize inconsistencies, costs, and job dissatisfaction. As an organization becomes institutionalized, it engenders a collective understanding among its members regarding appropriate and desirable behavior, resulting in actions that align with the organization's core principles. Consequently, as an organization progresses into an institution, specific behavioral models are embraced universally,

permeating throughout the entire organizational fabric.

Extensive research on organizational culture has identified a range of significant cultural dimensions. One widely recognized framework is Hofstede's Cultural Dimensions, encompassing dimensions such as power distance, individualism versus collectivism, and time orientation. Additionally, other dimensions, including adaptability, innovation, quality orientation, and diversity, have emerged as crucial factors in comprehending organizational culture within the dynamic context of a global landscape that is constantly evolving.

Moreover, Edgar Schein's model introduces another theoretical perspective that emphasizes three levels of culture: artifacts, espoused values, and basic underlying assumptions. Artifacts refer to visible symbols and behaviors, while espoused values represent shared beliefs and assumptions, and basic underlying assumptions encompass deeply ingrained beliefs about reality. This model highlights the influential role of leadership, socialization processes, and organizational history in shaping culture. Furthermore, social identity theory and sensemaking theory offer valuable insights into how individuals construct and interpret organizational culture based on their social identities and cognitive processes.

Extensive research consistently reveals the substantial impact of organizational culture on various organizational outcomes, including employee engagement, job satisfaction, organizational commitment, innovation, and performance. When there is a strong alignment between employees' values and those of the organization, it is associated with higher levels of employee motivation, job performance, and retention. Moreover, organizational culture significantly influences decision-making processes, organizational change initiatives, and strategic direction, thereby shaping the long-term sustainability and competitiveness of organizations.

2.3 Resistance (Y1)

Resistance within an organization is commonly understood as the opposition, reluctance, or refusal exhibited by individuals or groups to embrace or adjust to change initiatives. It takes different forms, including passive resistance (such as avoidance or procrastination) and active resistance (such as openly expressing dissent or engaging in sabotage). Factors contributing to resistance include fear of the unknown, loss of control, perceived inequity, or conflicting interests among stakeholders.

During periods of organizational change, resistance pertains to the opposition, reluctance, or pushback encountered from individuals or groups when introducing new initiatives, processes, or strategies. It is a natural reaction to change and can manifest in various ways, ranging from subtle skepticism to overt defiance. Developing a comprehensive understanding of the nature and underlying causes of resistance is essential for effective change management.

Resistance to change has the potential to create an unfavorable work environment characterized by diminished morale, heightened stress levels, and decreased job satisfaction among employees. When employees experience disengagement or a sense of disenfranchisement due to resistance towards change, their motivation and commitment to organizational goals may dwindle, resulting in reduced productivity and performance.

Persistent resistance can impede the progress of change initiatives, leading to missed deadlines, cost overruns, and project delays. When employees resist change, they may exhibit reluctance to adopt new processes, technologies, or work methodologies, which can result in inefficiencies and disruptions to organizational operations.

Moreover, unaddressed resistance can erode trust and confidence in leadership and management. When employees perceive that their concerns are being disregarded or dismissed, they may become

disillusioned with organizational leadership, ultimately leading to increased turnover, absenteeism, and disengagement. Resistance to change can reinforce cultural norms and behaviors that are incongruent with organizational goals and objectives. In organizations where resistance is prevalent, cultural inertia may persist, impeding the implementation of meaningful change initiatives and hindering the cultivation of a culture of continuous improvement.

Within the management literature, two distinct forms of resistance are often observed in individuals' responses to a changing environment. The first type is active resistance, which involves overt expressions of opposition. This can manifest as open dissent, complaints, or a refusal to comply with new directives. Active resistance may also encompass behaviors such as sabotage, work slowdowns, or the dissemination of rumors intended to undermine the change effort.

The second type is passive resistance, which is characterized by more subtle forms of opposition. Examples of passive resistance include avoidance, procrastination, or the outward appearance of compliance while internally resisting the change. In this case, employees may go through the motions of change but harbor internal resistance, contributing to inertia and a lack of progress.

The causes of resistance are as follows: employees may resist change due to uncertainty regarding how the proposed changes will affect their roles, responsibilities, and future prospects. Fear of failure or a loss of job security can also contribute to resistance. Additionally, change often disrupts established routines and power dynamics within organizations, leading to feelings of losing control or autonomy among employees. Resistance may arise from a perceived threat to individual or group autonomy. Furthermore, employees may resist change if they perceive it as unfair or unjust, especially if it results in perceived disparities in rewards, recognition, or the distribution of workload. Perceptions of favoritism or bias can intensify resistance. Lastly, resistance may stem from a lack of trust in leadership, particularly if previous change initiatives were poorly managed or if leaders are perceived as unresponsive to employee concerns. Building trust and credibility is crucial for mitigating resistance.

2.4 Organizational Commitment (Y2)

Organizational commitment, a prominent concept in the field of organizational behavior research, has received significant attention due to its implications for employee retention, job satisfaction, and overall organizational effectiveness. Organizational commitment is defined as an individual's stance towards the organization, encompassing strong beliefs and acceptance of the organization's goals and values, a willingness to exert substantial effort on behalf of the organization, and a deep desire to maintain one's affiliation with the organization (Mowday et al., 1982).

Organizational commitment is commonly conceptualized as the extent to which employees feel emotionally connected, identified, and devoted to their organization. It comprises three distinct components: affective commitment, which involves emotional attachment and loyalty; continuance commitment, which relates to the perceived costs associated with leaving the organization; and normative commitment, which reflects a sense of obligation to remain with the organization. These components represent different facets of an individual's psychological bond with the organization and their willingness to invest effort in its endeavors.

Numerous theoretical frameworks have been suggested to elucidate the factors influencing and outcomes resulting from organizational commitment. Scholars contend that employee commitment plays a pivotal role in improving employee performance. When employees experience a sense of affiliation with the organization, this identification promptly fosters elevated levels of commitment and innovation. In the current study, we delineate organizational culture by considering three dimensions: communication, trust, and innovation, as defined by Denison and Mishra (1995).

De Ridder (2004) explores the idea that clear internal communication can inspire employees to

adopt supportive attitudes, resulting in the development of organizational commitment. It is important to note that employees tend to display supportive behavior when they perceive a shared destiny within the organization and when they are emotionally dedicated. Other researchers argue that accurate and transparent communication in the workplace fosters employee engagement and commitment (see Trombetta & Rogres, 1988; Welsch & LaVan, 1981).

Trust, on the other hand, is characterized as a belief in the honesty, fairness, and dependability of individuals or organizations (Denison and Mishra, 1995; Lipnack and Stamps, 1997), where "the trusted party will not exploit or mistreat the other party." In essence, trust in an organization can enhance employee commitment by instilling the belief that their efforts will be reciprocated with unexpected improvements in emotional exchanges, such as socio-emotional development. Consequently, employees form emotional attachments to their organization.

Lastly, in terms of innovation, organizational culture plays a role in shaping employees' goal-setting, including personal and/or professional goals. For instance, an innovative organizational culture and leadership style can positively influence employee job satisfaction and organizational commitment (Lok and Crawford, 2004). Cultures that promote innovation and support are more focused on employees. Moreover, in an innovative culture, employees are more likely to receive support and encouragement to contribute new ideas and suggestions, and they often participate in formal and informal decision-making processes (Lok and Crawford, 2004). Collaboration and coordination among individuals are also highly emphasized in an innovative culture.

Furthermore, Meyen and Allen propose another comprehensive theory that outlines three factors within organizationalcommitment: affective commitment, normative commitment, and continuance commitment. Affective commitment pertains to the emotional connection, sense of identification, and active engagement that employees have towards the organization and its objectives. This type of commitment is fostered by the alignment of values between the individual and the organization. Normative commitment, on the other hand, relates to a moral obligation to remain with the organization, driven by loyalty and adherence to traditional values. It is reflected in the extent to which employees feel obliged to make personal sacrifices and refrain from criticizing the organization.

Lastly, continuance commitment signifies an individual's recognition of the costs associated with leaving the organization. Personal investments that cannot be easily transferred, such as strong professional relationships with colleagues, involvement in the community, specialized job skills acquired within the organization, and financial investments like contributions to pension plans or stock options, can make it appear financially burdensome for an employee to leave and pursue employment elsewhere.

The Social Exchange Theory, a prominent theory in organizational commitment, explains that social exchange behavior involves voluntary interactions driven by obligations and dependent on the actions of others. According to this theory, social behavior is primarily shaped by reciprocal incentives that impact individual actions within social relationships.

Within this framework, it is proposed that employees develop a sense of commitment to the organization based on the mutual exchange of benefits and obligations within the employment relationship. Employees often make efforts to avoid unsatisfactory work environments (A. Bakker et al., 2003). Reciprocity is seen as a cultural norm, as the degree of reciprocity varies across different cultures. Organizational researchers suggest that the relationship between perceived organizational support and absenteeism is stronger among employees who strongly embrace the concept of exchange compared to those who hold a weaker belief in exchange ideology.

Organizational commitment has been associated with numerous positive outcomes for both

employees and organizations. Among employees, having a strong commitment is linked to increased job satisfaction, job involvement, and engagement in organizational citizenship behaviors. Committed employees are also more likely to display higher levels of performance, lower intentions to leave the organization, and greater resilience when faced with organizational changes. For organizations, high levels of employee commitment contribute to reduced turnover rates, higher levels of employee engagement, and improved organizational performance and profitability.

To attract, retain, and motivate talented employees, it is crucial for organizations to understand and cultivate organizational commitment. Strategies for promoting organizational commitment include creating a positive work environment, providing opportunities for employee development and growth, acknowledging and rewarding employee contributions, fostering open communication and trust, and aligning organizational values with the values of the employees.

3. METHODOLOGY

This research study involved a sample of 34 employees from Kawan Lama Group in Samarinda as research participants. Data collection was conducted using a questionnaire distributed through Google Forms. The participants consisted of both male and female employees from middle-level management to lower-level management positions. The employees were invited to participate in the study by their managers, but participation was voluntary, and response rates were not monitored to ensure confidentiality. To encourage the respondents to take the study seriously and improve participation rates, they were offered personalized reports as an incentive. This approach aimed to ensure the quality of the answers. Any incomplete surveys or unusable responses were automatically excluded due to the structured format of the online questionnaire.
The average age of the 33 respondents was in the range of 20 to 30 years, with 52.94% being female and 47.06% being male. On average, they had approximately 7-8 years of professional work experience and had been with their current company for about 3-5 years. Among the respondents, 14.71% held store manager positions, 29.41% were store supervisors, and 55.88% were operational staff in various areas. The data collected in this research study was analyzed using descriptive statistics, inferential statistics, and the Partial Least Squares (PLS) analysis tool.

Each variable was measured using a five-point Likert scale. The first variable, organizational change (X1), was assessed through three questions that captured employees' perceptions of changes within the HR Department, including open communication, structural specialization, and goal achievement. The second variable, organizational culture (X2), was measured using five questions that assessed employees' perceptions of communication, trust, sense of belonging, a supportive environment, and rewards. The third variable, resistance (Y1), was evaluated based on three questions that reflected employees' perceptions of shock, influence over decisions, and avoidability. Finally, the fourth variable, organizational commitment, was measured using three questions that represented affective, normative, and continuance commitment as perceived by the employees.

Therefore, the hypothesis on this research as below :
H1 : The effect of organizational change in HRM on resistance is negative and significant,
H2 : The effect of working culture on resistance is negative and significant
H3 : The effect of organizational change in HRM on organizational commitment is positive and significant
H4 : The effect of working culture on organizational commitment is positive and significant, and
H5 : The effect of resistance on organizational commitment is negative and significant
H6 : The resistance variable is able to mediate the relations between organizational change in HRM and organizational commitment

H7 : The resistance variable is able to mediate the relations between organizational change in HRM and organizational commitment

4. RESULT AND DISCUSSION

4.1 Structural Equation Modelling (PLS-SEM)

1. Convergent Validity

This testing was conducted by examining the standardized loading factor. A loading factor value can be considered valid in this study if it has a loading factor greater than 0.7. The SmartPLS 3.0 output for the loading factor provides results as shown in Table 5 below:

Table 5. First Trial

	Organizational Change (X1)	Organizational Culture (X2)	Resistance (Y1)	Organizational Commitment (Y2)
X1.1	0.836			
X1.2	0.685			
X1.3	0.799			
X2.1		0.821		
X2.2		0.396		
X2.3		0.421		
X2.4		0.352		
X2.5		0.294		
Y1.1			0.757	
Y1.2			0.766	
Y1.3			0.465	
Y2.1				0.250
Y2.2				0.931
Y2.3				-0.436

According to Table 5 above, it is found that not all indicators used to measure each variable in this study have loading factor values greater than 0.70. The organizational change variable has one indicator, X1.2, that does not meet the loading factor requirement, with a loading factor value of 0.685. Meanwhile, the organizational culture variable has two indicators, X2.1 with a loading factor value of 0.250 and X2.3 with a loading factor value of 0.436, that do not meet the loading factor requirement. Additionally, the resistance variable has four indicators, Y1.2 with a value of 0.396, Y1.3 with a value of 0.421, Y1.4 with a value of 0.352, and Y1.5 with a value of 0.294, that do not meet the loading factor requirement. Lastly, the organizational commitment variable has one indicator, Y2.3, with a loading factor value of 0.465 that does not meet the loading factor requirement.

When the indicators that did not meet the loading factor requirement were eliminated from the model, the PLS testing was conducted again. The SmartPLS 3.0 output for the second testing of the loading factor provides results as shown in Table 6 below:

Table 6. Second Trial

	Organizational Change (X1)	Organizational Culture (X2)	Resistance (Y1)	Organizational Commitment (Y2)
X1.1	0.883			
X1.3	0.873			
X2.1		1.000		
Y1.1			0.497	
Y1.2			0.978	
Y2.2				1.000

According to Table 6 above, the indicators that did not meet the loading factor requirement for the variable... (please provide additional explanation) were again identified. These indicators were then eliminated from the model, and the PLS testing was conducted once more. The SmartPLS 3.0 output for the third testing shows results as seen in Table 7 below:

Table 7. Third Trial

	Organizational Change (X1)	Organizational Culture (X2)	Resistance (Y1)	Organizational Commitment (Y2)
X1.1	0.884			
X1.3	0.872			
X2.1		1.000		
Y1.2			1.000	
Y2.2				1.000

Based on Table 7 above, in the third testing, it is found that the indicators used to measure each variable in this study have loading factor values greater than 0.70. Therefore, it can be concluded that all indicator items in the third testing are considered valid for explaining the variables (constructs). This measurement model is also used to explain the relationship between latent variables and manifest variables or indicators, as shown in Figure 1 below:

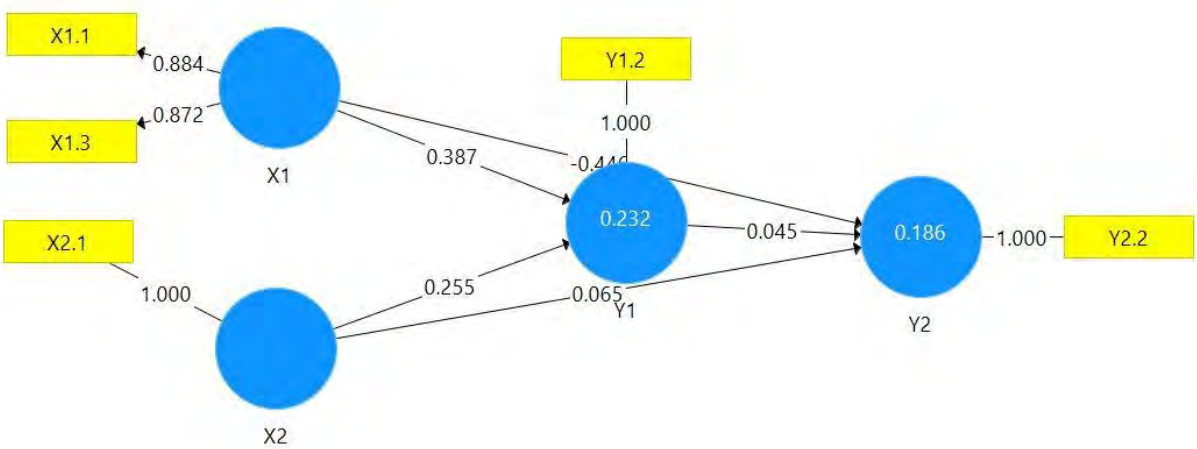

Figure 1. Smart Partial Least Square on this research model

4.2 Structural Model Evaluation (Inner Model)

The determination coefficients indicate that based on the data obtained in Table 8 below, the coefficient of determination (R square) for the resistance variable is 0.232, and the R square for the organizational commitment variable is 0.186. Therefore, it can be concluded that the model falls into the weak category.

Table 5. R Square (R^2)

	R Square	Adjusted R Square
Y1	0.232	0.181
Y2	0.186	0.101

In hypothesis testing in this study, the results are obtained through the inner model as seen in Table 10 below:

Table 10. Result of Hypothesis Testing Via Path Coeficients

	Original Sample	Sample Mean	Standard Deviation (STDEV)	T-Statistics (|O/STDEV|)	P Values
Organizational Change -> Resistance	0.387	0.388	0.127	3.046	**0.002**
Organizational Culture -> Resistance	0.255	0.237	0.148	1.726	**0.085**
Organizational Change -> Organizational Commitment	-0.446	-0.494	0.134	3.322	**0.001**
Organizational Culture -> Organizational Commitment	0.065	0.053	0.161	0.402	**0.688**
Resistance -> Organizational Commitment	0.045	0.054	0.155	0.289	**0.773**

According to Table 10 above, the hypothesis testing results are as follows:

1. Hypothesis 1 : The effect of organizational change in Human Resource Management is negative and significant is denied. The result indicates that organizational change in Human Resource Management has a positive and significant effect on resistance
2. Hypothesis 2 : The effect of working culture on resistance is negative and significant is denied. The result indicates that organizational culture has a positive and non-significant effect on resistance.
3. Hypothesis 3 : The effect of organizational change in HRM on organizational commitment is positive and significant is denied. The result indicates that organizational change has a negative and significant effect on organizational commitment.

4. Hypothesis 4 : The effect of organizational culture on organizational commitment is positive and significant is denied. The result indicates that organizational culture has a positive and non-significant effect on organizational commitment.
5. Hypothesis 5 : The effect of resistance on organizational commitment is negative and significant is denied. The result indicates that resistance has a positive and non-significant effect on organizational commitment.

Furthermore, to examine the influence of the resistance variable as a mediating variable, it can be seen in Table 11 below:

	Original Sample	Sample Mean	Standard Deviation (STDEV)	T-Statistics (|O/STDEV|)	P Values
Organizational Change -> Resistance -> Organizational Commitment	0.017	0.021	0.066	0.263	**0.792**
Organizational Culture -> Resistance -> Organizational Commitment	0.011	0.016	0.045	0.256	**0.798**

According to Table 11 above, the hypothesis testing results for the mediating variable are as follows:
1. Hypothesis 6 : Organizational Change has a positive and non-significant effect on organizational commitment mediated by resistance.
2. Hypothesis 7 : Organizational Culture has a positive and non-significant effect on organizational commitment mediated by resistance.

5. CONCLUSION

Based on the research, study reveals that organizational change in Human Resource Management has a positive and significant impact on resistance, while organizational change has a negative and significant impact on organizational commitment. Organizational culture has a positive effect on both resistance and organizational commitment, although the effects are not statistically significant. Furthermore, resistance has a positive effect on organizational commitment, but this effect is not statistically significant. The study also indicates that organizational change and organizational culture do not have a significant indirect effect on organizational commitment through the mediating role of resistance. These results suggest that other factors or mechanisms may play a more prominent role in explaining the relationship between organizational change, organizational culture, resistance, and organizational commitment. Further research is recommended to explore alternative variables or mediators that may better explain the relationship between these constructs.
These findings highlight the complex and nuanced relationships between organizational variables in relation to resistance and organizational commitment. Further research is recommended to explore and understand these relationships more comprehensively.

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THE ROLE OF INTEGRATION TECHNOLOGY AND SUPPLY CHAIN FOR SUSTAINABILITY COMPANY IN INDONESIA

Astitiansyah*, Zainal Abidin, Ike Purnamasari
Master of Management Study Program, Faculty of Economics and Business Mulawarman University, Samarinda, East Kalimantan, Indonesia

Correspondence email: astitiansyah.smd@gmail.com

Abstract

Companies operating in the business and industrial sectors have a strategic role in developing products and services. Things are needed that support the sustainability of the company, namely technology and supply chains. Technology plays a very vital function and rapid development, giving rise to great opportunities in the business world to face global business and making competition tighter, while the supply chain plays a function in a series of production process networks both as a source of raw materials and a place for distributing a product so that can be accepted by the final consumer at a cheap and competitive price. This requires integration between technology and the supply chain. The research carried out aims to examine the important role of implementing integration between the technology used and the form of supply chain carried out. Using qualitative methods and data collection techniques such as observation, interviews, document review, and content analysis. Thus, it can provide benefits so that companies can form supply chain centers using the right technology.

Keywords: *Technology, Supply Chain, Integration, Qualitative Methods*

1. INTRODUCTION

The reality is that we as academics have no shortage of ideas about how to access that greater and fair distribution of goods and services used carefully and effectively (Henry, 2013). However, it is often hampered in implementing these ideas because of the assumption that sustainability always results in higher costs, higher taxes, revenue deficits and leads to higher prices. Finding solutions by bringing together all market players can be used as a form of reducing the negative externalities of trade before they are finally included in business calculations and price setting. Today the company acts as a market custodian rather than a simple producer.

The concept of sustainability became known since the UN conference in 1970 and has become a concept that is difficult to separate from sustainable development (Benson & Craig, 2014). In general, sustainability relates to the long-term ability to continue engaging in an activity, process, or use of resources. This means that good support for the concept of sustainability will have a high impact. In taking public policy, for example, policy sustainability is certainly one of the optimizations of policy outputs that have been determined.

Doubt after doubt began to emerge and became a problem with market competition, economic conditions, and the ability to maintain the company's existence which became a challenge to continue to support and fully explore technology-supported supply chains.

Facts show that the supply chain is very important to identify whether a company achieves targets

in accordance with the objectives of the supply chain which was built with the expectations desired by the company.

The big theme of the study is the role of technology integration and supply chains in corporate sustainability. This is related to the importance of the company's supply chain system in maintaining price, quality and service, where with the increasing number of branches owned by the company, it becomes important for the company to run a supply chain.

Data shows that several companies in Indonesia, namely service companies and trading companies in the city of Samarinda, have used supply chains both nationally and locally or regionally, such as:

- Indo Grosir is a retail company that has been established since 1993 and operates in the trade sector, especially wholesale trade which is the supply chain for Indomaret, Alfamart and Alfa Midi Mini Markets in addition to regular grocery stores.
- Anas Grocery Store, a shop in a residential area in the city of Samarinda which is a supply chain for grocery stores and simple eating places around it.

2. LITERATURE REVIEW

2.1 The Role of Integration

Integration comes from Latin, namely 'integrate' which means to place in a whole. Meanwhile, according to the Big Dictionary of the Indonesian Nation (KBBI), integration is mixing until it becomes one complete and unified whole. Integration is an effort to maintain two or more objects, by involving elements of these objects in controlling, maintaining subsystems and preventing major disruptions in the system. Integration is carried out by a company because of external factors that influence it, such as the demands of current developments, competition, economic conditions, vision, mission and goals. Role is a concept of things that can be done by entrepreneurs in running business in the company.

For this reason, the important role of integrity is to build trust, have a high influence value, and have high standards.

2.2 Technology

Technology is a tool or method that is created in an integrated manner and refers to tools and machines that can be used to solve the problems faced. Nowadays technology has led to digital technology. Companies in the era of globalization, through technological support, namely increasingly sophisticated information and communication technology, have become two things that cannot be separated. Business in companies now and in the future must be managed with good management. This means that you must have a company form that suits the needs of the times. Both in terms of management and support of company business resources. Because generally businesses cannot be separated from the goal of achieving profit or gain. In the current era of digital technology, the world and all business activities can be connected and connected with consumers through various social media. Digital technology is technology whose operation no longer requires a lot of human power and aims to use automatic systems with computer systems. Digital is modernization or renewal of the use of technology, often associated with the presence of the internet and information technology. Where everything is possible with advanced devices to make things easier for people.

2.3 Supply Chain

Every company's presence is definitely not only intended for a short period of time and only to achieve momentary and minimal profits. Every entrepreneur wants his company to continue to grow and develop continuously over time in the long term. For this reason, many companies currently implement supply chains by using supply chain management.

According to Heizer and Render (2017), supply chain management is the activity of managing activities in the context of obtaining raw materials, transforming these raw materials to consumers through the distribution system.

The expected benefits from implementing supply chain management consist of:

1. Reduce inventory in various ways.
2. Ensure the smooth supply of goods.
3. Guarantee quality while maintaining prices.

Conceptually, the supply chain is also known as the procurement chain, which is a system through which a company distributes production goods and services to customers. This chain is also a network or network of various interconnected companies that have the same goal, namely to organize the procurement or distribution of these goods as best as possible. In this concept, logistics problems are seen as a broader problem that stretches a very long way from basic materials to finished goods used by final consumers, which is the link in the supply chain of goods. The supply chain consists of various parties involved either directly or indirectly in meeting consumer demand.

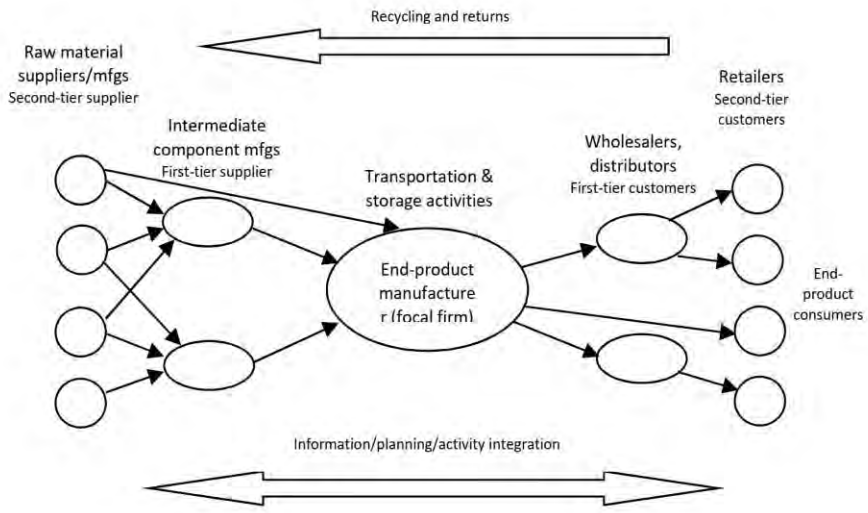

Figure 2.1. Supply Chain Scheme

2.4 Technology and Supply Chain Integration

The role of technology, namely information technology, in supply chain management is very necessary. Moreover, technology in digital business supports the implementation of supply chain systems.

Figure 2.2. Digital Supply Chain System

2.5 Corporate Sustainability

The purpose of corporate sustainability is the continuity or continuity of life of a company. In a business and policy context, sustainability seeks to prevent the exhaustion of resources, so that these resources remain available for the long-term existence of a company. Companies are competing to find ideas and ways to survive and develop and maintain their market share amidst competition and economic conditions, especially by maintaining price, quality and improving service. For this reason, it is very necessary to integrate the supply chain owned by a company with existing and developing technology.

3. METHODOLOGY

This research is qualitative research that defines sustainability in the supply chain management process in a company and was carried out to examine the important role of implementing integration between the technology used and the form of supply chain carried out, besides this method is in accordance with existing primary data and secondary data. Primary data was collected based on direct observation and interviews. Secondary data is obtained from literature, research, books, studies and other important documents, as well as content analysis of the data obtained.

The focus of the research is on the role of technology integration and supply chains in the sustainability of companies in Indonesia, both small companies, medium companies and large companies in the service and trade sectors. The location of the research was carried out in the city of Samarinda, East Kalimantan Province - Indonesia, because the growth and development of both service and trade companies is very rapid, especially now that the city of Samarinda is one of the main supports for the new capital city of Indonesia, namely the National Capital of the Archipelago (IKN), where the research was carried out. within 2 months.

It is hoped that this research will be useful for service and trade entrepreneurs, including people who build and develop Micro, Small and Medium Enterprises (MSMEs) in the service and trade sectors.

4. RESULT AND DISCUSSION

Supply chain management differentiates the supply chain of innovative products based on the function of commodities produced by the company to companies that require supplies. Innovative products require a responsive supply chain, while functional products can be handled by a leaner supply chain. Innovation requires a replacement for the values of efficiency and effectiveness, considering the problems faced by companies in the company's sustainability.

Based on the results of the analysis, there are three elements in supply chain management innovation, including:

- In the context of services, the availability of goods and services is one of the key factors in the supply chain because it is related to the availability of commodities. Apart from that, the scarcity of a product or service is one of the causes of failure to achieve supply chain elements.
- Supply chain network structure is an important factor in stabilizing supply chain availability.
- Technology used in the implementation of the supply chain. This is proven by the lack of use of simple technology but its efficiency is still low.

Technological progress towards digital business technology is one of the challenges for companies in Indonesia in the future, especially in increasing the stability of services and supply chains.

5. CONCLUSION

The importance of a technology-supported supply chain in the sustainability of a company to stay alive while maintaining price, quality and service. One proof of adequate supply chain implementation is the use of minimally updated technology, there are several technologies used, but the efficiency is still low. Advances in technology used and integrated with systems in supply chain management have become one of Indonesia's challenges in the future, especially in increasing the stability of company services and supply chains.

Acknowledgement

In implementing technology integration with the supply chain in company sustainability, Customer Acknowledgment is very necessary by:

1. Response and review from customers.
2. Greet customers.
3. Reply to comments on social media wisely and tactfully.

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THE IMPACT OF ENVIRONMENTAL DISCLOSURE AND DEBT-ON-EQUITY RATIO ON FIRMS' FINANCIAL PERFORMANCE: EVIDENCE IN MINING SECTOR LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) DURING COVID-19 ERA

Aurelita Elsa Regina Arianto*, Rizky Yudaruddin

Department of Management, Faculty of Economics and Business, Mulawarman University

Corresponding author: aurelitaelsa@student.unmul.ac.id

Abstract

This paper points to examine the association of environmental disclosure and debt on equity ratio with return on equity during the uncertainty of COVID-19. Subjective sampling is employed to specify the criteria of mining sector firms listed on the Indonesia Stock Exchange. The data samples of this study are gathered from financial reports, annual reports, and sustainability reports in 2020-2021. Panel data from 39 listed companies examined using EViews. The results imply that revealed environmental data has an non-significant impact on firms' capability on financing. Conversely, debt-on-equity ratio has significantly negative affects financial performance.

Keywords: *environmental disclosure, debt-on-equity ratio, return on equity, financial performance, COVID-19.*

1. INTRODUCTION

COVID-19 emerged as a global issue in 2020, affecting various sectors, particularly the financial conditions of countries. Indonesia was among the nations impacted by this pandemic. The first reported death case from COVID-19 in Indonesia led to a decline in investment interest and reduced stock returns (Robin, 2021). The implementation of lockdown as a preventive measure to combat the virus has begun. However, these social restrictions have hampered company operations, impacting economic growth in Indonesia. Moreover, Indonesia's annual economic growth rate decreased further in 2020 compared to previous years (Azhari et al., 2020).

All businesses have experienced the economic shock caused by the pandemic, which is the most significant impact it has had. Additionally, the distribution of supply and demand has been disrupted, leading to an imbalance in the export and import of goods (Ikram et al., 2022). Many businesses have had to shut down their livelihood and optimize their workforce to improve company finances. Companies in the mining sector have experienced fluctuations during this period. In addition to investors' frustration due to COVID-19, mining companies are facing challenges in transitioning from non-renewable to renewable energy sources. It will cause the productive net income year-to-year become unproductive (York, 2012). Companies must implement strategies to attract stakeholders to ensure their financial ability remains stable during the pandemic.

One business strategy is to use environmental information disclosure to attract investors is the distribution of reports containing relevant details about environmental concerns. Indonesia has implemented regulations for social and environmental responsibility through Law No. 40 of 2007. Nevertheless, the law does not regulate the specific items or formats that the company must use to

disclose its strategy regarding social and environmental responsibility, and there are still many entities in the mining sector are still unfamiliar with the practice of disclosing environmental data in annual or sustainability statements (Verawaty et al., 2020). Wang et al. (2020) resemblance positively on the revealed of environmental report and financing ability across 289 companies in China with a result above the significance level. Similarly, Haninun et al. (2018) asserted a positive association of revealed environment data on the financing ability of Indonesian manufacturing sector.

The use of the debt-on-equity ratio in companies is also considered important to fulfill stakeholders' curiosity regarding the company's strategy in allocating debt to any equity they own (Hertina et al., 2021). The debt on equity ratio is inherently incorporated into mandatory financial reports. If a company does not explicitly disclose this ratio, stakeholders can ascertain it by comparing the company's total debt to its total equity. In this outbreak era, companies that has low debt-on-equity ratio are deemed less prone to failure compared to those with a higher ratio. However, in reality, during this period of uncertainty, companies tend to increase their debt financing for various motives, one of which is to be able to continue to take part in the industrial business (Gopalakrishnan et al., 2022).

This paper purposes to provide grasp insights into the effect of firms' disclosed environment data reporting and the debt on equity ratio on the firms' financing ability of the mining sector during the ongoing COVID-19 crisis. The examination is based on stakeholder theory and legitimacy theory frameworks (Abdillah et al., 2022; Wang et al., 2020). The sample subset tested focused on mining companies that issued financial statements, annual reports, and sustainability reports during 2020-2021. Additionally, companies that provided data on their environmental responsibility activities were included in the sample criteria. Consequently, the hypotheses for each variable are developed below:

2. LITERATURE REVIEW

2.1. Environmental Disclosure and Financial Performance

Effective financial management plays a pivotal role within the company, facilitating the optimization of business-related activities. However, the emergence of the COVID-19 outbreak poses challenges, hindering the company's ability to ensure the satisfactory returns for its shareholders. The prevailing economic uncertainty stemming from the pandemic directly influences investors' investment decisions, consequently leading to a declining in stock returns (Jessica & Yanti, 2023). Amidst the challenges, adaptable companies can sustain and achieve robust profitability by embracing a specific ownership identity (Perwitasari et al., 2022).

According to Kalash (2020), companies that generate high returns tend to disclose information regarding environmental impact and mitigation efforts, thereby enhancing public trust in investing. Consequently, the company can align with the public's return expectations. Additionally, environmental disclosure is perceived as a benchmark in market competition for company's value and its commitment to environmental sustainability (Khlif et al., 2015).

Several metrics are employed to calculate financial ratios pertaining to the industry's financing ability amid the COVID-19 period. Wang et al. (2020) utilized profitability measurement across 289 listed companies in China. Darabee (2022) focused on liquidity metrics alongside solvency metrics and profitability metrics across 15 enterprises in the industrial, investment, and services sectors in Palestine. Hwang et al. (2021) investigated profitability using the return on assets metric, observing a significant equivalency of ESG project on profitability during the COVID-19 period. Similarly, Wu & Li (2022) assessed profitability through metrics like return on assets, return on equity, and earnings per share across a sample of 16 companies in China, revealing an equivalency

of revealed environmental data and firms' financing ability.

H1: Environmental disclosure has positively significance affect mining's corporate financial performance during COVID-19 in Indonesia.

2.2. Debt-on-Equity Ratio and Financial Performance
The utilization of the debt on equity ratio holds particular importance in evaluating how effectively a company manages its financing in relation to its debt obligations. High levels of debt can lead to various challenges, particularly regarding to debt on equity ratios. As the ratio resulting from this calculation increases, so does the risk of company insolvency.

Data on the debt on equity ratio and firms' finance ability, specifically return on equity, are typically found within the company's financial statements, calculated by comparing entire debt to total equity. This ratio, categorized as the leverage ratios, serves as a measure of the company's investment structure quality (Janice & Toni, 2020).

Several prior studies have explored the connection between the debt on equity ratio and financial performance. For instance, research conducted by Fitriani & Munandar (2021) and Janice & Toni (2020) yielded contrasting outcomes compared to earlier studies, indicating an insignificant impact of the ratio on return on equity. Conversely, Nada & Hasanuh (2021) study presented divergent findings, asserting an inequal relation between the debt on equity ratio and ROE across 8 companies in the automotive sector in Indonesia.
H2: Debt-on-equity ratio affects negatively significant on mining's corporate financial performance during COVID-19 in Indonesia.

3. METHODOLOGY

3.1. Sample, variable, and measurement of variable
The object for this paper comprises 44 mining enterprises listed on the Indonesia Stock Exchange (IDX) for the years 2020-2021. The sampling technique employed is subjective sampling, which adheres to the following criteria:
1. The mining sector companies that release and publish financial reports, annual reports, and/or sustainability reports for 2020-2021;
2. The mining sector companies that include the data about the environment in their annual reports and/or sustainability reports.

From these criteria, it was found that 39 companies with a research duration of 2 years were eligible for this study. Secondary data taken from financial reports available at www.idx.co.id, annual reports, and sustainability statements will be the main sources of research data. Environmental disclosure and the debt on equity ratio are used as independent variables in this study and return on equity as dependent variable. Environmental disclosure variable is measured by using items presented by Amalia et al. (2022) as shown in Table 1.

Table 1. Environmental Disclosure Items

	Items
1.	Activities related to pollution control, research, and development investment aimed for reducing pollution
2.	Reports showing that the firm's operations either do not pollute or adhere to the stipulations outlined in pollution laws and regulations.
3.	Reports that conclude the statement of pollution has been or will be mitigated.
4.	Efforts aimed at preventing or rectifying environmental damage resulting from the extraction or processing of natural resources, including activities like reforestation or similar initiatives.
5.	The practice of conserving natural resources, such as recycling materials
6.	Use recycled materials
7.	Acquire recognition or an award for the environmental initiatives
8.	Creates facilities that are environmentally compatible
9.	Provide the artistic facilities aimed to enhance the beauty of the environment
10.	Attempts on restoring the historical buildings
11.	Waste management
12.	Understanding company's activities impact towards the environment
13.	Environmental preservation

The entire items revealed by the company are divided by the total number of environmental disclosure items. Additionally, debt on equity is determined using the fraction of total of entire firms' debt to the equity. For the dependent variable, FP is assessed using the return on equity (ROE) approach, which is assessed using the net income to total equity ratio.

a. *Model Analysis*

This study employs panel data regression to analyze the dependence between variables using ordinary least square (OLS) method and employ three approach method of CEM, REM and FEM. The research utilizes a total of 78 observations (n = 78), and the variables under consideration are depicted in Figure 1. The equation model to be used is as follows:

$$ROE = \alpha + \beta_1 ED + \beta_2 DER + \varepsilon$$

To assess the hypotheses, a coefficient of determination test is conducted using the R^2 model. A value approaching 1 indicates a robust model for the dependent variable. In this context, the dependent variable measures the impact of environmental disclosure and the debt on equity ratio on financial performance (Paramita et al., 2021). Apart from that, the F-test and T-test are conducted to discover the impact of the two independent variables on the dependent variable. The significance level used for both the F-test and T-test is set at 5%.

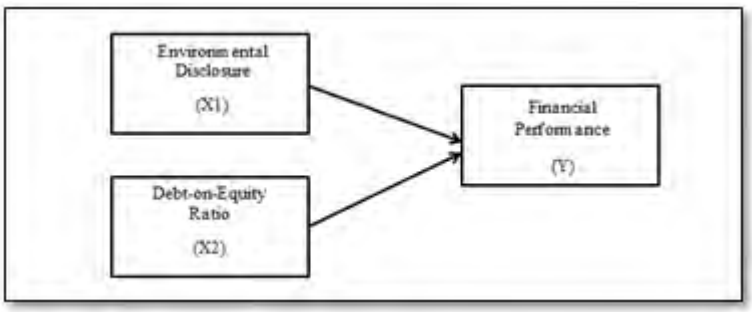

Figure 1. Research Variables

4. RESULT AND DISCUSSION

Based on the previously conducted sample options, 78 mining companies were identified as meeting the eligibility criteria for inclusion in this research, spanning the years 2020-2021. In Table 2, the Environmental Disclosure (ED) variable exhibits a range from a lowest value of 0.076923 to a maximum amount of 0.846154, signifying the inclusion of companies with varying degrees of awareness and compliance regarding environmental reporting.

Meanwhile, the debt-to-equity (DER) variable scopes from a lowest value of -7.710646 to a highest value of 28.16708, with a mean value of 1.880211. A significant number of DER samples fall under the average, indicating that numerous firms have relatively low debt on equity ratios. The return on equity (ROE) variable has a lowest value of -2.543 and a maximum amount of 6.144461, with a mean of 0.172822. This indicate that the ROE of companies within the sample tends to be below the average level of Return on Equity.

Table 2. Descriptive Statistics

Variables	Minimum	Maximum	Mean	Standard deviation
Environmental Disclosure (ED)	0.076923	0.846154	0.475345	0.209196
Debt-on-Equity (DER)	-7.710646	28.16708	1.880211	4.709309
Return on Equity (ROE)	-2.5434	6.144461	0.172822	1.05462

This research also employs a panel data regression model, with initial testing involving the CEM, REM, and FEM approaches. The testing includes the application of the Chow test and Hausman test for validation. The score reveals a Chi-square p-value of 0.0000 (0.0000 > 0.05), indicating a preference for the FEM method over the CEM method. Additionally, the Hausman test yields a p-value of 0.0025, also less than 0.05 (0.0025 < 0.05), further affirming the superiority of the FEM over the CEM method. This is because each unit of the company has a different slope value, so FEM accommodates the differences in intercepts, although the intercepts do not vary over time (Yudaruddin, 2021). Detailed data interpretation can be found in Tables 3 and 4.

Table 3. Chow Test

Effect test	Statistic	d.f	Probability
Cross-section F	1.999977	(38.37)	0.0186
Cross-section chi-square	87.084051	38	0.0000

Table 4. Hausman Test

Effect test	Chi-Sq. Stat.	Chi-Sq. d.f	Probability
Cross-section random	11.983558	2	0.0025

The classical assumption test includes the evaluation of multicollinearity and heteroscedasticity. The score of the multicollinearity test indicates an absence of multicollinearity issues, as the Variance Inflation Factor (VIF) values remain below 10. Additionally, the assessment for heteroscedasticity reveals no problems, as the Breusch-Pagan test yields a p-value above 0.05. Further details and data interpretation can be referenced in Tables 5 and 6.

Table 5. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.081302	6.736434	NA
ED	0.284368	6.341781	1.017915
DER	0.000561	1.182282	1.017915

Table 6. Heteroscedasticity Test

F-statistic	4.446072	Prob. F9.75)	0.0150
Obs*R-squared	8.267607	Prob. Chi-Square(2)	0.0160
Scaled explained SS	58.66898	Prob. Chi-Square(2)	0.0000

The panel data regression estimation, outlined in Table 7, yields noteworthy insights. Observing the impact of environmental disclosure (ED), it is evident that ED influences financial performance (FP); however, the effect is not statistically significant. Conversely, the DER demonstrates a negative result on firms' financial ability, leading to the acceptance of H2 while H1 is not supported.

The hypothesis testing leads to the conclusion that environmental disclosure does not exhibit a significant impact on firms' financing ability, aligning with the findings of Kalash (2020) and supporting Ong et al. (2016) suggestion of a non-significant correlation between revealed environmental information and ROE. The test result show that the revealed information of firms' environmental issue with a p-value of 0.882 where the amount is more than 0.05 and coefficient value of 0.136584.

This outcome resonates with stakeholder theory and legitimacy theory, indicating that disclosure of environmental information in mining companies can inspire investor confidence in the strategic environmental responsibility undertaken by corporations. This justification from stakeholders and public is rooted in the belief that such actions are beneficial for the environment.

Table 7. Regression Analysis

Dependent variable	Independent Variable	Regression Coefficient	t-Statistic	Prob.	Conclusion
ROE	C	0.411650	0.857370	0.3968	
	ED	0.136584	0.141581	0.882	Positive Insignificant
	DER	-0.161552	-6.142756	0.000	Negative Significant

Referring to Table 7, the panel data regression formula is articulated as follows:

$$ROE = 0.411650 + 0.136584ED - 0.161552DER + \varepsilon$$

The study further discloses that the DER has a non-significant effect on firms' financial ability, as indicated by a t-statistic of -6.142756, with a significance level of 0.000 (0.000 < 0.05). These results are harmonious with the discovery of Mugun et al. (2022) which confirm that the DER has adverse effects on FP. This suggests that increased debt levels within mining companies do not positively influence profits, given that a one-unit increase in the debt on equity ratio results in a decrease in return on equity by -0.161552.

5. CONCLUSION

This study concludes with two major findings. First, environmental disclosure asserting inequal impact to the financial performance, contradicts with the hypothesis 1. This finding is uneven with the studies by Wu & Li (2022) and Haninun et al. (2018) which found that revealed environmental data has a positive influence on companies' financial ability. From this result, it can be assumed that a company's openness to disclosing environmental responsibility does not have a significant impact towards firms' financial ability, in this case, return on equity. It should be noted that the companies included in the population demonstrate that revealed environmental information can have a positive association on the company's financing performance.

The study's second significant revelation pertains to the discernible and adverse influence of the debt-to-equity ratio on firms' financial ability. This identified impact aligns seamlessly with the findings documented by Nada & Hasanuh (2021). It is evident that the debt on equity ratio exerts a substantial negative on companies' financial outcomes. Thus, this study refutes the notion that the debt on equity ratio has no equivalency implications for a company's return, especially when faced with challenges posed by the COVID-19 crisis.

This study grapples with certain limitations, foremost among them being the constrained observation time frame, which poses challenges in acquiring comprehensive information on financial performance. The varied disclosure practices among companies, with some relying on annual reports and others on sustainability reports, contribute to the complexity of data collection. Another noteworthy challenge arises from the inherent subjectivity and potential inaccuracies associated with environmental disclosure items, often reliant on author judgments. Moreover, the exclusive focus on return on equity as a metric for firms' financing ability narrows the research scope. Given the diverse array of available financial ratios, this singular emphasis may limit the holistic understanding of a company's financial performance. These limitations underscore the need for cautious interpretation of the study's findings and prompt considerations for future research to address these challenges.

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THE IMPACT OF COVID-19 AND TYPES OF BANK ON BANK RISK IN INDONESIA

Irfan Iqbar*, Burhanuddin
Department of Management, Faculty of Economy and Business, Mulawarman University

Corresponding author: burhanuddin@feb.unmul.ac.id

Abstract

This paper examines the impact of the COVID-19 pandemic outbreak and the types of banks on bank risk. Our sample consists of 101 banks in Indonesia from 2018 to 2022. The aim of this paper is to study how the COVID-19 pandemic and types of bank (Islamic and conventional) impact bank risk in Indonesia. We apply the Z-Score to measure the risk of Indonesian banks for a comprehensive analysis. The results show that the COVID-19 pandemic has not significantly affected bank risk. Moreover, we found that Islamic banks negatively affected bank risk. Additional analysis shows that there is no significant interaction between COVID-19 and the types of banks. These studies can be beneficial for regulators and policymakers in Indonesia to address the unpredictability caused by the COVID-19 outbreak.

Keywords: *COVID-19 pandemic, Types of bank, Bank risk, Z-Score.*

1. INTRODUCTION

The importance of the banking to the stakeholders and the community at large, stability is a crucial concern in regard to the experience of the Global Financial Crisis (GFC) during 2007-2009. Some of the regulations that have been put in place to limit the banks' risk appetite are capital requirements, diversification strategy, and merger regulation among others (Bai & Elyasiani, 2013). There are various forms through which banking risks are presented to the stakeholders being involved in lending decisions, foreign exchange trading, and asset-liability management which contribute to its stability and efficiency especially during economic downturns (Lee et al., 2022).

In 2019, the COVID-19 pandemic was an unexpected shock to the world economy, including Indonesia. The subsequent health and humanitarian crises have led to an increase in poverty in distinct parts of the whole world and put significant pressure on the global banking system's stability and performance. Despite Indonesia is one of the key players in the Asia-Pacific banking sector, the pandemic introduced new vulnerabilities that impacted bank loans and subsidies and the real economy (Dahl et al., 2019).

While the financial industry was not the sole focus of economic difficulties during the 2020 crisis, it experienced substantial disruptions, reflected in bank loan instability and increased credit risks. Efforts by the Indonesian government and Bank Indonesia have been directed towards maintaining economic stability and fostering recovery amidst the pandemic-induced challenges (Elnahass et al., 2021; Maria et al., 2022).

Considering these challenges, this study seeks to analyze the impact of the COVID-19 outbreak and the types of banks on bank risk in Indonesia. Previous research has highlighted the importance of understanding the risk profiles of variety types of banks, particularly conventional and Islamic banks. Islamic banks, operating on principles distinct from conventional banking, are often perceived as more resilient to systemic financial crises regarding their adherence to Sharia

principles, such as the prohibition of interest (Marchetti, 2014).

The unique business models of conventional and Islamic banks entail different risk exposures, particularly concerning asset and liability structures then product offerings (Ashraf et al., 2016). While both types of banks face risks on both asset and liability sides, their risk profiles may differ significantly, affecting their stability and resilience during crises (Olson & Zoubi, 2017).

Based on previous research, there are vary differences in research results. The first study stated that it did not find any differences over the stability of conventional banks and Islamic banks. The empirical data revealed that throughout the 2007– 2009 Global Financial Crisis (GFC), Islamic banks were comparatively more stable than conventional banks (Čihák & Hesse, 2010). Meanwhile, the second study stated the results that along the COVID-19 pandemic that although all types of banks had a significant negative effect, Islamic banks had greater risk results than conventional banks (Elnahass et al., 2021).

The purpose of the study is providing thorough answers to important issues related to the intricate relationship among bank risk and the COVID-19 epidemic in the Indonesian financial environment. It aims at how the pandemic has directly affected bank risk as well as how other banking models—like Islamic and conventional banks—add to this risk situation. By carefully examining these dynamics, the study seeks to identify potential interactions or differences between the global outbreak and bank types in establishing overall risk profiles, providing insightful information for regulators, policymakers, and financial institutions negotiating the complexity of Indonesia's current economic environment.

By addressing these questions and objectives, this research seeks to embrace a deeper understanding of the dynamics of bank risk of the COVID-19 pandemic and the unique characteristics of different banking models in Indonesia.

2. LITERATURE REVIEW

2.1 Theory of Financial Intermediation

There are two primary purposes that intermediaries provide. They assist individuals navigate the complex network of financial products and markets and facilitate risk transfer. Intermediaries now focus heavily on risk management (Allen & Santomero, 1998). Financial institutions as banks and insurance firms have been essential throughout history. The statement seems genuine in practically all economies excluding developing economies at a very start stage. Even yet, the growth of intermediaries typically precedes the expansion of financial markets. Banks and insurance firms have involved a crucial role in channeling personal savings into productive investments (McKinnon, 1973).

From several frictions stated asymmetric information in the importance of the role of financial intermediaries, Leland and Pyle (1977) argue that a financial intermediary might demonstrate its knowledge by investing its wealth in assets that it has particular information about. Similarly, Diamond (1984) describes the job of financial intermediaries as "delegated monitors". Furthermore, it is the intermediaries' duty to effectively mitigate and prevent risks.

The categorization of risks into three distinct types of aids in better understanding and managing potential vulnerabilities within enterprises: First, risks that can be mitigated or eliminated through strategic business practices provide avenues for proactive risk management. Second, there are risks that can be transferred, which enables liabilities to be shifted to consumers and affirms the relationship between the risk and insurance processes, thereby underlining the importance of

external ones. Finally, there are risks that need to be managed proactively at the enterprise tier, which confirms the need for continuous compliance with conditions and selective strategies. This third category describes the concept of resilience or sustainability of business in a constantly changing environment.

2.2 Bank Risk

Risk in management is characterized as a decrease in the company's value brought on by alterations in the business environment. The goal of bank regulators is to measure singular risks, with a particular emphasis on the extreme tail of bank returns and the size of the tail that can harm banks (Pyle, 1999). During the sovereign debt crisis and the credit crisis, bank regulations also reinforce into bank risks. A diagram of the safety net for the financial system shows deposit insurance (Duan et al., 2021). The bank risk as an insolvency risk signified the stability of the bank (Pham et al., 2021). An improved governance takes risks that fall within its risk capacity and risk threshold. Risks can be quantified or qualitatively assessed using different ratios and stress tests (Lee et al., 2022). Bank risks impact either the asset and liability elements. Both demand and term deposits are coverable, represent the primary element of a bank's liabilities side. While demand deposits are rapidly withdrawable, term deposits have a fixed maturity date. Conversely, a substantial proportion of a bank's assets consist of loan and investment products provided to clients. Most of these investment items are designed for long-term projects that hardly converted into cash, even to meet the demands of depositors, without incurring a substantial loss in value. An imbalance between the maturity of assets and liabilities can potentially exacerbate a situation where depositors rush to withdraw their funds from a bank (Miah et al., 2021).

Banks may unquestionably comply with future regulations that will force them to quantify risk and capital. Managers will also need a gauge of risk to allocate capital to activities that possess the optimum riskreward ratio. Possibilities of losses with limitations set by liquidity, creditors, clients, and regulators (Pyle, 1999). The bank risk process is bolstered by risk management as well. All levels of management were advised in a clear and plain manner, with pertinent risk factors, accurate qualitative and quantitative analysis, focus on both the current situation and forward-looking using the finest analysis (Ramlall, 2018). There is evidence of variables that affect bank risk from numerous earlier studies with a global scope. such as how the COVID-19 outbreak has affected bank risk. (Duan et al., 2021). Furthermore, disparities in regulation and business models from two different levels of banks (Islamic bank and conventional bank) in earlier studies demonstrated a discrepancy between riskier and less risky banks. (Elnahass et al., 2021; Suhail et al., 2022).

Bank risk assessment was frequently compared to bank performance assessment in earlier research. Greater banking stability is shown by a higher z- score, and vice versa. Combining bank capitalization, return, and risk (volatility of return) to calculate the likelihood that a bank solvency (Yin, 2019). In field of their business activities, banks are exposed to a wide variety of risk. Financial, operational, and environmental risks are the three main types of risks associated with banking. The current model of bank risk-taking demonstrates how deposit insurance and other government initiatives work to reduce moral hazard and skew bank risk incentives (Boyd & O, 2005; Greuning & Bratanovic, 2020).

2.3 Financial Risk

Financial risk occurs due to a variety of transactions, such as investments, loans, sales, purchases, and other business activities. When financial prices fluctuate dramatically, it can lead to an increase in costs, a decrease in revenues, or other negative effects on a company's profitability (Zingler & Walker, 1965). The both its historical growth and contemporary best practice have proven,

financial risk management is a wide discipline that encompasses a wide range of dynamic elements. (Christoffersen, 2012). The count of risk measurement, particularly the volatility measurement and the correlation of returns on financial assets, is one of these elements. Most significantly, there are ongoing forces that affect how volatile asset returns are over time (Andersen et al., 2012). Financial risks can be categorized into two types: traditional risks and treasury risks. Traditional banking threats involve income statement and balance sheet layout, credit risk, and solvency risk. Treasury risks, which originate from financial arbitrage, may result to either a profit or a loss depending on the accuracy of the arbitrage. The primary classifications of treasury risk are currency, liquidity, interest rate, and market risks.

2.4 Interest Rate Risk

Traditional predictable interest rate risk management aims to control fluctuations in the value of assets and liabilities by deciding that interest rates encounter small and predictable changes. The traditional method of managing and valuing interest rate risk, developed and commonly employed by actuaries, relies on the presumption of an interest rate. This rate is utilized to evaluate cash flows as well as to determine their value.

By assessing the effect interest rates fluctuation on the cash flow's sensitivity. This approach implies that the yield curve is uniformly level and that interest rates vary in a consistent and predictable manner (Ang & Sherris, 1997). Determining the interest rate contributes by many factors, as economic conditions, potential inflation, monetary policy, foreign exchange market activity, the stance of the central bank, levels of outstanding sovereign debt, foreign investor demand for debt securities, and the stability of the financial and political environment (Zingler & Walker, 1965).

2.5 Credit Risk

Credit risk referring confusion regarding a counterparty's potential to fulfill their obligations. The growing diversity of individuals associated with highest governments and the expanding range of obligations, from auto loans to elaborate derivatives transactions, have made credit risk management a top priority for corporations in the financial services industry. The Bank for International Settlements, together with regulatory regulations in some instances, has compelled banks along with other financial institutions to investigate out fresh methods for quantifying and monitoring credit risk (Abeyratna Gunasekarage, 2006). Credit risk refers to the potential for a party involved in a contract not fulfilling their obligations as specified in the contract. Credit risk, alternatively referred to as default risk, performance risk, and counterparty risk, covers the possibility of a borrower failing to perform on their financial obligations. These names primarily refer to the same idea, which is the influence of credit impacts on a company's transactions in the banking sector. Credit risk can be defined by three key factors: exposure, default probability, and recovery rate (the likelihood of recovering a certain amount in the event of a default) (Nason, 2011).

2.6 Operational Risk

Operational risk regulations have been constructed, and the resulting agreement describes operational risk as a possibility for financial loss caused by a combination of internal processes, personnel, and systems, as well as external factors (Dowd, 2003; Moosa, 2007). Operational risks are to the bank's corporate operations and the potential consequences of adhering to bank regulations and policies, internal structures and technology, security of data, precautions against mismanagement and fraud, and issues over business continuity. Moreover, the strategic plans of bank, staff career development, governance, organizational structure, resource management

internally, product and knowledge development, and client acquisition approach.

2.7 COVID-19

Since like December 10, 2020, the Johns Hopkins University Center for Systems Science and Engineering (CSSE) announced that there were 70 million verified cases of COVID-19 across the worldwide, with a 1.5 million death rate (Duan et al., 2021). The existence of a corona virus outbreak called COVID-19 in 2019 was announced a global pandemic. The world is aware of the impact of COVID- 19 affecting many sectors, one of which is the global outbreak. The impact of the COVID-19 outbreak is extraordinary for the economy interplay in the world, including Indonesia. Health crises, humanitarian, have led in increasing poverty in vary countries (Duan et al., 2021). Due to how severe the COVID-19 pandemic crisis is, all authorities and regulators are motivated to take action and contribute to building economic defenses rather than promoting economic growth. How risk-taking banks handle crises and what strategies they have in place for addressing them (Moudud-ul-huq & Ahmed, 2022). The COVID-19 pandemic was measured in the previous literature using dummy variables, where 1 represents the pandemic's period and 0 represents a time when it wasn't. This study used dummy variable measurements to emulate the variable measurement methods used in the earlier literature as well.

2.8 Type of Banks

2.8.1 Conventional Banks

The d styles of banking worldwide, Islamic bank and conventional bank. Islamic banks have a noninterest-based banking system, whereas conventional banks have an interest-based banking system. Both stimulate competition in order to meet customer expectations for long-term economic gains. Commercial banks function as joint stock companies, primarily with the goal of generating profits. Traditional banks accept deposits that can be withdrawn promptly upon demand. They typically employ the available funds from these assets to address immediate credit requirements rather than long-term ones. Traditional banks receive deposits and subsequently lend them to borrowers, while also retaining a portion in their own safes. Commercial banks' assets comprise of cash reserves, readily accessible funds, discounted bills, investments, and loans and advances (Shekhar, 2005).

The involvement of the banking industry in the money supply process is undoubtedly an essential factor in bank regulatory policy. However, a regulatory policy driven solely by macroeconomic objectives could demolish banks not sustain the service that are essential. Some regulatory policies based exclusively on macroeconomic objectives imply implicitly that we have no need for banks because they can be supplanted by other institutions. The riskiness of loan portfolios is a crucial concern, and many banks were aggressively and rapidly expanding their deposit comes to finance the risky loans. In regard of theory, bank failures may become no worse than other business failures, but in practice, the failures of bank can cause significant harm by disrupting bank customers' profitable investments. Furthermore, the bank regulators have focused on behavior restrictions and meticulous supervision of banks, but they have resisted introducing a risk adjustment to deposit insurance premiums (Diamond & Dybvig, 1986).

2.8.2 Islamic Banks

The distinctions among conventional banks and Islamic banks often exist in the concepts of riba, purpose, and risk-sharing approaches (Ramlan & Adnan, 2016). The absence of interest in the Islamic banking system demands the use of alternative funding techniques as the main source of

revenue. Structured on the principles of equality, sharing profits, minimizing losses, and utilizing the investment contracts known as "Murharabah" and "Musharakah". The second approach relies on a debt-oriented implementation of the cost-plus/profit-margin concept (El-chaarani, 2022).

Another option essential component of the financial industry, in particular banks, is the liquidity risk, which spreads through interrelated relationships. However, the presence of liquidity risk resulted in both market risk and systemic risk, so representing a more significant danger to banks. Furthermore, when a particular bank happened a distraction to access liquid assets, depositors may withdraw their funds and relocate them to financially stable institutions. This behavior is motivated by concerns that a lack adequate liquidity in the overall banking system could result in its collapse under the existing market framework. Khan (1987) argues that the theoretical framework of an Islamic bank can adequately address the conventional bank's lack of stability. Acquiring legal counsel during the 2007-2008 financial crisis. Shamsad Akhtar, the former the World Bank for the Middle East and North Africa (MENA) VicePresident region in 2009, stated that Islamic banks exhibited a notable level of durability and steadiness notwithstanding the recent financial crisis. Nevertheless, their susceptibility has been influenced by their increased involvement in real estate and their restricted dependence on equity-based or risk-sharing transaction (Bourkhis & Nabi, 2013).

Referring that Islamic banks and conventional banks have different business models in terms of the structure of assets and product offerings, Islamic banks have shown empirical that remained relatively more stable in the face of the Global Financial Crisis (GFC) of 2007–2009, researchers are willing to compare the differences between the two types of bank models against their bank risks (Ashraf et al., 2016; Mohammed Ebrahim Hussien, 2017). A literature using dummy variables as variable measurements, where 1 indicates the Islamic banks and 0 indicates the conventional banks.

2.9 Conceptual Framework

Based on the aforementioned definitions, the dependent variable of this research is Bank Risk. Whilst, COVID-19, Type of Banks, and the interaction between COVID-19 and Type of Banks are the independent variables.

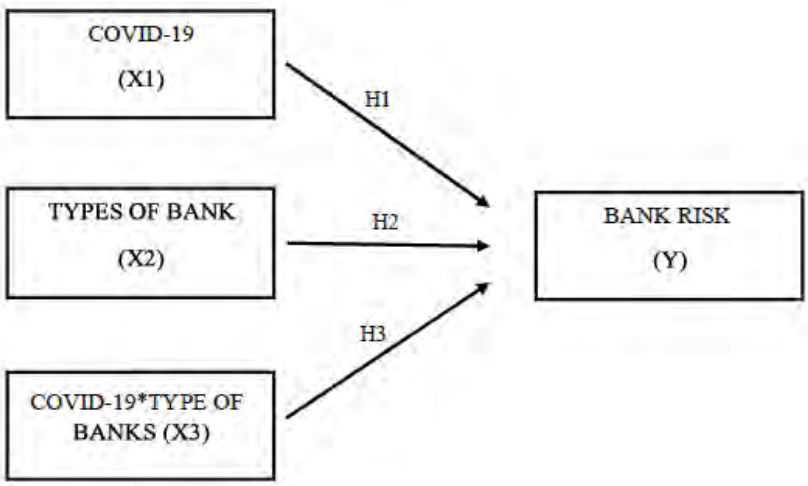

Figure 1. Conceptual Framework

The hypothesis that researchers will discuss first is the impact of COVID-19 on bank risk, Risk in management is characterized as a decrease in the company's value brought on by alterations in the business environment. The goal of bank regulators is to measure singular risks, with a particular emphasis on the extreme tail of bank returns and the size of the tail that can harm banks (Pyle, 1999). The COVID-19 outbreak greatly significantly affects the bank's stability, which is considered in relation to the size of the bank's risk (Maria et al., 2022). Discovering how COVID-19 affected bank risk because it increased the level of bank risk for 1,584 banks globally. Further analysis reveals that the impact on the stability of system is especially significant for banks that are riskier, large, have higher loan-to-asset ratios, highly leveraged, are not capitalized, and have less of network. Nevertheless, the impact of this influence is mitigated by formal bank regulation, ownership structure, and informal institutions (Duan et al., 2021).

The findings of Mohsin, Wang, and Özcan (2023) offer a significant negative effect of COVID-19 on bank risk. More precisely, the COVID-19 pandemic has had a substantial adverse effect on the financial performance and sustainability (risk) of lesser, undercapitalized, more concentrated foreign, and government-owned banks. Based on the aforementioned considerations, the following hypothesis is derived:

Hypothesis 1: there is a negative impact of COVID-19 on the high level on bank risk.

The second theory primarily concerns the impact of differentiating types of banks on bank risk. The substantial sum of the COVID-19 coefficients and kinds of bank shows tough evidence for the existence of significant disparities between both bank types by the measures. Additionally, they discovered that the pvalues indicate that the impact of COVID-19 is significantly lower for Islamic banks compared to conventional banks. Additionally, our research has revealed that Islamic banks have had significantly lesser levels of operational risk comparing to conventional banks during the duration of the outbreak. (Elnahass, 2016). Based on the current arguments, the hypothesis suggests:

Hypothesis 2: there is a positive impact of types of bank on bank risk.

The interaction between COVID-19 and type of banks; Conventional Banks and Islamic Banks on Bank Risk are additional discussion in this study. The impact of COVID-19 on both types of banks in developed and developing countries makes the author interested in discussing the interaction of the two

variables on bank risk. Islamic banks adhere to two fundamental principles: the forbidding of interest and the practice of profit/loss share. Typically, they act as investment associates rather than offering fixed rates of interest to depositors. Deposits in Islamic banks are considered as interest-free loans from clients to the banks (Miah et al., 2021).
Hypothesis 3: There is an interaction between COVID-19 and type of banks.

3. METHODOLOGY

In this study, the population encompasses all 101 banks registered with the *Otoritas Jasa Keuangan* (OJK) between 2018 and 2022, as identified by Sugiyono (2014). These banks form the basis from which conclusions can be drawn. The selection criteria for the sample included banks that regularly published financial accounts and remained operational throughout the period from 2018 to 2022. Consequently, the sample for this study constitutes a saturated sample, as it

encompasses the entire population, aligning with Sugiyono's (2012) definition of samples as representations of population characteristics.

In order to examine the effects of the COVID-19 epidemic over performance of banks globally in terms of accounting and market principles as well as financial stability, we have built an empirical model. Therefore, a standardized specification for the panel data regression models is outlined following:

$$BRi,t = \alpha + \beta 1COVIDi,t + \beta 2TBi,t + \beta 3TB*COVIDi,t + ei,t$$

Where:

In the context of assessing Bank Risk (BR) in a given month (t), various factors come into play, including but not limited to, a constant (a) and coefficients (β1… β3) representing different variables. Moreover, the impact of the COVID-19 pandemic (COVID) is a crucial consideration, influencing risk dynamics across different types of banks (TB). The interaction between TB and COVID, denoted as TB*COVID, adds another layer of complexity to risk evaluation, suggesting that the pandemic's effects may vary depending on the nature and operations of the bank. This multifaceted approach underscores the necessity of a comprehensive framework for understanding and managing risk in the financial sector amidst the ongoing global health crisis.

Researchers in this study measuring primarily bank risk and utilized the Z-Score measurement of measured insolvency calculated for bank stability (Yin, 2019). Greater banking risk is shown by a higher z-score, and vice versa. To measure banking risk, researcher use a Z-score:

$$Z = ROA - E/TA : \sigma ROA$$

ROA = Average Return On Assets of banks

E/TA = Average equity against the bank's total assets

σROA = Banks ROA deviation standards

The model represents a dummy variable that has a value of (1) if the bank becomes apparent during the COVID-19 timeframe and (0) otherwise. The term "Islamic" represents a dummy variable that is assigned a value of (1) if the observed bank is categorized as an Islamic bank, and (0) if it is qualified as a conventional bank.

4. RESULT AND DISCUSSION

4.1 Result

Descriptive statistics provide a concise overview of data, showing key metrics such as mean, total amount, maximum and minimum values, and standard deviation.

Table 2. Descriptive Statistic Result by Variables of Bank Risk (BR), COVID-19 (COVID), Types of Bank (TB), and The Interaction Between COVID-19 and Types of Bank (TBCOVID)

	BR	**COVID**	**TB**	**TBCOVID**
Mean	0.372384	0.600000	0.108911	0.065347
Median	0.228768	1.000000	0.000000	0.000000
Maximum	286.7630	1.000000	1.000000	1.000000
Minimum	-18.57106	0.000000	0.000000	0.000000
Std. Dev.	12.99464	0.490384	0.311836	0.247381
Observations	505	505	505	505

Source: www.ojk.com data processed, 2024

The statistical findings presented below are derived from the variables employed in this study. The descriptive statistics reveal that the variables COVID and TBCOVID exhibit mean values above the standard deviation, whereas the variables BR and TB demonstrate mean values falling below the standard deviation.

During analysis, when employing panel data regression techniques, three alternative approach models can be utilized. Therefore, it is necessary to determine and select the most suitable model for the study. The Chow Test was not conducted due to the presence of a singular matrix resulting from variables that utilize Dummy Variable measurements. Therefore, the subsequent test, namely the Hausman Test, has a nonsignificant p-value of 0.1876, which is bigger than 0.05. Adapting to the reference, it is suggested that if the value of the Hausman Test is less than 0.05, the Random Effects Model (REM) should be used rather than the Fixed Effects Model (FEM). However, based on the statement that if the data suggests that different bank units have different intercepts or slopes based on specific characteristics (or bank types), then FEM is more recommended to be used even though the Hausman Test results do not show significant values.

The multicollinearity, autocorrelation, and heteroskedasticity tests are examples of the traditional assumption tests that were utilized in this empirical investigation. According to the multicollinearity test, values that are greater than 0.90 suggest that there is no connection between the independent variables. This indicates that the panel data model used for this study result that zero multicollinearity difficulties. In addition, the investigation did not uncover any autocorrelation difficulties, as demonstrated by the Durbin-Watson statistic of 0.551133. This statistic is within the allowed range, which is defined as $-2 < DW < 2$, presenting that there was no autocorrelation. In addition, the heteroskedasticity test did not uncover any problems, since the Osb*R-squared probability value was 0.6164, which indicates that the value is more than 0.05. The authors have completed the panel data regression, and all of the results will be displayed on the next page.

Table 2. Panel Data Regression Result by Variables of Bank Risk (BR), COVID-19 (COVID), Types of Bank (TB), and The Interaction Between COVID-19 and Types of Bank (TBCOVID)

Dependent Variable	**Independent Variable**	**Coef.**	**T-stat.**	**Prob.**	**Sign.**	**Desc.**
BR	Constant	0.423500	0.171129	0.0137		
	COVID	-0.047413	0.036802	0.1982	(+)	Not Significant
	TB	-5.482540	0.519179	0.0000	(+)	Significant
	TBCOVID	0.044892	0.116275	0.6996	(+)	Not Significant
R-Square		0.181737				
Adjust R-Square		0.176837				
F-Statistic		37.09078				
Prob. (F Signifikan)		0.000000				

Source: www.ojk.com data processed, 2024

The value of the coefficient of determination R-squared (R2) is 0.181737. This indicates that the Bank Risk (BR) as dependent variable can be impacted by 18.17% due to the independent factors (COVID, TB, TBCOVID), while the remaining 81.83% is accounted for by other variables that were not considered in this study model.

During analysis, when employing panel data regression technique, three alternative approach models can be utilized. Therefore, it is necessary to determine and select the most suitable model for this study. The results of the panel data regression test suggest that the F-statistic value is 37.09078, with a significance level (F significant) of 0.000000, which is smaller than 0.05 (0.0000 < 0.05). These findings suggest that the three independent variables, namely COVID, TB, and TBCOVID, collectively or simultaneously influence BR in the sample of banks regulated by the *Otoritas Jasa Keuangan* (OJK) for the years 2018- 2022, indicating a valid model.

The multicollinearity, autocorrelation, and heteroskedasticity tests are examples of the traditional assumption tests that were utilized in this empirical investigation. According to the multicollinearity test, values that are greater than 0.90 suggest that shows no interaction between the independent variables. This indicates that the model of data panel used for this study have zero multicollinearity difficulties. In addition, the investigation did not uncover any autocorrelation difficulties, as demonstrated by the DurbinWatson statistic of 0.551133. This statistic is within the allowed range, which is defined as -2 < DW < 2, referring that there was no autocorrelation. Furthermore, the heteroskedasticity test did not uncover any problems, since the Osb*R-squared probability value was 0.6164, which indicates that the value is more than 0.05. The authors have completed the panel data regression, and all of the results will be displayed on the next page.

Based on the regression analysis results shown in Table 1, the model for this research is outlined as follows:

$$BR = 0.423500 + -0.047413COVID + -5.482540TB + 0.044892TB*COVIDi,t + e$$

The analysis looked at three main factors: the impact of COVID-19 on bank risk, the influence of different types of banks on bank risk, and the interaction between bank types and COVID-19. The measurements show that COVID-19 did not significantly affect bank risk, as the value was -0.047413 with a significance level of 0.1982. However, the type of banks had a notable effect, with a value of -5.482540 and a significance level of 0.0000, indicating a significant positive impact on bank risk. Regarding the interaction between bank types and COVID-19, the results didn't show a significant effect, on 0.044892 value and a significance level of 0.6996. Therefore, while the type of banks mattered in influencing bank risk, the interaction with COVID-19 didn't have a significant impact.

Further explanation, the analysis employed dummy variables, coded as 1 and 0, to represent the presence or absence of COVID-19 and the distinction among Islamic and Conventional banks. The coefficient for COVID-19 (-0.047413) suggests its impact on bank risk, yet with a significance level of 0.1982, indicating that this effect is not significant significantly. It implies that during the period of COVID-19 (coded as 1), there is no significant negative effect on bank risk compared to non-COVID-19 periods (coded as 0). In contrast, the coefficient for the Type of Banks variable (-5.482540) reveals a significant negative impact on bank risk connection with Islamic banks (coded as 1) compared to Conventional banks (coded as 0), supported by a significance level of 0.0000. However, the interaction term between bank type and COVID-19 (TB*COVID) did not yield a statistically significant impact on bank risk, with a coefficient of 0.044892 and a significance level of 0.6996. Thus, while the dummy variables effectively captured the presence of COVID-19 and the distinction between bank types, the analysis signifies that the impact of COVID-19 alone and its interaction with bank type were not statistically significant factors in determining bank risk levels.

4.2 Discussion

4.2.1 The impact of COVID-19 on Bank Risk

COVID-19 has not significant negative effect on bank risk across all banks in Indonesia registered with the *Otoritas Jasa Keuangan* (OJK) from 2018 to 2022. This study's findings unaligned with previous research conducted by Mohsin, Wang, and Özcan (2023), which found a significant negative effect of COVID-19 on bank risk. More precisely, the COVID-19 pandemic has had a substantial adverse effect on the operational efficiency and financial security (risk) of smaller, underfunded, less varied, international, and state-owned institutions. The statement also alludes to the repudiation of H1.

4.2.2 The impact of Types of Bank on Bank Risk

The type of bank results a positive significant impact on bank risk across all banks in Indonesia registered with the *Otoritas Jasa Keuangan (*OJK) from 2018 to 2022. Based on the model equation calculations, the findings indicate that Islamic banks exhibit a lower effect in regard to conventional banks, that are align with Elnahass (2022) and support previous research conducted. In addition, the substantial sum of the coefficients of the outbreak of COVID-19 and bank types

provides compelling evidence for the presence of considerable disparities among the two types of banks in terms of these stability metrics. Their findings reveal that Islamic banks are considerably less impacted by COVID-19 compared to regular banks, as indicated by the p-values. Moreover, throughout the outbreak, we have discovered that Islamic banks have had far lower operational risk than conventional banks. Also by Ghenimi, A., Chaibi, H., & Omri, M. A. (2024), which suggests that the COVID-19 pandemic negatively affects the stability of conventional banks. However, Islamic banks demonstrate better performance and lower risk levels compared to conventional banks. Banks with higher-quality capital exhibit greater effectiveness in risk management and performance enhancement during the pandemic. The statements refer to the acceptation of H2.

4.2.3 The interaction between COVID-19 and Types of Bank

During the period from 2018 to 2022, the COVID-19 pandemic and the type of bank (Islamic bank and conventional bank) exhibit a negative but nonsignificant interaction effect. This observation is drawn from data collected across all banks in Indonesia registered with the *Otoritas Jasa Keuangan* (OJK). Contrary to the findings of Elnahass et al. (2021), which suggested that both types of banks had a significant negative impact during the COVID-19 pandemic, the findings of this study do not support such conclusions and are less aligned with them. The statement refers to the rejection of H3.

5. CONCLUSION

After conducting research analysis and engaging in discussions, the COVID-19 pandemic has had a substantial impact on bank risk. Notably, the impact of the pandemic is more pronounced than that of the specific type of bank. It is noteworthy that this impact has endured beyond the discrepancies identified among the different categories of banks that were publicly traded on *Otoritas Jasa Keuangan* (OJK) from 2018 to 2022. Based on our study's findings, we propose several recommendations for bolstering the survival of the banking industry amidst the COVID-19 pandemic. Firstly, regulators should intensify their oversight of banks to ensure robust risk management practices. Secondly, banks themselves should improve their risk management strategies, specifically addressing challenges posed by the pandemic. Thirdly, financial institutions ought to prioritize promoting financial literacy among customers, empowering them to navigate financial decisions effectively during these uncertain times. Additionally, fostering innovation within the sector can lead to the development of novel products and services tailored to meet customers' evolving needs during the pandemic. Lastly, collaborative endeavors by governments and financial institutions to bolster small and medium-sized enterprises (SMEs) are crucial, given their heightened vulnerability to economic disruptions. By implementing these measures, policymakers, regulators, and financial institutions can mitigate the adverse impacts of the epidemic on bank risk, thereby reinforcing the stability and resilience of the banking sector.

Acknowledgement

We happily express our gratitude to all those who contributed to the bottom line of this research paper. Firstly, we extend our sincere appreciation to International Conference in Technology, Humanities, And Management (ICTHM 2024) for providing the platform to publish our findings. We are grateful to previous researchers for their insightful work, which provided valuable context for our study. Additionally, we acknowledge the support and guidance received from Mulawarman University and mentors throughout the research process. Lastly, we thank the participants who generously provided time and insights, as this study would not have been possible without them.

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EFFECTS OF ENTREPRENEURIAL ORIENTATION, ENTREPRENEURIAL COMPETENCE AND SOCIAL MEDIA USAGE ON SME PERFORMANCETHE CASE OF A SMALL BUSINESS ENTERPRISE OPERATING A COFFEE SHOP

David Ginola Awda, Dwi Martiyanti*

Economic and Business Faculty, Mulawarman University, Samarinda.

**Corresponding author: dwi.martiyanti@feb.unmul.ac.id*

Abstract

Small and medium enterprises (SMEs) have an important role in the economic growth of developing countries. However, as competition for small and medium enterprises (SMEs) increases, some of them do not know how to differentiate themselves or be unique from competitors. Therefore, this research aims to examine the influence of entrepreneurial orientation (EO) on SME performance. Data was collected using a questionnaire from 51 SMEs operating coffee shops in the city of Samarinda, East Kalimantan, Indonesia, in 2024. Coffeeshop was chosen as the research object because consumer interest in coffeeshop services is increasing and coffeeshop competition is increasing in Samarinda. The data were analyzed using PLS. Findings support all hypotheses with significant relationships. It was found that entrepreneurial orientation, entrepreneurial competence, and social media usage have an influence on performance, and entrepreneurial orientation has an influence on entrepreneurial competence and social media usage. This research provides a comprehensive framework for understanding SME performance by including performance, entrepreneurial orientation, entrepreneurial competence, and social media usage by SMEs.

Keywords*: Performance, entrepreneurial orientation, entrepreneurial competence, and social media usage.*

1. INTRODUCTION

A small medium enterprise is a business that we always see in our everyday lives in Indonesia, a small medium enterprise spins the wheel of the economy in many developing countries such as Indonesia especially in creating large job opportunities and reducing the percentage of people unemployed around the world. According to the government of Indonesia, there are more than 65 million units of small and medium enterprises registered by the government of Indonesia (Statista, 2024). The coffee shop business is one of the SME trends that is experiencing growth in Indonesia. The high interest and consumption of coffee due to the shift from tea to coffee as well as a new appreciation for locally produced coffee (Statista, 2023), has caused the popularity of the coffee shop business and competition in this sector to increase. However, it also needs to be emphasized that many coffee shops do not have a unique essence in their business aspect. Most of these coffee shops still look similar to each other, both in terms of sales and service. Therefore, coffee shop owners need to increase the selling value and aspects of their business to customers through understanding entrepreneurial orientation.

Entrepreneurial orientation has been understood as a series of actions and plans taken by an organization or company to achieve a different position or a higher position than other companies or organizations Saji (2018). However, small and medium enterprises may not have the basic

knowledge of how to differentiate themselves from competitors.

Business entities must be able to diversify themselves from their competitors to achieve entrepreneurial competence. Entrepreneurial Competence can be understood as an aspect that a business must have (Aulia, 2020). Although understanding this concept is quite simple, it is not easy to apply it to small and medium enterprises. This is due to the mentality of many entrepreneurs to sell products not based on statistical planning or on-the-spot evaluations but on trends that may be known by many people. Given that trends run fast, understanding the entrepreneurial competence of an entrepreneur is an important aspect of having a sustainable business. This is to the argument from Mitchelmore (2020) that entrepreneurial competence is an important aspect that must be possessed by owners or managers to achieve higher SME performance.

Apart from Entrepreneurial Competence, social media is also an aspect that cannot be ignored if a business's goals are to be noticed by its market. Data shows that the number of social media users in Indonesia is increasing every year (data reportal, 2024). Entrepreneurs must be able to adapt to using social media to be able to reach the desired market. In addition, through wide market reach, social media has helped improve the performance of SMEs (Susanto et al., 2022).

2. LITERATURE REVIEW

2.1. Entrepreneurial Orientation

Entrepreneurial Orientation is stated as a combination of innovative, proactive, and risk-seeking behaviors that cross national borders and aim to create the value of the organizations (Saji, 2018). This means that having an entrepreneurial orientation is a sequence of steps that an organization or corporation takes to distinguish itself from similar competing businesses or organizations in which one can find many. The understanding of an Entrepreneurial Orientation is the first step in helping the majority of SMEs sustain their business because as of this moment, many SMEs that are in Indonesia, especially in Samarinda do not have any fundamental knowledge when they are starting their business. So many SMEs that start their businesses cannot last long.

2.2. Entrepreneurial Competence

Entrepreneurial Competencies are unique and difficult-to-imitate skills possessed by business people (Aulia, 2020). This aspect is an important factor for businesses to build an image with customers and capture part of the desired target market to appear different from other types of businesses. This is in line with Mitchelmore (2020) that Entrepreneurial Competence is an important aspect that an owner or manager must have to achieve higher SME performance. The impact of this is the possibility that a business can last longer. Therefore, understanding the actions and plans that must be taken is very important to achieve high SME performance. In this series of actions and plans, one aspect that should not be forgotten by an organization or company is the entrepreneurial competency aspect.

2.3. Social Media Usage

Social media refers to activities, practices, and behaviors in a community that gathers online to share information, knowledge, and opinions (Safko, 2009). Social media has emerged as a relevant novelty for business growth and sustainability, both in the managerial and academic debate" (Perengki Susanto, 2022). Social media could potentially supply valuable market intelligence to fill the SME's resource gap and reduce uncertainty by leveraging their real-time market knowledge, resource-matching abilities, networking, social media customer relationship management (CRM), co-creation of products and services, and overall marketing capabilities (Perengki Susanto, 2022).

2.4. SME Performance

In general, the success of SMEs in running their business is due to improving their business performance. An organization's subjective performance efforts are generally based on market effectiveness which consists of three items, namely market share growth, sales volume, and profitability (Saunila, 2014). Considering that the large number of SMEs in Samarinda-Indonesia is overshadowed by the large number of foreign franchises that have started their businesses in the city, improving performance needs to be paid attention to. So, to achieve higher SME performance, it is hoped that understanding the variables of Entrepreneurial Orientation, Entrepreneurial Competence, and social media can provide positive growth for SMEs. Furthermore, this positive growth encourages SMEs to be able to maintain their businesses and create unique business aspects in their regions.

2.5. Hypothesis Development

2.5.1. Entrepreneurial Orientation on SME Performance

Entrepreneurial orientation is one of the important resources of SMEs that provides a foundation for SMEs to create entrepreneurial choices and decisions that can improve company performance (Torres, 2019). In addition, EO also helps SMEs to respond to customer needs and demands in the market by introducing new products/services or modifying existing products/services, initiating new and valuable ideas for SMEs, supporting SME process management and improving SME practices and activities. other. (Jia, 2014). Thus, entrepreneurial orientation can influence SME performance. In conclusion, we hypothesize that:

H1: Entrepreneurial orientation has a positive effect on SME performance.

2.5.2. Entrepreneurial Orientation on Entrepreneurial Competence

Entrepreneurial competencies are seen as the collection of capabilities and experiences that pave the way for the achievement of success in entrepreneurial activities (Gull, et al., 2021; Wahyuni dan Sara, 2020). Thus, the entrepreneurial orientation possessed by business actors can influence Entrepreneurial Competence. In conclusion, we hypothesize that:

H2: Entrepreneurial orientation has a positive effect on entrepreneurial competence.

2.5.3. Entrepreneurial Orientation on Social Media Usage

Chandra (2009) stated that EO has been extensively associated with the adoption of advanced technologies for improving business capabilities and getting a competitive edge to be well ahead of competitors. SMEs who have EO will tend to adopt social media for their business to gain the benefits offered by social media (Sahaym, 2019). In conclusion, we hypothesize that:

H3. Entrepreneurial Orientation Does have a positive effect on Social Media Usage.

2.5.4. Entrepreneurial Competence in SME Performance

Entrepreneurial competencies are the capability of the owners/managers of SMEs to execute their jobs and responsibilities successfully which could lead the SMEs to attain success and better performance (Rahman et al., 2020). Entrepreneurial competencies are crucial to attaining a higher SME Performance as it is one of the capabilities that is needed in their owners or managers to execute their tasks successfully (Aulia, 2020). Thus, we hypothesized as follows:

H4. Entrepreneurial Competence does have a positive effect on SME Performance.

2.5.5. Social Media Usage on SME Performance

Social media has become the most effective resource for improving company performance. Inexpensive costs and eliminating geographical boundaries with customers and other partners are advantages that MSMEs can obtain when using social media. Reducing advertising and promotion costs has helped MSMEs to produce improvements in their financial performance (Susanto et al.,

2022). Several studies also state that social media has a positive impact on company performance (Rodriguez et al., 2015; Karjaluoto, 2015). In conclusion, we hypothesize as follows:
H5: Social Media Usage has a Positive Effect On SME Performance

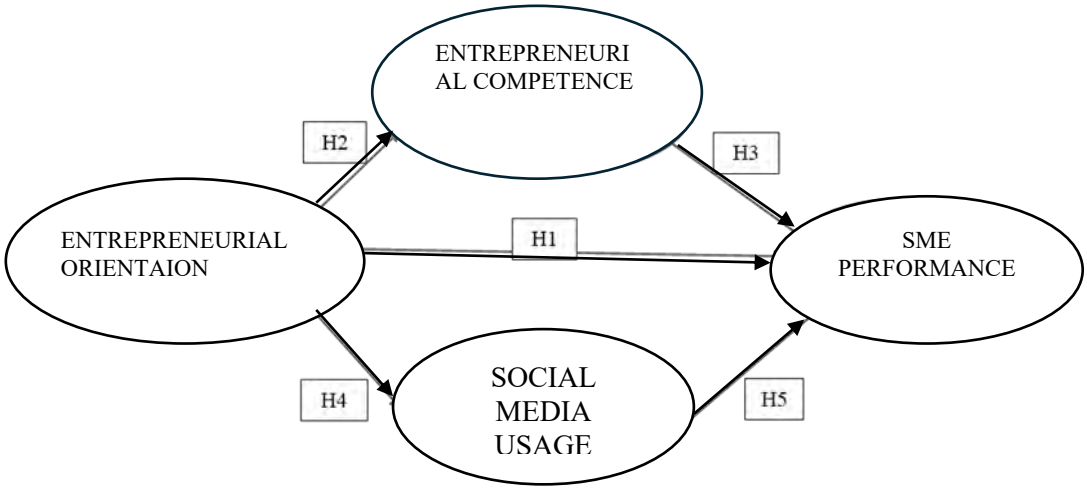

Figure 1. Research Framework

3. METHODOLOGY

3.1. Data collection

This research is a survey-based quantitative research using a questionnaire distributed to 51 coffee shop owners or managers in Samarinda Province, Indonesia. The unit of analysis for this research is the organizational level, namely SMEs. The research uses a non-probability approach, namely a purposive sampling technique with SME criteria based on the government's definition of SMEs (namely Law No. 8/2008) and SMEs that use social media to support their business. This research uses a Partial Least Square-Structural Equation Modeling (PLS-SEM) approach to test the conceptual framework and hypotheses as suggested by Hair et al. (2019).

3.2. Measurements items

The measurements in this study used a five-point scale ranging from "strongly disagree (1) to strongly agree (5)." The measurement items in this study were adapted from previous research in the context of SMEs. We have adopted EO measurement items from Susanto et al (2022), Entrepreneurial Competence from Aulia (2020), Social Media Usage from Susanto (2022), and SME Performance from Saunila (2014).

4. RESULT AND DISCUSSION

Respondents' profile

The sample in this study was 51 coffee shops in Samarinda city, consisting of using social media in a business (100%). The social media they use is Instagram. In terms of the length of time they have used social media to support their business, most are more than 4 years (41.2%), this shows that they have been using social media in their business for a long time.

Table 1. Demographic characteristics of the respondents

		Frequency	Percentage
Usage of Social Media in a Business	Yes	51	100%
	No	-	0%
Social Media Used By Business	Facebook	-	0%
	Instagram	51	100%
	Tiktok	-	0%
	Twitter	-	0%
	Others	-	0%
For How Long Has the Business Used social media	Less Than 2 Years	12	23,5%
	Between 2 To 4 Years	18	35,3%
	More Than 4 Years	21	41,2%

Measurement assessment
Before hypothesis testing, we checked the validity of the instrument through factor loading scores. Based on Table 2, shows that all factor loading scores are above 0.6 and the average variance extracted (AVE) score is also higher than 0.5 (Hair et al., 2017). In addition, the VIF scores for each variable were also examined. The results show that the score is satisfactory below 3.3 (Kock, 2015) so it can be interpreted that the data does not experience multicollinearity. Meanwhile, to ensure the consistency of measurement items, the results of the reliability test showed that Cronbach's Alpha score is above 0.7 and the composite reliability (CR) score is higher than 0.7 (Hair et al., 2017).

Table 2. Reliability, and construct validity

Variable and item	**Factor Loading**	**AVE**	**CR**	**Alpha**
Entrepreneurial Orientation				
We are often the first to market new products and services	0.754			
Even though the cost of some projects is high, under certain conditions, our organization will still launch the project.	0.779			
To seek sales growth, we are willing to execute some risky projects.	0.822	0,804	0,916	0,890
We always invest more resources than our major competitors in forecasting and exploitation.	0.815			
We often try new ideas.	0.756			
We are often looking for new ways to do things	0.891			
Entrepreneurial Competence				
Coffee shop creates new merchandise to attract customer	0.888			
Coffee shop creates a captivating establishment to attract customers	0.880	0,871	0,904	0,845

coffee shop releases new menu to keep customers attracted	0.844			
Social Media Usage				
We are seeking through the means of social media to promote brand	0.736			
We operate through the means of social media in the evaluation of performance marketing by getting feedback (from Likes, shares, and follow-ups on Instagram, Facebook, and Twitter)	0.857			
We systematically collected customer feedback on social media sites	0.832	0,803	0,916	0,889
We improved the quality of products through the study of customer feedback through social media	0.845			
We operate through the means of social media in the search for general information about the target market	0.768			
We use social media to search for competitors' information	0.772			
SME Performance				
Our coffee shop market share is increasing	0.884			
Our coffee shop sales volume increased	0.924	0,899	0,927	0,881
Our coffee shop's profitability increases	0.889			

Hypotheses testing result

Hypotheses testing found that entrepreneurial orientation has a positive effect on SME performance (p-val = 0.000), hence supporting H1. Entrepreneurial orientation has a positive effect on entrepreneurial competence (p-val = 0.000), hence supporting H2. Entrepreneurial Orientation has a positive effect on Social Media Usage, p-val = 0.000), hence supporting H3. Entrepreneurial Competence does have a positive effect on SME Performance (p-val = 0.011), hence supporting H4. Social Media Usage has a Positive Effect On SME Performance, p-val = 0.013), hence supporting H5.

Table 4. Summary of the hypotheses testing result

Path	Original Sample	Sample Mean	Standard Deviation	P Values	Conclusions
Entrepreneurial Orientation →Performance	0,511	0,522	0,094	0,000	Supported
Entrepreneurial Orientation →Entrepreneurial Competence	0,394	0,419	0,091	0,000	Supported
Entrepreneurial Orientation → Social Media Usage	0,480	0,507	0,114	0,000	Supported
Entrepreneurial	0,300	0,308	0,118	0,011	Supported

Competence → Performance					
Social Media Usage → Performance	0,321	0,321	0,129	0,013	Supported

Figure 2. Research Framework Result

Discussion

The research results found that Entrepreneurial Orientation had a positive and significant effect on SME performance (p-val = 0.000). This shows that businesses with a basic understanding of entrepreneurial orientation can improve SME performance. As a result, we can confirm the acceptance of the first hypothesis (H1). The findings of this research are in line with the results of research (Susanto, 2022) which also confirms that Entrepreneurial Orientation has a positive and significant effect on SME performance.

Apart from performance, EO and entrepreneurial orientation also have a positive and significant influence on entrepreneurial competence (p-val = 0.000). Based on the results of direct influence hypothesis testing, show that the p-value in the second hypothesis is 0.000 and the original sample value is 0.394. This suggests that the Entrepreneurial Competence of a business may be influenced by knowledge of the basics of entrepreneurial orientation. Increasing Entrepreneurial Orientation will lead to an increase in Entrepreneurship Competency by 39.4%. This is in line with research (Gull, 2021) which shows that Entrepreneurial Orientation has a positive and significant effect on Entrepreneurial Competence.

Furthermore, the direct influence of EO on SME performance. Based on the p-value in the fourth hypothesis, which is 0.011, and the original sample value, which is 0.300, this means H3 is

accepted. The results show that Entrepreneurial Competence has a positive and significant influence on SME Performance. Strong entrepreneurial competence can be a determining factor that differentiates a business from its competitors. The results of this research are in line with previous research by Mamun (2019), which shows that entrepreneurial competence has a good and significant influence on SME performance.

EO was also found to have a positive and significant influence on Social Media Use. This is proven based on the results of testing the direct influence hypothesis which shows the regression coefficient value is 0.480 and the p-value in the second hypothesis is 0.000. Thus, the second hypothesis is accepted (H2). SmartPLS analysis in this study produced a p-value of 0.000, which indicates that the value is less than 0.05. Apart from that, the sample value is 0.480, which shows that Entrepreneurial Orientation has a positive and significant influence on the Use of social media. This shows that when business owners have a basic understanding of Entrepreneurial Orientation, they will use social media to support their business. This is by research (Susanto, 2022) which shows that Entrepreneurial Orientation has a positive and significant effect on the Use of social media.
Furthermore, the direct influence of EO on SME performance. Based on the p-value in the fourth hypothesis, namely 0.011, and the original sample value, namely 0.300, this means (H4) is accepted. The results show that Entrepreneurial Competence has a positive and significant influence on SME Performance. Strong entrepreneurial competence can be a determining factor that differentiates a business from its competitors. The results of this research are in line with previous research by Mamun (2019), which shows that entrepreneurial competence has a good and significant influence on SME performance.
Finally, from the results of testing the direct influence hypothesis, it can be seen that the p-value for the fifth hypothesis is 0.013 and the original sample value is 0.321. This means that the fifth hypothesis (H5) which states that the use of social media has a positive and significant influence on SME performance, can be accepted. These results show that when the level of Social Media use is high it will encourage SME performance. As stated by Martiyanti (2022), social media has provided opportunities for companies to strengthen relationships with their customers through increased offers and better responses or services. The results of this research support research (Susanto, 2022) which shows that the use of social media has a significant effect on SME performance.

5. CONCLUSION

This study reviews the relationship between EO, EC, social media usage, and SME performance, the main findings are as follows:

1. Entrepreneurial Orientation has a positive effect on SME performance.
2. Entrepreneurial Orientation positively impacts Entrepreneurial Competence.
3. Entrepreneurial Orientation Does have a positive effect on Social Media Usage.
4. Entrepreneurial Competence does have a positive effect on SME Performance.
5. Social Media Usage has a Positive Effect On SME Performance

Results have provided insight into the theory and practice of entrepreneurship. More specifically, research has built a model to explain EO, EC, Social media usage, and SME performance. In addition, the research expands the research of Susanto et al (2022) and Wahyuni and Sara (2020) with empirical evidence on SMEs in Samarinda, Indonesia. The study also offers some practical implications. First, SMEs must improve their entrepreneurial orientation and competence to improve their performance. Increasing demand and competition in the coffee shop business require that each SME has its characteristics so that they are not easily imitated. They are required to

always have new ideas, and add new menus or additional services to be different from the others. Second, SMEs are also required to adopt the use of social media to offer services, obtain information, and build relationships with their customers. Ultimately, the importance of marketing skills and the use of social media can be used to maintain business continuity. Future research can expand research to other developing markets that may have different market characteristics. Research can also investigate the characteristics of other industries such as culinary, fashion, and others.

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THE ANTECEDENTS OF GEN Z USERS' TRUST AND ATTITUDES IN DANA FINTECH ADOPTION

Nicola Aryandi Putra, Justina Ade Judiarni*

Management Department, Mulawarman University, Indonesia

Corresponding author: yustina.ade@gmail.com

Abstract

This research presents an enhance technology acceptance model (TAM) that includes government support and perceived risk as factors of trust, also the correlation between perceived ease of use and perceived usefulness on attitudes to investigate how Gen Z users', specifically the undergraduate students of Economics and Business Faculty of Mulawarman University adopt DANA Fintech services. Researchers used a questionnaire, given directly to the respondents who either use or have used DANA Fintech services via Google Form, and gained 200 eligible answers. Researchers analyzed the data collected with SmartPLS software and Structural Equation Model (SEM) approach to evaluate 6 hypotheses with the correlation of all variables. The findings show that users' trust in Fintech services has insignificant effect on users' attitudes for adoption. In addition, perceived usefulness significantly affects users' attitudes toward the adoption, while perceived ease of use does not. In conclusion, while trust is commonly recognized as a crucial element in the uptake of financial services, it was not identified as a statistically significant determinant of users' attitudes towards the adoption of DANA Fintech services among Gen Z consumers in this paper. This is indicating the fact that although trust is critical for financial engagements, perceived usefulness is more influential in driving the adoption of services like DANA Fintech, especially among Gen Z users. This study reveals the complex interplay between trust and other factors within the technology acceptance model, offering insights into what motivates Gen Z users to adopt Fintech services.

Keywords: *Attitudes, Trust, Gen Z, Fintech Services, Adoption*

1. INTRODUCTION

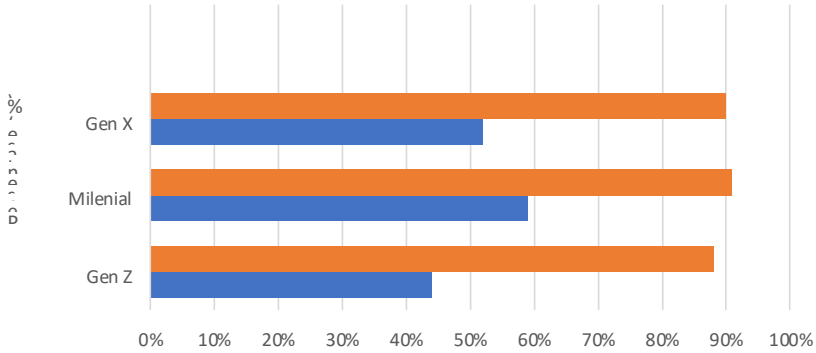
Financial technology (fintech) is a technological innovation that is widely employed within the financial sector. It integrates cutting-edge investment consulting, blockchain, and big data. Financial technology, as defined by Bank Indonesia, is the application of technological advancements to the financial system to generate new products, services, tech, and model of business. This has the potential to influence the stability of the financial and currency systems, as well as enhance the efficiency, fluidity, security, and reliability of payment systems (Bank Indonesia, 2017).

The Financial Stability Board (FSB) categorizes fintech activities into five areas by economic function, including: (i) market support; (ii) insurance; (iii) investment management; (iv) deposits, lending, and capital raising; and (v) payments, clearing, and settlement (FSB, 2017). With payment systems being the most predominant in Indonesia, thus, e-wallet systems have emerged as crucial tools for consumers, enabling the facilitation of both online and offline transactions. Fintech essentially enhances the efficiency and cost-effectiveness of purchasing, selling, and payment

processes, maintaining effectiveness (Arner et al., 2015). This highlights the need to examine what factors influence Indonesian users' trust and their attitudes towards adopting e-wallets in the fintech sector.

One of the primary advantages of technologically innovated financial services is the ease with which transactions can be completed, needing only a device's screen and internet connectivity. Additional factors contributing to the broad adoption of these services include their usefulness, ease of use, government support and regulations, and associated risks.

This research proposes a theory that is often used to see acceptance of the existence of a new technology, namely the Technology Acceptance Model (TAM). There are many studies that use TAM as a basic model and then modified in such a way with several other variables with certainly different results.



	Gen Z	Milenial	Gen X
e-Wallet	88%	91%	90%
Mobile Banking	44%	59%	52%

Figure 1. Use of Digital Payments by Generation Platform, 2022
Source: dataindonesia.id

Figure **1** visualized the rise of fintech, mobile banking, and application-based transactions, it shows that consumers, particularly in Gen Z, are becoming more interested in digital transactions. The Financial Services Authority (OJK), which launched from surveys conducted by Katadata.co.id in 2022, claimed that the potential of digital financial provider was made possible by the demographic advantage of Indonesian society, which is dominated by the younger generation.

From a generational perspective, Generation Z currently has less financial capacity compared to older generations, making them less prominent users of fintech services at present. However, as their financial capacity grow over time, Generation Z is expected to become the primary users of these services. Therefore, understanding what drives their adoption of fintech e-wallet services is crucial for startups and companies aiming to cater to the future needs of Generation Z.

2. LITERATURE REVIEW

2.1 Fintech

Extensive research from scholars worldwide has examined how technological advancements influence the developments in finance or financial innovation. The Financial Stability Board, (2017) describes fintech as technological innovations that develop financial services while generating new business models, applications, processes, or products that transform financial institutions and markets. Arner et al., (2015) highlight that fintech is distinct from traditional financial services; it is beyond a mere convergence of information technology and finance, this phenomenon entails the technological augmentation of conventional services with the intention of broadening their scope. Fintech, as defined in this research, pertains to cutting-edge financial services that leverage contemporary technological tools such as mobile devices, big data, and cloud computing.

2.2 Attitudes

Lifen Zhao et al., (2010) described "attitude" as a user's personal evaluations and inclinations related to a specific object, while "behavior intention" is described as how robust a person's strategy is to act a certain behavior. According to research using the TAM model by Ng & Kwok, (2017) and Gupta & Arora, (2017), it stated that predictability of adoption is predicated on a favorable disposition toward novel technologies.

2.3 Hypothesis Development for the Proposed Model

The Technology Acceptance Model (TAM), originally introduced by Davis, (1989), builds on the Theory of Reasoned Action (TRA). Ajzen & Fishbein, (2000) describe TRA as a theory that details how perceptions of one's actions by others can affect attitudes and behaviors. Davis, (1989) further developed this into the TAM, positioning it as a framework for evaluating the factors that influence the adoption of new technologies. Fernando et al., (2018) points out that the key variables in TAM, which are crucial for understanding behavior, include perceived usefulness and perceived ease of use. TAM proves effectively in explaining variations in users' readiness to embrace the newest technology in information and could be tied to fit specific research problems, making it a popular model in studies of information technology adoption. What adds interest to this study, according to Fernando et al., (2018a), is the exploration of additional factors like risk and trust, which are also considered vital in influencing technology adoption decisions.

2.4 Perceived Ease of Use

Perceived ease of use, as defined by Davis et al., (1989), refers to how effortless and simple a person finds the use of technology. Previous research in the banking sector, including studies by Akturan & Tezcan, (2012) and Szopiński, (2016), has consistently shown a significant relationship between perceived ease of use and attitudes towards adopting new technologies. Riquelme & Rios, (2010) also suggested that in the context of mobile banking, the simplicity of using complex information systems on mobile devices greatly influences consumer attitudes and their willingness to adopt these services, a concept applicable to financial technology as well. Thus, the hypothesis proposed is:

Hypothesis 1 (H1): *Users' Perceived Usefulness (PU) is affected by Perceived Ease of Use (PEOU) affects) in the use of Fintech services.*

Furthermore, as suggested by Davis et al., (1989) and Venkatesh et al., (2003), perceived ease of

use positively influences perceived usefulness. It is argued that even the best technological innovations may not be adopted if they are difficult to use. When individuals perceive technology as easy and straightforward, they are more likely to utilize it. Thus, the following hypothesis was developed:

Hypothesis 2 (H2): *Users' Perceived Usefulness (PU) is affected by Perceived Ease of Use (PEOU) in the use of Fintech services.*

2.5 Perceived Usefulness

According to the TAM, perceived ease of use goes to the extent to which an individual holds the belief that employing a specific technology would augment their job performance. (Davis et al., 1989). This concept aligns with the idea of expediency, which in technological terms, relates to the likelihood that users will meet their objectives through a specific technology. Over the past decade, numerous studies on technology information implementation have shown that perceived usefulness positively influences user intentions (Adams et al., 1992; Gefen & Straub, 2003; Laukkanen, 2017). In a study focused on Taiwan, Chuang et al., (2016) found that perceived usefulness was significantly linked to customer attitudes towards using fintech products and services. Thus, the hypotheses proposed is:

Hypothesis 3 (H3): *Users' Attitudes is affected by Perceived Usefulness (PU) in Fintech services adoption.*

2.6 Trust

If future customers can have confidence in the fintech industry's goods and services, they will find it easier to accept emerging technologies. One of the most important aspects is trust, because of the highdimensional information detailing its application in goods and services. The prior research related to trust is extremely crucial to evaluate the emotional consequences on users' views and their inclination to presume (Lee & Turban, 2001; McKnight & Chervany, 2001). Kesharwani & Bisht, (2012) assert that trust has the power to influence user behavior and shape goods and services into what consumers will need in the future.

This study looks at users' trust as a determinant of whether customers believe in fintech goods and services. According to research by Hanafizadeh et al., (2014), there is some evidence to back up the idea that using fintech services and fostering trust might have unexpected repercussions. Put differently, consumers are more inclined to utilize a service or product that they trust more (Basak et al., 2016; Koksal, 2016). As a result of the previous explanation, thus the hypothesis proposed is:

Hypothesis 4 (H4): *Users' Attitudes (ATT) is affected by Trust (TRU) in adopting Fintech services.*

2.7 Government Support

According to Chong et al., (2010), government support or help is one of the key determinants that leads to fintech adoption. To strengthen the reliability and authenticity of products or services, the government should promote financial innovation through technology and invest in vital infrastructure, such as communication networks. The government's high level of reliability will enhance the appeal of Fintech services to prospective clients.

Through the integration of pertaining ancestors into the TAM model, Marakarkandy et al., (2017) advanced The research on the determinants of online banking implementation has ultimately concluded that government support plays a crucial role in fostering public confidence in online banking services. Thus, we developed a hypothesis as:

Hypothesis 5 (H5): *Trust (TRU) is affected by Government Support (GS) in Fintech Service.*

2.8 Perceived Risk

This research defined "perceived risk" as the potential threats to users' financial security and privacy they perceive when using fintech services. refers to the anticipation of potential negative consequences that individuals may face while making a decision to engage in a particular action. Bansal et al., (2010) was highlighting users' fears about the improper utilization of their personal information data in fintech services due to the significant repercussions it could entail.

(Corbitt et al., (2003) initially suggested that perceived risk might precede trust, yet the weak correlation between these variables did not substantiate any relationship. Nevertheless, additional studies have provided evidence that perceived privacy risk significantly influences trust (Dinev & Hart, 2006; Tan & Thoen, 2000). Consequently, customers' perceptions of the risks involved in using fintech can significantly affect their decisions to adopt or purchase the technology. Based on this understanding, the hypothesis proposed is:

Hypothesis 6 (H6): *users' trust (TRU) is affected by Perceived Risk (PR) in Fintech Services.*

The model presented in this research is derived from previous research and is illustrated in Figure 1. The model was developed by modifying elements to make it align with the research context of fintech services.

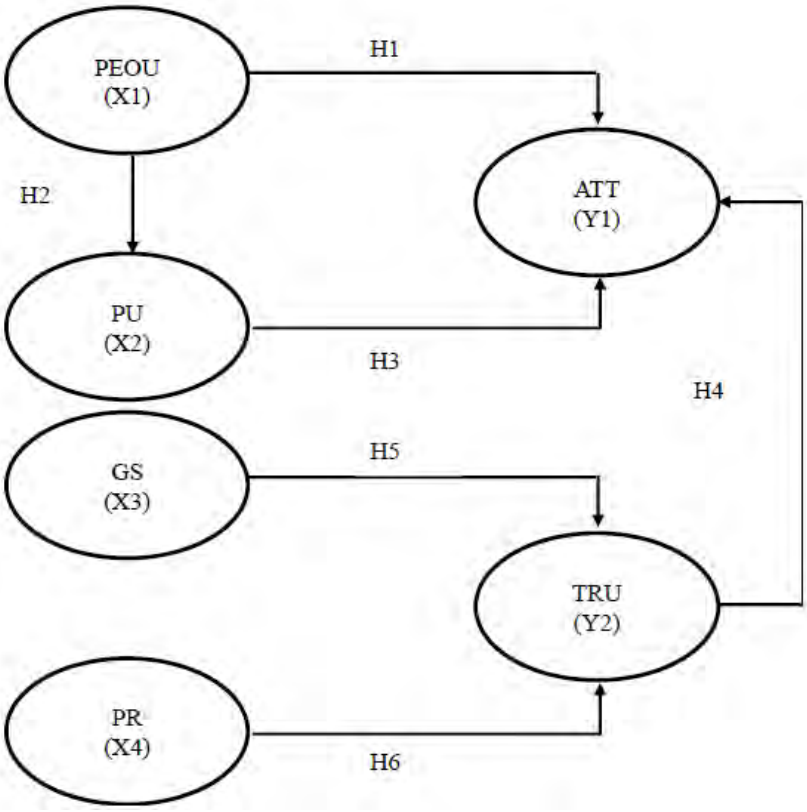


Figure 2. Conceptual Framework

3. METHODOLOGY

3.1 Data Collection

This study targeted the undergraduate students in the Faculty of Economics and Business at Mulawarman University as its population. Following Tabri & Elliott, (2012) recommendation, a sample size of 200 was deemed appropriate for conducting Structural Equation Modeling (SEM), as it provides robust estimates and minimizes the risk of Type II errors. A purposive sampling strategy was employed, selecting participants who are full-time students, at least 18 years of age, and users or past users of the DANA e-wallet Financial Technology service, thus ensuring the sample aligns with the research objectives (Etikan, 2016). The data collected was received by distributing an online questionnaire in the form of Google Forms, which contained 18 questions as the representation of the indicators and used the five-point likert scale. This quantitative data collection method enables the extraction of relevant data directly from the primary source—respondents—while supplementary data were acquired from secondary sources such as theses, textbooks, journals, and websites (Yudaruddin, 2014, 2021).

In this study, 226 responses in total were gathered. Following initial screening, 200 legitimate responds were accepted, giving an effective response rate of 88.49%. Questionnaires that were deemed invalid due to insufficient response times and random filling were eliminated.

Table 1. Sample characteristics

Description	Frequency	Percentage
Number of Sample	200	100%
Gender Male		
Female	85	42.5%
	115	57.5%
Age		
18-20	72	36%
21-23	115	57.5%
24-26	13	6.5%
Department		
Management	109	54.5%
Accounting	37	18.5%
Economics and Development Islamic	26	13%
Economics	28	14%
DANA Usage		
Use	157	78.5%
Have Used	43	21.5%

In this study, statistical analysis was performed on sample data using SmartPLS 3.0. The descriptive statistics derived from 200 questionnaires provided insight into demographic aspect of the questionnaire respondents. As illustrated in Table **1**, the sample consisted of a slight majority of female respondents, representing 57.5%. The age group 21-23 years dominated the sample, accounting for 57.5%, indicating that most participants are in the mid-range of their undergraduate studies. The departmental breakdown showed a predominant representation from the Management department, comprising 54.5% of the sample, followed by Accounting and Economics and Development with 18.5% and 13% respectively. This suggests that Management students may have

a higher exposure or inclination to participate in studies concerning financial technologies. Regarding the usage of DANA Fintech services, a significant majority of 78.5% of the respondents currently use the service, contrasting with 21.5% who have used it in the past. This high current usage rate reflects a robust adoption and reliance on DANA's financial technology among the respondents. Such insights are vital for understanding the context and relevance of the study within the specific demographic segments of Mulawarman University's Faculty of Economics and Business.

3.2 Instrument Development

In the design of the questionnaire for this study, comprehensive references were made to both domestic and international scholarly work on related topics, with adjustments and expansions tailored to the specific characteristics of Fintech services being investigated.

Table 2. Measurement Instruments

Variables	Notation	Measurement Items	Measurement Scale
Attitudes (ATT) (Grabner-Kräuter & Faullant, 2008)	Y 1.1 Y 1.2 Y 1.3	Using DANA's Fintech services is a pleasant experience. I think using DANA's Fintech services is a good idea. I am interested in DANA's Fintech services.	Likert Scale Utilize a 5-point rating system: 1 for strongly disagreeing and 5 for strongly agreeing
Trust (TRU) (Chong *et al*., 2010b; SánchezTorres *et al*., 2018)	Y 2. 1 Y 2.2	I believe DANA's Fintech services keeps my personal information safe. Overall I believe DANA's Fintech services are trustworthy.	Likert Scale Utilize a 5-point rating system: 1 for strongly disagreeing and 5 for strongly agreeing
Perceived Ease of Use (PEOU) (Cheng *et al.,* 2006; Wang et al., 2003)	X 1.1 X 1.2 X 1.3	I think the operation interface of DANA's Fintech services is friendly and understandable. It is very easy to use the services of Fintech DANA. It is easy to have equipment (mobile phones, applications, WiFi, et al.) to use the services of Fintech DANA.	Likert Scale Utilize a 5-point rating system: 1 for strongly disagreeing and 5 for strongly agreeing
Perceived Usefulness (PU) (Huh *et al*., 2009; Lockett & Littler, 1997)	X 2.1 X 2.2 X 2.3 X 2.4	DANA's Fintech services can increase efficiency. Using Fintech DANA can meet my service needs. I think using DANA's Fintech service will not be limited by time and location restrictions, which helped me a lot. Overall, DANA's Fintech service is useful to me.	Likert Scale Utilize a 5-point rating system 1 for strongly disagreeing and 5 for strongly agreeing

Government Support (GS) (Marakarkandy *et al*., 2017)	X 3.1 X 3.2 X 3.3	I believe the government supports and improve the use of Fintech services. I believe the government has introduced favorable legislation and regulations for Fintech services. I believe the government is active in setting up all kinds of infrastructure such as the infrastructure telecom network, which has a positive role in promoting Fintech services.	Likert Scale Utilize a 5-point rating system: 1 for strongly disagreeing and 5 for strongly agreeing
Perceived Risk (PR) (Grabner-Kräuter & Faullant, 2008; Marakarkandy *et al.,* 2017)	X 4.1 X 4.2 X 4.3	I believe that money is easily stolen by using DANA Fintech services. I believe personal privacy has the potential to be leaked by using DANA's Fintech service. I believe that DANA's Fintech services are risky because the services provided may fail to meet my expectations.	Likert Scale Utilize a 5-point rating system: 1 for strongly disagreeing and 5 for strongly agreeing

As shown Table 2, the questionnaire incorporated measures adapted from established literature: ATT were adapted from Grabner-Kräuter & Faullant, (2008); TRU from Chong et al., (2010b) and SánchezTorres et al., (2018); PEOU from Cheng et al., (2006) and Wang et al., (2003); PU from Huh et al., (2009) and Lockett & Littler, (1997); GS from Marakarkandy et al., (2017); and PR from GrabnerKräuter & Faullant, (2008) and Marakarkandy et al., (2017). Six latent variables, or external influencing factors, totaling two to four measurement items each were included in the scale. In this research, each item was measured using a five-point Likert scale, which spans from 'strongly disagree' to 'strongly agree'. Structural equation modeling (SEM) was the chosen method for data processing and analysis. SEM integrates multiple regression analysis, path analysis, and confirmatory factor analysis to evaluate variable relationships based on their covariance matrix. This technique is particularly effective for identifying causal relationships between independent and dependent variables and is widely used in economic psychology and behavioral science studies. For model testing and exploration in this study, SmartPLS 3.0 software was used to estimate SEM parameters.

4. RESULT AND DISCUSSION

4.1 Construct reliability and validity

As the form to evaluate and test the model employed in this paper, confirmatory analysis is utilized. This involved assessing internal consistency reliability, convergent validity, and discriminant validity. Denoting the dependability of the questionnaire items, reliability assesses the consistency or stability of the measurement outcomes. Cronbach's alpha and composite reliability (CR) were both employed in this investigation to evaluate the internal consistency of the data. In accordance with the criteria established by Fornell and F. Larcke (1981), the CR must surpass 0.7 and the Cronbach's alpha must surpass 0.8. As demonstrated in Table 3, even though the Cronbach's alpha values for all latent variables failed to satisfy the specified threshold values, their composite reliability scores still provided sufficient assurance of their reliability. The variables that have obtained a composite reliability score exceeding 0.7 are deemed reliable, indicating that the internal

consistency of the model is robust. Hence, the items presented in Table 3 represent the final model, ensuring that only items with sufficient reliability and validity are included.

Table 3. Construct reliability and validity

Constructs	Item	λ	Cronbach's Alpha	CR	AVE
ATT	Y 1.1 Y 1.3	0.807 0.743	0.339	0.751	0.601
TRU	Y 2.1 Y 2.2	0.851 0.673	0.310	0.738	0.588
PEOU	X 1.1 X 1.3	0.750 0.746	0.212	0.717	0.559
PU	X 2.1 X 2.4	0.878 0.819	0.615	0.838	0.721
GS	X 3.1 X 3.3	0.644 0.842	0.229	0.716	0.562
PR	X 4.1 X 4.2 X 4.3	0.776 0.782 0.752	0.664	0.814	0.593

λ, Outer Loadings Score; CR, composite reliability; AVE, average variance extracted. Source: Processed Data SmartPLS3, 2024

Validity refers to the degree of accuracy exhibited by the model represents the survey data and includes measures such as convergent validity and discriminant validity. Convergent validity is indicated by the correlation among multiple indicators of a single variable, assessed through the average variance extracted (AVE) of the latent variable, composite reliability (CR), and the loadings of the measurable variables. For a model to exhibit adequate convergent validity, AVE values should exceed 0.5 and variable loadings should be greater than 0.7. According to Table 3, all available data support the convergent validity of the constructs in the study.

Discriminant validity, on the other hand, ensures that the variables are distinct and not correlated with each other. It is confirmed when the AVE of each construct is greater than the squared correlation between constructs. As detailed in Table 4, the AVE values exceeded the squared interscale correlations for all variables, affirming the discriminant validity of each variable and demonstrating that the measures are effectively differentiated from one another.

Table 4. Discriminant validity of constructs

	Perceived Ease of Use	Perceived Usefulness	Government Support	Perceived Risk	Attitudes	Trust
X1.1	0.750	0.242	0.391	0.027	0.287	0.161
X1.3	0.746	0.332	0.275	0.013	0.170	0.391
X2.1	0.279	0.878	0.215	0.068	0.412	0.135
X2.4	0.384	0.819	0.321	0.088	0.182	0.272

X3.1	0.229	0.271	0.644	-0.036	0.254	0.200
X3.3	0.416	0.209	0.842	-0.049	0.217	0.283
X4.1	0.004	0.100	0.037	0.776	-0.032	-0.238
X4.2	-0.007	0.040	-0.153	0.782	-0.149	-0.239
X4.3	0.088	0.070	-0.002	0.752	-0.165	-0.158
Y1.1	0.281	0.327	0.316	-0.148	0.807	0.183
Y1.3	0.188	0.228	0.148	-0.067	0.743	0.289
Y2.1	0.315	0.228	0.277	-0.222	0.300	0.851
Y2.2	0.246	0.112	0.221	-0.216	0.137	0.673

Source: Processed Data SmartPLS3, 2024

4.2 Hypothesis testing

Structural Equation Modeling (SEM) is a statistical approach used to investigate the path correlations of variables by employing their covariance matrix. It is also a crucial technique for analyzing data with multiple variables. Following the analysis of validity and reliability, this part delves into an empirical examination of the Fintech service adoption model using the collected sample data. The hypotheses proposed in this study were tested using the SEM model via SmartPLS 3.0, which provided standardized path coefficients (p-value) and t-statistic. The criteria for hypothesis acceptance are a t-statistic value greater than 1.96; hypotheses will be declined if the t-statistic value is less than 1.96. Additionally, for hypothesis testing through probability, a hypothesis is accepted if the p-value is less than 0.05 and rejected if the p-value is greater than 0.05. The results of these hypothesis tests are displayed in Figure **3** below.

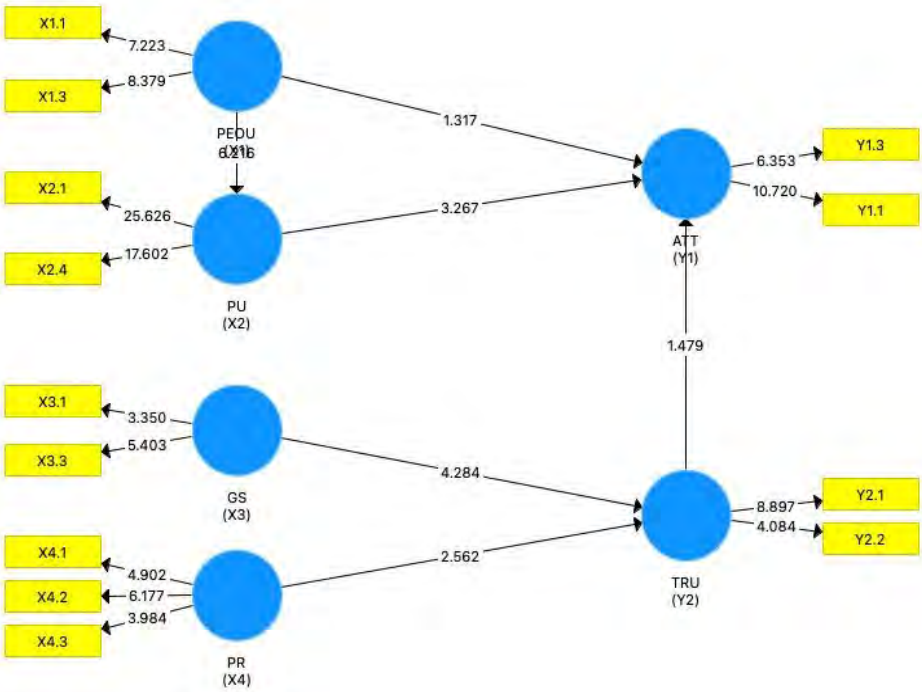


Figure 3. Structural model
Source: Processed Data SmartPLS3, 2024

Table 5. Path coefficients

Variable	T Statistic	P Value	Result
PEOU → ATT	1.317	**0.188**	Insignificant
PEOU → PU	6.216	**0.000**	Significant
PU → ATT	3.267	**0.001**	Significant
TRU → ATT	1.479	**0.140**	Insignificant
GS → TRU	4.284	**0.000**	Significant
PR → TRU	2.562	**0.011**	Significant

Source: Processed Data SmartPLS3, 2024

According to the result detailed in Table 5 and the predefined hypotheses, the following analysis can be performed:

The empirical results from the SEM, using SmartPLS 3.0, indicate varied support for the hypotheses. For the relationship between PEOU and ATT, with a T-statistic of 1.317 and a p-value of 0.188, leading to an insignificant result. This does not align with the initial hypothesis that posited a significant impact, thus H1 is not supported.

Conversely, the impact of PEOU on PU shows a T-statistic of 6.216, and a p-value of 0.000, indicating a significant relationship, thus supporting H2. Similarly, the path from PU to ATT is significant with a Tstatistic of 3.267, and a p-value of 0.001, aligning with H3.

The influence of TRU on ATT resulted in an insignificant relationship, with the value of T-statistic at 1.479, and a p-value at 0.140, which does not support H4 that anticipated a significant effect.

GS towards TRU shows a positive and significant relationship with a T-statistic of 4.284, and a p-value of 0.000, strongly supporting H5. Additionally, PR impacting TRU is significant, with a T-statistic of 2.562, and a p-value of 0.011, which supports H6, highlighting a significant influence.

In summary, hypotheses 2, 3, 5, and 6 are validated by the data, indicating significant relationships as initially proposed. However, hypotheses H1 and H4 are not supported, as the results did not show significant effects. These findings provide mixed results, confirming the complexity and variable nature of factors influencing Fintech service adoption.

5. CONCLUSION

Based on the findings and discussions presented in this paper, several conclusions can be drawled about the adoption of DANA Fintech services among Gen Z users at Mulawarman University. This research has significantly extended our understanding of the technology acceptance model by integrating factors like government support and perceived risk, along with traditional variables like perceived usefulness and ease of use.

Consistent with the theoretical assertions of the technology acceptance model, perceived usefulness has a positive and significant effects on users' attitudes towards the embracement of DANA Fintech services. This finding underscores the importance of Fintech service providers focusing on highlighting the practical benefits and efficiency gains that their platforms can offer to increase adoption rates among younger consumers.

Government support emerged as a crucial factor influencing trust in Fintech services. This support, which could range from regulatory frameworks to promotional activities, significantly boosts trust among users. Enhancing trust can indirectly foster wider acceptance and deeper integration of Fintech solutions into daily financial activities, suggesting that policy makers and service providers should collaborate more closely.

Surprisingly, perceived ease of use insignificantly impacts attitudes towards adoption, which may suggest that for Gen Z users, the simplicity of the interface is less of a barrier compared to other factors such as usefulness and trust. This could be indicative of the high level of tech-savviness and adaptability among this demographic.

In conclusion, this study highlights the complex interplay between perceived usefulness, government support, and perceived risk in shaping attitudes towards Fintech adoption among Gen Z users. It shows perceived ease of use and trust are traditionally emphasized, their influence may be less significant in certain contexts, particularly among younger, more tech-savvy demographics. By understanding these dynamics, Fintech companies and digital finance provider can better tailor their strategies to meet the expectations and needs of future generations, ensuring their services are not only useful but also trusted and well-supported by government initiatives. This research contributes to the broader discourse on technology acceptance, providing actionable insights for both practitioners in the financial sector and policymakers.

Acknowledgement

My deepest thank you goes to the faculty and staff of the Department of Economics and Business at Mulawarman University, who provided me with the necessary resources and advice needed to

conduct this research. I am particularly thankful for the assistance given by Mrs. Justina Ade Judiarni and Mr. Rizky Yudaruddin.

My sincerely thanks also go to my peers and colleagues at the university who challenged me to strive towards my best and supported me throughout the process with their insights and friendship. This accomplishment would not have been possible without them. Thank you.

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THE ROLE OF WOMEN AND CSR IN GREENWASHING ISLAMIC BANKING IN INDONESIA

Mutmainah Juniawati[1*], Endang Sri Mulatsih[2], Isnayati Nur[1]

[1,]Universitas Islam Negeri Raden Fatah Palembang, Indonesia

[2]STIE Mulia Darma Pratama, Indonesia

**Corresponding author: mutmainahjuniawati_uin@radenfatah.ac.id*

Abstract

Research shows that companies with higher representation of women on their boards tend to be more transparent in reporting their sustainability practices. (Alhosani & Nobanee, 2023). Konadu (2021) Women on corporate boards also put pressure on companies to show higher support for environmental practices. Furthermore, similar research shows that companies with greater representation of women on their boards tend to be more proactive in reporting sustainability practices. (Liao et al., 2015). The purpose of CSR is to restore and balance previous actions that negatively impacted the environment and society. (Juniawati & Hidayah, 2020). Sometimes companies make sustainability reports that are not in line with reality, known as greenwashing. Greenwashing is a form of information manipulation that aims to attract environmentally concerned consumers by claiming that a product or company is more "green" or sustainable than it actually is. (Dorfleitner & Utz, 2023). The purpose of this study was to determine the extent to which the role of women on the board of directors and commissioners and corporate social responsibility on greenwashing. This study uses a quantitative approach and a ligistic linear regression analysis method with the eviews 12 tool. Data obtained from the Financial Services Authority in the form of annual reports and Sustainability Report reports of Islamic banking from 2020-2022. The sample withdrawal technique used purposive sampling. Greenwashing is a dummy variable with Global Reporting Initiative (GRI) indicators. If the indicator only reveals positive things, it is given category one (1), meaning that it is greenwashing, and if the indicator reveals negative things, it will be given category zero (0), meaning that the company does not do greenwashing. The results showed that women on the board of directors and commissioners and corporate social responsibility have a positive effect on greenwashing. because they utilize CSR disclosure as a tool for greenwashing if they only show limited sustainability efforts or exaggerate the positive impact of their activities through the Corporate Sustainability Report.

Keywords: *Women, CSR and Greenwashing*

1. INTRODUCTION

Companies are established with the aim of making as much profit as possible and improving themselves. This view makes businesses operate today and allows any means to achieve its goals without considering its natural and social environment. Various problems in the environment as stated by Katy Lee dalam greencentralbanking.com "This week, EU scientists confirmed that last year was the hottest on record. This increases the pressure on policy makers to accelerate the decarbonization of the economy." (Katy Lee, 2024).

Another problem also occurs in the following figure 1.1:

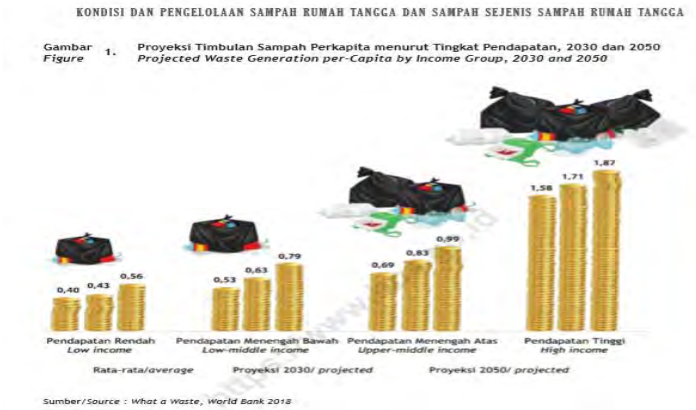

Figure 1. Waste Management Data According to the Central Bureau of Statistics

Figure 1 provides an explanation that the increase in waste generation is influenced by changes in the consumption patterns of residents in each region in addition to an increase in population. The figure shows that a person's income increases the amount of waste they produce every day. The World Bank states that Indonesia is categorized as an upper-middle income country, and as its economy continues to grow, the amount of waste produced will continue to increase, causing direct and indirect problems such as water, air, and soil pollution, increased greenhouse gases (GHG), and sources of diseases such as diarrhea and flood disasters. (Kominfo, 2020). Companies no longer rely on one bottom line, the economy, but also consider social and environmental factors, according to the concept of the triple bottom line, or TBL. (Umam et al., 2022). As shown in the sustainability report, TBL plays an important role in the sustainability of the company, which is the reason why companies must publish their CSR reports.

Sometimes companies make sustainability reports that do not match reality, which is known as greenwashing. Greenwashing is a form of information manipulation that aims to attract environmentally concerned consumers by claiming that a product or company is more “green” or sustainable than it actually is. (Dorfleitner & Utz, 2023) The conceptual framework suggests that greenwashing at the firm level occurs when the apparent green performance is higher than the actual green performance.

Greenwashing is the practice of companies hiding poor environmental and social performance by disclosing good information to create an overall good corporate image, which will attract stakeholders. (Ferrón-Vílchez, 2021). According to RepRisk's records, the 148 cases that occurred during the twelve months to the end of September 2023 came from the banking and financial services sector worldwide, an increase from 86 cases in the same period the previous year (Zurich, 2023). Banks may be Greenwashing at various levels, both at the entity and product levels. The European Banking Authority's (EBA) progress demonstrates how Greenwashing negatively impacts the financial risk of the institution and, ultimately, the consumer (Schdojt, 2023). There is very little literature on greenwashing in banking. (Taru Mustalahti, 2022).

Islamic banks should start considering the environmental impact when providing financing. (Salsabila et al., 2022). Therefore, banks have been trying to enhance sustainable growth through Corporate Social Responsibility (CSR) activities.

Islamic banking in Indonesia has great potential to grow as public awareness of Islamic finance and

the environment increases. To make a good impression on the public, Islamic banks must participate in social change by providing their funds through Corporate Social Responsibility (CSR). The purpose of CSR is to restore and balance previous actions that negatively impacted the environment and society. (Juniawati & Hidayah, 2020). " Companies conducting business activities in the field of and/or relating to natural resources are obliged to implement Social and Environmental Responsibility", according to Article 74 Paragraph 1 of Law No. 40/2007 on Limited Liability Companies, enacted on July 20, 2007. (Lako, 2018), However, it is not supported by PSAK no. 101, which does not stipulate that social statements should only contain financial statements (Ikatan Akuntansi Indonesia, 2016).

As a step to improve the company's environmental performance, it can carry out a sustainable development strategy, (Hollindale et al., 2019) stated that the company's decision to disclose depends on the role of senior management. Stakeholders, particularly shareholders, are in dire need of more information about a company's involvement in social and environmental functions. Therefore, many companies now demonstrate their commitment to sustainable activities by voluntarily publicizing their environmental, social and corporate governance (ESG) activities in their annual reports and on the company website. Women's participation in corporate boards of directors enhances corporate ESG disclosure and exerts a positive influence on the relationship between ESG and firm performance. (Arayssi et al., 2016).

It is expected that environmental policies and practices, such as information disclosure, will be more frequently undertaken by boards with dedicated resources provided by female advisors. Female directors are more likely to support the specialized expertise and perspective needed to understand the needs and expectations of multiple stakeholders, including those related to environmental issues. (Abd Majid & Jaaffar, 2023). Gender diversity at the top has a positive impact on the development of the company because there is a variety of opinions and decision making. (Monica et al., 2021). The percentage of women on the board of directors indicates higher female participation on the board reinforces sustainability reporting. Financially sound companies that expect excess future cash flows may participate in marginal social investments. Furthermore, the strength of ESG signaling may emerge, reinforced by the higher participation of women on boards, as disclosures may be perceived as important and more reliable and honest. (Arayssi et al., 2016)

Studies show that companies with higher representation of women on their boards tend to be more transparent in reporting their sustainability practices. (Alhosani & Nobanee, 2023). The presence of female directors provides tighter control and maintains communication between directors and investors through more transparent information disclosure. The presence of women on the board of directors has an advantage over all-male boards because women are able to create a conducive atmosphere with their ability to solve problems because they consist of various perspectives and can improve the performance of the board with their thoroughness and discipline in their duties. Therefore, the presence of women on the board has an impact on the decisions made and they have the ability to control the company in order to make disclosures. (Monica, 2021). In addition,(Konadu et al., 2022) found that gender diversity on boards can improve strategic decisions and corporate social responsibility. Furthermore, similar research shows that companies with greater representation of women on their boards tend to be more proactive in reporting sustainability practices. (Liao et al., 2015).

Previous research (Abd Majid & Jaaffar, 2023) the influence of Women's Leadership on Carbon Disclosure by the Top 100 Global Energy Leaders, the results show that among the world's top energy leaders, women leaders increase carbon disclosure rates. (Konadu et al., 2022) The effect of gender diversity on carbon emissions disclosure suggests that diversity in the board of directors is more effective in meeting the broader needs of stakeholders. (Gonenc & Krasnikova, 2022) The

study on gender diversity on boards and voluntary carbon emissions disclosure shows how gender differences on boards impact voluntary carbon emissions disclosure across firms, both in countries with and without quotas. The results show that there does not seem to be a need for strict country-level regulations regarding the percentage of female representation on boards, as in countries without quotas, gender diversity on boards has the same effect in explaining board recruitment. (Monica et al., 2021) examined women on boards of directors as a way to improve carbon emissions disclosure and firm value; it was found that women on boards of directors increased carbon emissions disclosure significantly and positively, but not significantly for firm value. (Tingbani et al., 2020) examined board gender diversity, environmental committees, and GHG voluntary disclosure, the results showed a strong positive relationship between board gender diversity and GHG voluntary disclosure. (Caby et al., 2022) examined the effect of Top Management Team Gender Diversity on Climate Change Management: An International Study, the results showed the gender of the CEO and the percentage of women on the board of directors did not affect green management scores. (Shakil et al., 2020) examined board gender diversity and the environmental, social and governance performance of banks in the United States:

The moderating role of environmental, social and corporate governance controversies which found there is a significant and positive effect of board gender diversity on the ESG performance of American banks. (Birindelli et al., 2024) examined greenwashing, bank financial performance and the moderating role of gender diversity, the results of which showed that greenwashing has a negative impact on bank performance, but female directors play a moderating role in this relationship. (Valls Martínez et al., 2020) examined women on corporate boards and sustainable development in the American and European markets: whether there are limitations in gender policies, the results show gender-diverse boards support corporate sustainable behavior. Previous research on CSR suggests that companies that publish standalone CSR reports may engage in greenwashing. (Mahoney et al., 2013), CSR impacts customer satisfaction and loyalty (Wang et al., 2024), CSR effect on trust and brand image (Nguyen-Viet et al., 2024), CSR effect on trust and brand image (Akbari et al., 2022) many successful CSR efforts with blockchain to reduce consumer concerns about greenwashing (Yao et al., 2022). from liu (2023) using a standard database China Stock Market and Accounting Research (CSMAR) (Liu et al., 2023), standart Yirjt is the random disturbance term (Hu et al., 2023), The company is better positioned than its peers in its ESG disclosure score compared to its ESG performance score, hence its ESG greenwashing score is positive. (Lin et al., 2023) greenwashing The literature review focuses on analyzing and synthesizing previous research but not on greenwashing regulations and standards. (Vangeli et al., 2023).

From several previous studies, there are still no authors who have examined Greenwashing using GRI indicators, including the role of women and CSR which is the novelty of this paper, for this reason, further research is needed on the presence of women on the board of directors and commissioners and CSR in greenwashing.

2. LITERATURE REVIEW

2.1 Stakeholder Theory

Explaining that Islamic banks need to consider the interests of all stakeholders, including customers, employees, shareholders, and society. The role of women and CSR can affect stakeholders' perceptions and trust in Islamic banks. The presence of women in the board of directors is able to produce quality disclosures. Women tend to be more concerned with quality of life by contributing to the process of managing the company's activities compared to managing assets and debts that already have their own standards. The characteristics of women tend to be more oriented towards aspects of life because the maternal instinct inherent in a woman makes her

contribution not only to the company but also to future generations (Monica et al., 2021) The more diverse the board, the greater its power to access needed funds and fulfill its social and environmental obligations (Martínez, 2020).

2.2 Legitimacy Theory

According to Matthews (1993) Legitimacy is defined as "the congruence between the social values associated with or implicit in their activities and the norms of acceptable behavior in the larger social system of which they are a part." As long as these two value systems are aligned, the legitimacy of the organization can be discussed. If there is a real or potential discrepancy between these two value systems, the legitimacy of the organization will be threatened (Mathews, 1993).

In legitimacy theory, companies are fully responsible for the benefits their operations generate in society, both for the survival of the company and the local community. To gain legitimacy and legitimacy, the company builds and maintains a social contract with the community (Chariri, A., & Ghozali, 2007). Islamic banks need to gain legitimacy from the community to operate and grow. The implementation of CSR and the role of women can increase the legitimacy of Islamic banks as responsible and sustainable financial institutions. Female corporate board members can contribute to enhancing corporate legitimacy in two ways. On the one hand, women's distinctive psychological characteristics make them more sensitive to stakeholder grievances, thus improving CSR performance (Gennari, 2018). On the other hand, if women are successful in leveraging corporate resources, these entities will be in a better financial position to take the necessary steps and fulfill stakeholder expectations (Zhang, 2022).

2.3 The Role Of Woman

Corporate boards are critical to the success of an organization to build a strong corporate governance structure. As women and men differ traditionally, culturally, and socially, the gender composition of boards is critical to corporate governance (Gonenc & Krasnikova, 2022). (Djie, 2021) The presence of women on the board provides tighter control and maintains communication between the board and investors through more transparent information disclosure. The presence of women on the board has an advantage over all male board members because they are able to create a conducive atmosphere with their ability to solve problems because they have a variety of perspectives and can improve the performance of the board with thoroughness and discipline in their duties. Thus, the presence of women on the board has an impact on the decisions made and is able to control the company so that it is not profitable. The character of women on the board makes decision making more careful and risk-taking, resulting in good disclosure quality. (Monica et al., 2021). Gender diversity on boards suggests that board diversity promotes better board effectiveness in meeting the needs of a broader stakeholder group (Konadu et al., 2022).

2.4 Corporate Social Responsibility

The company's business management based on Corporate Social Responsibility (CSR) aims to help its stakeholders, including society, employees, the environment, and local communities (Cahya, 2022). Companies must pay attention and be involved in fulfilling the welfare of the community, actively contributing to preserving the environment and also fulfilling the welfare of the community. The initial objectives of Corporate Social Responsibility are to increase company profits, improve employee and community welfare, and improve environmental quality (Global Report Initiative, 2023).

2.5 Greenwashing

Greenwashing is a selective disclosure that companies use to mislead investors. In other cases, companies will disclose positive environmental information but also hide negative information (Yu et al., 2020). Quoting from (Lokuwaduge, 2022) In an environmental context, greenwashing is

defined as deceptive statements and representations. The term "greenwashing" has evolved to encompass a wide range of actions that exaggerate and misrepresent the term "green". Research (Radnor, 2017) in Canada explored stakeholder perceptions of Sustainability reports, with the study reporting stakeholder perceptions that corporate sustainability reporting is driven by impression management and that companies convey positive aspects of their sustainability performance while hiding negative information.

2.6 GRI

The Global Reporting Initiative (GRI) framework is widely used among companies that issue stand-alone SRs (Andrian King, 2015) and includes social, environmental, and economic information. Despite criticisms by academics, stakeholder perceptions of the quality of sustainability reports, and more specifically the perceptions of those who use GRI reports, have not been scrutinized (Radnor, 2017).

Balance According to (Global Report Initiative, 2023) "To enable a reasonable assessment of an organization's overall performance, reports should show both positive and negative aspects of its operations" balance according to GRI:

a. Presenting information in a way that allows users to see positive and negative trends from year to year;
b. Explains the difference between the facts and the organization's interpretation of the facts; and
c. Do not omit important information about the organization's negative impacts.
d. Do not overemphasize positive effects or news 5) Do not use information in an inappropriate way that could influence the opinions or judgments of information users (p. 25).

3. METHODOLOGY

3.1 Sample

The sample in this study is all Islamic banks listed on the Indonesia Stock Exchange, as well as their websites, from 2020 to 2022. Banks that meet the sample criteria are those listed on the Indonesia Stock Exchange consecutively for three years, from 2020 to 2022. During the research period published annual reports and sustainability reports and reported in rupiah currency. From a population of 13 Islamic banks that meet the requirements there are 10 Islamic banks. The selection of the research period from 2020-2022 is due to the availability of new sustainability reports starting in 2020 while the 2023 sustainability report has not yet been published.

3.2 Variable

The dependent variable in this study is greenwashing, while the independent variables are the role of women and CSR. The following are the definitions and measures of the variables:

Table 1. Variable Definition & Scale

Variable	Definition	Scale
Greenwashing	Score 0 if the company discloses a sustainability report Score 1 if the company does not disclose the sustainability report Nominal	Nominal
Women Role	Comparison of the number of women on the board of commissioners and the board of directors with the total number of commissioners and directors	Ratio
CSR	Comparison of disclosed CSR items with total CSR items	Ratio

Greenwashing is a dummy variable with Global Reporting Initiative (GRI) indicators. If the bank discloses the Global Reporting Initiative (GRI) indicator, it is considered not to do Greenwashing and give category 0. If the bank does not disclose the Global Reporting Initiative (GRI) indicator, it is considered to do Greenwashing and give category 1, this is in accordance with legitimacy theory, to gain legitimacy and validity, banks build and maintain social contracts with the community (Chariri, A., & Ghozali, 2007) and according to the balance condition (Global Report Initiative, 2023) then the disclosure report must disclose positive and negative things. Corporate Social Responsibility is proxied by many environmental disclosures, but the role of women on the board of commissioners and audit committee is the same as the proportion of women on the board of directors and board of commissioners.

3.3 Methods

This research uses a quantitative approach. The data collection method is the documentation method and the sample withdrawal technique uses purposive sampling. The data was analyzed using logistic regression with the Eviews 12 tool. The regression equation is:

$Y = a + b1X1 + b2X2 + e$

Description:

Y = Greenwashing

a = Constant

b1 = Regression Coefficient X1

b2 = Regression Coefficient X2

X1 = Role of Women

X2 = CSR

4. RESULT AND DISCUSSION

4.1 Result

Classical Assumption Test

The classical assumption tests carried out are heteroscedasticity test and normality test, table 1 shows that Prob. Chi-square is 0.1031> 0.05 indicating the absence of heteroscedasticity.

Table 1. Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	2.409531	Prob. F(2,27)	0.1089
Obs*R-squared	4.543561	Prob. Chi-Square(2)	0.1031
Scaled explained SS	10.36872	Prob. Chi-Square(2)	0.0056

Table 2 shows that VIF is 2.79 < 10 indicating the absence of Multicollinearity.

Table 2. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.026705	13.43586	NA
X1	0.082155	3.625348	2.795574
X2	0.477311	20.55465	2.795574

Logistic Regression

The logistic regression equation in table 3 of the eviews12 results is:
$Y = -0{,}35 + 1{,}64\ X_1 + 1{,}52\ X_2 + e$

Based on the above equation, the following is the explanation:

Constant = -0,35 indicates the average value of greenwashing when the role of women and CSR are equal to 0 with 0

b_1 = 1,64 indicates that if the role of women increases by 1 unit, greenwashing will increase by 1.64 assuming the variables are the same by 1.64 assuming other variables remain constant

b_2 = 1,52 indicates that if CSR increases by 1 unit, greenwashing increases by 1.52 assuming the other variables are constant by 1.52 assuming other variables remain constant

Table 3. Logistic Regression Equation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.351078	0.163417	-2.148352	0.0408
X1	1.645051	0.286626	5.739355	0.0000
X2	1.524292	0.690877	2.206314	0.0361

Partial Test (t)

The results of the t test can be seen in table 3, by looking at the probability of the role of women (X1) of 0.00 <0.05, meaning that the role of women has a positive effect on greenwashing. The probability of CSR (X2) of 0.036 <0.05 means that CSR has a positive effect on greenwashing.

Simultaneous Test (F)

The results of the F test can be seen in table 4, showing a probability of 0.00 <0.05

Table 4. F test

Mean dependent var	-47.86087	S.D. dependent var	72.91540
S.E. of regression	4.889041	Akaike info criterion	6.106509
Sum squared resid	645.3736	Schwarz criterion	6.246629
Log likelihood	-88.59764	Hannan-Quinn criter.	6.151335
Durbin-Watson stat	1.245057	Weighted mean dep.	-21726.87
Wald F-statistic	81.21809	Prob(Wald F-statistic)	0.000000

Coefficient of determination

The R-squared value of 0.306690 indicates that 30% of the variation in the greenwashing variable (Y) can be explained by the independent variables (the role of women (X1) and CSR (X2). While 70% is explained by other variables.

Table 5. R-Squared Values

R-squared	0.306690	Mean dependent var	0.500000
Adjusted R-squared	0.255334	S.D. dependent var	0.508548
S.E. of regression	0.438846	Sum squared resid	5.199824
Durbin-Watson stat	1.256057		

Discussion

The Effect of Women's Roles on Greenwashing

The results of this study found that the role of women has a positive effect on greenwashing, meaning that the higher the role of women, the higher the greenwashing. The role of women on the board of commissioners and the board of directors is unable to suppress greenwashing. This is because the more women who work in management or company reports, the more likely the company is to use language and claims that are more sensitive to environmental issues so that it can increase greenwashing, if the focus lies on improving the company's reputation rather than real action to improve its environmental impact, this can also allow greenwashing practices. Supposedly, the greater the role of women on the board of commissioners and the board of directors can reduce greenwashing. This research is in line with dengan Caby dkk (2022) the gender of the CEO and the percentage of women on the board did not affect the green management score.

Historically, women have faced challenges to gain better representation in various fields, including in the business sector. However, an increase in the number of women in decision-making positions may encourage companies to pay attention to more sustainable business practices, which may lead to greenwashing as a result (Arayssi et al., 2016) Women's participation in corporate boards increases corporate ESG disclosure, Board gender diversity is positively and significantly associated with voluntary disclosure (Tingbani et al., 2020).

Women tend to want to look good in all respects, so the disclosure of sustainability reports is more sensitive and tends to show only the positive side and not disclose the negative side. Social disclosure has a direct effect on shareholder wealth when women have relatively higher participation on corporate boards (Arayssi dkk, 2016). (Abd Majid & Jaaffar, 2023) female leaders who sit on the board get a social approach to environmental disclosure. (Monica et al., 2021) The character of women in the board of directors makes decision-making more cautious, thus disclosing the good. This research does not support (Shakil et al., 2020), (Tingbani et al., 2020) dan (Valls Martínez et al., 2020) gender-diverse boards support corporate sustainability behavior as well as

(Monica et al., 2021) dan (Abd Majid & Jaaffar, 2023) Women on the board of commissioners and directors have a positive and significant effect on the disclosure of carbon emissions.

The effect of CSR on greenwashing

The results of this study found that the role of women has a positive effect on greenwashing, meaning that the higher the role of women, the higher the greenwashing. The role of women on the board of commissioners and the board of directors is unable to suppress greenwashing. This is because the more women who work in management or company reports, the more likely the company is to use language and claims that are more sensitive to environmental issues so that it can increase greenwashing, if the focus lies on improving the company's reputation rather than real action to improve its environmental impact, this can also allow greenwashing practices. Supposedly,the greater the role of women on the board of commissioners and the board of directors can reduce greenwashing. This research is in line with (Mu & Lee, 2023), the gender of the CEO and the percentage of women on the board did not affect the green management score (Soriano-Sandoval & Alarcón-Sánchez, 2022).

CSR can be used by some companies to create unfair sustainability reports. They may highlight small or even non-existent achievements or ignore the true negative impacts of their business operations. In this case, CSR serves as a way to cover up business practices that are detrimental to the environment. The existence of the greenwashing stigma can turn CSR into irrelevance which in turn results in the perception of greenwashing and hypocrisy. (Jauernig et al., 2021), negative impact on customer satisfaction (Ioannou et al., 2022).

Some companies may create CSR initiatives that appear to be meaningful, but actually only serve to divert attention from more fundamental or pressing issues. By doing this, companies can give the impression that they care about sustainability and the environment, but in reality they take no real action to improve their impact. As an abnormal and pretend social responsibility behavior (Gatti et al., 2019), Greenwashing behavior is because CSR publications can change customers' views and improve public image.(Shea & Hawn, 2019).

5. CONCLUSION

The role of women on the board is not able to suppress greenwashing. This is because the more women who work in management or corporate reporting, the more likely the company is to use language and claims that are more sensitive to environmental issues, which can increase greenwashing, if the focus lies on improving the company's reputation rather than real action to improve its environmental impact, this can also enable greenwashing practices. In contrast to Birindelli dkk (2024) that women on boards have a positive impact on bank greenwashing. In other words, a more balanced board seems to be able to reduce greenwashing practices. Banks can also benefit by prioritizing gender diversity and increasing female board representation to reduce greenwashing

CSR cannot reduce greenwashing, because companies tend to disclose the positive, without taking concrete actions, some companies only use CSR to improve their reputation and emphasize initiatives that appear positive publicly, but do not make significant changes in their business practices. CSR is used by some companies to create unfair sustainability reports. They may highlight small or even non-existent achievements or ignore the true negative impacts of their business operations.

The limitation of this study is that the research sample is very limited due to the limited number of Islamic banks in Indonesia and has not been required to make sustainability reports, this is because

the PSAK also does not require sustainability reports. Future research can expand the research sample by expanding Islamic banks in ASEAN, Asia or even the world.

The implication of this research is to encourage the Indonesian Accountants Association (IAI) as an institution that sets financial accounting standards in Indonesia to immediately require companies to make sustainability reports and to the Financial Services Authority (OJK) to determine the role of women on the board of commissioners and board of directors.

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ECONOMIC FREEDOM AND BANK EFFICIENCY: EVIDENCE FROM INDONESIA REGIONAL DEVELOPMENT BANKS

Andyni Jasmine Cantika Dewi, Wirasmi Wardhani*

Department of Management, Faculty of Economics and Business, Universitas Mulawarman

**Corresponding author: wirasmi.wardhani@feb.unmul.ac.id*

Abstract

This paper delves into the intricate impacts between economic freedom indices and the bank efficiency of regional development banks (BPDs) in Indonesia. The research focuses on three key independent variables of Investment Freedom (INV), Monetary Freedom (MON), and Business Freedom (BUS) to elucidate their influence on Bank Operational Expenses and Revenues (BOPO), a crucial indicator of operational efficiency. This analysis itself has yielded intriguing findings by leveraging a panel dataset encompassing 24 BPDs listed by the Otoritas Jasa Keuangan (OJK) with complete financial reports from 2017 to 2021, the research utilizes data panel regression analysis within EViews software. As the results, contrary to initial expectations, Investment Freedom did not exhibit a partially significant impact on BOPO. This warrants further exploration of potential moderating factors specific to the Indonesian context. Conversely, Monetary Freedom demonstrated a statistically significant negative association with BOPO, suggesting that while central bank autonomy offers potential benefits, potential drawbacks associated with excessive risk-taking behaviour require careful consideration. Encouragingly, Business Freedom emerged as a significant and positive driver of BPD efficiency, highlighting the importance of deregulation and streamlined processes in fostering a more competitive and innovative banking landscape. By fostering a deeper understanding of the factors influencing BPD efficiency, this research can contribute to the development of more effective policies for a thriving regional banking sector that roles vitally in supporting the economic growth and development in Indonesia.

Keywords: *Bank Efficiency, Economic Freedom, Investment Freedom, Monetary Freedom, Business Freedom, and Regional Development Banks.*

1. INTRODUCTION

As one of the significantly entailed institution of a country economics wellness system, bank's role in being an intermediate functional system in society is approximately determining how accessible a business ran which related to grant investment grant distribution as well as working capital. Becomes a vital institution since Banks control 80 percent of the existing financial system in Indonesia. Banks have a significant part in Indonesian performance evaluation (Abidin, 2007). It's also acknowledged that banks will be able to perform the intermediation function successfully if they are healthy and efficient. When a bank is healthy and efficient, the cost of banking intermediation is reduced. A healthy bank will be able to handle its resources appropriately. A healthy and efficient bank will have a favorable association with the economy or the real sector. Bank efficiency may be assessed from both macro and local perspectives. Efficiency is a performance indicator for any company, including banks. An efficient bank is a key component in the attempt to improve the performance of a healthy bank so that profitability improves (Fathony, 2013).

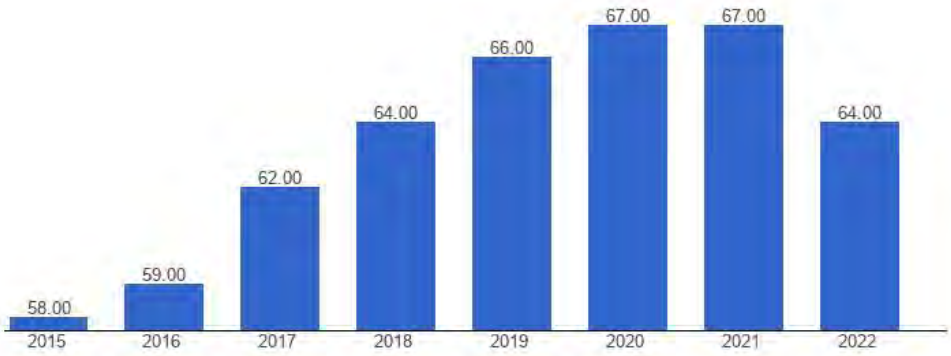

Figure 1. 1 Indonesia's Economic Freedom through the years
Source: The Global Economy (2022)

Now, portraying those findings on Indonesia's, this data of index of Economic Freedom above has been fluctuative, these scores were obtained by the ranking as free or mostly free, with an average percapital GD of double the overall averagee and more than six times that of a "repressed" country's median income. According to Chortareas et al. (2013), the performance of banks in terms of cost advantages and overall efficiency would typically be favorably correlated with the investment flexibility of the economy. The study also suggests that any positive effects of economic freedom on bank efficiency are more pronounced in countries with greater levels of governance and more open political systems where governments are able to create and carry out successful policies. Now it is both intriguing and critical to determine the elements that influence bank efficiency recalling on how several research on factors influencing bank efficiency produce inconclusive results were conducted based on how significant a bank's efficiency on small nor national range.

Table 1.1. BOPO Calculation of Regional Development Banks listed on Otoritas Jasa Keuangan (OJK) in 2017-2021

No	Bank	BOPO				
		2017	2018	2019	2020	2021
1	Bank Jawa Barat	83%	84%	85%	84%	80%
2	Bank Bengkulu	89%	85%	83%	82%	92%
3	Bank Sulawesi Utara	82%	82%	87%	89%	87%

Source: www.ojk.go.id, author's collection 2022

According to Table 1 itself, some of Regional Development Banks (BPD) of Indonesia are still inefficient in carrying out their functions. This demonstrates that the operational expenses of BPD are still rather substantial. As a result, it is vital to pay attention to interested parties in order to improve the functioning of Regional Development Banks. The degree of national banking efficiency, as indicated by the BOPO rating, remains in the 80 percent range (Bank Indonesia, 2014). According to Indonesian Banking Statistics issued by OJK, the national banking BOPO ratio reached 74.1% in December 2019. This number has risen from the basis points at the end of 2019. BOPO in 2020 was 65.94%. This demonstrates that the national efficiency level of banks is still inefficient. Since the goal has become something influential not only for the individuals but

also for the entire economic sectors by representing the efficient scale of their performances, bank efficiency as one of the public services are so much measured. Through this research overall economic freedom including government's openness to foreign competition will be examined whether it significantly affect bank competitiveness therefore its efficiency or the otherwise.

2. LITERATURE REVIEW

2.1 Competition Fragility Theory

The detrimental impact of competition on banking sector stability is one of the topics that scholars and policymakers discuss the most. The first research strand backs up the competition-fragility theory, arguing that greater competition will probably lead to lower bank stability, which will exacerbate the fragility of the banking system. Raising the agency hurdles would allow bank management to increase their risk-taking. This work is based on the assumption that competition happens on the balance sheet's liability or asset side. In the first situation, competition on deposit markets is projected to lower the bank's franchise value (Hellmann et al., 2000). According to Claessens (2019) traditional approach, it's found that the impact of excessive competition on financial stability, but the degree of competition also important for enterprises' and people' access to financial services. As a result, the belief that financial services competition is unequivocally advantageous is more naïve than in other industries. Moreover, it is insufficient to analyze competition solely from the perspective of a particular idea or result. Evaluation of a wider range of goals is necessary, including systemic financial sector stability, efficiency, and service accessibility for various user segments. as well as potential tradeoffs among these objectives. However, a related study by Berger et al. (2008) found that there is little evidence of a positive correlation between risk-taking and the number of bank competitors. Allowing loan markets to exist and requiring an equal number of banks to compete for deposits and loans makes a significant difference.

2.2 Bank Efficiency

Bank Efficiency is a condition where how a bank operates their intermediation functional decently will be measured to be called efficient or the otherwise. Haryanto (2018) asserts that bank considered efficient and healthy is able to manage their resources optimally and correlate positively with the real economy sector of a country. In smaller range, an efficient considered performance bank has a less banking intermediation cost. Previous author also mentions that healthy banks are more likely to survive in a competitive banking environment. Bank efficiency is a critical component of bank health. Only healthy institutions will be able to compete in an open financial market.

Bank efficiency may be measured on both macro and micro levels. Efficiency is a measure of an organization's performance, especially banks. An efficient bank is critical in attempts to improve the performance of a healthy bank and boost profitability. Previously, some similar studies toward different objects and approaches have been conducted before, For example, Chortareas et al. (2013) used Data Envelopment Analysis (DEA) to estimate bank-specific efficiency scores. To test their major assumptions, they developed a truncated regression model along with bootstrapped confidence intervals. On the other hand, the author of this study will measure bank efficiency using a conventional method that compares operating revenue to cost (BOPO). Because this efficiency technique with data-driven BOPO is based on financial reporting, it is also known as accounting based cost ratio (Haryanto, 2018).

2.3 Investment Freedom

Investment Freedom, characterized by the ease with which foreign and domestic investors can inject capital into a nation's economy, emerges as a potentially powerful driver of bank efficiency. While distinct from the individual-focused concept of Investment freedom, Investment Freedom can indirectly influence the banking sector through its impact on economic growth, human capital, and competition. Firstly, increased Investment Freedom often leads to economic expansion and job creation. This translates to a larger pool of potential customers for banks, fostering economies of scale and potentially lowering operational costs (Dat Chi & Thi Lan Nhi, 2020). Furthermore, a growing economy fuels demand for financial services, incentivizing banks to innovate and streamline processes to remain competitive. This innovation not only attracts new customers but also leads to more efficient internal operations within the banking sector (Beck et al., 2003).

Beyond these direct economic effects, Investment Freedom can also contribute to a more efficient banking sector through its influence on human capital. As Ali et al. (2021) highlight, a skilled workforce is crucial for bank performance. When Investment Freedom attracts foreign investment and fosters a knowledge-based economy, it can lead to an influx of talent within the banking sector. This influx translates to improved decision-making, streamlined operations, and ultimately, increased bank efficiency (Ali et al., 2021). Finally, increased Investment Freedom often leads to reduced barriers to entry for foreign banks and financial institutions. This heightened competition within the banking sector incentivizes innovation in products and services, potentially leading to a better allocation of expenses and lower operational costs for all banks (Chortareas et al., 2013). Hypothesis 1: Investment Freedom has positive impact on Bank Efficiency.

2.4 Monetary Freedom

Price stability and monetary freedom with an examination of price restrictions Inflation and price regulations both impair market activity. While, price stability without microeconomic interference is the ideal state for a free market. Monetary stability and price liberalization were two of the primary components of the transition process's dominant economic ideology. Within the purpose was moving to market-led economies, there’s not much argument about how important these objectives were. However, considerable disagreements erupted about the pace of changes, with the main issue being the impact on economic development or bank efficiency in particular ways. By providing economic actors with more flexibility in making decisions and by establishing the right incentives, the new market-oriented institutional framework seeks to facilitate and promote entrepreneurial activity while also guaranteeing a stable and predictable institutional and economic environment (Ivanović & Stanišić, 2017).

In an experiment to quanitify these various dimensions, The Index of Economic Freedom was developed by the Heritage Foundation in 1995. An evaluation of price controls and a gauge of price stability (inflation) are combined to create the monetary freedom index. Because both inflation and monetary freedom represent fundamental monetary requirements for effective resource allocation and constructive interaction of economic players, monetary freedom is more significant for economic growth. This then includes monetary freedom as a necessary aspect of efficiency regulator measurements, recalling how massive price control led the market to shift in increasing high inflation.

Hypothesis 2: Monetary Freedom has negative impact on Bank Efficiency.

2.5 Business Freedom

Business Freedom is a broad indication of how well government regulates business. Every country’s Business Freedom Score ranges from 0 to 100, with 100 denoting the most hospitable business environment. To ascertain how challenging it is to establish, operate, and shut down a

business, the Heritage Foundation produced a series of evaluations. Firm practices that restrict business entrance and diminish competition may have a knock-on effect on bank performance. Sufian (2011) also stated that business freedom assesses how simple it is for entrepreneurs to establish enterprises, get permits, and close a business. Impediments to any of these three activities inhibit business and so employment generation.

Banks with a higher level of openness (business freedom) tend to be more efficient. Therefore, bank performance will be enhanced by an entrepreneur who is better able to obtain licenses for starting, running, and shutting down firms. This is in line with a study on economic freedom that Sufian (2011) looked at, which focused on business freedom and bank performance in China. This could be explained by the fact that more freedom for business owners to launch ventures results in a rise in employment creation.

Hypothesis 3: Business Freedom has negative impact on Bank Efficiency.

2.2 Conceptual Framework

Based on the theory described above, the dependent variable of this research is the dependent variable of this research is Investment Freedom (INVFREE), Monetary Freedom (MONFREE) and Business Free (BUSFREE). Meanwhile, the independent variable is Bank Efficiency (EFF). Therefore, the theoretical framework in this study can be portrayed as follows:

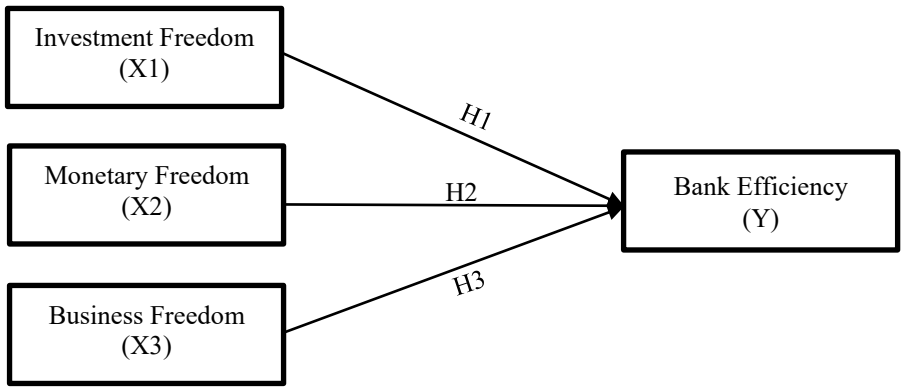

Figure 2.1 Research Conceptual Framework

3. METHODOLOGY

Quantitative data are used in this study's technique. Data expressed as numbers is known as quantitative data (Yudaruddin, 2021:9). Otoritas Jasa Keuangan (OJK) and the Transparency International Index (TI Index) provided the data for this study, with secondary data coming from another source (Yudaruddin 2014:13).officially registered regional development banks in Indonesia under Otoritas Jasa Keuangan (OJK) Indonesia. The sample used is non-probability sampling with purposive sampling type. The criteria of the purposive sampling are regional development banks that listed in OJK Indonesia with the conditions of having their financial publication during 20172022 listed.

Descriptive statistics are used to analyze a symptom or actual problem that occurs on regional development banks in Indonesia that exist in Otoritas Jasa Keuangan (OJK) while, panel data regression was utilized to look at how variables related to one another over time and among various people or groups. In the second stage, the following equations are estimated using the efficiency scores as the dependent variable:

$$\mathbf{EFF}_{i,t} = \alpha_{i,t} + \boldsymbol{\beta_1} FF_t + \boldsymbol{\beta_2} MF_t + \boldsymbol{\beta_3} \mathrm{BF}_t + \varepsilon_{i,t}$$

Where:

i : Bank sample t : Period

α : Constant

$\beta_1 \cdots \beta_1$: Coefficient

$\varepsilon_{i,t}$: Error term of regression

While i represents the bank sample, β1-3 is the vector of bank-specific attributes for every bank, t is for the period the sample is taken, α is for the constant while $\varepsilon_{i,t}$ is the considered error term. The institution is from the estimated efficient number, which proxies for banking and financial independence, as well as additional controls based on governance measures developed by the World Bank's Worldwide Governance Indicators (WGIs) (Kaufmann et al., 2010).

4. RESULTS AND DISCUSSION

Descriptive statistics below are to provide an overview of the data used, including data count, maximum value, mean value, and standard deviation for each variable in the study. The results of descriptive statistics indicate that the INV, MON, and BUSI variables exhibit mean values exceeding their respective standard deviations, while the ML variable demonstrates a mean value below its standard deviation.

Table 4.1. Statistic Descriptive Analysis on the variables of Investment freedom (INV), Monetary Freedom (MON), and Business Freedom (BUS)

	INV	MON	BUS	BOPO
Mean	44.00000	78.08000	63.20000	76.85424
Median	45.00000	78.40000	69.00000	76.33681
Maximum	50.00000	81.60000	71.00000	94.34629
Minimum	35.00000	74.00000	49.00000	41.56566
Std. Dev.	5.fa855400	2.478058	8.763561	7.071052
Observation	120	120	120	120

Source:Appendix 9, datas processed in 2024

In its processing, models utilizing panel data regression technique can use three alternative approach models, thus necessitating the determination and selection of the most suitable model for the research. Based on the output results of the Chow test from the EViews 10 tool, it is observed that the significant F-test value is 0.000 and the significant Chi-square value is also 0.000, which are both less than 0.05. This suggests that the Fixed Effects Model (FEM) is better than the Common Effects Model/Ordinary Least Squares (CEM/OLS) since it rejects the hypothesis.

Subsequently, the Hausman Test is conducted. Based on the output results of the Hausman test

using the EViews 10 tool, the significant p-value is 1.0000, which is less than 0.05. Consequently, this implies the acceptance of the hypothesis, indicating that the preferred model/method in this research is the Random Effects Model (REM) compared to CEM, now based on the result of panel data regression using EViews 10 tool, it's found the result of:

Table 4.2. Panel Data Regression results on the variables of Investment freedom (INV), Monetary Freedom (MON), and Business Freedom (BUS)

Dependent Variable	Independent Variables	Coefficient	t-statistic	Prob.	Sign	Evidence
BOPO	C	0.896438	56.11781	0.0000		
	INV	-0.001878	-1.324311	0.1886	(-)	Not significant
	MON	-0.002023	-6.950055	0.0000	(-)	Significant
	BUS	0.001783	2.544581	0.0126	(+)	Significant
R-Square		0.750990				
Adjust R-Square		0.681374				
F-Statistic		10.78765				
Prob. (F Significant)		0.000000				

Source: Appendix 9, data processed in 2024

In the CEM model, the coefficient of determination, R-squared (R2), is 0.750990, indicating that 75.09% of the variation in the dependent variable (BOPO) can be elaborated by how the independent variables (INV, MON, and BUS) are, while the remaining 24.91% is accounted for by other variables not involved in this research model. Regression analysis of panel data reveals a F-statistic value of 10.78765, with a significant F-value of 0.000000, which is less than 0.05 (0.0000 < 0.05). These results elucidate that the three independent variables, INV, MON, and BUS, collectively have a simultaneous effect on BOPO in the sample of Regional Development Banks from 2017 to 2021 under the supervision of the Financial Services Authority (OJK), indicating the adequacy of the model.

Regarding the t-test, the variable INV (X1) has a calculated t-value of -1.324311 with a probability level of 0.1886 > 0.05, indicating that this variable has a negative and significant partial effect on BOPO. Meanwhile, the variable MON (X2) has a calculated t-value of -6.950055 with a probability level of 0.0000 < 0.05, indicating a positive and significant partial effect on BOPO. Furthermore, the variable BUS (X3) has a calculated t-value of 2.544581 with a probability level of 0.0126 < 0.05, indicating a positive and significant partial effect on BOPO (with a significance level of 5% or 0.05). Which then conclude based on the regression test results presented in TABLE X, the model derived from this research is as follows:

BOPO = 0.896438 - 0.001878INV - 0.002023MON + 0.001783BUS + e

4.1 Discussion

4.1.1 The Impact of Investment Freedom on Bank Operational Expenses and Revenues

The empirical results indicate that Investment Freedom (INV) has a negative but statistically insignificant impact on Bank Operational Expenses and Revenues (BOPO). The coefficient for INV is -0.001878, and the corresponding p-value is 0.1886, which is greater than the significance number of 0.05. This suggests that the regression model does not provide strong evidence for a

significant relations between Investment Freedom and Bank Operational Expenses and Revenues. Therefore, Hypothesis 1 is not supported.

4.1.2 The impact of Monetary Freedom on Bank Operational Expenses and Revenues

The empirical results demonstrate that Monetary Freedom (MON) has shown an utter negative and statistically significant impact on Bank Operational Expenses and Revenues (BOPO). The coefficient for MON is -0.002023, and the corresponding p-value is 0.0000, which is less than the significance number of 0.05. This implies that the regression model provides strong evidence for a negative relations between Monetary Freedom and Bank Operational Expenses and Revenues. Therefore, Hypothesis 2 is supported.

4.1.3 The impact of Business Freedom on Bank Operational Expenses and Revenues

The result of the relations between Business Freedom (BUS) and Bank Operational Expenses and Revenues (BOPO) yielded a clear and positive outcome. The coefficient for BUS is 0.001783, and the corresponding p-value is 0.00126, which is less than the significance number of 0.05. This implies that the regression model provides strong overview for a positive relations between Business Freedom and Bank Operational Expenses and Revenues. It's concluded, Hypothesis 2 is supported.

5. CONCLUSION

The analysis hints at a potentially negative link between Investment Freedom and bank efficiency, but the data isn't conclusive. This complexity calls for further investigation into specific regions, regulations, and robust techniques to grasp the true connection. This research can guide policies that promote both bank efficiency and a financially secure environment. Monetary Freedom, on the other hand, shows a significant negative relation with bank expenses or the dependant variable. In simpler terms, as Monetary Freedom increases, bank expenses tend to decrease. This could be because greater central bank autonomy allows for more effective monetary policy, leading to a more stable economic environment. This stability might translate to lower borrowing costs and potentially reduced operational expenses for banks. Additionally, prioritizing financial stability through effective monetary policy can create a more predictable environment, potentially allowing banks to streamline operations and manage risks more efficiently.

Acknowledgment

Hereby, authors expressing their greatest gratitude to everyone who contributed all down to the up of this study. We extend our appreciation to the International Conference in Technology, Humanities and Management (ICTHM) 2024 for enabling us to join their platform and public these findings, as well as to the previous research and their researchers for their sharp findings that support this research gap and existence. Importantly, to Mulawarman University as the homebase of the authors who thoroughly guide each process of this study itself. Nonetheless, I'm sending my gratitude to the rest of the participants who are willing to share their knowledge and findings to this forum.

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ISLAMIC AND CONVENTIONAL BANKS PERFORMANCE WITHIN INDONESIAN BANKING SECTOR DURING COVID-19

Veronica Avika Rukha*, Felisitas Defung

Universitas Mulawarman, Indonesia

**Corresponding author: phivabis@gmail.com*

Abstract

This research aims to determine differences regarding the performance quality between Islamic and conventional banks in Indonesia during the Covid-19 pandemic based on Non-Performing Loan, Loan to Deposit Ratio, Capital Adequacy Ratio, and Return on Assets values. Bank Indonesia serves as source of Islamic and conventional banks financial data collection from 2020 until 2022 in Indonesia. Analysis process in this research employs Mann Whitney U test to uncover the performance gap between the two sort of banks during the Covid-19 pandemic. The data processing of Non-Performing Loan, Loan to Deposit, Capital Adequacy Ratio, and Return on Assets values disclose varied results for each ratio. (1) Islamic banks reveal better abilities in dealing with financial risk during conjuncture period than conventional banks. (2) In terms of profitability, Islamic banks show their superiority over conventional banks. (3) Conventional banks outperform Islamic banks regarding its liquidity, except in 2022. (4) Based on capital adequacy level, Islamic banks managed to surpass conventional banks. This comparative study of the performance between Islamic and conventional banks in Indonesia during the Covid-19 pandemic provides several important points that may be useful for stakeholders in banks and government.

Keywords: *Bank performance, Conventional banks, Islamic banks, Indonesia, Covid-19*.

1. INTRODUCTION

Mid-March 2020 was the initial benchmark of the economic shocks that hit Indonesia and hundreds of other countries worldwide. At that time, WHO officially declared Covid-19 as a global pandemic based on a significant number of 3 million infected cases with 207,973 deaths (World Health Organization, 2020). The government's defensive response to this pandemic is establishing policies limiting people's movements, such as imposing travel bans within and outside the country, closing borders, and quarantining (Nicola et al., 2020). These policies have multi-dimensional consequences, not only related to global health problems but also harm the manufacturing and service industries, especially in developing countries (Pak et al., 2020).

Donthu & Gustafsson (2020) with Sharma et al. (2020) stated that this pandemic forced almost all international institutions, including banks, to lower their growth expectations. This statement is supported by conditions requiring banks to face fluctuations from third parties, such as changes in customer withdrawal rates and funding levels from financial markets (Baldwin & Mauro, 2020; Barua, 2020). These problems then affect the bank in carrying out each series of operational activities, leading to disrupted bank performance, especially in commercial banks that depend tightly on third-party funds.

Article 1, paragraph (3) of Law Number 10 of 1998 on Banking mentions that, "*Bank umum adalah bank yang melaksanakan kegiatan usaha secara konvensional dan atau bedasarkan Prinsip Syariah yang dalam kegiatannya memberikan jasa dalam lalu lintas pembayaran.*" Based on the general role of a bank, conventional and Islamic banks also significantly influence society's financial condition. It can be inferred that during the Covid-19 pandemic, the effect of shifts in Indonesian banking performance did not only move from the society to the bank but also had the opposite effect. The performance of conventional and Islamic banks can be measured by estimating the values of several financial ratios, including NPL, LDR, CAR, and ROA (El-Chaarani et al., 2022; Hashem & Sujud, 2019; Sghaier et al., 2016).

According to studies conducted on Islamic and conventional banks during the financial crisis period in 2007-2009, including the study by Alqahtani et al. (2016). The outcomes reveal that conventional banks have more exceptional performance than Islamic banks, particularly in terms of profitability, capitalization, and efficiency. That statement is reinforced by Sghaier et al. (2016) and Alkheil et al. (2013), who found a declined profitability level in Islamic banks during the exact period. However, the results of these previous studies contradict the acquired data through the financial reports of several Islamic and conventional banks in Indonesia during the crisis due to the arrival of Covid-19 Pandemic in 2020. Based on the ROA value, Islamic banks surprisingly show an increasing trend of profitability or return every year. In addition, the number of financial risks represented by the NPL ratio tends to decrease.

2. LITERATURE REVIEW

2.1 Signaling Theory

The formulation process of signaling theory involves the labor market as a model and links it to the educational background as a signaling function (Spence, 1973). Recruiting companies do not have enough information to describe the applicants' performance until they start working, then causing information asymmetry (Kirmani & Rao, 2000). This limitation encourages applicants to prepare themselves by having a certain level of education to provide expectations or signals to recruiting companies regarding the quality of their performance and overcome the existence of information asymmetry (Connelly et al., 2010).

Illustrations of signal theory in the world of economics have been developed by experts over the past years to make it easier for laypeople to understand. For example, debt (Spence, 2002) and dividends (Bhattacharya, 1979) are analogized to signals for measuring company quality. Based on this model, it is known that only high-quality companies are able to meet debt and dividend obligations while continuing to generate profits in the long term. Conversely, low-quality companies do not have the ability at the same level. That condition will have consequences in the form of signals to external appraisers, such as customers, investors, or lenders, regarding the quality of the company's performance.

The main foundation of signal theory shows that the signal giver has a broader range of information and is less known by the general public, especially the signal receiver (Spence, 1973). Whatever signal is given, whether negative or positive, will undoubtedly bring benefits to the signal recipient (Kirmani & Rao, 2000). The received signal can be in the form of new information, or it can also be in addition to previous information (Yasar et al., 2020).

2.2 Bank Performance

The Cambridge Dictionary (2022) defines performance as a measurement of how well a person or thing does a job or activity. Therefore, a bank's performance can be interpreted as its ability to carry out its main tasks and achieve the set goals. The banking sector plays many vital roles in a country's economy, especially in the financial system (Berger et al., 2019). There are three primary functions of a bank mentioned by Thakor (2019), namely:

1. Banks form and create funding liquidity and private money by accumulating deposits and lending funds to parties who need loans, where borrowers will be screened, monitored, and charged interest.
2. Banks provide financial products that serve the safekeeping of valuables, maintain the confidentiality of customer information, and build trust.
3. Banks process various types of information that can help reduce contract costs and cash flow verification costs, asset ownership, and so on.

The critical reason for the bank's vital position is its role in providing loans to companies that need funds (Bikker & Bos, 2008), which influences business development and growth, as mentioned above. These functions and roles put the bank in a central position in the financial system (Thakor, 2019). Hence, the banking sector's performance and health stability must be carefully maintained. In addition, it is not only the responsibility of the bank owner concerned but a joint responsibility between bank owners and managers, the general public as users of banking products or services, and BI as banking sector supervisor (Sumarta & Yogiyanto, 2000).

OJK Regulation Number 4/POJK.03/2016 on Assessment of the Soundness Level of Commercial Banks explains banks' obligation to assess the soundness level with the risk profile, GCG, earnings, and capital as the basis for the assessment. In prior studies, several specific methods were applied to measure a bank's performance. However, the examination basis comes from similar sources, namely using various financial ratios connected with capital, risk, liquidity, assets, and profitability, for instance, in the research of El-Chaarani et al. (2022) and Sghaier et al. (2016). Both studies use financial ratios, including Capital Structure, Liquidity, Financial Risk, and Profitability ratios. Non-Performing Loan (NPL).

2.3 Loan to Deposit Ratio (LDR)

LDR is a financial ratio used to measure a bank's liquidity level (Sari & Murni, 2017). Liquidity refers to the bank's ability to meet its debt obligations, pay back customer money, and respond quickly to credit requests (Anggari & Dana, 2020). Boďa & Zimková (2021) define LDR as a structural parameter that helps to assess potential risks related to commercial bank liquidity and funding. According to Sari & Sulistyo (2018), LDR is an indicator for assessing a bank's liquidity level, which determines whether a bank can immediately meet short-term obligations with current assets.

As described above, LDR is used in measuring borrowing capacity while maintaining funding stability. Funding sources usually come from internal deposits or households and companies from the non-financial sector. During a crisis, such as loans exceeding savings, banks will undoubtedly experience funding gaps that inevitably make them enter the financial market. Therefore, a high funding gap can result in dependence on market funding, which can be more unstable or expensive when compared to retail funding, particularly when it comes to unsecured market funding (End, 2016). Each bank must continuously monitor its liquidity level because smooth payments will be the primary foundation for maintaining customer confidence in funding and business performance

(Anggari & Dana, 2020).

According to DiSalvo & Johnston (2017), LDR can be calculated by dividing the total debt by the total deposit. The amount of LDR obtained will indicate the number of liquid funds available at the bank to meet customer requests (Sari & Sulistyo, 2018). The greater the LDR number, the greater the profitability that can be generated (Anggari & Dana, 2020).

2.4 Capital Adequacy Ratio (CAR)

CAR is a ratio used to assess bank stability and efficiency and has become a hot topic in the banking sector (Muchtar & Abdurrahman, 2021). CAR is one of the key buffers for bank regulators to deal with possible credit risks (Karim, 1996). According to Aspal & Nazneen (2014), banking sector officials use this ratio to analyze the soundness of the bank's operational system and ensure that the bank concerned can assess the capital adequacy level of all possible risks or losses. Adelakun et al. (2015) define CAR as the ratio used in determining a bank's solvency quality to measure the adequacy of capital owned in tackling risks in the statement of financial position.

Maintaining the amount of capital is essential for the bank itself and its management. Bank's capital comes from third parties, such as customers, and is used to provide bank operational support facilities, which then provide benefits back to customers (Taherinia & Baqeri, 2018). In maintaining the bank's good performance, Sang (2021) states that CAR has a role as a safety belt to protect and minimize possible risks that banks might face. The same thing is stated by Bateni et al. (2014), according to them, CAR is also used to provide financial stability because it can potentially increase risk in every bank activity. Hence, if there is a shock to the capital structure, it will also harm the bank's performance.

CAR determines the relative proportion between the bank's major capital to off-balance assets and liabilities that are weighed against existing risks (Bialas & Solek, 2010). This ratio can be calculated using a formula derived from adding risk-weighted assets to tier I (core capital) and tier II (supplementary capital). Core capital includes paid-in and additional capital, general reserves, objective reserves, and profit distribution consisting of the current year's profit and the previous year's LAA. Meanwhile, supplementary capital includes asset revaluation reserves, private asset reserves, quasicapital, and subordinated loans (Muchtar & Abdurrahman, 2021). Bank Indonesia (2013) sets the minimum CAR percentage at 8%. The higher the ratio value, the greater the bank's strength in facing financial risks (Irawati et al., 2019).

2.5 Return on Assets (ROA)

ROA is one of the most popular financial ratios used in calculating a company's profitability (Joo et al., 2011). This ratio has been known in the business world since a company named DuPont used it at the top of its pyramid system (Jewell & Mankin, 2004). This ratio also has another familiar name, Return on Investment which is abbreviated as ROI (Horne & Wachowicz, 2008). In short, ROA is a type of profitability ratio that provides an overview of how much a company can generate profits with its assets (Atidhira & Yustina, 2017). According to Rusdiyanto et al. (2020), ROA indicates a company's net income from utilizing all of its assets. This ratio is also interpreted as a ratio that measures the level of capacity where a company can generate net income at a certain level of assets.

According to Siminica et al. (2012), ROA is believed to be one of the benchmarks for business operation and is always announced to the public by most companies. This ratio's percentage results assess the company's success in empowering existing assets to generate profits independently

besides financing related assets (Selling & Stickney, 1989). In addition, this ratio shows how effectively a company's performance is when utilizing available economic resources (Rusdiyanto et al., 2020). If the ROA value increases or decreases, it will undoubtedly impact the rise and fall of bank income. Subsequently, the income level can also affect other sub-activities of the bank, and in the end, it becomes a determinant of the performance health that must be observed.

ROA formulation divides net income after tax by total assets. The result of this ratio has a kind of comparative measure and cannot provide an absolute value. Joo et al. (2011) suggested that the latest results should be compared with previous period results or companies from similar sectors. The positive value of the ROA calculation indicates that profit can be generated from utilizing total assets in operational activities. On the other hand, a negative value indicates a failure to utilize total assets, resulting in losses (Rusdiyanto et al., 2020).

2.6 Previous Research

Research on bank performance has been a fascinating research issue for a lengthy time in various parts of the globe, especially in research that concentrates on Islamic and conventional banks, for instance, research conducted by El-Chaarani et al. (2022), Salih et al. (2019), Alqahtani et al. (2017), Miah & Uddin (2017), dan Siraj & Pillai (2012) in GCC member nations, Sghaier et al. (2016) in the MENA region, Abdo (2021) in Jordan, Majeed & Zainab (2021) dan Aziz et al. (2016) in Pakistan, Etab & El-Moslemany (2020) in Egypt, El-Chaarani & Ragab (2018) in Middle Eastern countries, Alkheil et al., (2013) in Europe, and also Hashem & Sujud (2019) in Lebanon.

The previous researchers obtain different results and determinations, particularly when a crisis hits the economy. Based on research by El-Chaarani et al. (2022), Etab & El-Moslemany (2020), Salih et al. (2019), Alqahtani et al. (2017), Sghaier et al. (2016), and Alkheil et al., (2013), the results reveal that the performance of conventional banks during a turmoil condition is much sounder than Islamic banks. Meanwhile, according to Hashem & Sujud (2019), Miah & Uddin (2017), and Siraj & Pillai (2012), the performance of Islamic banks is more invulnerable to the shocks of the rise crisis. In addition, several researchers have also discovered outcomes that are not overly dissimilar between the performance of these two sorts of banks, such as in research conducted by Abdo (2021), Majeed & Zainab (2021), ElChaarani & Ragab (2018), and Aziz et al. (2016).

2.7 Conceptual Framework

In this study, bank performance takes a position as the dependent variable (Y). Meanwhile, the independent variable (X), which will be an indicator for measuring the performance of each type of bank, consists of NPL, LDR, CAR and ROA. Each X variable represents at least one aspect of financial assessment, which will be tested differently using the Mann-Whitney test. The following conceptual framework describes the relationship between variables Y and X.

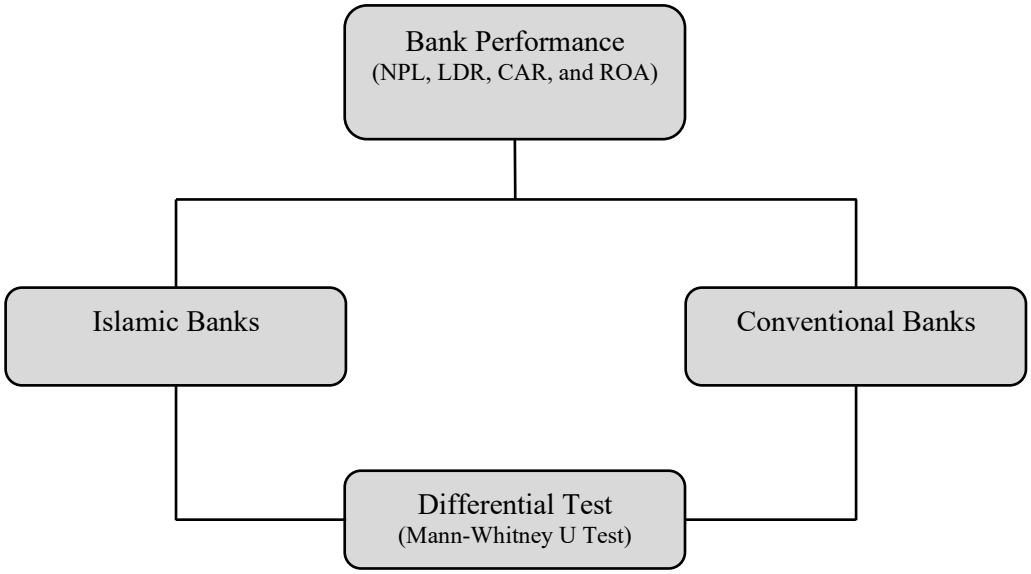

Figure 2.1. Research Conceptual Framework

3. METHODOLOGY

3.1. Operational Definition

The variables used in this research process series consist of dependent and independent variables. The dependent variable is bank performance. On the other side, the independent variables that serve as indicators or benchmarks in measuring bank performance are NPL, LDR, CAR, and ROA. The banks in Indonesia that become the object of this research are Islamic and conventional banks that have been officially registered at the OJK during the 2020-2022 period.

3.2. Population and Sample

The population of this performance comparison research is 108 Islamic and conventional banks in Indonesia that have been registered at OJK from 2020 to 2022. Purposive Sampling is a sample used to determine which banks are feasible and meet research standards.

3.3. Type and Source of Data

The type of data used in this research is quantitative data. This data is obtained through a secondary source from the OJK official website at www.ojk.go.id.

3.4. Data Collection Method

The entire data collection method applied to this research is the documentation method, which originates from the financial reports of every Islamic and conventional bank registered at the OJK from 2020 to 2022.

3.5. Analysis Instrument

3.5.1. Descriptive Statistics

The descriptive statistics method aims to summarize and present the results of processed data into clear, concise, and accurate information without damaging the main picture characteristics (Barrow, 2017). Therefore, descriptive statistics are involved to analyze the ratio values generated

by Indonesian conventional and Islamic banks enlisted at the OJK during the Covid-19 pandemic and their impact on clinching the level of performance of the two types of banks.

3.5.2. Kolmogorov Smirnov Test

According to Corder & Foreman (2013), the Kolmogorov-Smirnov test can be interpreted as a statistical method used to test comparative hypotheses from two independent samples with ordinal data arranged in a cumulative frequency distribution table with a class interval system. The purpose of taking out this test is to fulfil the assumption requirements to find out whether the data that has been collected will be analyzed using parametric or non-parametric instruments. The basic concept or principle of this test is to compare the distribution of data or data whose normality will be tested with data that has been transformed into Z-score form and has been assumed to be normal. The principle of calculating the Kolmogorov-Smirnov test is to calculate the absolute difference in each class interval.

3.5.3. Levene Test

Levene's test is used to test the homogeneity of variance for more than two groups of data so that the parametric and non-parametric analysis tools can be determined. The main purpose of this test is to see how large the variance is between two or more different data. From the results of testing the data, we can see whether the existing data has indications of being homogeneous or not (Corder & Foreman, 2013).

3.5.4. Mann-Whitney U Test

The Mann-Whitney U test will be used in this research's formulated hypothesis testing process. According to Yudaruddin et al. (2022), this test is a nonparametric statistical tool comparing two independent or unrelated sample types. Mann-Whitney U test requires that both data groups have the same variance and come from a random sample. Moreover, the data likewise must source from two groups that are not related or independent.

4. **RESULT AND DISCUSSION**

4.1. Description of Research Object

The main object of this comparative study is all Islamic banks and conventional banks that are actively registered by OJK during the period 2020 to 2022, which is approximately the period of the COVID-19 pandemic in Indonesia. The initial number of research objects was 107 banks consisting of 13 Islamic banks and 94 conventional banks. The criteria for sorting objects are based on the completeness of financial ratio data, which become independent variables, namely NPL, ROA, LDR, and CAR. After going through the purposive sampling process, it was found that 2 banks needed to have complete ratio value data on their financial statements in a certain period. Therefore, the exact number of objects of this study is 104 banks consisting of 12 Islamic banks and 92 conventional banks.

4.2. Descriptive Statistics

Descriptive statistics in research provide an outline and exposition of the object attributes (Cooksey, 2020). From 2020 to 2022, the values of NPL, ROA, LDR, and CAR for Islamic and conventional banks in Indonesia obtained varied formations. Downward is a descriptive statistical table of the collected ratio value data:

Table 4.1. Descriptive Statistics

Ratio	Period	N	Mean	Standard Deviation	Minimum	Maximum
NPL	2020	104	3,2492	2,75910	0,00	22,27
	2021	104	2,9388	2,40269	0,00	14,09
	2022	104	2,5463	1,91103	0,00	10,64
	2020-2022	312	2,9114	2,39284	0,00	22,27
ROA	2020	104	1,7225	7,61307	-14,11	74,05
	2021	104	1,1884	7,13133	-14,75	65,26
	2022	104	2,6113	11,11701	-10,85	89,21
	2020-2022	312	1,8407	8,79289	-14,75	89,21
LDR	2020	104	87,6941	32,88340	0,00	221,24
	2021	104	79,5095	31,29605	0,00	241,97
	2022	104	87,6984	44,21023	0,77	355,00
	2020-2022	312	84,9673	36,67110	0,00	355,00
CAR	2020	104	55,1801	173,58259	10,95	1.575,00
	2021	104	44,0107	68,17602	13,38	538,01
	2022	104	42,6233	44,98608	9,59	283,84
	2020-2022	312	47,2713	110,54569	9,59	1.575,00

In Table 4.1, data of Islamic and conventional banks' NPL, ROA, LDR, and CAR values in Indonesia do not reveal drastic changes during the three years encountering the COVID-19 pandemic, particularly in NPL and ROA values. It can be noticed from the mean value of each ratio, which does not vary extensively from one period to another. Hereinafter, the standard deviation results that identify the variation extent of ratio values show two different groups, whereby the standard deviation of ROA and CAR values in both sorts of banks diversely ranges more than NPL and LDR values. The greater the standard deviation and exceeding the mean, the greater the variation of ratio values in this research data, and vice versa. Moreover, it is likewise comprehended that the lowest values of the four ratios per year are not considerably distinct; in fact, the NPL values data has the same lowest state in all periods. Meanwhile, the highest values of the four ratios in each year vary extensively, especially CAR, whose highest annual values can differ by up to 2-3 times.

4.3. Data Analysis Results

4.3.1. Normality Test Results

Normality test is carried out as a form of assumption test to determine whether research object data can be examined using parametric or non-parametric statistical instruments. The normality test operated in this research is the Kolmogorov-Smirnov test with a significance level or α of 0.05. The ensuing are results of the normality test from NPL, ROA, LDR, and CAR values data in Islamic and conventional banks from 2020 to 2022:

Table 4.2. Normality Test Results with Kolmogorov-Smirnov Test

Ratio	Bank Type	Sig. (p-value)	Annotation
NPL	Islamic Bank	0,000	p-value < 0,05
	Conventional Bank	0,010	p-value < 0,05
ROA	Islamic Bank	0,000	p-value < 0,05
	Conventional Bank	0,000	p-value < 0,05
LDR	Islamic Bank	0,000	p-value < 0,05
	Conventional Bank	0,000	p-value < 0,05
CAR	Islamic Bank	0,000	p-value < 0,05
	Conventional Bank	0,000	p-value < 0,05

The criteria of this normality test emphasize the comparison between the p-value and α. If the p-value is less than the confined α (p-value < 0.05), then the data is not considered from a normally distributed population. Conversely, if the p-value is higher than α (p-value > 0.05), the data derives from a normally distributed population. Table 4.2. reveals that all p-values of each financial ratio in both types of banks are below 0.05. Therefore, the conclusion that can be drawn from this normality test is that the data of NPL, ROA, LDR, and CAR values in Islamic and conventional banks throughout 2020-2022 is not sourced from a normally distributed population.

4.3.2. Homogeneity Test Results

The homogeneity test is a part of the assumption test besides the normality test, which is employed to decide whether to operate parametric or non-parametric statistical instruments. The homogeneity test applied in this research is the Levene test with a significance level or α of 0.05. This test provides information regarding the assortment of similar or dissimilar data for each variable. The following table is the Lavene test result on this research data:

Table 4.3. Homogeneity Test Results with Levene Test

Ratio	Sig. (p-value)	Annotation
NPL	0,757	p-value > 0,05
ROA	0,000	p-value < 0,05
LDR	0,864	p-value > 0,05
CAR	0,400	p-value > 0,05

The benchmark in framing inferences from the Levene test results is comparing p-value and α. If the p-value is smaller than α (p-value < 0.05), the data is considered to have a similar variance. Contrarily, if the p-value is above α (p-value > 0.05), the data is deemed to have a dissimilar variance. Based on the Levene test results above, it is known that the p-value of NPL, LDR, and CAR data of Islamic and conventional banks exceeds the limit of 0.05. Hence, the data for those three ratios have similar variations. On the other hand, the p-value of ROA data for both types of banks is below 0.05, which leads to the conclusion that the data has dissimilar variations.

4.3.3. Hypothesis Test Results

The hypotheses formulated in this research are tested using non-parametric statistical tools for two independent sample groups, namely the Mann-Whitney U Test, with a significance level or α of 0.05. This determination is based on the results of normality and homogeneity tests that fail to fulfill the parametric test assumptions. The subsequent are the results of testing four financial ratio hypotheses in each period and overall period in this research:

Table 4.4. Hypothesis Test Results with Mann Whitney U Test

Ratio	Period	Islamic Bank Mean Rank	Conventional Bank Mean Rank	Asymp. Sig. (2-tailed) (p-value)	Annotation
NPL	2020	49,71	52,86	0,733	p-value > 0,05
	2021	43,58	53,66	0,276	p-value > 0,05
	2022	45,92	53,36	0,421	p-value > 0,05
	2020-2022	137,29	159,01	0,174	p-value > 0,05
ROA	2020	56,63	51,96	0,615	p-value > 0,05
	2021	54,63	52,22	0,795	p-value > 0,05
	2022	53,71	52,34	0,883	p-value > 0,05
	2020-2022	164,33	155,48	0,580	p-value > 0,05
LDR	2020	46,25	53,32	0,445	p-value > 0,05
	2021	50,00	52,83	0,760	p-value > 0,05
	2022	54,25	52,34	0,831	p-value > 0,05
	2020-2022	150,03	157,34	0,647	p-value > 0,05
CAR	2020	55,08	52,16	0,752	p-value > 0,05
	2021	55,67	52,09	0,699	p-value > 0,05
	2022	53,50	52,37	0,903	p-value > 0,05
	2020-2022	163,35	155,35	0,628	p-value > 0,05

Table 4.4. above depicts the Mann-Whitney U test outcomes with a p-value greater than 0.05 in all periods for each ratio. In 2020, 2021, and 2022, the p-values of Islamic and conventional banks NPL are 0.733, 0.276, and 0.421, respectively. Then, the p-values for the ROA of both sorts of banks in 2020, 2021, and 2022 are 0.615, 0.795, 0.883, and 0.580, respectively. The p-value of LDR for Islamic and conventional banks in that period is similar to the previous ratio, where in 2020, the p-value was at 0.445, in 2021 at 0.760, and 2022 at 0.831. Furthermore, for CAR's p-value comparison, p-values are 0.752, 0.699, and 0.903 in 2020, 2021, and 2022, respectively. Meanwhile, throughout 2020 to 2022, the p-value comparison of NPL, ROA, LDR, and the CAR between the two types of banks is 0.174, 0.580, 0.647, and 0.628, respectively. These figures show the Mann-Whitney U test results with p-values greater than 0.05. Based on the decision-making criteria mentioned previously, the rank distribution of NPL, ROA, LDR, and CAR values differs between Islamic and conventional banks in Indonesia.

4.5. Discussions

4.5.1. Differences in NPL Value of Islamic and Conventional Banks

The outcomes of data set testing reveal no difference in NPL values between Islamic and conventional banks in Indonesia during the Covid-19 pandemic. The Mann Withey U test on both types of banks from 2020 to 2022 shows a p-value of more than 0.05; thus, the NPL HA formulation is rejected. Apart from that, the mean rank for the NPL values of Islamic and

conventional banks tracks a slight gap with the loftiest digits attained by conventional banks, either in each period or overall. Another conclusion that can be stated is that there are no significant differences between Islamic and conventional banks in Indonesia when a crisis during the Covid-19 pandemic emerges. These results align with research by Alqahtani et al. (2016), where no significant differences are found between the performance of the two types of banks based on the level of NPL values.

During the Covid-19 pandemic in Indonesia, there were approximately 6.7 million positive cases with 160 thousand deaths (Kementrian Kesehatan, 2022). For every 41 individuals, there is 1 individual who is confirmed to have contracted the virus. Consequently, all individuals must strictly enforce the social distancing regulations issued by the government. These policies complicate people's activities; the majority are compelled to work remotely, and some even become victims of layoffs due to sluggish economic conditions. According to a national survey, 66.6% of households in this country experienced an income decline in 2020 and 72.6% in 2021 (Indikator, 2020, 2021). This decline is the root of concerns that have ramifications for each individual, including the decreasing capability to settle credit instalments. People with difficulty paying credit instalments, including sharia and conventional bank credit, will increase the NPL value. This phenomenon will eventually increase the number of bad loans from Islamic and conventional banks.

The slight eminence of Islamic banks in encountering increased non-performing loans can be traced through the financial risk management mechanisms, especially credit risk, that they implement. In carrying out their funding activities, Islamic banks use a principle called Musharakah or profit loss sharing (Sapuan, 2016). Musyarakah financing has a significant negative influence on Islamic banking credit risk. The larger the portion of the Musharakahm financing scheme, the more competent the bank will be in nominating and observing customers, thereby diminishing the risk of non-performing loans (Warninda et al., 2019).

4.5.2. Differences in ROA Value of Islamic and Conventional Banks

The data analysis process through the Mann-Whitney U Test produces ROA value comparison results that reject the HA formulation since the p-value is greater than 0.05. It indicates no difference in ROA values between Islamic and conventional banks in Indonesia during the Covid-19 pandemic. However, the two sorts of banks reveal differences in performance based on the mean rank of ROA value, where Islamic banks have a higher mean ROA rank than Islamic banks in each and throughout 2020 to 2022. Therefore, Islamic banks establish a sounder level of profitability. The further conclusion is that the difference in performance of Islamic and conventional banks according to ROA does not show a significant difference. These outcomes align with the results of prior research noted by Siraj & Pillai (2012).

The first COVID-19 case in Indonesia was recorded in March 2020 and continued to increase, with the highest additional positive cases in July 2021 and February 2022 (Kementrian Kesehatan, 2022). The Indonesian government has not remained tight-lipped in responding to the arrival of the Covid-19 virus. Various regulations have been issued to protect public health and shield the economy's stability, including the banking sector. The regulations include SEOJK Number 20 /SEOJK.04/2021 concerning

Stimulus Policy and Relaxation of Provisions Related to Issuers or Public Companies in Maintaining

Capital Market Performance and Stability Due to the Spread of Corona Virus Disease 2019, POJK Number 18/POJK.03/2020 concerning Written Orders for Handling Bank Problems, POJK Number 11/POJK.03/2020 concerning National Economic Stimulus as a Countercyclical Policy, PBI

Number 22/7/PBI/2020 of 2020 concerning Adjustments to the Implementation of Several Bank Indonesia Provisions as an Impact of the 2019 Corona Virus Disease Pandemic, and etcetera, must be followed by all banks without exception (Bank Indonesia, 2020; Otoritas Jasa Keuangan, 2021). Therefore, Islamic and conventional attempt to modify their operational activities under applicable regulations.

Commercial banks worldwide, including Indonesia, emphasize the difference in the added value obtained from the banking products offered. Banks will collect funds from the public and allocate them in the form of loans with interest rates imposed by the central bank. When the Covid-19 pandemic began to assail Indonesia, Indonesian banks gradually reduced interest rates from 5.00% in late 2019 to 4.75% in March 2020. Bank Indonesia continued to decrease it until the beginning of 2021, and the rate reached 3.50% in response to worsening economic conditions during the pandemic (Trading Economics, 2023). The direct consequence of changes in interest rates is a reduction in the added value or profits that may be obtained from funding businesses, especially by conventional banks. On the other hand, BI interest rates do not considerably influence Islamic banks because these banks do not adopt Bank Indonesia interest rates as a consideration for determining deposit and loan interest (Hidayati, 2014). The principles of Mudarabah, Musharakah and Ijarah lease agreements applied by Islamic banks have a significant effect on their level of profitability since the profits will be shared based on a mutual agreement that has been consented at the commencement (Pratama et al., 2017; Salman & Nawaz, 2018).

4.5.3. Differences in LDR Value of Islamic and Conventional Banks

Hypothesis testing of the LDR values of Islamic and conventional banks in this study displays a pvalue greater than 0.05 and rejects HA. Hence, there is no difference in the LDR values of Islamic and conventional banks in Indonesia during the Covid-19 pandemic. The mean rank of the two banks has a slim disparity per year. Conventional banks established their prominence in 2020 and 2021, while Islamic banks only managed to excel in 2022. From 2020 to 2022, conventional banks performed more adequately than their counterparts. These results infer that Islamic and conventional banks' performance regarding liquidity levels from 2020 to 2023 shows no significant differences, and they align with the Alkheil et al. (2013) and Salih et al. (2018) research results.

There are several factors that influence changes in the LDR value, including economic conditions. During the Covid-19 pandemic, Indonesia's GDP growth rate fell from 5.02% in 2019 to 2.07% in 2020, then slowly increased in the following years (Melati, 2023). The decline in people's income indicates sluggish economic activity in the country, as mentioned in the previous discussion. Based on the income statistics catalogue in 2021, the average income of Indonesians fell by 8.50% from the previous year (Badan Pusat Statistik, 2020, 2021, 2022). The reduction or even loss of sources of income signifies that people tend to require aid to set aside money for savings or increase their deposits in the bank. Therefore, the amount saved in the bank is stagnant. At the same time, poor economic conditions also encourage people to select alternative financial crisis consolation through credit applications. This problem occurs in the majority of Indonesians who are also users of banking products. From an internal perspective, banks will undoubtedly be more careful in selecting credit recipient candidates to minimize credit risk, which could impact their level of liquidity.

4.5.4. Differences in CAR Value of Islamic and Conventional Banks

The research results find no difference in the CAR values of Islamic and conventional banks in Indonesia during the Covid-19 pandemic. The Mann-Whitney U test results show a p-value above 0.05, and HA is rejected, similar to the three previous alternative hypotheses. However, the mean rank CAR value of those sorts of banks shows a slight difference in numbers, where conventional

banks' performance is better each year and in the overall period. It also provides a conclusion or assumption that the difference in CAR values between Islamic and conventional banks is insignificant. This insignificant result aligns with previous research conducted by El-Chaarani et al. (2022) and Hashem & Sujud (2019).

In May 2020, the OJK issued a policy that relaxed regulations in the banking sector to provide more space for liquidity and banking capital. This relaxation policy includes rules governing Islamic and conventional banks to maintain financial sector stability in economic weakening conditions due to the Covid-19 pandemic. This policy is contained in POJK Number 17/POJK.03/2021 concerning the Second Amendment to POJK Number 11/POJK.03/2020 concerning National Economic Stimulus as a Countercyclical Policy on the Impact of the Spread of the 2019 Coronavirus Disease. Obligation to fulfil specific capital components, such as RWA, liquidity coverage, and net stable funding, is part of the relaxation provisions, affecting the CAR value of Islamic and conventional banks in Indonesia. These provisions must be implemented as adequately as possible by all Islamic and conventional banks so both types of banks will sense all the effects of changes resulting from this policy.

5. CONCLUSION & SUGGESTIONS

The results of all hypothesis testing related to the quality of performance of Islamic and conventional banks in Indonesia during the Covid-19 pandemic obtain p-values that exceed the limit of 0.05 and reject all HA that have been formulated. The following is the conclusion of each ratio measurement:

1. The performance between Islamic and conventional banks based on NPL values does not show a significant difference (p-value > 0.05) throughout 2020-2022. However, Islamic banks establish more satisfactory abilities in dealing with non-performing loans than conventional banks.
2. The performance between Islamic and conventional banks based on ROA values does not show a significant difference (p-value > 0.05) throughout 2020-2022. In terms of profitability, Islamic banks affirm their preeminence over conventional banks.
3. The performance between Islamic and conventional banks based on the LDR value does not show a significant difference (p-value > 0.05) throughout 2020-2022. Apart from that, conventional banks ascertain a sounder level of performance than Islamic banks, except in 2022.

The performance between Islamic and conventional banks based on the CAR value does not show a
significant difference (p-value > 0.05) throughout 2020-2022. On this benchmark, Islamic banks likewise managed to outperform conventional banks.

The research regarding the performance quality of Islamic and conventional banks in Indonesia during the Covid-19 pandemic delivers several vital points that may benefit stakeholders in banks and government.

1. Islamic and conventional banks need to deeply and carefully understand the availability of capital and sources of funds and assess their resilience based on various financial ratios. A balance must be struck between supporting the economy in times of need and ensuring economic stability.
2. Bankers from Islamic and conventional banks have to reallocate resources and redesign their capital structures after analysing the financial behaviour of their customers and investors during the crisis.
3. Leaders of Islamic financial institutions need to review their business strategies and financial decisions during the crisis to mitigate the negative impact of the Covid-19 pandemic.

4. The government, regulators and financial authorities must also improve regulations and increase financial support for Islamic and conventional banks during the crisis. The socio-economic impact of the Covid-19 pandemic should be considered in order to implement further reforms, especially in the banking sector.

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ENHANCING HEALTHCARE QUALITY IN DEVELOPING COUNTRIES' PRIVATE CLINICS THROUGH ELECTRONIC HEALTH RECORD

Amalia Tanjung, Zainal Abidin, Herry Ramadhani

Magister Manajemen, Universitas Mulawarman, Indonesia

Corresponding author: liaryodan88@gmail.com

Abstract

The deployment of Electronic Health Records (EHRs) in private healthcare settings across developing nations holds significant promise for improving medical outcomes but is met with considerable challenges related to technological infrastructure and resource limitations. This systematic literature review critically examines the adoption and impacts of EHRs in these settings, focusing on their effectiveness, safety, patient-centeredness, timeliness, equity, integration, and efficiency, as delineated in peer-reviewed studies published from 2014 to 2024. The review, conducted across multiple academic databases, synthesizes data from 13 rigorously selected studies that met stringent inclusion criteria. Findings demonstrate that while EHRs are capable of improving clinical outcomes, provider efficiency, and patient flow, their implementation is frequently undermined by inadequate IT infrastructure, resistance to technology adoption, and the high costs of operational maintenance. This study identifies a significant research gap concerning the effective leveraging of EHRs under the constraints typical of low-resource settings and underscores the critical need for supportive policies, enhanced training, and sufficient funding to realize the full benefits of EHR technology. By offering new insights into the unique challenges of EHR implementation in resource-limited environments, this review contributes novel perspectives to the discourse on health informatics in developing contexts, advocating for contextually adapted strategies to facilitate successful EHR integration and maximize healthcare service delivery.

Keywords: *Electronic Health Records, Healthcare Quality, Private Clinics, Developing Countries*

1. INTRODUCTION

The implementation of Electronic Health Records (EHRs) has revolutionized healthcare delivery in numerous high-income countries, leading to substantial improvements in healthcare quality. However, integrating such technologies in private clinics in developing countries poses significant challenges. These clinics often operate under resource constraints, including limited funding, inadequate technological infrastructure, and a shortage of trained personnel (Al-Shorbaji et al., 2015). Despite these hurdles, EHR systems hold the potential to enhance healthcare delivery by providing accurate, timely, and accessible patient information.

Private clinics in developing countries represent a diverse and vital component of the healthcare system, serving a broad spectrum of the population across varied geographic and socio-economic settings. These clinics range from small, single-physician practices that offer basic outpatient services to larger, multispecialty facilities providing advanced medical care, often comparable to that found in better-resourced urban centers. In many developing countries, private clinics are not just supplementary but essential to healthcare delivery, especially in regions where public health services are chronically underfunded, insufficient, or geographically inaccessible. They fill crucial

gaps in healthcare provision, offering faster access to care, shorter waiting times, and sometimes more advanced technological resources than their public counterparts (Oliveira et al., 2021). The role of private clinics is particularly prominent in the context of non-communicable diseases and specialized care, where they often lead in providing targeted therapies and advanced diagnostic services that are not widely available in public institutions (Zheng et al., 2019).

Recent studies highlight both the progress and obstacles in EHR adoption across diverse environments. For instance, research has shown that while EHRs can improve clinical outcomes by facilitating better access to patient information, barriers such as cost, complexity of data integration, and user resistance continue to hinder widespread implementation (Bhattacherjee & Hikmet, 2017). In particular, the lack of IT infrastructure and the high cost of EHR systems are major deterrents for their adoption in lowerincome settings (Odekunle, Odekunle, & Shankar, 2020). Adaptability of EHR systems within varied healthcare environments. However, private clinics in developing countries often face difficulties such as inconsistent power supply, lack of trained staff, and high costs of system maintenance, which can impede the effective implementation of EHRs (Odekunle et al., 2017).

Additionally, the effectiveness of EHRs in improving healthcare quality depends heavily on the customization of the systems to meet local needs. Studies have suggested that the adaptation of EHR systems to local cultural and regulatory contexts significantly impacts their success and acceptance among healthcare providers (Adekanye et al., 2022). Training and continuous support have also been identified as critical factors in ensuring the effective use of EHR systems in these settings (Smith & Seward, 2019). Moreover, the COVID-19 pandemic has underscored the importance of digital health technologies, including EHRs, in managing public health emergencies. The ability to rapidly access and share patient data has proven crucial in regions affected by the virus, highlighting another compelling reason for adopting EHR systems in developing countries (Nguyen et al., 2021).

The primary objective of implementing Electronic Health Records (EHRs) in private clinics within midlow income countries is to significantly improve the quality of healthcare delivery. EHRs in these settings aims to achieve multiple enhancements across several key dimensions of healthcare quality:

1) Effectiveness: EHRs help in ensuring that healthcare interventions are applied effectively by providing clinicians with real-time, evidence-based information at the point of care, which supports better clinical decision-making (Balsari et al., 2020).
2) Safety: By reducing the incidence of medical errors through better management of patient data and alerts for potential harmful drug interactions, EHRs contribute to safer patient care (Huang et al., 2019).
3) Patient-centeredness: EHRs facilitate more personalized care by allowing easy access to patient histories, thus enabling healthcare providers to make more patient-tailored decisions (Agarwal et al., 2018).
4) Timeliness: The use of EHRs can decrease the time taken to access patient records, thus speeding up the process of care delivery and reducing delays (Lee et al., 2021).
5) Equity: By potentially standardizing the quality of data and care provided, EHRs can help in addressing disparities in healthcare delivery across different populations within a country (Torres et al., 2022).
6) Integration: EHRs enhance the coordination of care among multiple providers, leading to more integrated care delivery, particularly beneficial in managing chronic diseases that require care from multiple healthcare professionals (Jiang et al., 2020).

7) Efficiency: By minimizing the need for redundant tests and streamlining workflows, EHRs improve the efficiency of healthcare services, which can lead to reduced healthcare costs (Kumar & Aldrich, 2024).

Despite the potential benefits, the realization of high healthcare quality through Electronic Health Records (EHRs) remains challenging in many private clinics in developing countries. These challenges are often compounded by financial constraints, administrative hurdles, and limited access to advanced technologies. Recent studies indicate that while EHRs promise to enhance healthcare delivery, their implementation is frequently hindered by infrastructural inadequacies and a lack of digital literacy among health workers (Nguyen et al., 2021). The strategic implementation of EHRs in private clinics is aimed not only at improving the immediate quality of healthcare but also at establishing a robust health information system. This system is envisioned to support extensive health reforms and facilitate better health policy planning within developing countries, thereby enhancing overall health system resilience (Oliveira et al., 2021).

However, there exists a significant research gap in understanding the effective implementation of EHRs within the unique context of private clinics in developing countries. These clinics face distinct challenges compared to their counterparts in public healthcare settings and in more developed economies. Notably, issues such as inconsistent power supply, intermittent internet connectivity, and the high cost of technology deployment significantly impede the adoption of digital health records (Balsari et al., 2020). This study introduces a nuanced examination of the impacts of EHRs in an understudied setting—private clinics in developing countries—considering both the implementation process and the subsequent effects on healthcare quality. It explores how adaptations of EHR systems can be tailored to meet the specific needs of these environments, potentially overcoming barriers to implementation and maximizing health outcomes (Kumar & Aldrich, 2024).

Previous research has explored the impact of Electronic Health Records (EHRs) on healthcare quality but often lacked a comprehensive analysis through the stages of pre-implementation, implementation, and post-implementation of EHR systems. Consequently, this review is structured around the following research questions to address these critical phases comprehensively:

Does the implementation of EHRs provide benefits in private clinics settings in developing countries? Does the implementation of EHRs in private clinics lead to enhanced healthcare quality in mid-low income economies?

Do these barriers to the implementation of HER impact the overall effectiveness, safety, and efficiency of healthcare delivery?

This review was conducted to assess the impact of Electronic Health Records (EHR) on healthcare quality, focusing exclusively on literature published between 2014 and 2024.

2. LITERATURE REVIEW

Private clinics in Low- and Middle-Income Countries (LMICs) serve as essential components of the healthcare system by providing specialized services that often exceed the quality found in public institutions. According to the World Bank (2021), LMICs are categorized based on Gross National Income (GNI) per capita, with low-income countries having a GNI of $1,135 or less, and lower-middleincome countries having a GNI between $1,136 and $4,465, highlighting the economic contexts within which these private clinics operate.

These clinics are particularly crucial in developing countries, where they fill significant gaps in public health services, often in underserved or remote areas. With a focus on quality service, reduced waiting times, and enhanced patient comfort, private clinics not only improve healthcare accessibility but also play a pivotal role in innovative healthcare delivery models such as public-private partnerships. For instance, community clinics in Bangladesh exemplify such successful partnerships, significantly enhancing primary healthcare delivery and promoting community involvement in both the establishment and management of these services (Baigulova & Dovletov, 2023; Riaz et al., 2020). The Donabedian framework for evaluating healthcare quality is a comprehensive model emphasizing the importance of structure, process, and outcomes in assessing healthcare services. This framework has been widely accepted and utilized for decades in quality analysis and improvement in healthcare (Ayanian, J., & Markel, H. 2016). Patient preferences and viewpoints, along with other stakeholders, encapsulate the definition of healthcare quality.

Table 1. Definition of healthcare quality

Year	Sources	Definition
1980	Donabedian	Healthcare quality is the effort to maximize patient welfare by considering the balance between the benefits and risks of the care process.
1990	Institute of Medicine	Healthcare quality is the degree to which healthcare services increase the likelihood of desired health outcomes in accordance with current professional knowledge.
1997	Council of Europe	Healthcare quality is the level at which the care provided enhances the chances of achieving desired outcomes and reduces the chances of undesired outcomes.
2010	European Commission	Healthcare quality is the provision of services that are effective, safe, and responsive to the patient's needs and preferences.
2018	WHO	Healthcare quality should be effective, safe, and personcentered, responsive to the preferences, needs, and values of the individual.

Source : Busse, R., Panteli, D., & Quentin, W. (2019). An Introduction to Healthcare Quality: Defining and Explaining Its Role in Health Systems.

A summary of influential definitions of healthcare quality across various contexts is ranging from Donabedian's definition (1980) to the latest from WHO (2020) concerning national quality policies and strategies. Specifically for care quality, healthcare quality is about maximizing patient welfare, considering the balance between benefits and risks in the care process. The Institute of Medicine (1990) defines care quality as the degree to which healthcare services increase the likelihood of desired health outcomes in line with current professional knowledge, emphasizing patient satisfaction and overall health status. A concise overview from Donabedian's (1980) initial concepts to WHO's (2018) focus on effectiveness, safety, and patient-centered care, recognizing other aspects like accessibility, timeliness, equity, and efficiency as integral parts of broader healthcare quality discussions. The World Health Organization (2020) identifies quality healthcare based on its contribution to achieving desired health outcomes for both individuals and the community, defining it in terms that increasingly recognize the necessity for healthcare to be effective, safe, and patient-centered.

3. METHODOLOGY

This systematic literature review adhered to rigorous methodology to ensure the comprehensive identification and synthesis of relevant studies. A systematic search strategy was devised, incorporating appropriate keywords and Boolean operators, to retrieve pertinent literature from reputable databases, including Scopus, PubMed, Semantic Scholar, and Crossref. The search was restricted to studies published in peer-reviewed journals within a specified timeframe. Following the retrieval of studies, a meticulous screening process was employed to select articles based on predefined inclusion and exclusion criteria. Data extraction and synthesis were conducted systematically to analyze key findings and identify themes pertaining to the impact of EHRs on healthcare quality in private clinics within mid-low income countries.

The research was structured using the PICOS framework, guiding the study's design and focus:

- Population (P): The target population included private clinics operating within mid-low income countries, reflecting varied healthcare environments.
- Intervention (I): The intervention of interest was the implementation of electronic health records.
- Comparison (C): The comparative analysis encompassed studies that detailed the phases of preimplementation, implementation, and post-implementation of EHRs in similar clinical settings.
- Outcomes (O): Outcomes were defined as any improvement in healthcare quality, which included aspects such as effectiveness, safety, people-centeredness, timeliness, equity, integration, and efficiency.
- Study Design (S): The review included Randomized Controlled Trials, Cohort Studies, Casecontrol Studies, and Cross-sectional studies. This diverse approach allowed for a robust analysis of EHR impacts across different study designs and methodologies (Higgins & Green, 2011).

3.1 Eligibility Criteria

Eligibility criteria were stringent to ensure relevance and rigor: studies were included if they specifically analyzed EHR implementation in private clinics within mid-low income settings and reported on predefined outcomes published from 2014 to 2024. Studies not aligning with the clinical setting or target economic contexts were excluded, ensuring focused and applicable results (Moher et al., 2015).

3.2 Information Sources and Search Strategy

A systematic search was conducted across multiple electronic databases, including Scopus, PubMed, Semantic Scholar, and Crossref to capture relevant literature published from 2014 to 2024. To identify relevant studies, specific search phrases were crafted based on keywords derived from the research questions and objectives. This approach involved selecting essential keywords and their synonyms to ensure comprehensive yet precise coverage. The goal was to capture all pertinent studies without yielding overly broad results. Searches were tailored to yield fewer than 1000 results to avoid highly competitive outcomes. Articles were sought where terms related to "PRIVATE CLINIC" or "ELECTRONIC HEALTH RECORD" appeared in the title, while terms related to "LOW- AND MIDDLE-INCOME COUNTRIES" were searched within the title or abstract. Modifications were made for journal searches using the allintitle operator to enhance the

relevance of results.

The search queries were adapted to meet inclusion criteria such as publication year (2014–2024), language (English), and the exclusion of non-empirical studies like reviews. Due to variations in the configurations of different search engines, the search strings were adjusted to accommodate each source's specific limitations. The tailored search queries and the number of results obtained from each database are detailed in Table 2 provided.

Table 2. Search queries and results count

Source	Search String	Results
Scopus	("private clinics") AND ("electronic health records" OR "EHRs") AND ("healthcare quality" OR "effectiveness" OR "safety" OR "people-centeredness" OR "timeliness" OR "equity" OR "integration" OR "efficiency") After inclusion/exclusion criteria: years 2014–2024, language English	5
Semantic Scholar	("private clinics" AND ("mid-low income countries" OR "developing countries")) AND ("electronic health records" OR "EHRs") AND ("healthcare quality" OR "effectiveness" OR "safety" OR "people-centeredness" OR "timeliness" OR "equity" OR "integration" OR "efficiency") After inclusion/exclusion criteria: years 2014–2024, language English	23
Crossref	("private clinics" AND ("mid-low income countries" OR "developing countries")) AND ("electronic health records" OR "EHRs") AND ("healthcare quality" OR "effectiveness" OR "safety" OR "people-centeredness" OR "timeliness" OR "equity" OR "integration" OR "efficiency") After inclusion/exclusion criteria: years 2014–2024, language English	55
PubMed	private clinics AND mid-low income countries OR developing countries AND ("electronic health records" OR "EHRs") AND ("healthcare quality" OR "effectiveness" OR "safety" OR "peoplecenteredness" OR "timeliness" OR "equity" OR "integration" OR "efficiency") After inclusion/exclusion criteria: years 2014–2024, language English	40

3.3 Data Collection Process

Data extraction was meticulously carried out by two independent reviewers using a standardized data extraction form designed for this review. This form captured key information such as study location, sample size, study design, EHR features examined, and main outcomes. Discrepancies between reviewers were resolved through discussion or consultation with a third reviewer to ensure accuracy and consensus (Liberati et al., 2009).

4. RESULT AND DISCUSSION

4.1 Study Selection

A systematic search was conducted across multiple databases to identify relevant studies on the use of electronic health records (EHRs) in private clinics, particularly in developing countries, with articles published from 2014 to 2024 and limited to those written in English. Specific search strings were tailored for each database, focusing on healthcare quality, effectiveness, safety, and other relevant metrics.

The initial search results were as follows: Scopus yielded 5 articles, Semantic Scholar 23, Crossref 55, and PubMed 40, totaling 123 results. Before screening, Endnote software was used to detect

and remove duplicate records, which reduced the total to 91 articles. The elimination was primarily due to overlapping titles found across multiple databases and the preference for versions with more comprehensive metadata.

A title-based screening was then independently carried out, retaining only those unanimously agreed upon, which further narrowed the pool to 57 articles. Articles not available in full text were subsequently excluded, leaving 57 articles for further assessment. Articles in languages other than English and those not aligning with the study's geographic focus on low and middle-income countries (LMICs), private clinic settings, and direct relevance to the research objectives were excluded. This led to the removal of 17 articles for not being from LMICs, 14 for not involving private clinics, and 11 for irrelevance, further reducing the count to 13 articles that were deemed suitable for full text review and inclusion in the study analysis

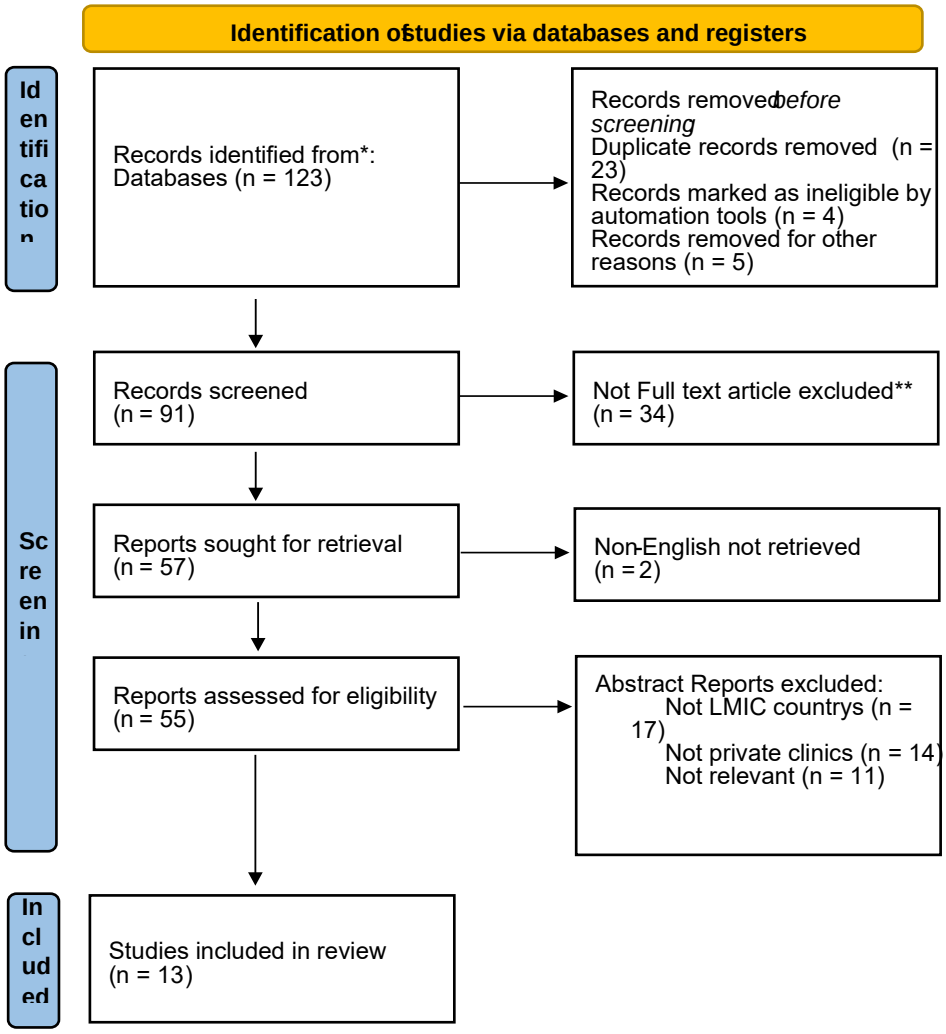

Figure 1. PRISMA 2020 flow diagram for systematic reviews

4.2 Study Characteristics

The studies summarized in Table 2 reflect a diverse range of methodologies and geographic contexts, aligning with the inclusion criteria focused on electronic health records and healthcare

quality in various settings. The research methods employed across these studies include structured interventions, crosssectional surveys, qualitative interviews, mixed-method studies, and analytical processes such as the Analytical Hierarchical Process (AHP). Specifically, the data analysis techniques used range from descriptive statistics and percentage increase calculations to more complex factor analysis, multiple regression, and thematic analysis.

Quantitative methods dominate the landscape, with many studies utilizing descriptive statistics and regression analysis to evaluate data collected through surveys and structured questionnaires. Notably, two studies adopted a mixed-methods approach, integrating both quantitative and qualitative data to provide a richer analysis of the subject matter. In contrast, three studies exclusively applied qualitative methods, focusing on in-depth interviews and thematic analysis to gather nuanced insights into the impacts of health IT systems.

Geographically, the studies span a variety of low- and middle-income countries, with several research projects based in Africa, including South Africa, Ethiopia, and Kenya, reflecting a significant focus on regions where ICT in healthcare is still evolving. Other studies explore health IT implementation across broader international contexts, including multiple low- and middle-income countries, illustrating global interests and challenges in healthcare IT integration. This comprehensive approach highlights both the universal and locale-specific barriers and facilitators to effective health IT deployment and utilization in diverse healthcare environments.

Table 2. Summary of the Included Studies' Characteristics

Author (Publication Year)	Journal	Method	Data Analysis	Study Population (Country)
Shuaib et al. (2016)	Health Informatics Journal	Structured onsite intervention	Descriptive statistics, percentage increase calculation	Rural community health services in underprivileged areas
Akwaowo et al. (2022)	Frontiers in Digital Health	Cross-sectional survey	Factor analysis, multiple regression	Healthcare facilities, Niger Delta, Nigeria
Zharima et al. (2023)	Frontiers in Digital Health	Qualitative study, in-depth interviews	Thematic analysis	South Africa
Tolera et al. (2022)	Frontiers in Digital Health	Mixed-method study	Descriptive statistics, logistic regression	Public health facilities, Dire Dawa, Ethiopia
Zharima et al. (2023)	Frontiers in Digital Health	In-depth interviews	Thematic analysis	South Africa
Alwan et al. (2015)	JMIR Human Factors	Cross-sectional survey	Descriptive statistics, logistic regression	Health professionals in Ethiopia
Pyron and CarterTempleton (2019)	CIN: Computers, Informatics, Nursing	Longitudinal Study	Descriptive statistics	Urgent care clinics (Various)

Labrique et al. (2018)	Globalization and Health	Case Studies	Qualitative analysis	Digital health initiatives (Various LMICs)
Shiri et al. (2021)	BMC Medicine	Empirical, socio-economic cohort	Data envelopment approach	Tanzania and Uganda
Ferry AM et al. (2021)	PubMed Central (PMC)	Survey	Quantitative	Smile Trainpartnered institutions (68 LMICs)
Antoun J, Hamadeh G, Romani M (2019)	International Journal of Medical Informatics	Interviews	Qualitative	Patients at a family medicine clinic (Lebanon)
Adego et al. (2019)	International Journal of Scientific and Research Publications	Cross-sectional descriptive	Quantitative (SPSS v22)	Health facilities (Kenya)
Kalema B. M., Kgasi M. R. (2017)	Information Technology, Electronics and Mobile Communication Conference (IEMCON)	Analytical Hierarchical Process (AHP)	Validation of collected data	Health institutions (South Africa)

4.3 Results and analyses

Based on the comprehensive data presented in the study summaries (table 3), summarizing the findings within the context of a systematic literature review focused on healthcare quality in private clinics across various countries:

1) Effectiveness

The effectiveness of electronic health records (EHRs) in enhancing healthcare delivery is well documented across various studies. Shuaib et al. (2016) demonstrated a notable increase in the use of EHRs, with complete vaccination records in the Dominican Republic rising from 10% to 23% following the intervention. Akwaowo et al. (2022) also highlighted the positive impact in Nigeria, where clinicians' intention to adopt EHRs was significantly influenced by perceived usefulness and awareness, illustrating the practical advantages of these systems.

Tolera et al. (2022) in Ethiopia found that only 26.6% of healthcare professionals utilized EHRs, with adoption being influenced by the availability of discussions and manuals regarding EHR use. This underscores the importance of support and training in the effective implementation of health information systems. Similarly, Antoun et al. (2019) conducted a qualitative study in Lebanon and found that most patients did not feel that the use of computers during consultations negatively impacted their communication with healthcare providers; instead, EHRs were viewed as necessary and efficient for record-keeping. Additionally, Kalema et al. (2017) in South Africa identified core readiness as the most crucial factor for e-health readiness, further emphasizing the foundational needs for successful EHR implementation in improving healthcare services.

2) Safety

In Nigeria, Akwaowo et al. (2022) noted that the safety aspect of EHR adoption was enhanced by clinicians' awareness and perceived usefulness, indicating that proper implementation can improve patient safety outcomes.

3) Patient-centeredness

Antoun et al. (2019) observed in Lebanon that the use of computers in clinical settings did not negatively impact physician-patient communication, suggesting that electronic health records (EHRs) can be effectively integrated into clinical practices without sacrificing a patient-centered approach. This finding highlights that the technological intervention can complement traditional healthcare delivery methods, ensuring that the patient-doctor interaction remains intact. Further emphasizing the concept of patient-centeredness, Akwaowo et al. (2022) conducted a cross-sectional study in Nigeria and found that clinicians' intentions to adopt EHRs were significantly influenced by the perceived usefulness and awareness of these systems. This suggests that when EHRs are viewed as beneficial and when there is sufficient awareness of their advantages, healthcare providers are more likely to adopt them, potentially leading to enhanced patient care. The study indicates that the successful implementation of EHR systems not only depends on the technology itself but also on the attitudes and acceptance of the healthcare providers who use them. Together, these studies illustrate that EHRs can be a critical tool in maintaining and even enhancing patient-centered care when implemented with consideration of both the provider's and patient's needs.

4) Timeliness

Pyron and Carter-Templeton (2019) highlighted the significant role of electronic health records (EHRs) in improving provider efficiency and patient flow across various locations. This study underscores the contribution of EHRs to the timeliness of healthcare delivery, as efficient patient flow and quicker provider responses directly impact the speed and quality of care provided. Shuaib et al. (2016) in the Dominican Republic reported a notable increase in the use of EHRs following a structured intervention, with complete vaccination records rising from 10% to 23% ($p = 0.05$). This demonstrates how EHR implementation can expedite specific healthcare processes, such as vaccination tracking, enhancing overall healthcare delivery efficiency.

Moreover, Adego et al. (2019) conducted a cross-sectional descriptive study in Kenya, revealing that no facilities were fully computerized; however, 10% of the facilities had computerized some aspects, 14% had links with satellite clinics, and 26% had integrated some information technology components. Although full integration was lacking, the partial adoption of EHR systems and IT integration in some facilities suggests incremental steps toward improving the timeliness and efficiency of healthcare services through digital means.5) Equity. Shuaib et al. (2016) emphasized the equitable distribution of health resources through increased EHR utilization, which allowed for better management of vaccination records across underprivileged areas. 6) Integration

Zharima et al. (2023) in South Africa and Adego et al. (2019) in Kenya documented both challenges and successes in the integration of electronic health records (EHRs) within healthcare systems. In South Africa, notable progress was made in the Western Cape, attributed to focused efforts on system integration, while in Kenya, about 26% of healthcare facilities had integrated some level of IT functionality, indicating a gradual but positive trend towards digital healthcare systems. Adding depth to this discussion on integration, Labrique et al. (2018) identified critical factors for the successful scaling of digital health initiatives across various Low- and MiddleIncome Countries (LMICs), emphasizing the importance of stakeholder engagement and policy alignment. This highlights that successful integration is not just about technology but also involves aligning strategic objectives and engaging all relevant stakeholders.

Further, Shiri et al. (2021) in Tanzania and Uganda found that integrated services for managing HIV, diabetes, and hypertension could significantly reduce both health service and household costs, showcasing the tangible benefits of integrated healthcare services. Ferry AM et al. (2021) surveyed 68 LMICs and reported that while the majority of institutions still relied on paper charting (64.2%), about 25.9% had adopted institutional EHRs, with 11.1% using standardized treatment protocols (STX). The study also noted significant geographic variations in EHR usage (P = 0.01), suggesting differing levels of integration across regions.

Kalema et al. (2017) in South Africa pointed out that core readiness is the most crucial element for E-health readiness, underscoring that preparedness and foundational structures must precede technology adoption for successful integration

7) Efficiency

Labrique et al. (2018) identified that stakeholder engagement and policy alignment were key factors for the successful scaling of digital health initiatives, contributing to overall system efficiency. Pyron and Carter-Templeton's (2019) findings further corroborate the efficiency gains post-EHR implementation.

This systematic review highlights that while challenges remain, the strategic implementation of EHRs in low- and middle-income countries can substantially improve the quality of healthcare in private clinics. These technologies not only enhance operational effectiveness but also ensure safety, timeliness, and equity, fostering a more integrated and efficient healthcare environment.

Table 3. Study Findings

Study	Country	Study Design	Main findings	Positive findings						
				Effectiveness	Safety	People-centeredness	Timeliness	Equity	Integration	Efficiency
Shuaib et al. (2016)	Dominic an Republic	Structured intervention	Significant increase in the use of EMRs after intervention, complete vaccination records increased from 10% to 23% (p = 0.05).	√			√	√	√	√
Akwaowo et al. (2022)	Nigeria	Cross-sectional	Clinicians' intention to adopt EMRs influenced by usefulness and awareness	√	√	√				
Zharima et al. (2023)	South Africa	Qualitative	Barriers to EHR implementation include lack of leadership and technical skills					√		√
Tolera et al. (2022)	Ethiopia	Mixed-method	Only 26.6% of professionals use EHRs, influenced by factors like EHR discussions and manuals	√						√
Zharima et al. (2023)	South Africa	Qualitative	Barriers include lack of leadership and technical skills; success in the Western Cape due to system integration						√	
Alwan et al. (2015)	Ethiopia	Cross-sectional	Poor ICT knowledge among healthcare workers impedes EHR use; training needed				√	√		

Study	Country	Study Design	Main findings	Positive findings						
				Effectiveness	Safety	People-centeredness	Timeliness	Equity	Integration	Efficiency
Pyron and Carter-Templeton (2019)	Various	Longitudinal Study	Improvement in provider efficiency and patient flow post-EHR implementation.				√			√
Labrique et al. (2018)	Various LMIC's	Case Studies	Identified key factors for successful scaling of digital health initiatives, emphasizing stakeholder engagement and policy alignment.						√	√
Shiri et al. (2021)	Tanzania and Uganda	Cohort study	Integrated services for HIV, diabetes, and hypertension significantly reduce health service and household costs					√	√	√
Ferry AM et al. (2021)	68 LMIC's	Survey	Most institutions used paper charting (64.2%); 25.9% used institutional EHR. STX is used by 11.1% of institutions. Geographic variation in EHR use is significant (P = 0.01).					√	√	
Antoun et al., (2019)	Lebanon	Qualitative Study	Most patients felt that computer use did not negatively affect communication; EHR was seen as necessary and efficient in record keeping.	√		√				

Study	Country	Study Design	Main findings	Positive findings						
				Effectiveness	Safety	People-centeredness	Timeliness	Equity	Integration	Efficiency
Adego et al. (2019)	Kenya	Cross sectional descriptive	No facilities fully computerized; 10% computerized some aspects; 14% had satellite clinic links; 26% had some IT integration				√		√	
Kalema et al. (2017)	South Africa	Analytical Hierarchic al Process	Core readiness is identified as the most crucial element for E-health readiness.	√				√	√	

4.4 EHR Implementation Challenge
The successful adoption of EHRs faces several challenges, including infrastructure inadequacies, lack of technical expertise, and resistance to change among healthcare staff. Financial constraints in low- and middle-income countries further complicate the acquisition and maintenance of advanced EHR systems. Ensuring consistent power supply and internet connectivity also remains a critical challenge that can impede the effective use of EHRs.

4.5 Practical Implications
The integration of Electronic Health Records (EHRs) in private clinics across developing countries presents substantial opportunities for enhancing healthcare quality. Practical implications include improved clinical decision-making, streamlined workflows, and enhanced patient management. Healthcare providers can leverage EHRs to reduce wait times, improve data accuracy, and facilitate better health outcomes through more personalized patient care strategies.

4.6 Limitations
This review is limited by the variability in the quality of the studies reviewed, which may affect the generalizability of the findings. Additionally, most studies focus on specific regions or countries, which might not represent the diversity of challenges and successes in different settings.

4.7 Recommendation and future research
Future research should explore the long-term impacts of EHR implementation in developing countries, particularly focusing on patient outcomes and cost-efficiency analysis. There is also a need for more comparative studies that analyze the differences in EHR implementation strategies and outcomes between urban and rural settings. Policymakers should consider creating more supportive policies that facilitate the adoption of EHRs, including funding, training, and infrastructural improvements.

5. CONCLUSIONS

The systematic review of Electronic Health Records (EHRs) in private clinics within developing countries highlights their substantial potential to enhance healthcare delivery by improving clinical outcomes, provider efficiency, and patient care. However, the integration of EHRs faces significant challenges, including infrastructural deficiencies, high operational costs, and resistance to technological change, which can considerably hinder their effective implementation and utility. Addressing these barriers through targeted policies, adequate funding, and continuous training is essential to fully realize the benefits of EHRs.

The evidence from the reviewed studies confirms that the implementation of EHRs provides significant benefits in private clinic settings in developing countries by facilitating more accurate and timely access to patient information, enhancing decision-making and patient management. Additionally, EHRs contribute to enhanced healthcare quality by improving safety and efficiency in care delivery. However, the barriers associated with EHR implementation—such as cost, lack of IT infrastructure, and insufficient training—significantly impact the overall effectiveness, safety, and efficiency of healthcare delivery. These barriers often prevent the full integration of EHR systems and limit their potential benefits. Therefore, to improve healthcare quality in mid-low income economies, these challenges must be comprehensively addressed through strategies that include stakeholder engagement, policy reform, and strengthening digital infrastructure in healthcare systems.

The implementation of Electronic Health Records (EHRs) in private clinics within developing nations presents a credible strategy for enhancing healthcare quality. However, the success of EHRs is contingent upon addressing significant systemic and operational challenges that currently

impede their full integration and effectiveness. Future research should prioritize the development of adaptable EHR systems tailored to the unique needs of these environments. Additionally, there is a critical need for longitudinal studies to assess the long-term impacts of EHRs on healthcare quality, particularly in settings with limited resources. Such studies will provide valuable insights that could facilitate more effective implementations of EHR technology, ultimately improving healthcare outcomes in developing countries.

Acknowledgement

The author would like to thank the healthcare professionals and researchers who have contributed to the studies analyzed in this review. Their insights and dedication to improving healthcare through technology are crucial in advancing the field. Additionally, gratitude is extended to funding bodies and institutional support that facilitated the comprehensive review of the literature.

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International Conference in Technology, Humanities and Management
ICTHM 2024
29-30 May 2024
Istanbul, Turkiye

AUTHENTICITY IN THE AGE OF GLOBALISM: STRATEGIES FOR CITY BRANDING

Eko Nursanty*

Department of Architecture; Faculty of Engineering; University of 17 Agustus 1945 (UNTAG)
Semarang, Indonesia

*Corresponding author: santy@untagsmg.ac.id

Abstract

In an era marked by the pervasive influence of globalism, cities worldwide are increasingly leveraging branding strategies to carve out unique identities on the international stage. This paper examines the complex interplay between globalism and authenticity in city branding, exploring how cities can maintain their authentic character while adapting to global trends. Through a comprehensive review of existing literature, the study identifies a gap in understanding the nuanced ways in which global influences impact local authenticity within city branding practices. Employing a qualitative research methodology, the paper presents an analysis of case studies from cities that have successfully integrated globalism with local authenticity in their branding efforts. It reveals that strategic alignment between global trends and local culture is paramount in crafting an authentic city brand. Furthermore, the study discusses the challenges cities face in preserving their unique heritage and identity amidst global pressures. It concludes with actionable strategies for city planners and marketers to enhance authenticity in city branding, emphasizing the importance of community engagement, cultural preservation, and innovation. This research contributes to the burgeoning field of city branding by providing insights into achieving a harmonious balance between global appeal and local authenticity, offering a roadmap for cities aiming to distinguish themselves in a globalized world.

Keywords: *Globalism, City Branding, Authenticity, Cultural Preservation, Strategic Alignment*

1. INTRODUCTION

In the era of burgeoning global interconnectedness, cities around the world vie for recognition, investment, and tourism. This competitive landscape necessitates a deeper understanding of three pivotal concepts: globalism, city branding, and authenticity. Globalism, characterized by the increased flow of goods, services, people, and information across borders, has transformed local economies and cultures into interconnected parts of a global system (Stiglitz & Pike, 2004). City branding, a strategic approach to shaping perceptions and experiences of a city, involves the creation of a unique identity aimed at attracting tourists, businesses, and residents (Kavaratzis & Ashworth, 2005). Authenticity, in this context, refers to the genuineness and originality of a city's offerings, including its culture, heritage, and experiences, which are critical for distinguishing a city in the global marketplace (Seamon & Sowers, 2008).

Authenticity is central to the intersection of globalism and city branding, as it is used to create value in global capitalism (Cavanaugh & Shankar, 2014). This is particularly relevant in city branding, where authenticity is a key element in creating a unique urban space (Ulldemolins, 2014). The search for authenticity is also evident in the local food movement, influencing consumers' brand perceptions (Riefler, 2020). However, the use of authenticity in city branding can be complex, as it is influenced by a city's cultural identity and global competitiveness (Pashkus, 2019). The tension between globalism and authenticity is further explored in the context of urbanism, where the aesthetic idea of authenticity is used to support the right to a diverse city (Zukin, 2009a).

The importance of city branding in today's global marketplace cannot be overstated. As cities compete on a global stage, effective branding strategies can elevate a city's profile, attract foreign investment, boost tourism, and enhance economic development (Dinnie, 2007). However, the challenge lies in balancing the pressures of globalism with the need to preserve local authenticity. This delicate equilibrium is essential for cities aiming to maintain their unique character while appealing to a global audience (Zukin, 2009b).

This paper posits that globalism significantly influences city branding strategies, necessitating a nuanced approach to maintaining local authenticity. The thesis explores how cities can navigate the complex interplay between embracing global trends and retaining their unique identity. Through this lens, the paper will assess the impact of globalism on city branding efforts and propose strategies to safeguard local authenticity amidst global pressures.

2. LITERATURE REVIEW

The phenomenon of city branding has become increasingly important in the context of globalization, with cities vying for attention and investment (Patachi, 2016). However, there is a tension between the desire for a strong city brand and the need to maintain authenticity and place identity (Nursanty, 2023) (Nursanty et al., 2023). Some cities use green development as a marketing tool, while others genuinely embrace sustainability (Patachi, 2015). The role of architecture and urbanism in city branding is also significant. The importance of residents and their priorities in city branding practices is highlighted (Dastgerdi & De Luca, 2019). The role of commercial strategies and stakeholder cooperation in city branding is crucial (Kapelioti, 2019). The concept of city branding is closely linked to corporate identity studies and brand creation (Yurdakul, 2015).

The concept of authenticity in city branding is a complex and multifaceted issue, as highlighted by Nursanty (2023). It involves a delicate balance between creating a strong city brand and preserving a sense of place identity (Nursanty et al., 2023). This tension is further explored by Grazian (2015), who discusses the use of authenticity in branding strategies (Grazian, 2015). Ghafar (2022) and Gregory (2019) both emphasize the importance of integrating local history, culture, and values into city branding, while also acknowledging the potential for contradictory narratives (Ghafar et al., 2022; Gregory, 2019). The role of design in crafting authentic brand identity is discussed by Murphy (2018), who suggests that truly authentic brands are based on uncompromised values (Murphy, 2018). Banks (2021) and Kalashnikova (2022) both explore the influence of social media and the attention economy on city branding (Kalashnikova, 2022), with Banks (2021) drawing parallels between cities and social media influencers (Banks, 2021). Kalashnikova (2022) further proposes the concept of authenticity as a research tool, using the concept of social space by H. Lefebvre to understand the multidimensionality of authenticity (Kalashnikova, 2022).

The interaction between globalism and authenticity in city branding is a multifaceted and critical area of research that necessitates a profound comprehension of consumer behavior, brand management, and cultural influences. Several key references shed light on various aspects of this interplay. Uysal & Okumuş (2021) underscore the significance of consumer-based brand authenticity in enhancing brands, both globally and domestically (Uysal & Okumuş, 2021). This highlights the importance of authenticity in city branding, where perceptions of authenticity can significantly influence customer satisfaction and loyalty. Green et al. (2016) identify significant research gaps in city branding literature, particularly in addressing the theory-practice gap (Green et al., 2016). Understanding the interplay between globalism and authenticity is crucial for developing effective city branding strategies that resonate with both researchers and practitioners. Mujihestia (2018) emphasizes authenticity as a pivotal element of marketing strategy in city branding. Authenticity not only bolsters city branding endeavors but also impacts visitors' intentions to revisit, demonstrating its influence on consumer behavior (Mujihestia, 2018). Riefler

(2020) explores the connection between global food consumption and brand authenticity, revealing differing perspectives on how globalness impacts brand authenticity and consumer responses (Riefler, 2020). This sheds light on the complexities of upholding authenticity in a globalized setting. Schmidt-Devlin et al. (2022) discuss how global brands establish authenticity through genuine narratives, underscoring the importance of crafting authentic brand stories to resonate with consumers in a globalized environment (Schmidt-Devlin et al., 2022). The synthesis of these references underscores the critical necessity for further research on the interplay between globalism and authenticity in city branding. Understanding how authenticity can be preserved in a global context and its effects on consumer perceptions and behaviors is vital for formulating effective city branding strategies that appeal to diverse audiences.

3. METHODOLOGY

To investigate the strategies cities employ to maintain authenticity in the age of globalism and the challenges they face, a mixed-methods research approach will be adopted. Qualitative data will be gathered through semi-structured interviews with city planners, local business owners, cultural experts, and community leaders to gain insights into the subjective experiences and perceptions of authenticity preservation. Complementing the qualitative inquiry, a quantitative analysis will be conducted using surveys to assess public opinion on the effectiveness of current authenticity preservation strategies. Additionally, a comparative case study analysis of diverse cities that have implemented noteworthy authenticity-preserving initiatives will be performed. Content analysis of policy documents, urban planning records, and promotional materials will further inform the research. The triangulation of these methods aims to provide a comprehensive understanding of the practical measures taken to balance local identity with global influences and the resultant socio-cultural impacts. This methodology will facilitate the development of a nuanced framework that other cities could adopt to safeguard their unique cultural heritage in a globalized context.

4. RESULT AND DISCUSSION

In the evolving discourse on urban development and marketing, the concept of city branding has emerged as a pivotal strategy for municipalities striving to navigate the complexities of the global economy. This approach goes beyond mere advertising; it encapsulates a holistic narrative that seeks to encapsulate a city's essence, encompassing its cultural, economic, and social attributes. The advent of globalism has significantly amplified the stakes, pushing cities to reinvent themselves as globally competitive entities while grappling with the imperative of preserving their intrinsic authenticity. This delicate balance between global appeal and local essence forms the crux of our inquiry. As globalism facilitates an unprecedented flow of ideas, goods, and people across borders, cities are increasingly leveraging their unique attributes to distinguish themselves on the world stage (Anholt, 2011; Kavaratzis & Hatch, 2013).

Against this backdrop, our study meticulously selects a range of cities that exemplify the integration of global branding strategies with a deep-rooted commitment to authenticity. These cities, through their diverse approaches—ranging from environmental sustainability initiatives to the promotion of cultural heritage and innovation ecosystems—offer invaluable insights into the multifaceted dynamics of city branding in the age of globalism. The criteria for selection include the innovative nature of their branding strategies, the success in achieving global recognition, and the efforts made to preserve local authenticity amidst global pressures. This comparative analysis is aimed at uncovering the underlying principles and practices that can guide other cities in crafting their branding strategies that resonate with both global audiences and local communities (Florida, 2012; Scott, 2000).

Table 1. Case Studies of Cities Embracing Globalism in Their Branding (Author, 2024)

City	Branding Strategy	Execution	Outcomes	Balancing Globalism and Authenticity
Amsterdam	"I Amsterdam" campaign aimed at promoting inclusivity and cultural diversity	Utilization of social media, interactive installations, and cultural events	Increased tourism by 20% over five years, enhanced international image	Highlighted local culture and history in promotional materials, preserving authenticity
Dubai	Positioning as a global hub for business and luxury tourism	Development of world-class infrastructure and business-friendly policies	Attracted international investments and luxury tourists	Promoted traditional Emirati culture and heritage sites alongside modern attractions
Kyoto	Emphasizing traditional Japanese culture alongside modern innovation	Cultural festivals, international partnerships in technology	Boost in cultural tourism, recognition as a UNESCO Creative City	Careful preservation of historical sites while showcasing technological advancements
Barcelona	"More than a city" campaign focusing on architectural innovation and lifestyle	Architectural tours, lifestyle magazines, and international expositions	Significant growth in international students and design tourism	Maintenance of Catalonian traditions and language in branding materials
Cape Town	Leveraging natural beauty and diversity as a place of innovation and creativity	Social media campaigns, eco-tourism, and cultural festivals	Increased recognition as a creative and innovative hub, rise in eco-tourism	Integration of indigenous cultures and languages in marketing efforts

Following the examination of these case studies, a pattern emerges, highlighting the symbiotic relationship between globalism and authenticity in city branding. These cities illustrate that embracing globalism does not necessitate the dilution of local culture; rather, it can catalyze showcasing authentic local flavors to a global audience. The strategic positioning of a city on the global stage, when executed with mindfulness toward preserving its unique cultural and historical heritage, can enhance its attractiveness as a destination for tourism, investment, and living. The success of these cities underscores the importance of a cohesive strategy that aligns with global trends while remaining deeply anchored in the local culture and values. This alignment not only strengthens the city's brand identity but also fosters a sense of pride and belonging among its residents (Zukin, 2009b; Beatley, 2011).

The insights gleaned from these case studies contribute to a broader understanding of how cities can navigate the challenges posed by globalism. They underscore the need for an integrated approach to city branding that harmonizes the global with the local, ensuring that cities remain competitive while retaining their unique charm and authenticity. In light of these findings, our subsequent discussion will pivot towards developing a theoretical framework that encapsulates these dual objectives, offering a blueprint for cities aiming to carve out a distinct identity in the global marketplace without compromising their authenticity.

4.1 The Impact of Globalism on City Branding

Global trends play a significant role in shaping city branding strategies, particularly in the context of sustainability and green development (Patachi, 2016). The use of architecture and urbanism as

marketing tools, as seen in the case of Dubai, is also a key trend (Patachi, 2015). Communication strategies, including the involvement of the local population, are crucial in this process (Primorac, 2019). The formation of a strong corporate identity is emphasized as a means of distinguishing cities in the face of globalization (Aysu, 2013). Factors such as security, transportation, and mental creativity are identified as influencing city branding (Mahmoudzadeh et al., 2014). The role of urban design elements in city branding is also highlighted, with the need for unique and authentic representations (Hassani, 2014). Lastly, the multidisciplinary approach to city branding, including graphic design, architecture, and product design, is noted as a key trend (Lau & Leung, 2005).

The impact of globalism on city branding is a multifaceted phenomenon that reshapes urban identities and value propositions to meet the demands of a global audience. The emergence of global trends, such as sustainability, digitalization, and cultural tourism, has had a profound influence on how cities conceive and communicate their branding strategies. As global connectivity accelerates, cities are increasingly leveraging these trends to craft images that not only resonate with international markets but also attract investments, talents, and tourists from across the world (Anholt, 2011) (Kotler & Gertner, 2002).

The role of global trends in shaping city branding strategies is evident in the proliferation of 'smart city' initiatives and the emphasis on innovation hubs, which position cities as vanguards of technological advancement. Similarly, sustainability trends have led cities to brand themselves as green and eco-friendly, aligning with global concerns about climate change and environmental preservation (Hollands, 2020). Additionally, the rising global cultural economy has prompted cities to highlight their unique cultural assets, creating a distinctive place brand that capitalizes on their historical and artistic heritage (Scott, 2000b).

However, the benefits and drawbacks of globalism in city branding are closely intertwined. On the one hand, cities that adeptly align with global trends can achieve greater visibility and competitiveness, resulting in economic growth, increased tourism, and improved international standing [6]. On the other hand, a city's rush to adopt a global brand may lead to the overlooking of local needs and values, potentially resulting in a loss of cultural authenticity and a sense of placelessness among residents. This commodification of local culture and space to suit global tastes can lead to cultural homogenization and dilution of the city's unique character (Zukin, 2009b).

Moreover, the disparities between the image projected to attract global interest and the lived realities of local populations can exacerbate socio-economic inequalities. The focus on appealing to a global market may prioritize development projects that serve tourists and investors at the expense of local community services and affordable housing (Harvey, 2017). Thus, cities face the challenge of balancing the need to engage with globalism while fostering an inclusive approach that benefits and reflects the diversity of their inhabitants. The intersection of globalism and city branding is a dynamic and complex area that requires cities to navigate carefully. The goal is to create a brand that both resonates on the global stage and remains authentic and inclusive to local communities.

4.2 Maintaining Authenticity in The Age of Globalism

A range of strategies have been proposed for preserving local identity and authenticity. Värlander (2009) and Tartaglia (2015) both emphasize the role of marketing practices and the use of local branding strategies in constructing and maintaining local authenticity (Värlander, 2009) (Tartaglia & Rossi, 2015). Valasiadis (2017) suggests the use of digital games in education to strengthen students' awareness of local identity (Valasiadis et al., 2017). Certomà (2009) and Niskasaari (2008) advocate for a more inclusive and non-exclusivist approach to place authenticity protection (Certomà, 2009; Niskasaari, 2008), while Ranfagni (2021) proposes a model for family business internationalization driven by territorial-based authenticity (Ranfagni et al., 2021). Bleibleh (2020) highlights the role of non-governmental organizations in preserving cultural heritage and local identity, particularly in conflict zones (Bleibleh & Awad, 2020). Lastly, Thomson (2006) underscores the importance of schools in affirming and unsettling local identities through place-

based curricula (Thomson, 2006).

In an era where globalization increasingly homogenizes urban landscapes, cities face the formidable challenge of differentiating themselves while staying true to their local identity. The delicate art of balancing global influence with local authenticity has become a central theme in urban development and branding strategies. This balance is not merely about preserving heritage but also about innovating in ways that resonate with global trends and audiences. The cities selected for the following case studies exemplify successful strategies in navigating these complex dynamics. By intertwining global appeal with a strong sense of place, they showcase how urban centers can thrive economically and culturally on the world stage without losing their unique essence. The insights drawn from these case studies are pivotal for urban planners, policymakers, and marketers aiming to craft city brands that are both internationally appealing and authentically local.

Table 2. Case Studies of Cities Successfully Balancing Global Influence with Local Authenticity (Author, 2024)

City	Global Influence Strategy	Local Authenticity Measures	Outcome
Tokyo	High-tech innovation and global financial center	Preservation of historic sites, local festivals, and traditional cuisine	Sustained economic growth with a strong sense of cultural identity and heritage preservation
Barcelona	Tourism and international conferences	Promotion of Catalan culture, language, and architectural heritage (e.g., Gaudí's works)	Significant tourist attraction while maintaining a vibrant local culture
Amsterdam	Global hub for creative industries and sustainable urban living	Support for local arts, bicycle-friendly policies, and conservation of historic cityscape	High quality of life with a unique blend of innovation and tradition
Cape Town	International tourism with a focus on natural beauty and history	Empowerment of local communities and promotion of local arts, crafts, and township tours	Increased international recognition while fostering local economic development and culture
New Orleans	Cultural tourism centered on music, festivals, and food	Preservation and celebration of local music heritage, Creole cuisine, and cultural festivals	Robust tourism industry that authentically represents the city's diverse cultural heritage

Following the examination of case studies in Table 2 above, a deeper analysis reveals several pivotal insights and innovative strategies that these cities employ to navigate the complexities of global influence while preserving and celebrating their local authenticity. Notably, each city's approach to balancing these dynamics is deeply rooted in leveraging unique cultural, historical, and socio-economic attributes that resonate with both global audiences and local communities.

- Tokyo exemplifies a commitment to harmonizing its rapid technological advancements and economic prowess with a steadfast dedication to cultural traditions and practices. This dual focus not only fortifies Tokyo's identity on the global stage but also serves as a testament to the city's

ability to integrate the new without overshadowing the old, ensuring a cohesive narrative that appeals to international tourists, investors, and residents alike (Hannerz, 1996).

- Barcelona's strategic emphasis on its rich architectural heritage and the promotion of Catalan culture underscores the city's innovative approach to branding. By intertwining its cultural identity with urban development, Barcelona has successfully positioned itself as a vibrant cosmopolitan hub that offers an immersive cultural experience, thereby attracting a diverse international audience while fostering local pride and preserving its unique cultural heritage (Foster, 1990).
- Amsterdam showcases an exemplary model of sustainable urban living and creative industry development, set against the backdrop of its historic cityscape. The city's efforts to support local arts, implement bicycle-friendly policies, and conserve its iconic canals demonstrate how Amsterdam harnesses its historical and cultural assets to enhance its global appeal. This approach not only attracts creative talents and eco-conscious visitors but also reinforces the city's commitment to sustainability and innovation (Fuller & Moore, 2017).
- Cape Town leverages its breathtaking natural landscapes and complex historical narratives to offer a rich, multifaceted tourist experience that benefits the local economy. By empowering local communities and promoting indigenous arts and crafts, Cape Town has crafted a branding strategy that highlights its natural beauty and cultural diversity, making it a prime destination for those seeking authentic experiences. This not only boosts the city's international image but also contributes to community development and cultural preservation (Florida, 2014).
- New Orleans' focus on its musical heritage, culinary richness, and vibrant festivals exemplifies how cities can use their cultural assets as a powerful tool for economic development and urban revitalization. The city's commitment to celebrating and preserving its unique cultural mosaic has not only enhanced its attractiveness as a tourist destination but also played a crucial role in post-disaster recovery and community rebuilding efforts (Connell, 2012).

These case studies collectively underscore the critical importance of cities adopting multifaceted branding strategies that carefully balance global influences with local authenticity. Such approaches not only enhance the cities' competitive edge in the global marketplace but also ensure that urban development and globalization do not come at the expense of cultural heritage and local identity. Moving forward, these insights can serve as valuable guidelines for other cities aiming to navigate the challenges of globalization while fostering environments that celebrate and preserve their unique local characteristics.

Figure 1. Global Influence vs Local Authenticity. (Author, 2024)

The conceptual diagram in figure 1 above, illustrates the balance between Global Influence and Local Authenticity in city branding strategies. It highlights the optimal balance point where cities manage to integrate global trends and influences with their unique local culture and heritage. This balance is crucial for cities aiming to enhance their global appeal without compromising the authenticity that makes them distinctive and attractive to residents, investors, and tourists alike. By navigating these dynamics effectively, cities like Amsterdam, Dubai, Kyoto, Barcelona, Cape Town, and New Orleans have successfully crafted compelling and authentic urban brands that

resonate on the international stage while preserving their unique local identity.

Maintaining authenticity in the age of globalism presents a complex challenge for cities as they navigate the pressures to compete and stand out in a global marketplace. Authenticity is often tied to a city's historical roots, cultural practices, indigenous arts, and unique ways of life, which form a vital part of its identity and appeal. The increasing homogenization brought about by globalism requires conscious efforts to preserve these aspects that confer a city's sense of place and community. Strategies for preserving local identity and authenticity often involve a multifaceted approach. This can include initiatives to protect cultural heritage sites, support for local artisans and businesses, the promotion of local languages and customs, and the facilitation of community participation in urban development processes. For instance, urban planning can incorporate traditional architectural styles, and tourism can focus on authentic local experiences rather than generic attractions. Furthermore, cities can leverage digital storytelling and social media to share their unique narratives with a global audience, thus maintaining control over their brand image while promoting authentic local culture.

The challenges of maintaining authenticity in a globalized world are manifold. There is the risk of local culture being commodified for the sake of tourism, which can strip practices and sites of their original meaning and reduce them to mere attractions. Economic pressures can lead to the displacement of local communities in favor of developments aimed at attracting foreign investment and visitors. Moreover, the influx of global brands and franchises can overshadow local businesses, making it difficult for indigenous enterprises to survive. Additionally, the pace of modernization and the desire to attract international attention can sometimes result in the loss of traditional practices and a city's historical character. The challenge, therefore, lies in finding a balance between development and preservation, ensuring that growth strategies do not come at the expense of a city's soul. This balance requires thoughtful policy-making, community engagement, and a commitment to valuing the unique attributes that define a city's essence. Preserving authenticity in an increasingly globalized world necessitates deliberate strategies that prioritize the value of local identity. As cities continue to evolve, they must remain places where the past is respected, the present is vibrant, and the future is approached with an understanding of the need to preserve the distinctive elements that make up their character.

5. CONCLUSION

The endeavor to sustain authenticity in the face of globalism represents a crucial aspect of contemporary city branding and urban cultural preservation. The intricate balance between embracing global trends and maintaining a city's unique character is not merely an academic concern but a practical imperative for urban policymakers, community leaders, and citizens alike. Our exploration has revealed that while globalism poses significant challenges, including the risk of cultural homogenization and economic pressures that may undermine local traditions, it also provides a platform for cities to showcase their unique identities to a worldwide audience. The successful examples highlighted in our analysis demonstrate that with thoughtful, participatory strategies that engage local stakeholders and prioritize cultural heritage, cities can flourish as vibrant, authentic spaces that honor their past while innovating for the future.

The insights derived from this inquiry suggest that the authenticity of a city is an invaluable asset that requires diligent stewardship as part of its branding strategy. As urban centers continue to navigate the complexities of globalization, the strategies identified herein offer a beacon for preserving the intangible cultural fabric that defines them. Forthcoming research and policy development should focus on creating adaptive models that facilitate the integration of global dynamics with local authenticity, ensuring that the cultural integrity and the sense of place that enrich urban life are not only conserved but also celebrated as cornerstones of city identity in the global narrative. The dialogue between globalism and local authenticity is an ongoing narrative that cities will continue to author, with implications that resonate on economic, cultural, and social

levels. The careful crafting of this narrative, as evidenced by the cities studied, is paramount in forging a future where urban spaces are not just globally connected nodes but are also treasured repositories of human heritage and diversity.

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International Conference in Technology, Humanities and Management
ICTHM 2024
29-30 May 2024
Istanbul, Turkiye

THE GLOBALISM OF FUTURE LAW EDUCATION IN INDONESIA: TRENDS, CHALLENGES, AND OPPORTUNITIES

Retno Mawarini Sukmariningsih[1], Eko Nursanty[2*], Sri Mulyani[1], Anggraeni Endah K.[1]

[1]Department of Law; Faculty of Law; University of 17 Agustus 1945 (UNTAG) Semarang, Indonesia

[2]Department of Architecture; Faculty of Engineering; University of 17 Agustus 1945 (UNTAG) Semarang, Indonesia

[*]*Corresponding author: santy@untagsmg.ac.id*

Abstract

The landscape of legal education globally is undergoing significant transformations, influenced by technological advancements, international legal frameworks, and the increasing need for cross-border legal expertise. With its unique legal system and educational challenges, Indonesia stands at a pivotal point in integrating global perspectives into its law education. This paper explores the trends, challenges, and opportunities of globalism in Indonesian law education, aiming to pave the way for a more interconnected and comprehensive legal education system. Through a qualitative analysis of current educational practices, and drawing on comparative case studies from other countries, this study identifies the gaps and potentials within Indonesia's legal education system. It argues that integrating global perspectives is not merely beneficial but essential for preparing future legal professionals in Indonesia to navigate the complexities of international legal practices. The paper proposes strategic approaches for embedding globalism in legal education, including curriculum development, faculty training, and international collaborations. Furthermore, it highlights successful examples of globalism in legal education from other jurisdictions and pilot projects within Indonesia, offering actionable insights for stakeholders. This research contributes to the ongoing discourse on legal education reform, emphasizing the necessity of a global outlook to equip future lawyers with the skills and knowledge required in a rapidly evolving legal landscape.

Keywords: *Globalism in Education, Indonesian Law Education, Legal Education Reform, International Legal Frameworks, Cross-border Legal Expertise*

1. INTRODUCTION

Indonesia's law education system, with its rich history and diverse legal traditions, serves as a pivotal foundation for the country's legal profession and governance. Historically, this system has been deeply influenced by a mix of customary law, Dutch colonial law, and modern Indonesian law, creating a unique legal landscape. Currently, Indonesian law schools offer a blend of theoretical knowledge and practical skills, aiming to prepare students for the complexities of the legal profession within the nation. However, as the global legal environment becomes increasingly interconnected, the need for a more internationally oriented legal education in Indonesia has never been more critical.

The integration of global perspectives in law education is crucial for preparing students for the evolving legal landscape (DeJarnatt & Rahdert, 2010). This includes understanding the impact of globalization on legal practice and education (Sugarman & Sherr, 2001; Silver, 2013), and developing skills for working in a global context Silver, 2009). Practical experiences, such as international clinical legal education, are also important for fostering global legal literacy (Li et al.,

2019). However, the current U.S.-centric approach in law school curricula may not adequately prepare students for global practice (Silver et al., 2008). The role of law schools in the globalization of the legal profession and the need for ethical and social values in legal education are also highlighted (Faulconbridge & Muzio, 2009).

The integration of global perspectives into law education is paramount in today's borderless world. Legal professionals are now required to navigate issues that cross national boundaries, such as international trade disputes, human rights concerns, and transnational crime. Thus, understanding global legal standards, international law, and comparative legal systems is essential for law graduates to effectively operate on the international stage. For Indonesian law education, incorporating these global perspectives means not only enhancing the curriculum but also adopting new teaching methodologies and technologies that align with international best practices.

This paper aims to examine how global trends are influencing law education in Indonesia, identifying the challenges faced by legal educators and institutions in integrating these trends, and exploring the opportunities they present for the future. Through a comprehensive analysis, this thesis will delve into the nuances of adopting digitalization, international law, and innovative teaching methods within Indonesia's legal education system. It will also consider the implications of these changes for Indonesian law graduates, preparing them for a globalized legal market. By addressing these aspects, the paper seeks to contribute to the ongoing discourse on legal education reform in Indonesia, highlighting the importance of a global perspective in nurturing the next generation of legal professionals.

1.1 Global Trends in Law Education

In the evolving landscape of legal education, the impact of globalization has led to significant shifts in pedagogical approaches, curriculum content, and teaching methodologies worldwide. These transformations aim to address the growing demands of the legal profession in a digital and interconnected world. As law schools globally embrace these changes, Indonesia faces both challenges and opportunities in integrating these global trends into its legal education system. The following table (Table 1) offers a comparative analysis of the prevalent global trends in law education against Indonesia's current practices, highlighting the country's efforts to adapt and the gaps that still need addressing.

Table 1. Global Trends in Law Education: A Comparative Analysis with Indonesia. (Authors, 2024)

Trend	Global Perspective	Indonesia's Response	Remarks
Digitalization of Education	Widespread adoption of online platforms, digital resources, and virtual classrooms.	Gradual integration of digital learning tools and platforms in law curricula.	Indonesia is catching up, with a growing emphasis on e-learning post-pandemic.
Internationalization	Curricula include international law subjects, encouraging student exchanges and internships abroad.	Increased efforts to include international law in the curriculum and partnerships with foreign law schools.	Though on the rise, international exposure and collaborations are areas for further development.
Interdisciplinary Approach	Law programs increasingly incorporate cross-disciplinary subjects such as technology, business, and human rights.	Emerging introduction of interdisciplinary courses, though predominantly traditional law focus remains.	A growing trend, recognizing the importance of versatile education in law.
Practical Skills Training	Emphasis on experiential learning through moot courts, internships, and legal clinics.	Implementation of clinical legal education and moot court activities, but with room for expansion.	Practical skills development is recognized but requires broader implementation and resources.
Innovation in Teaching Methods	Adoption of interactive pedagogies, like problem-based learning and flipped classrooms.	Initial steps towards more interactive teaching methods, yet predominantly lecture-based.	An area for significant potential growth, aligning with global educational trends.
Regulatory Changes	Dynamic curriculum updates to reflect changing laws, technology, and societal needs.	Curriculum revisions are underway, but the process is slow due to regulatory hurdles.	Efforts are being made, but agility in curriculum development is needed.
Focus on Soft Skills	Increasing emphasis on developing negotiation, communication, and ethical decision-making skills.	Some law faculties are beginning to integrate soft skills training into their programs.	Recognizing the importance of soft skills, with ongoing initiatives to incorporate them more systematically.

The comparative analysis provided in Table 1 underscores the dynamic nature of law education, reflecting a global shift towards digitalization, internationalization, and interdisciplinary approaches. Digitalization of education, marked by the adoption of online platforms and digital resources, is a trend where Indonesia has made notable progress, yet the pace of integration varies across institutions (Agarwal & Maiti, 2020). The push towards internationalization in legal education is evident through Indonesia's increased efforts to include international law in its curriculum and to forge partnerships with foreign law schools, signaling a recognition of the importance of global legal perspectives (Gane & Huang, 2017).

Furthermore, the trend towards an interdisciplinary approach in law education emphasizes the necessity of equipping law students with knowledge and skills beyond traditional legal studies, an area where Indonesian law schools are gradually expanding their curricula (Schäfke et al., 2018). Practical skills training, through mechanisms such as moot courts and legal clinics, highlights a

global move towards experiential learning—a shift that Indonesian law education is embracing, albeit with room for more widespread implementation (Kemp et al., 2016).

Innovation in teaching methods, including the adoption of interactive pedagogies like problem-based learning, presents an opportunity for Indonesian law schools to enhance student engagement and learning outcomes. This trend aligns with global educational strategies aimed at preparing students for the complexities of modern legal practice (Bajpai & Kapoor, 2018). The table also highlights the necessity of regular curriculum updates to reflect the rapid changes in law, technology, and societal needs, a challenge that Indonesian law education is addressing, though further agility is required (Jacobs, 2010)

Lastly, the increasing emphasis on soft skills development in legal education globally points to a broader understanding of the competencies required for effective legal practice. Indonesian law education's emerging focus on these skills signifies an evolving recognition of their importance, with initiatives underway to systematically integrate them into the legal education (Tsaoussi, 2019).

Table 1 illuminates both the strides made and the hurdles yet to be overcome in aligning Indonesian law education with global trends. It reflects a landscape of adaptation and growth, where ongoing efforts to embrace digitalization, internationalization, interdisciplinary learning, and innovative teaching methodologies are crucial for preparing future legal professionals to thrive in a globalized world.

Exploring the influences of technology and international law on legal education offers a compelling glimpse into the transformative forces shaping the legal landscape. These influences are not only redefining the competencies required of future legal professionals but also the pedagogical approaches adopted by law schools globally, including Indonesia.

1.2 Influences of Technology on Legal Education

The advent of technology has dramatically altered the legal profession, necessitating a corresponding shift in legal education. Digital tools and platforms, from legal research databases to virtual courtroom simulations, have become integral to legal practice and education (Mardikyan et al., 2015). These technological advancements facilitate a more interactive and engaging learning environment, allowing students to simulate real-world legal scenarios and practice their skills in a controlled setting. Moreover, the rise of legal technology startups and the application of artificial intelligence in legal proceedings highlight the need for law graduates to be proficient in technological tools as well as traditional legal analysis (Peterson et al., 2018).

1.3 Influences of International Law on Legal Education

As globalization continues to erase the borders that once defined legal jurisdictions, the importance of international law in legal education has become increasingly evident. Law schools worldwide are integrating international law subjects into their curricula, preparing students to operate in a global legal environment (Steele & Taylor, 2010). This includes not only the study of treaties and international conventions but also the understanding of diverse legal systems and practices. For Indonesian law schools, this global perspective is crucial for fostering graduates who can navigate the complexities of international legal practices, whether in dispute resolution, trade, human rights, or environmental law (Lamparello & MacLean, 2014).

1.4 Synergy of Technology and International Law in Legal Education

The intersection of technology and international law presents unique opportunities for legal education. Virtual exchange programs and online international law moot courts offer students the chance to engage with peers and professionals across the globe, enhancing their understanding of international legal issues through direct interaction (Kolb, 2014). Additionally, digital platforms can disseminate international legal materials more widely, making it easier for students in Indonesia and elsewhere to access a vast array of resources that were previously out of reach.

2. METHODOLOGY

To conduct a thorough examination of the influences of global trends on law education in Indonesia, this study adopts a mixed-methods research approach, combining qualitative and quantitative data collection and analysis. This methodology is chosen for its robustness in exploring complex phenomena, allowing for a comprehensive understanding of the current state of law education in Indonesia and its alignment with global trends.

The initial phase of the research involves a comprehensive literature review, sourcing academic articles, legal education reports, and policy documents from both Indonesian and international publications. This review serves to identify key global trends in legal education, including digitalization, internationalization, interdisciplinary approaches, and innovations in teaching methods. It also provides insights into how these trends are currently being integrated into legal education systems worldwide, establishing a benchmark against which Indonesia's efforts can be compared.

Following the literature review, the study employs a qualitative approach through semi-structured interviews with a diverse range of stakeholders within Indonesia's legal education community. These stakeholders include university faculty members, law students, legal professionals, and representatives from legal education regulatory bodies. The purpose of these interviews is to gather in-depth perspectives on the perceived challenges and opportunities of integrating global trends into Indonesia's law education system. The interviews also aim to identify the strategies that law schools are employing to adapt to these trends.

In conjunction with qualitative data, the research incorporates quantitative methods through the analysis of secondary data related to law education in Indonesia. This includes enrollment numbers, curriculum changes over time, and outcomes of law graduates, such as employment rates and performance in international legal competitions. Where available, this data is compared to global benchmarks to assess Indonesia's progress and identify gaps.

The collected data is then analyzed using thematic analysis for qualitative inputs and statistical analysis for quantitative data. This dual approach enables a nuanced understanding of the complex dynamics at play in integrating global trends into Indonesia's law education system. It also allows for the identification of patterns, challenges, and opportunities that may not be immediately apparent through a single method of analysis. By employing this mixed-methods approach, the research aims to offer a holistic view of the current state and future directions of law education in Indonesia in the context of global trends. This methodology ensures that the findings are grounded in both empirical data and the rich experiences and insights of those directly involved in legal education, providing a solid foundation for the study's conclusions and recommendations.

3. RESULT AND DISCUSSION

The comparative analysis presented in Table 1 sheds light on the current state of law education in Indonesia against the backdrop of global trends, revealing both convergences and divergences in the evolution of legal education. The findings indicate that while Indonesia has begun to embrace digitalization, internationalization, interdisciplinary approaches, and innovations in teaching methods, its pace and depth of integration vary significantly when compared to global practices (Bateman, 1997).

3.1 Results

Digitalization has emerged as a key trend, with global law schools incorporating advanced technologies into their curricula to enhance learning outcomes. Indonesian law schools have similarly initiated the integration of digital tools and platforms, albeit with varying degrees of adoption across institutions (McConville, 2017). This uneven pace suggests a need for more

systemic support to fully leverage digital advancements in legal education.

In terms of internationalization, the analysis underscores the global movement towards embedding international law and comparative legal studies within law curricula. Indonesia has made strides in this area through partnerships with foreign law schools and the inclusion of international law subjects. However, the depth of such integration and the extent of student exposure to international legal practices remain areas for further development (Wallace & Martin-Ortega, 2020). The trend towards interdisciplinary approaches in law education globally highlights the increasing relevance of non-legal subjects in legal training. Indonesian law schools have shown openness to incorporating subjects such as business, technology, and human rights into their programs, reflecting a broader understanding of the multifaceted nature of legal practice today (Melchert, 2024).

Figure 1. Global Trends in Law Education. Author, 2024.

The radar chart visualizes, see figure 1 above, the comparison between global trends in law education and Indonesia's response to these trends across various dimensions: Digitalization, Internationalization, Interdisciplinary Approach, Practical Skills Training, Innovation in Teaching Methods, Regulatory Changes, and the Focus on Soft Skills.

- The blue area represents the ideal alignment with global trends in law education, scored out of a maximum of 10 for each category.
- The red area depicts Indonesia's current level of response to these global trends, with scores indicating the extent of adoption or integration.

This visual comparison highlights areas where Indonesia is making strides towards aligning with global trends, such as Internationalization and Practical Skills Training, and areas where there is room for improvement, like Innovation in Teaching Methods and a comprehensive Interdisciplinary Approach. The chart underscores the importance of ongoing efforts to enhance Indonesia's legal education system, ensuring that it remains relevant and competitive in the face of rapidly evolving global standards and expectations.

4. DISCUSSION

The analysis points to a critical juncture in Indonesia's law education system, where embracing global trends presents a pathway to enhancing the quality and relevance of legal education. The challenges in integrating these trends, such as infrastructural limitations, regulatory barriers, and resistance to change, are not insurmountable but require strategic focus and commitment (Knapp et al., 2023).

The radar chart in figure 1 above offers a comprehensive visual comparison between the alignment of global trends in law education and Indonesia's current responses across several key dimensions. This comparison illuminates the extent to which Indonesian legal education is evolving in response to the demands of a globalized legal landscape. Through this visualization, we can engage in a nuanced discussion on the progress, challenges, and opportunities within Indonesia's legal education framework.

Firstly, the chart reveals a notable effort by Indonesia to incorporate digitalization and internationalization into its legal education system, as indicated by the respective scores. While the country is making strides in integrating digital learning tools and fostering international law in the curriculum, the comparison with global trends suggests there is still considerable room for enhancement. This gap underscores the potential for Indonesia to further leverage technology and global legal standards to enrich its legal education, making it more accessible and aligned with international practices.

The areas of Interdisciplinary Approach and Innovation in Teaching Methods present significant opportunities for development. The chart shows Indonesia's current efforts are not fully aligned with the global movement towards incorporating cross-disciplinary subjects and adopting interactive pedagogies. Expanding the curriculum to include more non-legal subjects and embracing innovative teaching methods such as problem-based learning could foster a more versatile and engaging learning environment. This shift would not only prepare students for the complexities of modern legal practice but also enhance their critical thinking and problem-solving skills.

Practical Skills Training emerges as another critical area where Indonesia is making progress, yet still lags behind the global trend. The importance of experiential learning through moot courts, internships, and legal clinics cannot be overstated in preparing law students for the practical realities of legal practice. Increasing the availability and diversity of practical training opportunities can bridge the gap between theoretical knowledge and real-world application, a crucial step for producing competent legal professionals.

Finally, the emphasis on soft skills development in legal education is gaining recognition worldwide as essential for effective legal practice. While Indonesian law faculties are beginning to integrate soft skills training into their programs, the chart indicates a need for a more systematic and comprehensive approach. Developing negotiation, communication, and ethical decision-making skills is vital in preparing law graduates for the global market, where such competencies are increasingly demanded.

The radar chart not only highlights the progress made by Indonesia in adapting its legal education system to global trends but also illuminates the pathways for future development. By addressing the identified gaps and leveraging global best practices, Indonesia can enhance the quality and relevance of its legal education, thereby equipping future legal professionals with the knowledge, skills, and competencies required to excel in a rapidly evolving global legal environment.

The opportunities for reform and innovation in legal education in Indonesia are vast. Strengthening digital infrastructure, fostering a more global outlook among students and faculty, and adopting flexible, interdisciplinary curricula can significantly elevate the standard of legal education in

Indonesia. Moreover, enhancing practical skills training through experiential learning opportunities, such as legal clinics and moot court competitions, can better prepare students for the demands of the legal profession, both domestically and internationally (Law et al., 2019). The integration of global trends into Indonesia's law education system is not only a necessity but an opportunity to redefine legal education in the country. By addressing the identified challenges and leveraging the opportunities, Indonesia can ensure its legal education system is robust, dynamic, and capable of preparing future legal professionals for the complexities of a globalized world.

5. CONCLUSION

This study has critically examined the impact of global trends on law education in Indonesia, highlighting the challenges and opportunities these trends present. Through a mixed-methods approach that combined literature review, interviews, and quantitative data analysis, it has become evident that while Indonesia has made strides in integrating digital technologies, international law content, and innovative teaching methodologies into its legal education system, significant gaps remain. The global trends of digitalization, internationalization, interdisciplinary approaches, and practical skills training represent not only a challenge but also an opportunity for Indonesian law education to evolve. The findings underscore the importance of a proactive and adaptive approach in reforming legal education to meet international standards and the demands of a globalized legal profession.

Looking forward, the opportunities for enhancing Indonesia's law education system are vast. Embracing digitalization more fully can provide greater access to international legal resources and foster interactive learning environments. Moreover, a stronger emphasis on international law and comparative legal studies, coupled with the adoption of innovative teaching methods, can better prepare Indonesian law graduates for global challenges. The integration of practical skills training and soft skills development into the curriculum is crucial for producing well-rounded legal professionals who can thrive in diverse settings. This study calls for a collaborative effort among policymakers, educators, and the legal community to embrace these global trends, ensuring that Indonesia's law education system is dynamic, inclusive, and competitive on the world stage.

In addressing these challenges and seizing the opportunities outlined, Indonesia can cultivate a generation of legal professionals who are not only well-versed in national law but are also adaptable, technologically savvy, and equipped to navigate the complexities of the international legal landscape.

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BUILDING TRUST THROUGH GOVERNANCE: A CASE STUDY FROM LOW-INCOME FAMILY ASSISTANCE PROGRAM IN INDONESIA

Fenny Purwani[1], Irfan Dwi Jaya[1], Fenando[1], Jamaliah Said[2]

[1]*Universitas Islam Negeri Raden Fatah Palembang, Indonesia. Jl. Prof. K. H. Zainal Abidin Fikri KM.3, RW.5, Pahlawan, Kec. Kemuning, Kota Palembang, Sumatera Selatan 30126*

[2]*Universiti Teknologi MARA, Malaysia, Level 12, Menara Sultan Abdul Aziz Shah, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia*

**Corresponding author: santy@untagsmg.ac.id*

fennypurwani_uin@radenfatah.ac.id; irfan_dj@radenfatah.ac.id; fenando_uin@radenfatah.ac.id; jamaliah533@uitm.edu.my

Abstract

Using a Naïve Bayes Classifier approach, this study examines the critical relationship between transparent governance and trust-building within the context of an Indonesian low-income family support programme or Family Hope Program (PKH). This study uses data-driven analysis to explore the particular characteristics and textual elements that support transparent governance and its influence on trust-building in the context of public assistance. The study's conclusions provide insight into the critical roles that language and communication play in communicating accountability and transparency to programme participants and the broader public. Through applying the Naïve Bayes Classifier, this study provides a more sophisticated comprehension of the linguistic indicators that denote transparency and, consequently, how these components influence the formation of trust. This creative method shows how machine learning and natural language processing methods can improve our comprehension of intricate governance dynamics, especially in the context of socioeconomic support initiatives. The knowledge gathered from this study can assist governments and international organizations in creating more efficient and trustworthy programmes, which will eventually support efforts to reduce poverty and promote sustainable development. It can also provide valuable insights for policy and decision-making processes

Keywords: *Governance, Naïve Bayes Classifier, PKH, Indonesia*

1. INTRODUCTION

The term Open Governance, associated with Open government, has evolved into a global concern and has gained significant importance in recent years. Open government, as a manifestation of transparency, participation, and collaboration, was widely promoted during the tenure of the United States' President Barack Obama in 2009. Open government is defined as a multilateral, political, and social process, specifically encompassing actions that are transparent, collaborative, and participatory by both government and administration (Wirtz, B. W., Weyerer, J. C., & Rosch, 2017).

One sector that leverages open government is the public service sector. Open government can help improve the quality of public services by enhancing government transparency and accountability, as well as encouraging community participation in decision-making processes. The opening of data is expected to enhance transparency and provide opportunities for better governance, although possibilities of transparency lapses may still exist (Matheus & Janssen, 2020).

In Indonesia, governance principles have been implemented in various social assistance government programs. One of them is assistance for low-income families under the name Family Hope Program abbreviated as PKH. The implementation of PKH demonstrates the government's commitment to enhancing transparency, accountability, effectiveness, efficiency, and community participation, as well as law enforcement in managing social assistance programs. The conditional social assistance program is aimed at Poor Families (KM) designated as beneficiary families (KPM). This program aims to improve the standard of living for poor families and break the cycle of intergenerational poverty (Ferraro & Simorangkir, 2020).

Social protection programs have long been implemented in Latin American countries as efforts to accelerate poverty alleviation. Internationally, social protection programs known as Conditional Cash Transfers (CCT), (Hadna & Askar, 2022) have proven to be quite successful in addressing poverty, particularly chronic poverty, in those countries (Sri Mujiarti Ulfah; Puput Ratnasari, 2021).

The Naïvendonesian government adopted this approach into the Family Hope Program (PKH), which provides conditional social assistance to Poor Families (KM) designated as beneficiaries of PKH, starting in 2007 (Sri Mujiarti Ulfah; Puput Ratnasari, 2021). In Indonesia, the assistance program for poor families is a crucial factor in efforts to alleviate poverty and promote sustainable development (BPS, 2023). The Indonesian National Team for the Acceleration of Poverty Reduction (TNP2K) reported in 2018 that the CCT Family Hope Program (PKH) had a positive impact on per capita expenditure (PCE) in Indonesia, increasing by 4.8% annually (Hadna & Askar, 2022).

However, in its implementation, many challenges are still encountered in the distribution or execution of assistance in the Family Hope Program (PKH). One of them is the continued issue of mis-targeting, where many economically capable individuals who are ineligible end up receiving PKH assistance. This is caused by various factors such as inaccurate data collection by PKH facilitators, data falsification by residents, and others. The most dominant factor is the government's limited openness to the community regarding the factors influencing an individual's selection as a Beneficiary Family (KPM), resulting in those declared ineligible as KPM unable to propose themselves as deserving recipients of the PKH assistance (Sri Mujiarti Ulfah & Puput Ratnasari, 2021).

The mis-targeting in determining PKH recipients can hinder the program's objectives and diminish public trust in the government (Alexandri, 2020). The effectiveness of the program is also determined by the level of trust between the government and beneficiaries (Mulyana, C., Aswicahyono, 2019). Issues of transparency and accountability gaps often erode public trust in the government (Transparency International Indonesia, 2022). These conditions can impede the effectiveness of the CCT program and diminish public trust in the government.

The research aims to design a model for determining the eligibility or appropriateness of potential PKH recipients based on the PKH implementation procedure. There are 14 criteria as requirements for determining PKH recipients set by the government. The designed model will use the Naïve Bayes Classification approach, which is one of the classification methods in machine learning (Alenazi et al., 2023). This creative method shows how machine learning and natural language processing methods can improve our comprehension of intricate governance dynamics, especially in the context of socioeconomic support initiatives. The knowledge gathered from this study can

assist governments and international organizations in creating more efficient and trustworthy programmes, which will eventually support efforts to reduce poverty and promote sustainable development. It can also provide valuable insights for policy and decision-making processes.

2. LITERATURE REVIEW

With Open Governance becoming a commitment of the Indonesian government to enhance transparency and accountability in decision-making processes and public resource management, the principles of open government encompass public information access, public participation, and public collaboration. Open Government aims to prevent various forms of governance activities based on authoritarianism, collusion, corruption, and nepotism, which could provide opportunities for other criminal activities within the government.

Government transparency is defined as the openness of public information to the community (Hood, C., Flinders, 2006), enabling the public to monitor government performance. Previous research has shown a positive relationship between government transparency and public trust (Levi, M., Sacks, 2007). Other studies indicate that public trust and community participation in decision-making processes significantly increase (Moe, 2003). Based on these research findings, the government, as the executor of the PKH, strives to ensure that the implementation of PKH reaches its target. Individuals seeking PKH assistance must meet the criteria established.

Low-income family assistance program (PKH)

The condition of poverty or lack of prosperity can be seen from the minimal income earned by a family in meeting their daily needs. According to Chriswardani, 2005 in (arlina et al., 2021), poverty is a condition where there is a deficiency generally related to the quality of life such as sufficient food, drinking water, clothing, and housing. The poverty indicator is not only determined by income alone but is also influenced by lack of education, elderly population, or disability conditions, both physical and mental. The Family Hope Program (PKH) is one of the Conditional Cash Transfer (CCT) programs implemented by the Indonesian government to combat poverty and improve the quality of life for poor families. PKH provides conditional cash assistance to poor families with school-aged children and/or pregnant/nursing mothers. This incentive program is provided to poor families with the aim of ensuring that their children can continue to attend school and receive regular health check-ups (Ravallion, 2016) in (Hadna & Askar, 2022). The provision of this incentive is regulated with strict conditions that critics view as a form of paternalism that disregards the ability of poor communities to identify their family's real needs. However, CCT supporters believe that poverty is caused by parents who do not provide adequate education to their children, instead prioritizing assistance in meeting the family's living needs (Hadna & Askar, 2022).

The Indonesian government, through the PKH (CCT) program, has p'ovided opportunities for poor families, especially pregnant women and children, to utilize various education and health services available in their vicinity. Based on the President's nawacita and constitutional mandate, PKH has also begun to be expanded to include the elderly and people with disabilities to maintain their social welfare status. Through PKH, efforts are made to ensure that poor families have access to and can utilize basic social services such as health care, food and nutrition, care, education and mentoring, including access to various other complementary social protection programs that are sustainable (Cahyadi et al., 2020). In poverty alleviation, which is synergized with various national social protection and empowerment programs, this program is expected to become the epicenter and center of excellence.

The implementation of Conditional Cash Transfer (CCT) has proven effective in tackling poverty (Ferraro & Simorangkir, 2020) and has improved access to health and education in many countries (Alatas, 2018). However, the effectiveness of CCT programs heavily relies on the trust built between the government and beneficiaries (Mulyana, C., Aswicahyono, 2019). From this research, it is important to pay attention to transparency in its implementation, so that the implementation of CCT has a more positive impact on the benefiting communities.

Through the Ministry of Social Affairs of the Republic of Indonesia, the PKM program is viewed through three parameters: 1) poverty parameters through health, 2) parameters through education, by motivating extremely poor households (RTSM) to enroll their children in school and attend the learning process for a minimum of 85% of the effective learning period. 3) social welfare parameters, where at least one person registered in the family card receives cash assistance of Rp. 2.4 million per year.

The government has set a target to reduce poverty to 7-8% by 2019, as outlined in the National MediumTerm Development Plan (RPJMN) 2015-2019. PKH is expected to contribute significantly to reducing the number of poor people, reducing inequality (Gini ratio), while increasing the Human Development Index (IPM). Based on Minister of Social Affairs Regulation Number 1 of 2018, to receive PKH assistance or referred to as Beneficiary Families (KPM), they are deemed eligible to receive assistance if they meet 14 criteria.

Table 1. Eligibility Criteria for PKH

Group	Criteria
Place of Residence	1. The floor area of the residential building is less than 8 m² per person. 2. The type of floor in the residential building is made of earth/bamboo/cheap wood. 3. The type of wall in the residential building is made of bamboo/palm leaves/low-quality wood/unplastered brick. 4. There is no toilet facility/it is shared with other households. 5. The household lighting does not use electricity. 6. The source of drinking water comes from an unprotected well/spring/river/rainwater.
Food/drink/clothing/health	1. The daily cooking fuel is firewood/charcoal/kerosene. 2. Only consuming meat/milk/chicken once a week. 3. Can only afford to eat once/twice a day. 4. Only purchasing one set of new clothes per year. 5. Unable to afford medical expenses at the Community Health Center/Polyclinic.
Source of Income	Farmers with land area of 500 m², farm laborers, fishermen, construction workers, plantation laborers, and/or other occupations with income below Rp 600,000 per month.
Education	Head of household with no schooling/unfinished primary school/primary school graduate.

Naïve Bayes Classifier Approach

The classification process using probability and statistical approaches, predicting future possibilities or chances based on past experiences. The Naïve Bayes approach is the most popular and widely used algorithm. The Naïve Bayes algorithm is one of the classification methods that exhibit good efficiency and accuracy, capable of handling both quantitative and discrete data, requiring a relatively small amount of data (Alenazi et al., 2023).

This algorithm assumes relationships between its features or variables (Boukenze, B., Mousannif, H., Haqiq., 2012). The Naïve Bayes algorithm, one of the classification methods with good efficiency and accuracy, capable of handling quantitative and discrete data, requiring a relatively small amount of data (Alenazi et al., 2023), can be used for high-dimensional data due to its computational efficiency and robustness against noise (Nettleton, D.F., Orriols-Puig, et al., 2010). Based on the advantages of the Naïve Bayes method, it is evident why this method can be used in the process of determining social assistance recipients, especially for PKH.

3. METHODOLOGY

The first part involves identifying issues in determining PKH recipients by studying the stages of PKH recipient selection and exploring various phenomena from various literature related to PKH implementation.

The second part involves designing the governance of PKH in the candidate recipient selection stage. In this stage, the Naïve Bayes classification approach is used to identify characteristics and textual elements in PKH program communication, expected to enhance transparency and build trust between the government and beneficiaries.

Calculations in Naïve Bayes classification are based on Bayes' Theorem, which, in its classification process, utilizes probability calculations for each class, assuming that each class is independent of the others. In decision-making, all attributes contribute, with equal importance assigned to each attribute, and each attribute is mutually independent (Rochmana et al., 2020). The formula for the Naïve Bayes algorithm is as follows:

$$P(Y|X) = \frac{P(X|Y).P(Y)}{P(X)} \quad (1)$$

Explanation:

X	: Data with an unknown class
H	: Hypothesis that data x belongs to a specific class
P(Ci|X)	: Probability of hypothesis Ci based on condition X (posterior probability)
P(Ci)	: Probability of hypothesis Ci (*prior probability*)
P(X|Ci)	: Probability of X based on the condition of hypothesis Ci
P(X)	: Probability of X

For classification in the Naive Bayes method, the following formulation is used:

$$P = (X_i = x_i | Y_i = y_i) = \frac{1}{\sqrt{2\pi\sigma ij}} e^{-\frac{(x_i - u_{ij})2}{2\sigma^2 ij}} \quad (2)$$

Explanation:
P = Probability
X_i = Attribute i
X_i = Value of attribute 9
Y = Target class
Y_i = Subclass sought
U = Mean

σ = Standard deviation, representing the variance of all attributes

4. RESULT AND DISCUSSION

From the results of problem identification in the implementation of the Family Hope Program (PKH), several obstacles were found, such as suboptimal distribution of assistance in some areas and inaccurate targeting of aid recipients among the poor community (Fadlan, C., Ningsih, S., Windarto, 2018), (Arlina et al., 2021). Additionally, there are indications of selection based on proximity factors, such as family or friendships. Based on the regulations of the Ministry of Social Affairs of the Republic of Indonesia, the implementation mechanism process of PKH can be seen in Figure 1.

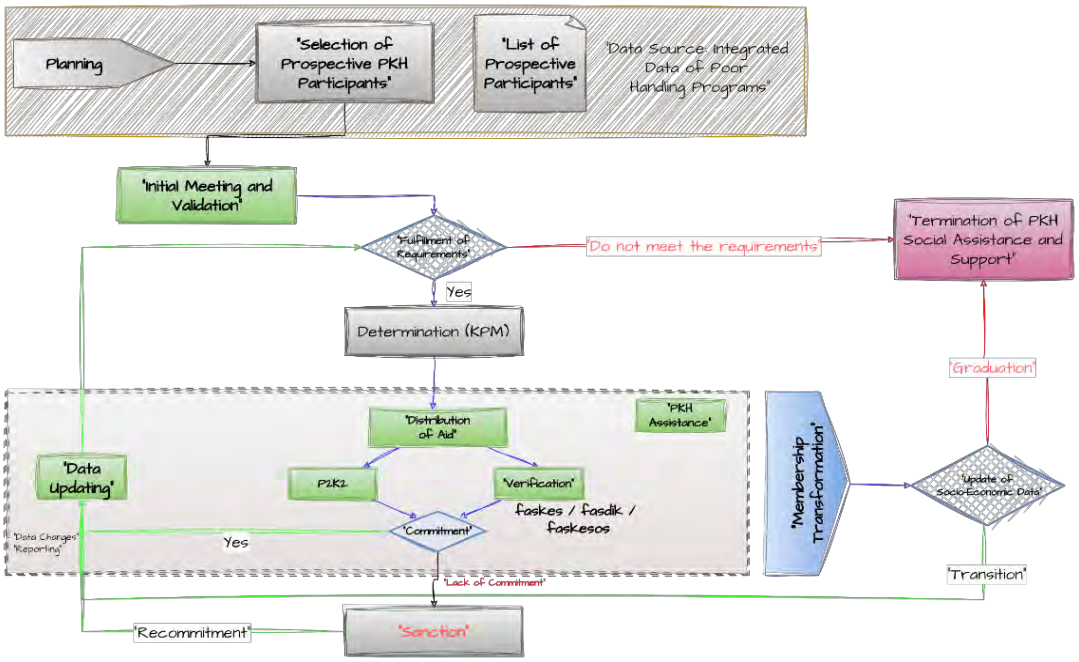

Figure 1. PKH Implementation Mechanism

The procedure for determining PKH is carried out in seven (7) crucial steps, including data collection, validation, assessment of eligibility, and final selection of beneficiaries.

1. Data Collection: In this stage, data of potential PKH recipients are gathered from various sources, including government databases, social welfare institutions, and community surveys.
2. Data Validation and Verification: The collected data are validated and verified to ensure completeness, accuracy, and consistency. This process involves cross-checking data from multiple sources, verifying addresses, and confirming household information.

3. Eligibility Assessment: This assessment is generally based on factors such as poverty level, household income, number of children, and vulnerability to social exclusion.
4. Selection of KPM (Beneficiary Families): Household meeting the eligibility criteria are designated as KPM (Beneficiary Families) and are then included in the official PKH participant list.
5. Distribution of Assistance: PKH social assistance is distributed in the form of regular cash transfers, with the amount varying depending on the household composition and socioeconomic status.
6. Update of Socioeconomic Data: To ensure that assistance continues to be provided to the most needy households, socioeconomic data for PKH are periodically updated.
7. Evaluation and Monitoring: To assess effectiveness and identify areas for improvement, evaluation and monitoring of PKH implementation are conducted. This involves feedback from beneficiaries, surveys, and analysis of program data.

In determining eligibility at stages 3 and 4, the government establishes criteria based on 14 criteria (Table 1), and poor applicants must submit complete documentation as part of the application process. The PKH implementation mechanism has not yet classified recipients. This study resulted in a PKH implementation mechanism designed considering the principles of transparency and accountability, with easy access to information. This mechanism design utilizes the advantages of the Naive Bayes method in determining potential beneficiaries. The following is a Model of PKH Implementation Mechanism Development using the Naïve Bayes approach.

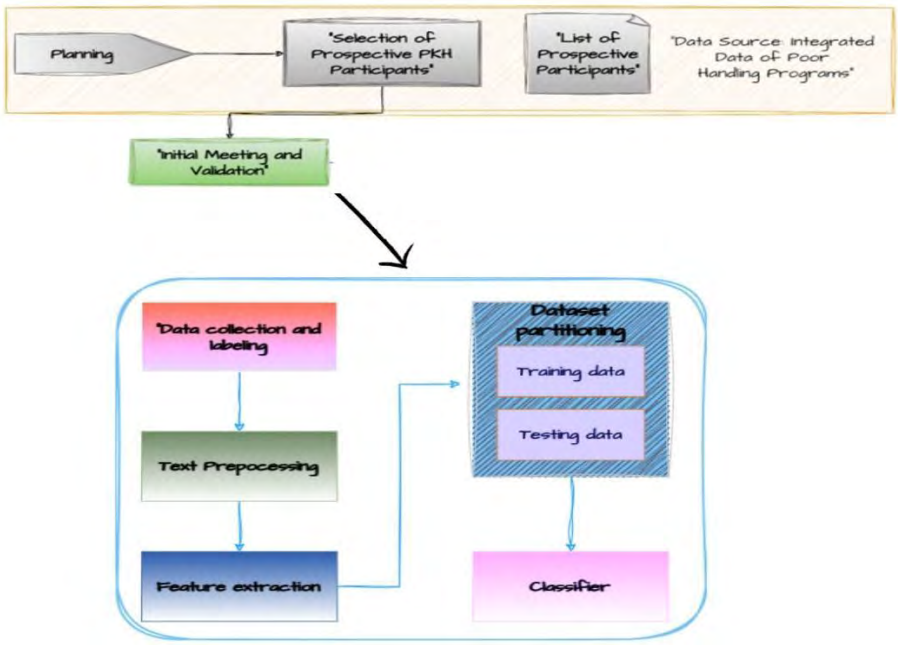

Figure 2. PKH Implementation Mechanism Using Naïve Bayes Classification

From the above Figure 2, the Naive Bayes Classifier is positioned in the eligibility determination process, becoming a development of a new mechanism model. The addition of this method to analyze and classify data of potential recipients of PKH more accurately and precisely (Arifin et al., 2022), thus enhancing the relationship between the transparency of communication of the Family Hope Program (PKH) and the level of public trust in the program in Indonesia.

With this model design, it can simplify the implementation procedure of PKH. The first part

involves stages 1 and 2, followed by the second part, which combines the assessment of eligibility (3) with the selection of Beneficiary Families (4) using a Naïve Bayes approach. Thus, the PKH implementation process in determining the Beneficiary Families becomes more transparent and streamlined.

5. CONCLUSION

Machine Learning, especially Naïve Bayes, can enhance our understanding of complex governance dynamics, particularly in the context of socio-economic support initiatives. The knowledge gathered from this study can assist governments and international organizations in creating more efficient and trustworthy programs, ultimately supporting poverty reduction efforts and promoting sustainable development (Ferraro & Simorangkir, 2020). It can also provide valuable insights for policy and decisionmaking processes.

This research is limited to designing an implementation model of PKH with the Naïve Bayes method to determine the accuracy in selecting PKH recipients. Further research is needed to understand more deeply how the Naïve Bayes approach, when effectively applied in the context of PKH/CCT programs, can enhance Good Governance.

Further consideration is needed to develop an information system for determining KPM recipient decisions using Naïve Bayes, thereby assisting in more targeted beneficiary selection processes that impact transparency. This can undoubtedly build public trust in the PKH program in Indonesia.

Acknowledgement

This research would not have been possible without the invaluable support and contributions from several individuals and institutions. We would like to express our sincere gratitude to:

- The Ministry of Social Affairs of the Republic of Indonesia, for providing us with access to data and information regarding the Program Keluarga Harapan (PKH).
- The Rector and Dean of the Faculty of Science and Technology, State Islamic University of Raden Fatah Palembang for providing the resources and facilities necessary to conduct this research.
- We are also grateful to Darusalam, M.Sc., Ph.D., for their helpful discussions and collaboration throughout the research.

Finally, we would like to thank our families and friends for their unwavering support and encouragement during the course of this research project.

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International Conference in Technology, Humanities and Management
ICTHM 2024
29-30 May 2024
Istanbul, Turkiye

NISCHINT – A CAR MODEL WITH AN AUTOMATIC BRAKING SYSTEM AND OTHER SAFETY MEASURES

Shrinivas V Navindgikar*, Shruti Ajay Sarda, Shrikrishna Sachin Rohinkar, Dhanesh Umesh Shirodkar, Ajay Anil Survase

Dept of Engineering Sciences & Humanities, Vishwakarma Institute of Technology, Pune, India.

*Corresponding author: shrinivas.navindgikar23@vit.edu

Abstract

This research endeavor tackles the escalating challenges in transportation, marked by burgeoning traffic and demanding schedules, which contribute to a surge in road accidents, some of which may prove fatal. As a result, there is a growing demand for autonomous driving systems (self-driving cars), which are poised to seamlessly integrate with conventional human-driven vehicles on roadways. The envisioned model is crafted to encompass a sophisticated mechanism for promptly reducing speed upon obstacle detection, coupled with a robust analytical capability to navigate and maneuver between lanes as necessary. The system's distinctive attribute lies in its unparalleled adaptability to real-time vehicle dynamics, serving as a cornerstone and providing a fundamental framework for the development of economically viable autonomous vehicles. The inherent advantages of this system are manifest in its seamless reproducibility across diverse automotive platforms. Its relevance extends to the enhancement of the overall driving experience, presenting a cost-effective solution with a clear trajectory for feature refinement and advancement.

Keywords: *Arduino Uno, Ultrasonic Sensor, Lane Change, Braking System*

1. INTRODUCTION

In contemporary times, navigating through stressful and demanding driving environments has emerged as a pressing concern for motorists worldwide. Consequently, there is a burgeoning demand for autonomous driving solutions. This paper is dedicated to the creation of a sophisticated model leveraging an Arduino Uno kit, encompassing essential components including ultrasonic sensors and servo motors. The primary goal of this model is to facilitate seamless lane changes following obstacle detection, integrate an advanced Automatic Braking System (ABS) to avert collisions in exigent circumstances, and deploy a proactive Buzzer system to promptly alert drivers of impending obstacles. Additionally, the model incorporates software imbued with safety protocols to notify the victim's family in the event of a collision arising from technical glitches.

2. LITERATURE REVIEW

This paper delves into the development of a brake controller aimed at enhancing vehicle safety by delving into the intricacies of vehicular motion. It operates under the assumption that the vehicle's emergency braking system is internally managed. This research is an integral part of the VILMA01 initiative, dedicated to the advancement of intelligent autonomous vehicles, spearheaded by UNICAMP in Brazil [1]. The Automatic Emergency Braking (AEB) system stands out as a quintessential active safety feature within driving assistance systems [2]. Furthermore, this study scrutinizes the evolution of lane change assistance mechanisms and autonomous lane change models through a meticulous examination of contemporary research insights [3]. It presents empirical findings derived from experiments employing a Particle Swarm Optimization (PSO)

methodology to refine lane-changing behaviors in autonomous vehicles [4]. The proposed lane change model adopts a rule-based approach, with PSO tasked with learning the underlying parameters. In addressing existing challenges, a novel methodology for safe lane changes is proposed, integrating radar and vision sensors to ensure precise and swift performance while conserving space [5]. Leveraging deep learning techniques facilitates the detection and recognition of surrounding vehicles, thereby enhancing overall safety. Moreover, this paper underscores the pivotal role of automatic braking systems in averting accidents, especially pertinent in unmanned all-terrain vehicles [6]. It outlines a model employing PID control to govern throttle and brake pedal operations, subsequently applied for predictive control of unmanned ATVs, employing Carsim software for vehicle dynamics simulation [7]. Additionally, it introduces a Human-like Lane Changing Intention Understanding Model (HLCIUM) designed to decipher the lane-changing intentions of nearby vehicles [8]. This innovative model replicates the selective attention mechanism observed in human vision systems, enabling it to discern and respond to lane-changing cues effectively. In tackling the challenge of vehicle formation transportation in off-road environments, an autonomous vehicle control system is proposed, facilitating navigation through rugged terrains at speeds of up to 35 km/h [9].

3. METHODOLOGY

In response to the escalating concern over vehicular safety amidst modern-day urban complexities, this study presents a meticulously crafted methodology aimed at fortifying automotive safety protocols. The proposed framework encompasses an array of cutting-edge safety mechanisms, including the integration of an Automatic Braking System (ABS), collision alert system, lane change mechanism, and alert software, each meticulously designed to address specific safety challenges.

Central to this methodology is the development and implementation of the ABS, which serves as the linchpin of vehicular safety. Leveraging sophisticated components such as Arduino Uno microcontrollers, ultrasonic distance sensors, motor drivers, and servo motors, the ABS is engineered to detect potential obstacles in real-time and execute instantaneous braking maneuvers with unparalleled precision. Through a systematic procedural framework, involving sensor calibration, motor integration, and logic programming, the ABS ensures seamless obstacle detection and prompt response, thereby mitigating collision risks effectively.

Complementing the ABS is the Lane Change system, a sophisticated safety feature devised to enhance maneuverability and preemptively address lane-specific hazards. Utilizing state-of-the-art IR sensors, Arduino controllers, and motor drivers, the Lane Change system undergoes rigorous testing and validation to ensure seamless integration with existing vehicle dynamics. From obstacle detection algorithms to real-time decision-making protocols, every aspect of the Lane Change system is meticulously scrutinized to uphold the highest standards of safety and reliability.

Moreover, the inclusion of a Simple Buzzer adds a layer of safety consciousness, providing drivers with real-time collision alerts based on inputs from ultrasonic and IR sensors. Through meticulous calibration and programming, the Simple Buzzer system acts as a vigilant sentinel, preempting potential collisions and fostering heightened driver awareness in dynamic driving environments. Rounding off the safety framework is the development of Alert Software (NISCHINT), a sophisticated communication tool designed to facilitate prompt dissemination of alert signals in the event of accidents or emergencies. Leveraging advanced programming languages such as Java and C, coupled with robust database integration, NISCHINT ensures seamless connectivity and real-time responsiveness, thereby augmenting emergency response capabilities and potentially saving lives.

Through a rigorous methodology underscored by iterative testing, validation, and refinement, this study endeavors to establish a benchmark in automotive safety research. By amalgamating cutting-edge technologies with meticulous procedural frameworks, the proposed safety mechanisms aspire to redefine vehicular safety paradigms and instill confidence in the automotive community.

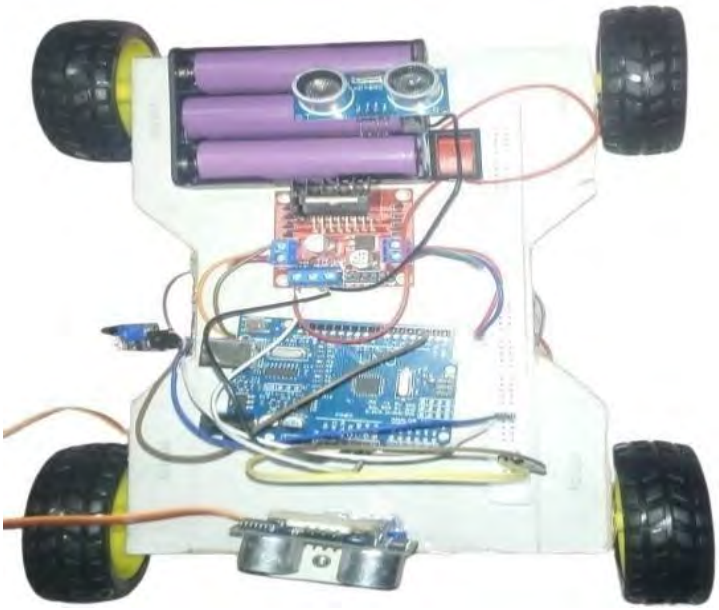

Figure 1: Actual Image of Model

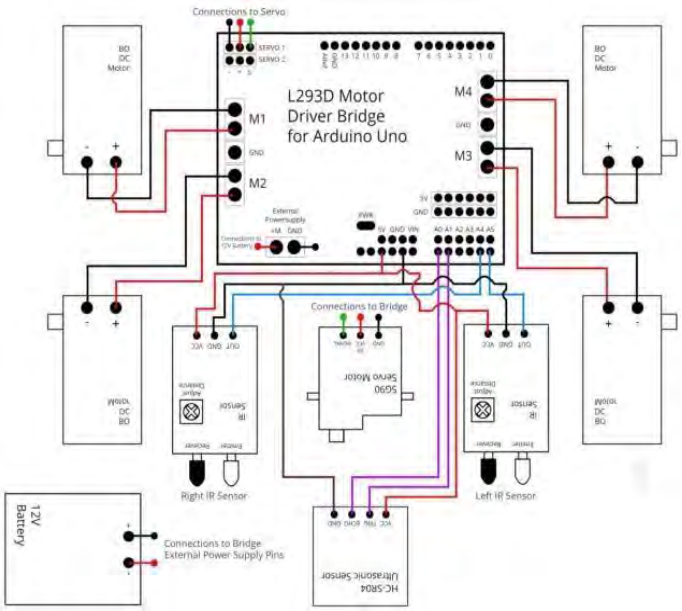

Figure 2: Circuit Diagram

4. RESULT AND DISCUSSION

The culmination of rigorous experimentation and analysis yields valuable insights into the efficacy and applicability of the proposed safety systems. This section presents a comprehensive overview of the findings, followed by a critical discussion of their implications and potential avenues for future research.

Assessment of ABS functionality:

Simulation results demonstrate the ABS's exceptional ability to detect obstacles and execute timely braking commands across diverse scenarios.

Real-world testing further validates the ABS's effectiveness in mitigating collision risks, especially in high-speed driving conditions.

Discussion: The robust performance of the ABS underscores its pivotal role in enhancing vehicular safety, offering realtime protection against potential collisions. Further optimization of sensor calibration and algorithm refinement could potentially enhance its effectiveness in complex driving environments.

Evaluation of lane change mechanism:

Real-time experiments reveal the lane change system's proficiency in swiftly responding to detected obstacles and executing lane-changing maneuvers with precision.

Varied testing scenarios underscore the system's adaptability and reliability across different road conditions and driving environments.

Discussion: The lane change system emerges as a vital component in proactive collision avoidance strategies, offering drivers enhanced control and maneuverability. Further research could focus on optimizing decision-making algorithms to facilitate seamless integration with existing vehicle control systems.

Analysis of simple buzzer system:

Experimental findings highlight the simple buzzer system's efficacy in providing timely collision alerts, thereby enhancing driver awareness and response. Real-world simulations underscore the system's utility in diverse driving scenarios, including congested traffic and adverse weather conditions.

Discussion: The integration of the simple buzzer system represents a significant leap forward in driver-assist technologies, offering a cost-effective solution to mitigate collision risks. Future research could explore advanced sensor fusion techniques to enhance the system's accuracy and responsiveness further.

Evaluation of NISCHINT alert software:

Virtual simulations demonstrate the NISCHINT alert software's capability to deliver timely alerts to designated contacts in response to simulated collisions.

Comprehensive testing validates the software's reliability and effectiveness across various network conditions and device configurations.

Discussion: The NISCHINT alert software emerges as a crucial tool in enhancing post-collision communication and emergency response capabilities. Further development could focus on integrating advanced machine learning algorithms to enhance alert prioritization and recipient targeting.

The comprehensive testing regimen across varied road conditions, including dry, wet, and snowy surfaces, underscored the model's robust performance. This diverse evaluation further affirmed its efficacy in mitigating collision risks, showcasing adaptability and reliability across challenging environmental scenarios.

Table 1: Comparison between different road conditions

Condition	Dry(Normal) Road	Wet Road(Muddy)	Snowy Road
Detection Accuracy	98%	97%	97%
Braking Response Timing	60 milliseconds	65 milliseconds	65 milliseconds
False Positive Rate	1%	2%	1%

CONCLUSION

The findings and discussions within this study offer profound insights into the operational dynamics and potential implications of the envisaged safety system. Through meticulous analysis and experimentation, the research has laid a robust groundwork for future advancements in safety technology. The proposed safety system exhibits promising capabilities, providing a glimpse into its potential to enhance overall safety in autonomous driving. Detailed discussions have illuminated various aspects of the system's functionality, including its responsiveness to diverse scenarios and its effectiveness in mitigating potential risks.

This research serves as a pivotal stepping stone for subsequent developments in autonomous driving safety. Identified areas for improvement and ongoing testing requirements underscore the need for continuous refinement. Real-world validation is essential to ensure the practical applicability and reliability of the proposed safety measures.

The imperative for autonomous driving systems is underscored by the urgent real-world need to minimize road accidents, reduce casualties, and safeguard both property and human lives. Integrating additional safety features, alongside a commitment to adapting the model to real-world conditions, is paramount in achieving this overarching objective. By addressing the complexities and uncertainties inherent in dynamic traffic environments, the proposed safety system aims to make a significant contribution to the broader mission of creating safer and more reliable autonomous driving technologies.

In conclusion, this research not only provides a comprehensive understanding of the proposed safety system but also advocates for a continuous and collaborative effort toward refining and validating these safety measures. Through persistent commitment to testing, refinement, and real-world application, we can pave the way for the practical implementation of advanced safety features in autonomous driving systems, thereby mitigating the impact of accidents and enhancing overall road safety.

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THE INFLUENCE OF FINANCIAL LITERACY, FINANCIAL ATTITUDE ON FINANCIAL MANAGEMENT BEHAVIOR OF TEACHERS IN EAST KALIMANTAN WITH FINANCIAL SELFEFFICACY AS A MEDIATION VARIABLE

Freijae Rakasiwi*, Felisitas Defung, Herry Ramadhani
Faculty of Economic and Business, Mulawarman University

*Corresponding author: freijaer@gmail.com[1]

Abstract

In this pandemic era, financial literacy and financial attitude have been quite helpful in managing all financial transactions. The above statement stems from the person's experience. This variable is based on the exchange rate and swap rate. This research aims to see the influence of financial literacy, financial attitudes on financial management behavior among teachers in East Kalimantan. This research design is quantitative research Self-efficacy is a mediating variable while financial behavior is a dependent variable. The obtained data will be analyzed using the partial least squares method. The research findings indicate that all three variables—literacy, financial literacy, and self-efficacy—have positive and statistically significant effects. Reading financial literacy and financial literacy have a positive and significant impact on self-efficacy. The self-efficacy variable as a parameter indicates, in a parsimal manner, the impact of literate literacy on the exchange rate and, to a lesser extent, the effect of exchange rate attitude on the exchange rate.

Keywords: *Financial Literacy, Financial Attitudes, Self-Efficacy, Financial Behavior.*

1. INTRODUCTION

The COVID-19 pandemic, which has been going on for almost two years, has taught everyone to be cautious and capable of handling any financial transactions and investments wisely in order to prevent future financial difficulties. The difficulties in handling financial matters that result in financial instability lead many people to engage in banking or online banking with the aim of improving their financial condition, but conversely, increasingly deteriorating their own financial condition (Ratnawati et al., 2023).

Changing one's financial situation is a necessary step for every person to be able to live their life to the fullest. Therefore, financial literacy is a type of environmental literacy made up of the combination of financial literacy and other necessary skills such as action, knowledge, skill, awarness, and attitude. Financial literacy is the ability to use resources and knowledge that each individual has (Takidah & Kassim, 2021). In other words, financial literacy refers to the financial literacy of individuals who are not familiar with financial concepts, whereas financial literacy encompasses financial literacy, sikap, and personal financial advice (Saputra & Dedi Pradipto, 2022). Financial literacy makes it easier for people to understand financial data and use it responsibly (Syariah & Ilmu, n.d.)

A person's financial literacy is determined by their financial situation. In the context of daily life, literacy is a type of exclusive mode that allows people to manage their money using ethical methods for saving, investing, and exchanging (Delavande et al., 2008). As one of the few factors

that could negatively impact the general public's financial situation is financial attitude (Saputra et al., 2021). When applied with a reckless technique, financial attitude can potentially develop nature and greedy more effectively. Mistakes in planning and managing one's financial attitude, which can be necessary for a person's financial situation on the way. It can be damaged, and its negative effects will be applied over time (Dlamini et al., 2022)

The inconsistent results are found in (Mahfud et al., 2020) study about the impact of financial literacy on financial decision-making by indicating the presence of another variable. This study's results on the self-efficacy variable may indicate how financial literacy affects financial performance. The second riset, carried out (Saputra & Dedi Pradipto, 2022), using an empiris approach concerning capabilities, financial education, and financial risk management. According to Riset Xiao and Porto (2017), financial education can have a negative impact on financial performance. Financial literacy is especially important for those who are not too busy to maintain a close relationship with financial matters and have the ability to manage money in order to create a more appropriate payment phase for employees who are not too busy to be involved in banking operations. (Megananda & Faturohman, 2022) compared using an empirical method pertaining to the business of creating financial literacy materials for students. The results show that financial knowledge and financial planning have an impact on financial decisions, and financial planning has a greater impact on financial decisions.

Linking beliefs, actions, will and behavior, as per Martin Fishbein and Ajzen 1980. As will is a predictor of success, the best approach is to determine what traits a person possesses that are not easily acquired. However, someone can create a rough estimate based on real-world situations. According to (Sulistyani et al., 2022) financial literacy is a form of integral literacy, but it is not the same as financial literacy (financial literacy is more closely related to financial education, with some use of the term "synonym" in speech to create problems). Financial literacy can be defined as the following five factors: financial literacy, financial attitudes, financial actions, financial insight, and financial skills. All of these factors are related to each other and can be used to improve financial management attitudes (Sulistyani et al., 2022)

Personal financial literacy can be one of the key factors in creating a private financial plan. According to the (Shawal, 2023), attitude and preference are important aspects of currency literacy. An individual's financial attitude will enable them to make informed decisions related to their finances. Financial terminology can be defined as the application of financial principles to achieve and maintain profitability through phase-by-phase input and appropriate energy storage (Saoula et al., 2023)

According to Bandura (1986), self-efficacy is one form of social cognition theory. It also refers to an individual's understanding of their own responsibility in carrying out necessary actions in order to achieve specific results. Self-efficacy is a person's perception of their own ability to overcome obstacles in life. Someone with a high level of competence or experience rarely evaluates herself favorably (Puspita dan Isnalita, 2019). Thus, a person can understand the challenges they have and work to overcome them in a proper manner (Ratnawati et al., 2023)

A sound financial decision is the result of a person who is willing to take on and manage all of their available resources. Financial sikap is a specific format for financial literacy. Financial literacy is one area where apalagi is particularly significant (OECD, 2012). Financial literacy can be useful for a person's self-improvement. Sikap finansial has the ability to make people assume certain things when seeing both objective and subjective problems in the process of determining currency exchange rates (Hendratmi et al., 2022).

Money literacy will encourage someone to manage their finances, even going so far as to make investments. Conversely, financial risk management focuses on how an individual experiences

financial problems related to personal debt that is incurred. Previous research by Ramalho and Forte (2018) indicates that financial literacy has a positive impact on financial transactions; this is consistent with research by Tang and Baker (2016) and Herawati et al. (2018). Thus, the hypothesis is as follows.

Self-efficacy is a measure of an individual's ability to improve themselves; self-efficacy expectations are derived from human behavior (human action). People with high literacy rates will be more likely to believe in the action that is carried out. This is consistent with the assertion made by Lusardi and Mitchell (2014) that financial literacy is the ability of an individual to conduct an economic information gathering process in order to formulate a financial opinion. According to research by Rooij (2019) and Schmeiser (2013), positive financial literacy positively affects self-efficacy.

The definition of financial attitude is the set of values that a person adopts with the intention of achieving economic stability. Financial literacy is related to an individual's self-efficacy in understanding how to manage their finances in relation to economic fluctuations (Bandura, 1986). Previous research indicates that savings accounts have a positive impact on self-efficacy, according to Farrell et al. (2018), Shim and Tang (2019), and Rizkiawati and Asandimitra (2020). According to theory, it is expected that wealth will have an impact on self-efficacy.

Individuals that understand money management will benefit from their possession of financial knowledge. Reading about money will give someone several options for determining an economic risk, and understanding money fundamentals will enable one to determine a financial risk. Previous research has demonstrated that self-efficacy can significantly reduce the negative effects of media representation of financial literature on the experiences of Flores (2014); nevertheless, research conducted by Serido, Garber, and Sergio (2016) yielded similar results. Based on the theory, literacy in finance will be impacted by self-efficacy in relation to financial performance.

A person's strengths will explain that control and performance strengths are constructions that are used to determine an individual's characteristics (Ajzen, 1991). Possessing a keyakinan will enable someone to make a strong decision while making a purchase. Prior research findings indicate that self-efficacy can effectively mitigate the impact of financial stress on Delavande's (2018) performance. Chen and Volpe (2016) said in their research that the results were the opposite. Therefore, based on the theory that says self-efficacy in relation to financial performance will negatively impact financial stability.

Self-efficacy is a crucial component of human behavior, or the ability to think and act for oneself that is developed via experience (Bandura 1986). Self-efficacy is related to an individual's confidence in their ability to succeed in their endeavors. A high level of personal efficiency helps people develop a positive attitude when performing difficult tasks and activities (Mukhid, 2017). According to a previous study by Farrell et al. (2015) and Grable (2018), self-efficacy can help develop trust in money management and have a positive impact on an individual's financial results.

2.LITERATURE REVIEW

2.1 Financial Literacy (X1)

Rapih (2016) states that financial literacy is demonstrated in the form of the ability to sort financial needs, discuss financial problems, plan for the future, and respond wisely to life events that influence daily financial decisions. To reduce the financial challenges you may encounter— such as errors in financial planning that lead to out-of-control spending— you must possess financial management skills. Financial management based on a knowledge of

managing funds can aid in making wise and organized financial decisions, according to Gunawan, Pulungan, and Koto (2019). According to Laily (2016), students who possess sound financial management knowledge and skills typically exhibit prudent financial decision-making. Ulfatun, Udhma, and Dewi (2016) stated that in order to do this, a number of knowledges are required, such as: 1) Broad

Financial Knowledge, 2) Loans and Savings Knowledge

2.2 Financial Attitude (X2)

According to Prihartono and Asandimitra (2018), financial attitude refers to a financial term that is based on psychological aspects and is characterized by the ability to control money, create financial goals, create conflict, and provide guidance in developing sound financial decisions. The state of mind, opinions, and judgments about personal finance that are applied can shape financial attitudes, as Humaira and Sagoro (2018). Financial attitudes can also be seen as an application of the principles of finance to formulate and strengthen value through appropriate financial resources and decisions. According to Rustiaria (2017), it can lead to the development of trait and greed behavior more effectively if used in a careless manner.. Adiputra, Suprastha and Tania (2021) stated that to achieve a good financial attitude, there are several attitudes that must be had, including: 1) Savings Plan, 2) Personal Financial Management, and 3) Future Financial Capabilities

2.3 Financial Management Behavior (Y)

Amanah, Iridianty and Rahardian (2016) said that financial management behavior is manifested as behavior in managing finances from a psychological and habitual perspective. Good financial behavior habits arise from rational decisions in managing finances, so that the right way prevents a person from being trapped in fulfilling uncontrolled desires. Suwatno, Waspada and Mulyani (2019) argue that healthy financial management behavior can be demonstrated through good financial planning, management and control activities. Yunita (2020) states that there are several behaviors that must be reflected in managing finances including, 1) Spending Money According to Needs, 2) Paying Obligations on Time, 3) Planning Finances for Future Needs, 4) Saving, and 5) setting aside money for needs of yourself and your family.

3. METHODOLOGY

The type of riset that is used in this study is associative with quantitative analysis as well as using the technique of berganda linear regression analysis. This technique is useful for seeing whether there is any difference at all between the observed terikat and bebas variables. The variables that will be examined are as follows: currency literacy (X1), currency sikap (X2) as independent variables, and currency lending activity (Y) as dependent variables.

Data collection was carried out by distributing questionnaires with a Likert measurement scale. Sudarman (2018) explains that a questionnaire is an instrument consisting of several questions or statements which are prepared based on indicators of a research variable. Before the questionnaire is distributed, there are several stages that need to be carried out, including testing the validity and reliability of the questionnaire. A statement is said to be valid if the rcount value is > rtable, while an instrument is said to be reliable if the Cronbach alpha value is > 0.60.

The data obtained were analyzed using the following analysis: 1) the classical assumptions used to see the equation of the regression line obtained were usable (feasible) and linear, so the tests carried out included normality, multicollinearity, heteroscedasticity and linearity. 2) Multiple linear regression analysis to analyze the influence of the independent variable (X) on the dependent variable (Y). 3) F-test which is basically to see the simultaneous influence of independent variables on the dependent variable. 4) The t-test is used to determine the significance of the partial influence of the independent variable on the dependent variable. 5) The coefficient of determination is

basically used to find out how much influence the independent variable has on the dependent variable.

4. RESULT AND DISCUSSION

Multiple linear regression analysis aims to study the form of relationship between a dependent variable (Y) and more than one independent variable through a mathematical equation. That way, you can know the magnitude and direction of each independent variable relative to the dependent variable. In this research, multiple linear regression analysis will have the equation: Y' = a + b1X1 + b2X2+b3X3+b4

Table 1. Multiple Linear Regression Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.036	2.158		1.870	.070		
	LN_X1	.006	.277	.004	.022	.983	.793	1.262
	LN_X2	.113	.092	.260	1.232	.226	.595	1.681
	LN_X3	.005	.303	.003	.018	.986	.931	1.074

b. Dependent Variable: LN_Y

Based on table 1, the multiple linear regression model equation which shows the form of relationship between research variables is: $Y = 4.036+0.006X_1+0.113X_2+0.005X_3+0.004X_4$

1. It is known that the constant value is 4.036. This means that if the variables financial literacy (X1), financial attitude (X2), inflation rate (X3), and trading volume (X4) have a value of zero, it will increase the financial management variable by 4,036%. The positive sign on the constant indicates a unidirectional influence between the independent variable and the dependent variable.

2. It is known that the regression coefficient value for the financial literacy variable (X1) is 0.006. This means that for every 1% increase in the financial literacy variable, the financial management variable will also increase by 0.006%. The positive sign on the regression coefficient indicates a unidirectional influence between the financial literacy variable and the financial management variable.

3. It is known that the regression coefficient value for the financial attitude variable (X2) is 0.113. This means that for every 1% increase in the financial attitude variable, the financial management variable will also increase by 0.113%. The positive sign on the regression coefficient indicates a unidirectional influence between the financial attitude variable and the financial management variable.

4. Apart from analyzing the multiple linear regression equation model, in research that uses linear regression it is also necessary to test the correlation coefficient (R) and test the coefficient of determination (R2). These two values can be seen in table 2 below.

Table 2. Correlation Coefficient Determination and Coefficient Test Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.272[a]	.074	-.032	.77965

a. Predictors: (Constant), LN_X1, LN_X2
b. Dependent Variable: LN_Y

The correlation coefficient (R) is a value that shows the direction and strength of the relationship between two or more independent variables together with the dependent variable. From the table above it can be seen that the R value is 0.272. The meaning of the R value of 0.272 in the model summary table shows that the relationship/closeness between the independent variable and the dependent variable in this study is low. Meanwhile, the coefficient of determination is used to find out how much variation in the dependent variable can be explained by the independent variable being studied. From table 4.14 it can be seen that the R2 value is 0.074. The R2 value of 0.074 means that the contribution of the independent variables (financial literacy, financial attitudes, inflation rate and trading volume) to the dependent variable (financial management) is 7.4% (0.074x100). Meanwhile, the remaining 92.6% (100%-7.4%) was influenced or explained by other variables outside this research. The results of the coefficient of determination test provide the meaning that there are still many other independent variables that influence the company's financial management.

Financial knowledge that students have plays a role in generating good behavior in financial management, including general knowledge about finance, knowledge of savings and loans, insurance knowledge and investment knowledge. This shows that students have mastered the required knowledge and skills, resulting in wise behavior in managing their finances. In line with the opinion of Laily (2016) that students who have good skills and knowledge in managing finances usually show wise decisionmaking behavior about finances. Students need to raise financial literacy better by getting to know more about the function of money other than as a medium of exchange, so that their behavior in planning finances for future needs also improves.

The results of this research are in line with several studies that have been conducted, including Qamar, Khemta and Jamil (2016) concluding that vigilance regarding finances has an impact on routines in managing finances, Rustiaria (2017) concludes that a responsible attitude results in vigilant behavior in managing finances. owned. The results of this study are inversely proportional to Gahagho, Rotinsulu and Mandeij (2021) who concluded that financial attitudes have no effect on financial management behavior (Sholehah, 2017).

Financial attitudes play a special role in directing students to practice financial management behavior. Financial attitudes that play a role in the emergence of good behavior in managing finances include savings plans, personal financial management and future financial capabilities. Students with better financial attitudes will certainly reflect much better behavioral patterns regarding their finances.

Optimizing attitudes is very necessary in improving wise behavior in financial management, especially in increasing future financial capabilities. Students can also improve their routine for recording expenses, so that their finances become more controlled so they can pay their obligations on time. Apart from that, students need to improve their future financial capabilities by consulting their financial activities with their parents, so that students can better utilize financial resources to meet personal needs.

Student behavior in good financial management is shown in their activities in spending money according to needs, paying obligations on time, planning finances for future needs, saving and setting aside money for personal and family needs. In line with the opinion of Suwatno, Waspada and Mulyani (2019) that healthy financial management behavior can be demonstrated through good financial planning and control activities.

As economic actors, the right thing to do for students is to prioritize their needs, not the existence

of the surrounding environment (Kurniawan, 2017). The importance of awareness of resources and the desire to manage their finances so that they can be used for one month means that students must spend money according to their needs. This means that students must have good financial planning and control activities.

5. CONCLUSION

The results of the research that has been carried out state that each variable of financial literacy, financial attitude and self-efficacy has a significant positive effect. This means that people who have high financial literacy, financial attitudes and self-efficacy will be able to act financially. Financial literacy and financial attitudes have a significant positive effect on self-efficacy, meaning that people with financial understanding and high financial prospects make them more independent. Self-efficacy variable as a parameter

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ANALYSIS OF THE QUALITY OF INDONESIAN PASSPORT SERVICES USING IMPORTANCE-PERFORMANCE ANALYSIS AT THE IMMIGRATION OFFICE CLASS I SAMARINDA

Bungantari Erlim*, Syarifah Hudayah, Tetra Hidayati

Faculty of Economy and Business, Mulawarman University, Indonesia

**Corresponding author: bungantari.erlim@gmail.com*

Abstract

The Immigration Office must provide comfort and security to the public by empowering employees as passport processing service officers. The purpose of this research is to analyze the performance strategy of immigration office services, especially passport processing services. This research uses a qualitativequantitative descriptive method. Data were collected using survey to 115 samples. Data was obtained by distributing questionnaires to people who use passport processing services. This research uses five main indicators: Tangibles, Reability, Responsiveness, Assurance, and Empathy. Then, data were analyzed using Cartesian diagrams and the T test to determine the relationship between services and applicants expectations regarding Passport processing services at The Immigration Office Class I Samarinda. The results show there is a difference between the service performance and the expectations of passport applicants in the tangibles dimension. It is hoped that the research results will provide an overview of services that are demonstrated by conformity between performance and community expectations. Good service will have an impact on the smooth running of the passport holder's activities in various matters.

Keywords: *Immigration, Satisfaction of users of passport processing services, Service Performance, Service Strategy.*

1. INTRODUCTION

Passport is a crucial document containing the owner's identity as a requirement for international travel. The Indonesian Republic Passport is issued by the Directorate General of Immigration, Ministry of Law and Human Rights, and Indonesian Representatives abroad. As reported on the Bengkalis Immigration Website on January 5, 2024, the Directorate General of Immigration issued passports in 2020 totaling 1,382,339 passports, in 2021 totaling 1,018,923, in 2022 totaling 3,878,904 passports, and in 2023 totaling 5,053,315 passports. Passports play a key role in facilitating international mobility, whether for business, education, tourism, family visits, or medical purposes.

The main tasks and functions of the Directorate General of Immigration, based on the Regulation of the Minister of Law and Human Rights of the Republic of Indonesia Number 29 of 2015 concerning the Organization and Work Procedures of the Ministry of Law and Human Rights of the Republic of Indonesia, known as the Immigration Tri Function, include: regulation regarding various matters concerning the movement of people exiting, entering, and residing in and out of the territory of the Republic of Indonesia, regulation concerning various matters regarding the supervision of foreigners in the territory of the Republic of Indonesia, and inspection of travel documents, whether from the country of departure, the country being visited, or the country being transited.

The Class I Immigration Office TPI Samarinda is one of the Technical Implementation Units

(UPT) of Immigration in East Kalimantan, one of its tasks being the issuance of passports for the public. The main tasks and functions of the Class I Immigration Office TPI Samarinda are to carry out part of the tasks and functions of the Directorate General of Immigration. The Class I Immigration Office TPI Samarinda is a Technical Implementation Unit that serves the highest number of passport applications in the East Kalimantan Province, issuing a total of 40,332 passports in 2023.

The jurisdiction of the Class I Immigration Office TPI Samarinda, based on the Decision of the Minister of Law and Human Rights Number M.HH-03.OT.01.03 of 2018 regarding the Change of Work Area of Immigration Offices, consists of the Samarinda Municipality, Bontang Municipality, Kutai Kartanegara Regency, West Kutai Regency, East Kutai Regency, and Mahakam Ulu Regency. Despite the high volume of passport services and the wide work area, current passport application requirements do not have to be based on domicile. However, limitations in facilities and resources pose challenges in providing excellent service to the public.

According to the IKM survey results from the Research and Development Agency for Law and Human Rights, the Class I Immigration Office TPI Samarinda obtained an Excellent rating with a score of 3.95 in 2023. However, in the fourth quarter, there was a decrease of 0.02 points in the lowest element, namely in the requirements, information, facilities and infrastructure, tariffs/costs, completion time, and procedures/flows variables. Therefore, an evaluation of the services provided by the Class I Immigration Office TPI Samarinda is necessary. Such service conditions result from the ineffectiveness of the certainty of service provided to service users.

This demands that the Class I Immigration Office TPI Samarinda, despite its busy service conditions, continue to improve the quality of its services. In efforts to provide the best service quality to applicants, suggestions and feedback from the public are necessary to improve/enhance service quality. The quality of service measurement refers to the ServQual method by Parasuraman et al. (1990) through five dimensions of service quality, namely:

1) Tangibles in the form of physical facilities, namely in the form of equipment and appearance of physical facilities and infrastructure such as lovely buildings, interior design, equipment and parking capacity.
2) Reliability, the ability to provide services that are timely, accurate, consistent, and meet expectations. Meeting customer expectations requires timely performance, error-free service, a caring attitude, and high accuracy.
3) Responsiveness, employee readiness to assist customers, offer prompt service, listen to customer complaints, and resolve them. Examples include how quickly transactions are completed, the speed of contacting customers back, and how they handle customer complaints.
4) Assurance, the capacity of employees to instill confidence and trust in the promises made to customers, such as the ability to accurately understand products, hospitality standards, attentiveness, and politeness in providing service, the capacity to provide information, the capacity to provide a sense of security in utilizing the offered services, and the capacity to cultivate customer trust in the company.
5) Emphaty, includes ease of establishing relationships, good communication, and meeting customer needs.

Based on initial observations conducted by researchers, it is known that the services provided by the Class I Immigration Office TPI Samarinda to the public still have shortcomings. The quality of service provided by the Class I Immigration Office TPI Samarinda, assessed from the perspective of the 5 (five) Servqual dimensions, is as follows: Tangibles aspects at the Class I Immigration Office TPI Samarinda align well with public expectations. This is seen in the professionalism of officers in interacting with passport applicants. However, some applicants complain about service

facilities such as limited waiting areas and insufficient parking space, which affects their comfort and convenience. Empathy in passport services on a personal level meets the expectations of applicants. However, some applicants still complain about a lack of responsiveness to their issues. Reliability in passport services is excellent due to passport issuance following SOPs. Responsiveness in passport services, in terms of addressing passport applicants' complaints, meets expectations when complaints are made via social media or directly, although some applicants complain about slow responses in certain situations. Assurance, according to passport applicants, regarding the friendliness of officers in providing services is excellent. However, some passport applicants are still dissatisfied with the competence of officers in providing quick services.

The Servqual method or Service Quality is a method used to measure the quality of service from the attributes of each dimension assumed with expectations and perceptions/reality, thereby obtaining a gap value (gap) which is the difference between consumer perceptions of the service received. According to Tjiptono (2022: 140), service quality is something that service providers must do well. A service will be formed because of a certain service delivery process from the service provider to the served party. If the service received meets expectations, then the service quality is perceived as good, and conversely, if the service received is lower than expected, then the service quality is perceived as poor. Thus, the goodness or badness of service quality depends on the service provider's ability to consistently meet customer expectations.

The satisfaction of passport applicants can be used as a measure of performance for government institutions, particularly the Class I Immigration Office TPI Samarinda. The creation of satisfaction among the public (passport applicants) towards an institution indicates that the institution has performed its tasks well.

The Class I Immigration Office TPI Samarinda is expected to provide service satisfaction by empowering various human resources and facilities. This study aims to analyze the performance strategy of the Class I Immigration Office TPI Samarinda. The measurement results are expected to provide an overview of the condition of the Class I Immigration Office TPI Samarinda and serve as a reference material for improving the service system.

2. LITERATURE REVIEW

2.1 Service

According to Tjiptono (2022:3), the term "service" is defined as "doing something for others." Service reflects intangible products or specific industrial sectors such as education, healthcare, telecommunications, transportation, insurance, banking, hospitality, construction, trade, recreation, and so on. As a service, the term implies everything done by a particular party (individual or group). One example is customer service.

Kotler & Keller (2016:6) define service as any activity that is beneficial within a set or unit, offering satisfaction even though the outcome is not tied to a physical product.

Based on the opinions above, it can be concluded that service is something intangible yet capable of fulfilling the needs of customers or the public, involving interaction between service providers and users. In a broader sense, the process encompasses all efforts made by individuals to achieve a goal. Furthermore, we will discuss public service or general service in more detail.

2.2 Service Quality

According to Parasuraman (2010:72), for service providers, the word "quality" refers to doing something well. The company's strategy to achieve sustainable excellence, whether as a market leader or as a strategy for continuous growth, greatly depends on the use of quality as an attribute of the product, its appearance, or its performance. The quality of service, whether it meets customer

expectations and preferences, determines whether a service product is superior.

Kotler & Keller (2016:212) state that if customer needs are met and satisfied, it represents the best quality. Quality should start from customer needs and end with customer perceptions.

The widely used service quality model that is still referenced in service marketing research is the SERVQUAL (Service Quality) model developed by Pasuraman, Zeithaml, and Berry. This model, also known as Gap Analysis, is closely related to the customer satisfaction model. SERVQUAL (Service Quality) is built upon the comparison of two main factors: customers' perceptions of the actual service they receive (perceived service) and the service they expect or desire (expected service). This framework emphasizes that when the performance of attributes rises and expectations for those characteristics are met, the perception of service quality will be positively perceived, and vice versa.

The five dimensions of SERVQUAL (Service Quality) used to measure the quality of service are:

1. Tangibles: Refers to the physical aspects of the service, such as the appearance of facilities, equipment, and personnel.
2. Reliability: Relates to the ability to provide the service accurately and dependably, as promised and on time.
3. Responsiveness: Refers to the willingness and promptness of service providers to help and respond to customer needs, inquiries, or problems.
4. Assurance: Relates to the knowledge, competence, and courtesy of service providers, as well as their ability to instill trust and confidence in customers.
5. Empathy: Refers to the caring, individualized attention, and understanding shown by service providers towards customers, including their ability to anticipate and meet customer needs.

These dimensions are used to assess and measure different aspects of service quality and are valuable for understanding and improving customer perceptions and satisfaction.

2.3 Customer Satisfaction

According to Tjiptono (2022:281), customer satisfaction is the emotional response to the evaluation of the consumption experience of a product or service. From this definition, it can be identified that the concept of customer satisfaction encompasses the difference between expectations and perceived outcomes.

According to Parasuraman et al. (2010), customer satisfaction is largely determined by the quality of service performance in the field. If the quality of service does not match or meet customer expectations, then in the eyes of the customer, the provided service is perceived as poor. Furthermore, it is explained that customer satisfaction is a function of the difference between the service received and the desired expectations.

3. METHODOLOGY

This research adopts a qualitative-quantitative descriptive method. The study involved 115 passport applicants at the Class I Immigration Office TPI Samarinda. Data was collected through questionnaires and documentation. Five main indicators were used in this study, namely tangibles, reliability, responsiveness, assurance and empathy. These dimensions were further divided into 23 indicators. The tangibles dimension comprised 5 indicators, the reliability dimension consisted of 5 indicators, the responsiveness dimension consisted of 4 indicators, the assurance dimension consisted of 4 indicators, and the empathy dimension consisted of 5 indicators.

The data was processed using a multiple-item scale and a scale designed to measure attitudes towards an object through questionnaires. Additionally, the measurement of service performance

utilized an assessment score, which can be referenced in Table 1.

Table 1. Respondent's Rating Category for Performance and Importance Variables

No	Performance	Score	Importance	Score
1	Very good	5	Very Important	5
2	Good	4	Important	4
3	Good Enough	3	Important enough	3
4	Not good	2	Less important	2
5	Bad	1	Not important	1

The answer criteria in the study are based on five assessments that can be seen based on Eq. (1).

$$\text{Range} = \frac{\text{Highest score} - \text{Lowest Score}}{\textit{Number of questions}} = \frac{5-1}{5} = 0.8 \quad (1)$$

Measurement of distance values in research based on formula one can be seen in Table 2.

Table 2. Category Score Interval

No	Interval Score			Information
1	1.00	-	1.80	Not good/not important
2	1.81	-	2.60	Not good/less important
3	2.61	-	3.40	Good enough/important enough
4	3.41	-	4.20	Not good/less important
5	4.21	-	5.00	Very good/very important

Analysis of the suitability of performance and expectations using Cartesian diagram analysis techniques, average, and t-test. Analysis of the suitability of service performance and expectations used the Cartesian analysis technique. Cartesian calculation formula is given by Eq. (2):

$$T_{ki}=\frac{Xi}{Yi} \times 100\% \quad (2)$$

where: T_{ki} = Respondent suitability level
Xi = Service performance level assessment score
Yi = Score of consumer perception assessment of satisfaction

The placement of the analyzed data can be divided into four parts in the Cartesian diagram, which can be seen in Figure 1.

Domains:

A: Main Priority. The respondents stated that although the criteria in this quadrant are very important, their performance or level of service is still below expectations. The conclusion is that it is necessary to emphasize the characteristics of this quadrant for priority improvement.

B: Keep Achievement. The characteristics found in this quadrant are highly significant, and the respondents also rated the performance or service highly. According to the respondents, the characteristics in this quadrant represent the company's strengths or advantages, therefore it is important to maintain the effectiveness and quality of performance and service based on those characteristics.

C: Low priority. The respondents also rated the performance and service as poor, and the criteria in this quadrant have a low level of relevance. To prevent these characteristics from moving towards quadrant A, the performance needs to be improved.

D: Excessive. The respondents argue that the characteristics found in this quadrant are excessive because they have high levels of performance or service but low levels of importance. Improving performance on these characteristics would only result in resource waste.

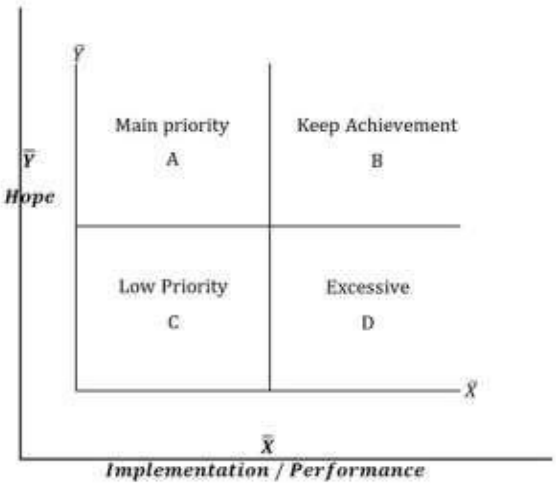

Figure 1. Cartesian Diagram of patient performance and expectations (Supranto, 2001)

4. RESULT AND DISCUSSION

4.1 Dimension measurement

The results of the study provide an overview of the strategic position of the five dimensions of service performance consisting of (1) tangibles, (2) reliability, (3) responsiveness, (4) assurance and (5) empathy. The results of the measurement of the fifth dimension of the study can be seen in Table 3.

Table 3. Recapitulation of Performance Calculations and Important

No	Reliability Statement	Performance (X)	Service Performance Importance (Y)	Tki
1	Tangibles	3.89	4.61	84
2	Reliability	4.41	4.56	97
3	Responsiveness	4.38	4.58	96
4	Assurance	4.39	4.53	97
5	Empathy	4.40	4.48	98
	Average	4.29	4.55	94

Based on Table 1, the service quality of Class I Immigration Office TPI Samarinda has an average score of 4.29, which means good, and the expectations have a score of 4.55, which also means good. The service suitability shows a score of 94, indicating a high level of suitability as it is above 93%. Overall, the service performance is still lower than the public interest, and this difference is significant in the tangibles dimension. These results indicate that service users perceive the service provided by Class I Immigration Office TPI Samarinda as good, but there is dissatisfaction with the tangibles dimension of the service. This perception illustrates that, overall, service users have evaluated the office's ability to deliver the promised passport services that meet their expectations. The officers at the passport service center have provided services with special attention to the service users. The results also show that service users are not satisfied with the waiting room facilities and the availability of adequate parking. Class I Immigration Office TPI Samarinda must prioritize the improvement of those services.

4.2 Cartesian Diagram

The dimensions of service based on the Cartesian diagram can be seen in Fig. 2. Figure 2 shows the results of the Cartesian analysis obtained by maintaining achievement, the dimensions included in this quadrant are reliability (2), responsiveness (3), and assurance (4), there are no dimensions in the low priority quadrant. Exaggerated, the dimensions included in this quadrant is empathy (5), and the main priority, the dimensions included in this quadrant, are tangibles (1).

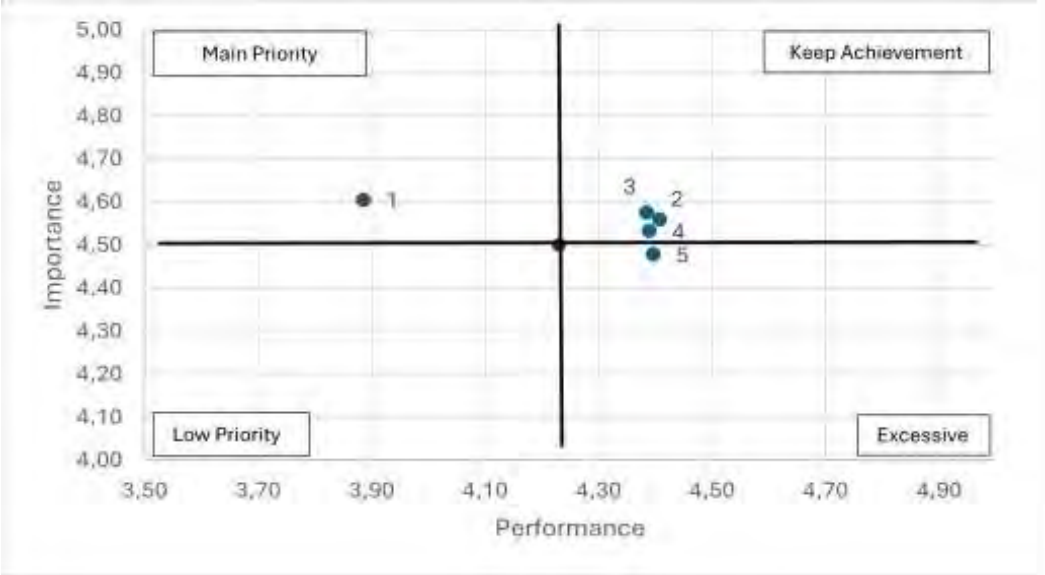

Figure 2. Cartesian Diagram of 5 Service Dimensions

The tangibles dimension (1) in the top priority quadrant is interpreted as a quadrant that should be the primary concern because it is considered very important by passport applicants, but its implementation is still below expectations. Passport applicants want spacious and comfortable waiting rooms, as well as adequate parking facilities. The dimensions of reliability (2), responsiveness (3), and assurance (4) are in the maintain achievement quadrant. Passport applicants consider their performance to be good and important. This condition illustrates that Class I TPI Samarinda Immigration Office has been able to carry out their duties well in these dimensions. Therefore, Class I TPI Samarinda Immigration Office must maintain and improve the current performance. There are no dimensions in the low priority quadrant because passport applicants believe that the performance and service are already good. Passport applicants also consider it not too much of a problem if the officers are not too attentive or individually caring. Therefore, the current situation is considered sufficient by passport applicants using the service. In the empathy dimension (5), passport applicants consider non-discriminatory officers, providing opportunities to complete requirements, and apologizing for any mistakes to be good. However, this condition is not a concern for passport applicants when using the service.

The results of the 23 proxies indicators in each quadrant can be seen in Figure 3.

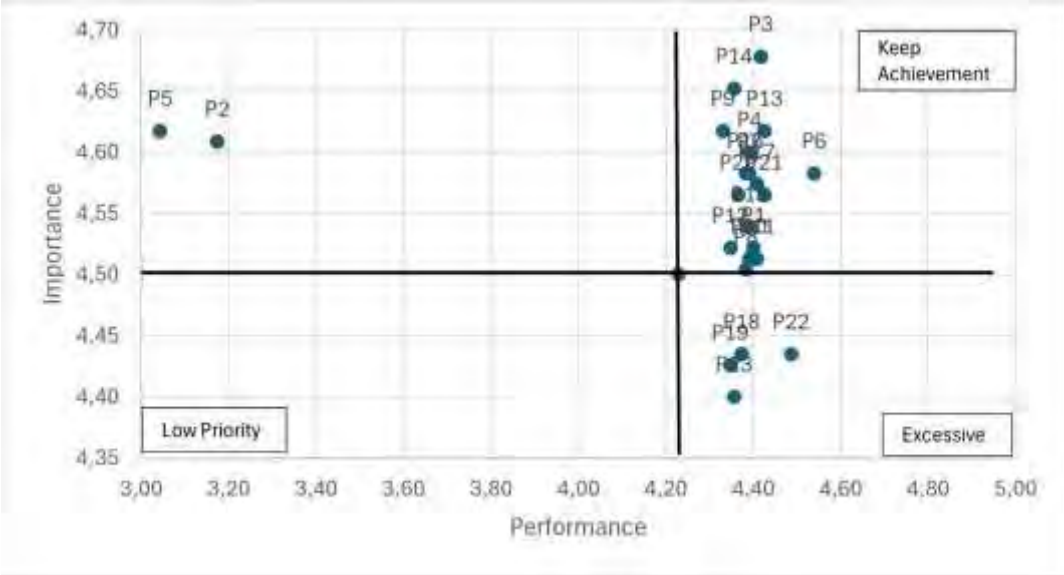

Figure 3. Cartesian diagram of service performance indicators

Figure 3 shows a total of 23 indicators studied, each occupying a quadrant as follows: (1) Overload: High performance - low importance: P18, P19, P22, P23. (2) Low priority: there are no indicators in this quadrant. (3) Maintain achievement: High performance - high expectation: P3, P4, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P20, P21. (4) Top priority: Low performance - high expectation: P2 and P5.

Class I TPI Samarinda Immigration Office should maintain the excessive quadrant, but it does not need to be the top priority because the existing ones are considered sufficient. There are no indicators in the low priority quadrant. Class I TPI Samarinda Immigration Office has performed its duties well. There is no need for Class I TPI Samarinda Immigration Office to make improvements in these indicators. The Maintain Achievement quadrant is a quadrant that shows the indicators that have been successfully implemented by Class I TPI Samarinda Immigration Office according to the expectations of passport applicants. The indicators in this quadrant must be maintained because they are considered highly important and have been implemented well. The main priority quadrant is a quadrant that describes the indicators that still do not meet the expectations of passport applicants. The indicators in this quadrant should be the main priority in improving the services of Class I TPI Samarinda Immigration Office. *t-Test results*

Service performance and expectations t-test was conducted to determine the significant difference. The results of the t-test in the study can be seen in Table 4.

Table 4. Test the Difference between Importance and Performance
Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Importance & Performance	115	.712	.000

Table 4 shows a significant value of 0.000, meaning there is significant difference between service performance and expectations.

5. CONCLUSION

There is a difference between the service performance and the expectations of passport applicants in the tangibles dimension. Class I TPI Samarinda Immigration Office needs to improve the waiting room facilities and parking facilities. The main objective of this research is the service performance strategy at Class I TPI Samarinda Immigration Office. The test results show a significant value of 0.000, indicating a significant difference between the service and the expectations received by passport applicants, particularly in the tangibles dimension. The research results are expected to provide an overview of the services and expectations of passport applicants for relevant parties to improve the services of Class I TPI Samarinda Immigration Office. Good service will have an impact on the smooth processing of passports for passport applicants.

Acknowledgement

Researchers would like to thank the Universitas Mulawarnan, Samarinda, of East Kalimantan for their support in completing this research.

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INFLUENCE OF FINANCIAL PERFORMANCE AND FIRM SIZE ON FIRM GROWTH MODERATED BY CAPITAL STRUCTURE IN REGIONAL-OWNED ENTERPRISES IN EAST KALIMANTAN

Maulida Ardhia Regita*, F. Defung,, Wirasmi Wardani
Faculty of Economic and Business, Mulawarman University

*Corresponding author: mar.regita@gmail.com[1]

Abstract

This study aims to examine and analyze the influence of financial performance and firm size on firm growth moderated by capital structure in Regional-Owned Enterprises (ROEs) in East Kalimantan Province. This study employs a quantitative approach. The sampling method used is purposive sampling, where samples are selected based on their compatibility with predetermined sample criteria, namely SOEs in East Kalimantan Province with audited financial statements from 2018 to 2022. The population of this study consists of 7 SOEs in East Kalimantan Province that meet the sample criteria. Data were obtained from the East Kalimantan Provincial Government's SOE management bureau, specifically the Economic Bureau of the East Kalimantan Provincial Secretariat. This study utilizes Moderated Regression Analysis (MRA) and data processing is conducted using Eviews 12 software. The results of the study indicate that financial performance has a significant influence, while firm size does not have a significant influence. Additionally, capital structure moderates the influence of financial performance on firm growth, whereas capital structure does not moderate the influence of firm size on firm growth.

Keywords: *Capital Structure; Company Growth; Financial Performance; Firm Size; Regional-Owned Enterprises (ROEs)*

1.INTRODUCTION

Regional-Owned Enterprises (ROEs) are business entities owned by local governments in Indonesia. ROEs play a crucial role in managing local economic resources to enhance community welfare and support local development (Hasan et al., 2022). As part of the regional economic structure, ROEs take various forms, including limited liability companies (PT), regional-owned enterprises, and others.

One of the main characteristics of ROEs is their full or partial ownership by the local government. Although owned by the government, ROEs are expected to operate with sound business principles and a focus on profitability (Setiawan et al., 2022). The primary focus of ROEs is to develop the economic potential of the region, create employment opportunities, and contribute to local revenue.

ROEs typically operate in various sectors of the economy, including industry, trade, tourism, transportation, and others. They can serve as providers of public services, such as water supply management and waste management, or operate in service sectors such as public transportation (Digdowiseiso & Rengganisa, 2023a). Some ROEs are also involved in priority regional infrastructure development projects.

ROEs play a significant role in the context of local economic development and are subject to crucial studies due to their wide-ranging and profound impacts (Digdowiseiso & Rengganisa, 2023b). ROEs not only serve as the backbone of the regional economy but also act as the primary tool for local governments to manage local economic resources to enhance community welfare and strengthen the regional economic base. Through various sectors of operation, such as

manufacturing, trade, transportation, tourism, and public services such as water supply and waste management, ROEs have a significant impact on job creation, increasing local revenue, and key infrastructure development such as roads, bridges, ports, and airports (Dewi, 2022).

Increased revenue is one of the key indicators of ROEs financial growth (Prasetyo & Sulastiningsih, 2022). With increased revenue, ROEs can allocate more resources for investment in new business development, service quality improvement, and infrastructure development needed by the community and local economic sectors. Furthermore, sustainable profitability is crucial in ensuring the operational sustainability of ROEs and their ability to make significant contributions to regional development. High profitability enables ROEs to reinvest their earnings into businesses and projects that can enhance regional economic value.

Asset growth is also an important indicator in measuring the growth of Regional Owned Enterprises (ROEs). ROEs assets include various forms such as land, buildings, equipment, investments, and other resources owned and managed by the company. Asset growth demonstrates ROEs ability to manage and expand their business portfolios, reflecting the company's value growth over time.

Asset growth can reflect ROEs ability to manage risks and preserve company value (Komariyah et al., 2023). Sound investment in productive assets can enhance operational efficiency, expand market share, and improve competitiveness. By effectively utilizing their assets, ROEs can create sustainable added value for stakeholders, including local governments, employees, and the local community.

In a study by Amrullah & Widyawati (2021), the ability of financial performance to impact company performance was revealed. Based on the research, financial performance can have a significant and positive impact on company growth. Similarly, there are studies that show similar findings, such as the research by Kurniawan & BS (2022) which states that company growth is greatly influenced by their financial performance.

Moreover, in the study by Solehah (2022), it also highlights other factors besides financial performance that have a significant role in influencing company growth. The study explains how company size can have a significant impact on company growth. The research indicates that larger companies have a higher capacity to foster company growth because they are perceived to have more assets, which facilitates the development of new services for the community or improves the quality of their products.

A study by Berkowitz & Nishioka (2024) suggests another factor, where the management of capital structure can also affect company growth. A sound capital structure will help companies manage their funds, especially those obtained from loans, to ensure sustained growth without being burdened by high debt payments and interest to be paid or settled immediately.

However, despite analyzing various factors that contribute to company growth, researchers have not found any studies on the factors that play a significant role in enhancing the growth of ROEs. Previous research has been limited to private companies, mostly publicly listed companies, rather than state or regionalowned companies that are intentionally managed not only for profit but also to contribute to building a prosperous society.

Furthermore, previous studies have not yet shown whether the capital structure variable is closely related to the influence between financial performance and company size. Proper management of the capital structure would greatly benefit ROEs in considering their capital structure, ensuring that they are not trapped in high debt payments and interest.

By understanding the factors influencing ROEs growth and conducting further research specific to ROEs, policymakers and local governments can develop strategies to promote their growth and

enhance their contributions to regional development. This may include implementing policies that support sound financial management, encouraging investment in productive assets, and fostering an enabling environment for ROEs to thrive.

2. LITERATURE REVIEW

2.1 Agency Theory

Agency Theory is a conceptual framework in economics and management that studies the relationship between two parties, namely the principal and the agent, where the principal allows the agent to act on their behalf (Vitolla et al., 2020). In the business context, the principal is the owner or shareholder of the company who assigns the agent, which is the manager or executive of the company, to manage day-today operations. Agency Theory examines how contracts and incentives can be used to reduce conflicts of interest between the principal and the agent and ensure that the agent acts in the best interest of the principal.

Conflicts of interest arise due to information asymmetry between the principal and the agent. The principal typically has limited knowledge about the actions and decisions of the agent, while the agent has more information about the company's activities (Steinfeld, 2023). This can lead to the agent acting in their own interest, which may not always align with the interests of the principal.

To address these conflicts of interest, various control mechanisms have been developed within the framework of Agency Theory (Shevchenko et al., 2020). One of them is the contract, which includes provisions regarding the responsibilities, incentives, and penalties for the agent. Additionally, external checks such as independent audits and monitoring by the board of directors are also part of the control mechanisms in Agency Theory.

Agency Theory also considers the concept of incentives, where the agent is provided with certain rewards or incentives to achieve the goals set by the principal. These incentives are designed to motivate the agent to act in the best interest of the principal (Raimo et al., 2021). However, improper incentive arrangements or unaddressed information asymmetry can result in undesirable agent behavior.

In practice, as Geddes (2020) suggests, Agency Theory helps analyze various corporate management issues, such as conflicts of interest between managers and shareholders, moral hazard problems, and adverse selection problems. By understanding the dynamics of the relationship between the principal and the agent, as well as the control mechanisms that can be applied, companies can improve performance and mitigate the risks associated with agency relationships.

2.2 Financial Performance

Financial performance is a measure used to evaluate how well an entity, such as a company, financial institution, or individual, manages and utilizes its financial resources (Francis Hutabarat, 2021). It encompasses a range of metrics and ratios that provide an overview of the efficiency, profitability, liquidity, and financial stability of an entity. These metrics are used to analyze financial health and operational performance, as well as to make investment, lending, or policy decisions.

One commonly used indicator of financial performance is profitability, which measures an entity's ability to generate income from its operations. This can be measured by ratios such as net profit margin, return on assets, or return on equity (Reysa et al., 2022). Liquidity is another important indicator, reflecting an entity's ability to meet its short-term financial obligations. Ratios such as current ratio and quick ratio are used to evaluate liquidity.

Furthermore, financial stability is also a significant concern. Financial stability encompasses an entity's ability to repay its debts and avoid the risk of bankruptcy (Purwanti, 2021). Ratios such as

debt-to-equity ratio, interest coverage ratio, and cash coverage ratio are used to assess financial stability. Operational efficiency is also an integral part of financial performance, measuring how well an entity utilizes its financial and non-financial resources to generate revenue.

Financial performance provides a comprehensive overview of the health and performance of an entity, which is crucial for stakeholders such as investors, creditors, management, and government. Financial performance analysis helps evaluate the growth potential, risks, and value of the entity, as well as aids in strategic decision-making to improve financial performance in the future. By understanding financial performance holistically, entities can identify areas for improvement and develop strategies to achieve their long-term financial goals.

Quoting the explanation of Lase et al. (2022), financial performance can be measured in various ways, one of which is profitability. Based on Hidayat et al. (2021), profitability is a ratio used to measure a company's ability to generate a high level of profit in an accounting period. Within this ratio, the return on assets (ROA) ratio can be calculated by dividing the amount of profit after all costs and taxes obtained by the company by the total assets managed.

$$ROA = \frac{EAT}{Total \quad Asset}$$

2.3 Firm Size

The size of a company measured by its total assets is one of the key metrics used to evaluate the scale and financial capability of an entity (Kolamban et al., 2020). Total assets refer to the overall amount of assets owned by a company at a specific point in time, including current assets and fixed assets. Current assets include cash, accounts receivable, and inventory, while fixed assets encompass land, buildings, equipment, and long-term investments.

This measure provides an overview of the operational scale and complexity of the entity (Romadhani et al., 2020). The larger the total assets, the greater the likelihood that the company has extensive operations, a large investment portfolio, and significant financial resources. Total assets also serve as an indicator of growth potential and company stability, as companies with large total assets tend to have more access to capital and resources needed to support business expansion and mitigate financial risks.

Furthermore, total assets are also considered by external parties such as investors, creditors, and financial analysts in evaluating the financial health and value of a company (Damayanti & Darmayanti, 2022). Total assets can be used as an indicator in financial ratio analysis, such as liquidity ratios, activity ratios, and profitability ratios, providing further insights into the operational and financial performance of the company.

While total assets are an important measure in evaluating the size and financial health of a company, it is also important to consider other factors such as capital structure, profitability, and financial risks holistically. Nevertheless, total assets remain a key indicator that provides an overview of the scale, complexity, and growth potential of a company in a competitive market.

Bahri (2022) explains that to obtain results from measuring a company, a formula is needed to quantify the size of the company based on the value of their assets. The formula can utilize the natural logarithm value of the overall assets under the control of a company.

$$Firm\ Size = (Ln)\ Total\ Asset$$

2.4 Firm Growth

A company is created with the purpose of surviving and growing over the long term, with the expectation of progress and advancement. In this regard, the growth of a company is consistently evaluated, and this growth can be seen based on the performance of the company, especially in terms of profitability (Wahyudi, 2022). Firm growth refers to the increase in scale, revenue, assets, or profits of a business entity over a certain period of time.

Firm growth reflects investor confidence in the company and can be measured in various ways, one of which is through sales growth (Suhandi, 2021). This is because firm growth portrays future opportunities, and if the market response is positive and strengthening, investors will not hesitate to invest in the company (Efrinal and Astuti, 2022). Sales growth directly impacts the company's profit margin and potential earnings for shareholders. The company's ability to expand its operations is often referred to as growth, which is influenced by internal and external factors, as well as local industry conditions.

Additionally, company growth can be measured through revenue growth. Therefore, in this research, it is approximated by company profit. In this study, the measurement of Firm Growth is the same as in previous studies conducted by Suhardjo et al. (2022), Ariyani et al. (2018), Apriliyani (2022), Rahayu (2019), Efrinal and Astuti (2022), and Wahyudi (2022). The calculation of Firm Growth is as follows:

$$Firm\ Growth = \frac{EAT_y - EAT}{EAT_y} \times 100\%$$

2.5 Capital Structure

The capital structure of a company refers to the composition of funding sources used by the company to finance its operations (Savestra et al., 2021). It involves the combination of equity capital (ownership) and debt capital (borrowings) used by the company to acquire assets, finance growth, and conduct day-to-day operations (M. R. Setiawan et al., 2021). Capital structure is an important aspect of corporate financial management as it directly affects the level of risk, cost of capital, and the value of the company.

Equity, as a key component of capital structure, involves direct investment from the owners or shareholders of the company (Supeno, 2022). This capital does not have to be repaid to the shareholders, but they have a claim on the company's profits in the form of dividends or increased stock value. The use of equity can enhance the financial flexibility of the company and reduce the risk of bankruptcy due to the absence of fixed interest payment obligations.

On the other hand, debt represents funds obtained by the company through borrowing from creditors or lenders. It includes bank loans, bonds, or debts owed to other parties (Umdiana & Claudia, 2020). Debt allows the company to obtain additional funds without issuing additional shares, but it requires fixed interest payments and repayment of principal according to a predetermined schedule. The use of debt can increase the potential profitability of the company as the interest expense paid can be deducted from pretax income.

The capital structure of a company can vary depending on various factors, including industry, company size, business cycle, and shareholder preferences. Some companies may prefer a conservative capital structure with more equity than debt to reduce financial risk, while others may choose to leverage more debt to expand their business or take advantage of lower cost of capital.

Achieving the right balance in the capital structure is crucial, where the company can leverage the benefits of debt usage to maximize profits without significantly increasing financial risk. Analysis of the company's capital structure involves evaluating the costs and benefits of different funding

sources and understanding the risks associated with each. By understanding the optimal capital structure, companies can improve operational efficiency, reduce the cost of capital, and enhance the overall value of the company.

In Nurmiati & Pratiwi (2022), the calculation of a company's capital structure can utilize the debt-to-equity ratio, which compares the value of liabilities as a source of company financing to the total equity held by the company.

$$DER = \frac{Total\ Debt}{Total\ Equity}$$

3. METHODOLOGY

3.1 Research Methodology and Data Analysis Technique

A quantitative approach is chosen by researchers because it is capable of processing valid and reliable data from various data sources. According to Caroline's explanation (2019), quantitative research can be defined as research that uses numerical data that has been collected and then analyzed to answer hypotheses that are formed based on the research questions. This method relies on data that is measured with numbers, statistics, and various mathematical calculations, aiming to generalize and infer about the population being studied.

To obtain the results of hypothesis testing, data analysis technique play a crucial role in the research process. By utilizing the technique of moderation regression analysis, which is a regression analysis that uses moderating variables to examine cause-and-effect relationships between the dependent and independent variables.

3.2 Population and Sample

In this study, the researcher uses a sample of 7 regional-owned enterprises (ROEs) located under the East Kalimantan provincial government. The researcher utilizes their financial reports from the accounting years ranging from 2018 to 2022. The following ROEs companies are being studied:

1. PT BPD Kalimantan Timur dan Kalimantan Utara
2. PT Penjaminan Kredit Daerah Kalimantan Timur
3. PT Ketenagalistrikan Kalimantan Timur
4. PT Migas Mandiri Pratama Kalimantan Timur
5. PD Pertambangan Bara Kaltim Sejahtera
6. PD Melati Bhakti Surya
7. PD Kehutanan Sylva Kaltim Sejahtera

3.3 Research Variable

3.3.1 Financial Performance (X1)

Return on Assets (ROA) is an important metric in financial performance analysis that provides an indication of how effectively an entity utilizes its assets to generate net profit. By measuring the percentage of net profit generated from total assets, ROA provides an in-depth understanding of operational efficiency and management's ability to leverage company resources. ROA not only provides insights into actual profitability but also allows for cross-industry comparisons, assisting investors and management in evaluating the relative performance of the company in a broader market context.

3.3.2 Firm Size (X2)

Firm size, as measured by its total assets, is a key metric for assessing the scale and financial capacity of an entity. Total assets include current and fixed assets such as cash, receivables, land, buildings, and equipment. It reflects the operational scale and complexity of the company, with larger total assets indicating broader operations and access to significant financial resources. Total assets also indicate growth potential and stability, serving as an important factor in the assessment of financial health and the value of the company by external parties such as investors and creditors.

3.3.3 Firm Growth (Y)

Firm growth is defined as the increase or significant change in the size, capacity, or scale of a company over time. Firm growth can be measured in various dimensions, including revenue growth, market expansion, increase in market share, or operational expansion. Firm growth is measured using the percentage increase in revenue or total assets of the company from year to year.

3.3.4 Capital Structure (Z)

The capital structure of a company includes equity capital (own funds) and debt capital (borrowings), which are used to finance operations and growth. Equity involves direct investment from the company's owners without repayment obligations, while debt involves borrowing with fixed interest payment obligations. The capital structure affects risk, cost of capital, and the value of the company. The use of equity can enhance financial flexibility and reduce the risk of bankruptcy, while debt can amplify profits with interest expenses deducted from income. Companies choose their capital structure based on industry, size, and shareholder preferences, with the aim of achieving an optimal balance between risk and return. Evaluating the capital structure involves analyzing the costs, benefits, and risks of different funding sources, with the expectation of improving operational efficiency and the value of the company.

3.4 Hypothesis Development and Conceptual Framework

3.4.1 The Influence of Financial Performance on Company Growth

The financial performance of a Regional-Owned Enterprise (ROEs) in East Kalimantan is crucial, and one of the key indicators is profitability ratio. This ratio reflects the ROEs ability to generate profits from its business operations. The impact of profitability is expected to have a significant effect on the financial growth of the ROEs in the region. When the profitability ratio is high, it indicates that the ROEs is capable of generating sufficient profits to support its operations and further development.

H_1: Financial performance has a significant positive influence on firm growth.

3.4.2 The Influence of Firm Size on Firm Growth

The size of a company, often measured by the total assets it manages, plays a crucial role in the growth of Regional-Owned Enterprises (ROEs) in East Kalimantan. The larger the assets managed by the ROEs, the greater the potential for generating significant revenue and profits. This provides the ROEs with greater capacity to invest in operational development, innovation, and business expansion. Additionally, a larger firm size can enhance investor and creditor confidence in the ROEs, opening access to greater financial resources to support growth and strategic projects.

H_2: Firm size has a significant positive influence on firm growth.

3.4.3 The Influence of Financial Performance on Firm Growth Moderated by Capital Structure
The capital structure, in relation to financial performance, has significant implications for the changes that occur in the context of the growth of Regional-Owned Enterprises (ROEs) in East Kalimantan. Taking into account the capital structure, such as the proportion of debt and equity in the company's capital, it can be predicted that efficient financial management that helps the company generate profits will strengthen ROEs's growth.

H_3: Financial performance moderated by capital structure has a significant positive influence on firm growth.

3.4.4 The Influence of Firm Size on Firm Growth Moderated by Capital Structure
The capital structure, in the context of the growth of Regional-Owned Enterprises (ROEs) in East Kalimantan, considers the importance of firm size in driving the growth that occurs. Taking into account the capital structure, such as the composition between debt and equity in financing, it can be assumed that firm size plays a crucial role in determining the company's ability to acquire financial resources, particularly from the perspective of assets needed for growth.

H_4: Firm size moderated by capital structure has a significant positive influence on firm growth.

Therefore, based on the explanation provided, a conceptual framework is formed as depicted in Figure 1.

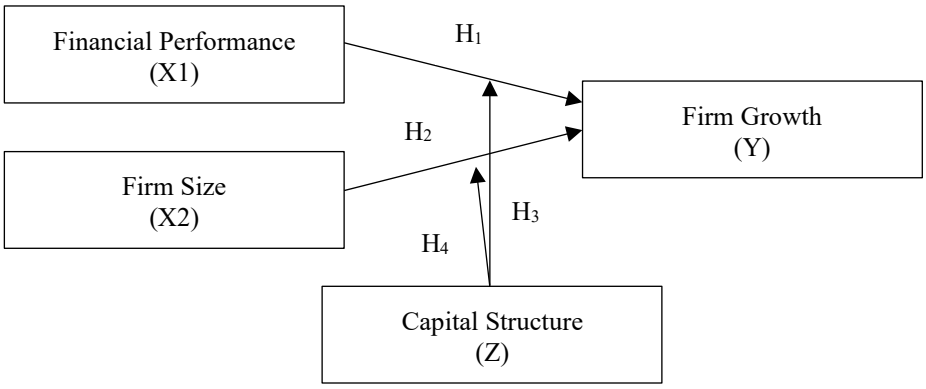

Figure 1. Conceptual Framework

4. RESULT AND DISCUSSION

4.1 Chow Test

Table 1. Test Results using Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	5.243814	(6,25)	0.0013
Cross-section Chi-square	28.514769	6	0.0001

By analyzing the testing method that will be used as the basis for testing with Eviews, based on the values obtained from the Chow test, it can be concluded that the probability value (Prob) of 0.001 < 0.05. This leads the researcher to conclude that the data obtained would be more suitable for the Fixed Equation Model (FEM) method.

4.2 Classical Assumption Test

Quoting information regarding the classical assumption testing from the statements put forward by

Kusumastuti et al. (2020) and Zakariah et al. (2020), it is stated that if the data has a sample size of n > 30, the classical assumption tests can be skipped as it can be assumed that data with a sample size exceeding 30 will pass the classical assumption tests.

4.3 Hypothesis Test

4.3.1 The Influence of Financial Performance on Firm Growth

Through hypothesis testing, assessing the significant impact of financial performance on the changes in firm growth, the researcher found that with a probability value (Prob) of 0.000 < 0.05, it can be concluded that financial performance has a significant impact on firm growth. Therefore, based on the statistical analysis results, the researcher concludes that H_1 in this study is accepted, indicating that the financial performance of Regional-Owned Enterprises (ROEs) in East Kalimantan has a significant positive influence on firm growth.

Table 2. Results of Test the Influence of Financial Performance on Firm Growth

Variable	Coefficient	Std. Error	t -Statistic	Prob.
X1	111.3635	20.83413	5.345242	0.0000
C	-845.3494	249.2938	-3.390976	0.0022

Effects Specification

Cross-section fixed (dummy variable

R-squared	0.593500	Mean dependent var	-537.0317
Adjusted R-squared	0.488111	S.D. dependent var	2005.441
S.E. of regression	1434.821	Akaike info criterion	17.57310
Sum squared resid	55585212	Schwarz criterion	17.92861
Log likelihood	-299.5292	Hannan-Quinn criter.	17.69582
F-statistic	5.631527	Durbin-Watson stat	2.094373
Prob(F-statistic)	0.000440		

4.3.2 The Influence of Firm Size on Firm Growth

With the test results revealing the impact of firm size on firm growth, the researcher observed that

the probability value (Prob) exceeds 5% or, in statistical terms, the Prob value obtained from this test is 0.6075 > 0.05. This indicates that there is no significant impact of company size on the occurrence of changes in company growth. The findings, as detailed in Table 3, support the conclusion that, based on statistical grounds, H_2 in this study is rejected, implying that firm size does not have a significant positive influence on firm growth.

Table 3. Results of Test the Influence of Firm Size on Firm Growth

Variable	Coefficient	Std. Error	t- Statistic	Prob.
X2	1060.228	2040.137	0.519685	0.6075
C	-28422.85	53660.23	-0.529682	0.6007
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.171625	Mean dependent var		- 537.0317
Adjusted R-squared	-0.043139	S.D. dependent var		2005.441
S.E. of regression	2048.241	Akaike info criterion		18.28498
Sum squared resid	1.13E+08	Schwarz criterion		18.64049
Log likelihood	-311.9872	Hannan-Quinn criter.		18.40770
F-statistic	0.799133	Durbin-Watson stat		2.867053
Prob(F-statistic)	0.594947			

4.3.3 The Influence of Financial Performance on Firm Growth Moderated by Capital Structure

In this research, analyzing the impact of financial performance through the capital structure of RegionalOwned Enterprises (ROEs) under the responsibility of the East Kalimantan provincial government, the researcher identified a significant role of capital structure in moderating the influence of financial performance on the changes that reflect firm growth, with a probability value (Prob) of 0.0081 < 0.05. Based on the statistical analysis, as indicated by the Prob value presented in Table 5, it can be concluded that H_3 in this study is accepted, suggesting that financial performance through the capital structure of ROEs has a significant positive impact on the changes occurring in firm growth. With these findings, it can be inferred that the capital structure acts as a mediator between the impact of financial performance and the growth that occurs in ROEs.

Table 4. Results of Moderation Testing on the Influence of Financial Performance on Firm Growth by Capital Structure

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1Z	2.160479	0.755195	2.860823	0.0081
C	-889.3732	328.7430	-2.705375	0.0117
Effects Specification				

Cross-section fixed (dummy variables)			
R-squared	0.357957	Mean dependent var	-537.0317
Adjusted R-squared	0.191501	S.D. dependent var	2005.441
S.E. of regression	1803.224	Akaike info criterion	18.03017
Sum squared resid	87793676	Schwarz criterion	18.38568
Log likelihood	-307.5280	Hannan-Quinn criter.	18.15289
F-statistic	2.150462	Durbin-Watson stat	2.410527
Prob(F-statistic)	0.072049		

4.3.4 The Influence of Firm Size on Firm Growth Moderated by Capital Structure

The test regarding whether capital structure can act as a moderating variable in the relationship between firm size and firm growth yielded a probability value (Prob) of 0.6686. This value, exceeding 0.05 or 5%, indicates that in assessing the impact of firm size on firm growth, the capital structure is unable to moderate the relationship. With a probability value exceeding 0.05, it can be concluded that H_4 is rejected, suggesting that in reality, the firm size through the capital structure does not have a significant negative influence on the growth that occurs in the ROEs.

Table 5. Results of Moderation Test on the Influence of Firm Size on Firm Growth by Capital Structure

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X2Z	- 0.172978	0.399675	-0.432797	0.6686
C	-3.317607	1280.996	-0.002590	0.9980

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.169103	Mean dependent var	-537.0317
Adjusted R-squared	-0.046314	S.D. dependent var	2005.441
S.E. of regression	2051.356	Akaike info criterion	18.28802
Sum squared resid	1.14E+08	Schwarz criterion	18.64353
Log likelihood	-312.0404	Hannan-Quinn criter.	18.41074
F-statistic	0.785002	Durbin-Watson stat	2.892376
Prob(F-statistic)	0.605714		

4.4 Discussion

4.4.1 The Influence of Financial Performance on Firm Growth

Financial performance plays a significant role in the growth of a company, as evidenced by the results obtained through regression analysis conducted by the researcher. With good financial performance, it has a substantial impact on the growth of Regional-Owned Enterprises (ROEs) in Kalimantan.

The researcher found that Amrullah & Widyawati (2021) reported similar findings in their study, where financial performance has a massive impact on firm growth. Additionally, Kurniawan & BS

(2022) also demonstrated a similar level of influence of financial performance on c firm growth in their research.

In their study, Syafi'i et al. (2021) revealed that financial performance serves as the main foundation for sustainable firm growth. When a company achieves positive financial performance by managing its finances effectively, it reflects the company's ability to efficiently utilize its assets, make sound decisions, and maximize various opportunities.

Lu & Dimov (2023) emphasized that firm growth is highly influenced by the ability to consistently generate profits and use them effectively. The positive value of their analysis further supports the findings of this research, indicating that good financial performance enables companies to gain easier access to the capital and resources needed to develop their operations, such as investments in research and development, market expansion, acquisitions, and driving overall company growth. Additionally, strong financial performance instills confidence in investors, creditors, and business partners, opening doors to collaboration opportunities and further growth.

Overall, the findings of this research highlight the significant impact of financial performance on firm growth and emphasize the importance of managing financial resources efficiently to foster sustainable development and maximize opportunities for ROEs in East Kalimantan.

4.4.2 The Influence of Firm Size on Firm Growth

The research conducted by the researcher actually rejects the formulated hypothesis that assumes a significant role of firm size in firm growth. The resulting values provide evidence that company size does not have a significant impact on the rate of firm growth.

Mansikkamäki (2023), in their study, presents different findings from the researcher, where they find patterns in the studied companies that larger companies tend to have better firm growth. However, Musa et al. (2024) observe that there is a small or insignificant impact of firm size on how a company grows during the periods examined by the researcher.

Firm size is not always the sole determinant in predicting its growth. Although size is often considered a potential indicator of growth, there are other factors that have equally important impacts. One main reason is that excessive focus on size can obscure the understanding of qualitative factors underlying a company's success. Innovation, effective management, and the ability to adapt to market changes are key elements that can drive growth, regardless of the company's size.

Additionally, external conditions such as industry trends, government regulations, and market developments can also have a significant impact on firm growth. For example, small companies that have a competitive advantage in responding to market changes or developing new products may grow faster than larger competitors who are less responsive to such changes.

The negative value suggests that large company size does not always guarantee flexibility and speed in decision-making. Complex organizational structures and lengthy bureaucratic processes can hinder the ability of large companies to respond quickly to market changes. On the other hand, small companies are often more adaptive and quick in taking strategic steps because they have fewer hierarchical layers and more direct decision-making processes.

4.4.3 The Influence of Financial Performance on Firm Growth Moderated by Capital Structure

Based on the analysis in this research using the collected data, the researcher observed that capital structure can act as a moderating variable for the impact of financial performance on the growth of Regional ROEs in East Kalimantan. The results reveal that capital structure has the ability to strengthen the impact of financial performance on a firm’s growth.

The capital structure of a company has a significant impact in enhancing the role of financial performance in bringing about positive changes in firm growth (Murdiyanto & Kusuma, 2022). When the capital structure is effectively designed, it provides a solid foundation for strong financial performance. An optimal capital structure can help reduce the cost of capital, improve efficiency in resource allocation, and optimize key financial ratios such as the debt-to-equity ratio or the interest-to-earnings ratio. This enables the company to create significant value for shareholders and bondholders, as well as enhance its attractiveness to potential investors.

Moreover, the right capital structure can also enhance the financial flexibility of a company in facing challenges and opportunities. By utilizing a balanced combination of equity and debt, a company can better manage financial risks and have better access to additional resources to support growth initiatives such as business expansion, research and development, or strategic acquisitions. This helps the company to remain competitive and adapt to changes in the market and economic environment.

Furthermore, an optimal capital structure can send positive signals to the market and other stakeholders about the financial health of the company and management's commitment to long-term growth. This can boost investor confidence, attract creditors and business partners, which in turn can open doors to collaboration opportunities, access to additional capital, or increased market share.

The positive correlation results indicate a strong relationship between the higher debt-to-equity ratio and the company's ability to finance asset purchases and generate profits that impact growth. In the context of ROE's in East Kalimantan, this positive value indicates that a higher level of debt can be an effective tool in obtaining additional funds for investment, including the purchase of assets crucial for operational expansion.

Furthermore, by utilizing debt as a source of funding, ROEs can leverage those funds to increase production capacity, expand market reach, or develop new initiatives that generate profits. The profits generated from these investments can then be used to pay debt interest and increase the company's net income, creating a positive domino effect on overall growth.

4.4.4 The Influence of Firm Size on Firm Growth Moderated by Capital Structure

Based on the researcher's measurement using moderation analysis, it is observed that capital structure does not have the ability to moderate the impact of firm size on the growth of ROEs in East Kalimantan. Both before and after considering the capital structure as a moderator, a significant role of firm size in the growth of ROEs in East Kalimantan is not found.

Capital structure is an important component in managing the financial resources of a company (Umdiana & Claudia, 2020). However, in the context of its role in firm growth, its relationship with firm size is not always consistent or direct.

Traditionally, firm size is often considered a crucial factor influencing growth, assuming that larger companies have access to larger and more diversified financial resources, thus enabling faster growth. However, in practice, capital structure is not always a determining factor in strengthening the role of firm size in growth (Putri & Ardini, 2020).

Several factors influencing this include market conditions, business cycles, management strategies, and internal factors of the company itself. Sometimes, even though a company has a large size, poor or mismatched capital structure can hinder the company's ability to grow optimally.

Moreover, proper financial strategies are also key elements in enhancing firm growth, where good planning in capital management, including the selection of an appropriate capital structure, can

help strengthen the role of firm size in achieving sustainable growth. Thus, although capital structure plays an important role in managing financial resources, its correlation with firm size in influencing growth is not always linear, and there are more factors to consider in achieving optimal growth.

The negative correlation reveals that the higher the debt-to-equity ratio, the more complex the challenges faced by ROEs in East Kalimantan in managing their growth. Although a high debt ratio can facilitate asset purchases and operational expansion, if those assets are not managed properly, their impact can become a heavy burden for the company.

A high debt ratio increases financial risk and instability, especially if the income generated from those assets is not sufficient to cover interest costs or debt repayments. As a result, ROEs can get trapped in prolonged debt cycles, which can hinder long-term growth and cause serious financial problems.

Therefore, careful management of the debt ratio is crucial for ROEs in East Kalimantan, ensuring that debt usage is carefully considered and that the acquired assets are efficiently used to support the firm's growth and sustainability.

5. CONCLUSION

The conclusion of this discussion reveals that financial performance plays a crucial role in supporting firm growth, while firm size is not always the primary factor influencing growth. Although company size is often considered a potential indicator for growth, other factors such as financial performance and management strategies can have an equal or even greater impact on a company's ability to grow.

Research shows that good financial performance provides a strong foundation for firm growth by enabling easier access to capital and resources needed to develop company operations. Additionally, effective management in capital management and responsiveness to market changes also play a crucial role in driving the company towards sustainable growth.

On the other hand, although capital structure can serve as a moderation in strengthening the impact of financial performance on firm growth, capital structure does not always have a significant influence on firm growth itself. While an optimal capital structure can help improve capital management efficiency and provide positive signals to stakeholders, other factors such as management strategies and market conditions have more influence in determining firm growth.

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ANTECEDENT VARIABLES IN ORGANIZATION BASED SELF ESTEEM (OBSE) AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR (OCB)

Nanda Sekar Asmara*, Tetra Hidayati, Heni Rahayu Rahmawati

Faculty of Economics and Business, Mulawarman University

*Corresponding author: nanda.sekar.asmara@gmail.com

Abstract

Government organizations continue to demand employee professionalism in providing services, so employees must have an awareness of their responsibility for the success of the organization. This work is made to investigate the relationship between servant leadership and job social support on organizational citizenship behavior (OCB) mediated by Organization based self-esteem (OBSE). The research was conducted at the Central Berau Statistics (BPS) office on Samarinda City, using a sample of 72 employees. Data was collected using a questionnaire distributed via Google Forms. Furthermore, this research was analyzed using descriptive statistics and inferential statistics and the Partial Least Squares (PLS) as analysis tool. Empirical findings validate that servant leadership and Job Social Support have a positive and significant effect on OBSE. Meanwhile OCB servant leadership have positive but not significant to OCB and Job Social Support have a negative and not significant to OCB. When the relationship between the variables Social support and OCB is mediated by OBSE, it shows the result of a positive and significant influence. Servant leadership and job social support have a clearer relationship to OCB Employees who have better servant leadership is expected to increase OBSE and OCB. OCB is very important for organizations because it can provide an overview of employee awareness of their responsibilities as members of the organization.

Keywords: *Servant Leadership, Job Social Support, Organizational Citizenship Behavior (OCB), Organization Based Self Esteem (OBSE).*

1. INTRODUCTION

The transformation of positions within government organizations remains an interesting topic of discussion among Civil Servants (PNS) due to its significant impact, as this new policy has changed the organizational governance. According to data from the Ministry of Administrative and Bureaucratic Reform (Kemepanrb), as of June 30, 2021, a total of 46,159 structures have been simplified. Meanwhile, in terms of functional position composition, there has been an increase in numbers since the enactment of the law in 2019, with a rise of 1% from 50.4% in 2019 to 51.4% in 2021. This increase in functional positions is accompanied by a decrease in structural positions, which decreased from 11.1% in 2019 by 0.1% to 11% in 2020, and further decreased by 0.3% in 2021 to 10.7%. These changes indicate that the transformation or reassignment of positions from structural to functional positions has been implemented within government agencies.

The success of career management in functional officials is driven, among others, by the nature of OCB. Organizational Citizenship Behavior (OCB) is needed because it plays a role in driving organizational progress, as explained by Mahmudi and Surjanti (2020), who state that OCB is a voluntary behavior of members that goes beyond the roles mandated by the organization but indirectly recognized by the organization's reward system and influences organizational work effectiveness. It can be said that the presence of organizational citizenship behavior (OCB) in an

organization is a manifestation of a strong organizational culture. OCB plays an important role in organizations. OCB behavior does not emerge spontaneously; there are factors that influence it. Some of the factors that influence OCB include personality, organizational culture, organizational climate, job satisfaction, organizational commitment, transformational and servant leadership, employee social responsibility, employee age, work engagement, collectivism, organizational justice, social support, and happiness (Organ et al., 2006; Verawati & Heri, 2022). In this study, we will further discuss the variables of servant leadership, social support, and organizational-based self-esteem (OBSE), which are believed to have an influence on OCB.

The researchers assess that OCB and OBSE are shaped by how leaders within the organization and the work environment also support them. This is consistent with the research conducted by Verewati & Heri (2022), which found that there is an influence of increased OCB in employees due to the social support they receive. A similar finding is also evident in the study by Yang et al. (2015), which shows a positive correlation between OBSE and OCB, suggesting that OBSE can mediate the relationship between servant leadership, job social support, and OCB.

However, not all studies show positive results regarding the relationships between these variables. In a study conducted by Mukti et al. (2023) with a sample of 78 individuals, it was found that servant leadership did not have a significant influence on OCB. Similarly, in a study by Costa et al. (2021) among employees in an IT company, the results showed that the variable of social support did not have a significant influence on OCB. Therefore, based on the research gaps identified from the literature review above, the author decided to further investigate the antecedent variables of organizational-based selfesteem (OBSE) and organizational citizenship behavior (OCB) specifically focusing on the variables of servant leadership and job social support among functional officials in the BPS in Samarinda City.

2. LITERATURE REVIEW

2.1 Servant Leadership

The concept of servant leadership was introduced by Robert K. Greenleaf in 1970 in an essay titled "Servant as Leader," where he coined the terms "servant-leader" and "servant leadership." To be a servant-leader, an individual must possess qualities such as listening, commitment to growth, building community, and a forward-looking vision. Servant leadership is a type or model of leadership developed to address leadership crises characterized by a decline in followers' trust in the exemplification of their leaders (Mukasabe, 2004). This is because the behavior exhibited by a servant leader tends to serve as an example that influences those they lead.

In this study, the researcher chooses to focus on validating the servant leadership instrument previously researched by Dennis (2004; cited in Irving, 2005). The construction of Servant Leadership according to Dennis (2004; cited in Irving, 2005) includes the following components:

1. Love: The first characteristic of servant leadership is love-based leadership. Winston (2002, cited in Irving, 2005) states that love means doing the right thing at the right time for the right reasons. Team members should be treated with care and love to promote greater performance and effectiveness.
2. Empowerment: The second characteristic of servant leadership is empowerment. Empowerment emphasizes collaboration, entrusting power to others, and listening to the advice of followers (Dennis, 2004; cited in Irving, 2005).
3. Vision: The third characteristic of servant leadership is vision. Vision refers to the direction in which the leader will guide the organization and its people. The leader's vision inspires action and helps shape the future, exerting a strong influence on those who work for the organization's interests. In other words, when personal values associated with servant leaders are characterized by vision, team performance can be enhanced (Bennett, 2001; cited in Irving, 2005).

4. Humility: The fourth characteristic of servant leadership is humility. Dennis (2004; cited in Irving, 2005) states that effective leaders maintain humility by showing respect for employees and acknowledging their contributions to the team.
5. Trust: The final characteristic of servant leadership is trust. Servant leaders are chosen among others based on specific qualities that earn them the trust to be leaders.

2.2 Job Social Support

Social support is a part of social capital that can be transferred from the work domain to the family domain of employees. Social support is the individual's perception of being cared for, loved, valued, appreciated, and being part of a network that has obligations and shared goals (Nicklin and Nall, 2013). Social support as a form of social capital in the workplace originates from the organization, immediate supervisors, and coworkers (Tang et al., 2012). Workplace social support can yield positive outcomes for employees (such as job satisfaction, increased well-being) and organizations (such as commitment, productivity, and reduced absenteeism). A positive organizational climate and personal relationships between coworkers, as well as between supervisors and employees, are necessary to create a relevant platform for implementation. In this study, social support in the work environment will be discussed in relation to individual support, supervisor or managerial support, and organizational support.

2.3 Organization Based Self Esteem (OBSE)

Organization-based self-esteem (OBSE) refers to the degree to which members of an organization believe that they can fulfill their needs by participating in the organizational context (Korman, 1976). OBSE has several characteristics (Kreitner & Kinicki, 2000; Greenberg, 2005): feeling accepted in the organization, feeling secure in the organization, feeling competent in the organization, feeling influential in the organization, feeling important to the organization, feeling valued by the organization, and feeling a sense of growth in the organization. The presence or absence of self-esteem in the organization, or OBSE, explains the closeness of the employee's relationship with the organization (Pierce et al., 1993). OBSE reflects the degree of employees' belief in an organization and their personal perception of their willingness to help by actively participating in the organization, indicating the employee's closeness to the organization. The indicators used include living consciously, self-acceptance, responsibility, selfassertiveness, purposefulness, and integrity.

2.4 Organizational Citizenship Behavior (OCB)

According to Dyne et al. (1995), Organizational Citizenship Behavior (OCB) is defined as discretionary behavior that is expected to benefit or even be beneficial to the organization, which is not formally rewarded or required and goes beyond the employee's job expectations. Podsakoff and MacKenzie (1994) identified the following dimensions of OCB:

1. Helping behavior/(altruism/courtesy): Conceptually, helping behavior involves voluntarily assisting others or preventing work-related problems. It demonstrates a willingness to help others even when it is not part of one's job duties or obligations.
2. Sportsmanship: Sportsmanship refers to the willingness or tolerance to persevere in the organization without complaining, even in less pleasant conditions.
3. Civic virtue/organizational participation: This dimension involves an individual's involvement in organizational activities and concern for the organization's well-being. Employees voluntarily participate, take responsibility, and engage in addressing organizational issues. They actively contribute their ideas.
4. Individual initiative/conscientiousness: Individual initiative refers to voluntary efforts to improve the way tasks are performed in a creative manner to enhance organizational performance.

It involves proactive and innovative actions taken voluntarily to enhance one's own abilities in performing tasks for the improvement of organizational performance.

2.5 The Relationship Between Variables

Relationship Between Servant Leadership and Organizational Citizenship Behavior (OCB)
One of the factors that shapes OCB attitudes is the leadership style of organizational leaders, specifically the servant leadership relationship that plays a role in the organization. In servant leadership, a dominant indicator is where leaders prioritize the interests of workers and help them discover their full potential (Northouse, 2018). According to several researchers, servant leadership is related to OCB because it focuses on follower development, community building, and shared leadership (Graham, 1991, as cited in Sandjaya et al., 2008).

H1: Servant Leadership has a positive and significant influence on Organizational Citizen Behavior (OCB).

Relationship between Job Social Support and Organizational Citizen Behavior (OCB)
According to Nicklin and Nall (2013), social support is one of the important resources in the workplace for individuals in dealing with job stress, especially for individuals who have dual roles. Having strong social support shapes better mood, which indirectly influences OCB attitudes in individuals.

H2: Job Social Support has a positive and significant influence on Organizational Citizen Behavior (OCB).

Relationship between Servant Leadership and Organization Based Self-Esteem (OBSE)
Leadership characteristics can influence employees' OBSE, and one of them is servant leadership, which encourages employee learning by providing opportunities and empowering employees to make independent decisions (Konczak et al., 2000). Employees can develop the skills, knowledge, needs, and abilities required to achieve their career goals. This situation increases the likelihood of employees working successfully. A work environment with such conditions can enhance OBSE within the organization.

H3: Servant Leadership has a positive and significant influence on Organization Based Self-Esteem (OBSE).

Relationship between Job Social Support and Organization Based Self-Esteem (OBSE)
Pierce and Gardner (2004) stated that there are three factors that influence Organization Based SelfEsteem: workplace structure, feedback from the environment or social support (trust, fairness, respect), and successful experiences. Workplace structure affects self-esteem in OBSE held by members of the organization. One of the factors influencing Organization Based Self-Esteem is social support.

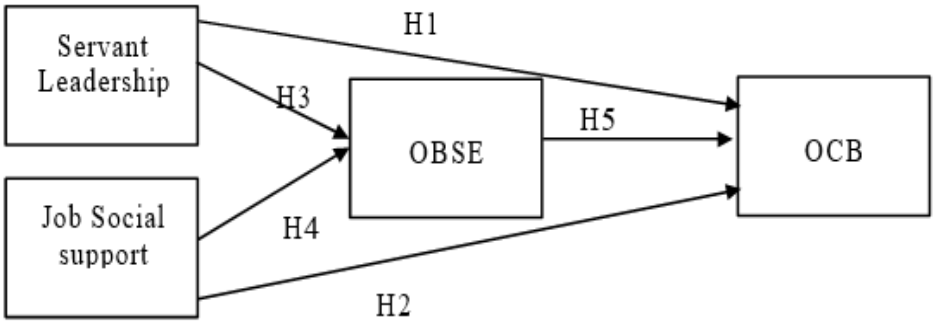
H4: Job Social Support has a positive and significant influence on Organization Based Self-Esteem (OBSE).

Relationship between Organization Based Self-Esteem (OBSE) and Organizational Citizen Behavior (OCB)
The role of OBSE in shaping OCB in individuals is explained by Chein (2004), stating that individuals with high collectivism and a propensity to trust are more likely to believe they can be a valued part of the organization, value this role, and engage in behaviors to make a difference in the organization. H5: Organization Based Self-Esteem (OBSE) has a positive and significant influence on Organizational Citizen Behavior (OCB).

Mediating Role of Organization Based Self-Esteem (OBSE) in the Relationship between Servant Leadership and Job Social Support with Organizational Citizen Behavior (OCB)
Based on previous research, servant leadership and job social support have a positive relationship with OCB, but not all studies show significant positive results. Therefore, it is considered necessary to use mediating variables to strengthen the explanation of the relationship between independent and dependent variables. Based on previous research, OBSE is considered a variable that can mediate the relationship between servant leadership and job social support with OCB. This is because OBSE is related to OCB and is itself influenced by servant leadership and job social support. In a study by Tang et al. (2002), a positive relationship was found between OBSE and OCB, conducted with samples from the United States, Taiwan, Poland, and Egypt.

H6: Organization Based Self-Esteem (OBSE) as a mediating variable in the relationship between Servant Leadership and Organizational Citizen Behavior (OCB).
H7: Organization Based Self-Esteem (OBSE) as a mediating variable in the relationship between Job Social Support and Organizational Citizen Behavior (OCB).

Based on the description of the interrelationships between variables and hypotheses, the researcher formulates the research model as follows.



3. METHODOLOGY

This research adopts a quantitative approach. The study was conducted among all functional officers in the environment of the Central Bureau of Statistics (BPS) employees in Samarinda City, with a total of 72 samples collected using Google Forms as the data collection medium. The measurement instrument used in this study was a structured questionnaire or a questionnaire with Likert scale questions. Likert scale is used to measure the attitudes, opinions, and perceptions of respondents towards the object (Nazir, 2009). The measurement for all variables is done using a 5-point Likert scale, where if there are answers with low weights, they are given a score of 1, and so on, with answers of high weight given a score of 5. The categories for each answer correspond to the following criteria:

Score 1: Strongly Disagree

Score 2: Disagree

Score 3: Uncertain

Score 4: Agree

Score 5: Strongly Agree

In this study, the model testing stage involves testing convergent validity and discriminant validity. The construct reliability is tested using Cronbach's alpha and composite reliability. The model testing is conducted to determine how well the questionnaire items measure the nature and concept of the variables being measured and to assess the consistency of the questionnaire items in measuring the same variables in different times and places. In this study, data analysis to test the research hypotheses uses the Partial Least Squares (PLS) approach. The main objective of SEM-PLS is to explain the relationships between constructs and emphasize the understanding of the value of these relationships. It is important to note that there must be a theory that provides assumptions to describe the model, variable selection, analytical approach, and interpretation of the results. Since this study uses indicators to measure each construct and the measurement model is structural, the decision is made to use SEM-PLS.

4. RESULT AND DISCUSSION

The population of this study consists of BPS employees in Samarinda City, with a total of 72 respondents. Among the respondents, 17% are male and 83% are female. The majority of the respondents are married, accounting for 71%. In terms of length of service, 40% of the respondents have a work experience ranging from 10 to 14 years. Looking at the educational background of the respondents, 68% have a Diploma IV/Undergraduate degree (S1), 20% have a postgraduate degree (S2/S3), while the remaining respondents have completed high school or have a Diploma I/II/III.

The results of the measurement model testing with convergent validity produced outer loading factor values that have undergone standardized estimation to measure the convergent validity of the research indicators. The items for the variables Servant Leadership, Social Support, OBSE, and OCB each have loading factor values above 0.5. According to most references, a factor weight of 0.5 or higher is considered to have strong validation. Based on the results processed by SmartPLS 4.0, after eliminating items that did not meet the criteria, all indicators in Table 3 have loading factor values above 0.5. Thus, the convergent validity of this research model meets the criteria. The discriminant validity test also shows that all constructs have square root of AVE values higher than the correlation with other latent constructs, based on the Fornell-Larcker criterion, indicating that the model meets discriminant validity (Fornell & Larcker, 1981).

Construct reliability testing is conducted in this study, where construct reliability can be assessed based on the values of Cronbach's alpha and composite reliability for each construct. The recommended values for composite reliability and Cronbach's alpha are above 0.7 (Ghozali, 2014). The results of the reliability test indicate that all constructs have composite reliability and Cronbach's alpha values greater than 0.7 (> 0.7). In conclusion, all constructs meet the required reliability. The detailed values of loadings, Cronbach's alpha, composite reliability, and AVE for each construct can be seen in Table 1 below.

Tabel 1. Items Loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE)

Variables	Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE
Servant Leadership (SL)	SL1	0.894	0.932	0.940	0.636
	SL10	0.769			
	SL2	0.843			
	SL3	0.757			
	SL4	0.709			
	SL5	0.764			
	SL6	0.814			
	SL7	0.830			
	SL9	0.779			
Social Support (SS)	SS3	0.913	0.810	0.913	0.840
	SS4	0.920			
OBSE	OBSE1	0.781	0.913	0.933	0.698
	OBSE2	0.857			
	OBSE3	0.860			
	OBSE4	0.812			
	OBSE5	0.823			
	OBSE6	0.875			
OCB	OCB1	0.677	0.827	0.873	0.541
	OCB2	0.775			
	OCB3	0.554			
	OCB4	0.910			
	OCB6	0.601			
	OCB7	0.830			

Hypothesis Testing

Hypothesis testing in PLS is also known as the inner model test. This test includes testing the significance of direct effects, moderation effects, and measuring the magnitude of the influence of exogenous variables on endogenous variables. To understand the relationships between research variables, it is necessary to conduct tests for direct and moderation effects. The test of influence is performed using t-statistics in the partial least squares (PLS) analysis model, with the assistance of SmartPLS 4.0 software.

Table 2. Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P Values
OBSE -> OCB	0.630	0.653	0.174	3.622	0.000
SL -> OBSE	0.406	0.431	0.156	2.596	0.010
SL -> OCB	0.197	0.186	0.164	1.195	0.232
SS -> OBSE	0.409	0.415	0.114	3.595	0.000
SS -> OCB	-0.031	-0.055	0.181	0.174	0.862
SL -> OBSE -> OCB	0.256	0.292	0.142	1.805	0.072
SS -> OBSE -> OCB	0.258	0.271	0.107	2.404	0.017

Relationship between Servant Leadership and Organizational Citizenship Behavior (OCB).
The hypothesis testing results show a t-statistics value of 1.195 with a significance level of 0.232 and an original sample value of 0.197. The positive original sample estimate indicates a positive relationship. Based on the significance value of 0.232 < 0.05, H0 is accepted, and it can be concluded that servant leadership has a positive but insignificant effect on OCB. The research suggests that Servant Leadership has a positive and significant influence on Organizational Citizen Behavior. Organizations that promote and nurture servant leadership behaviors are more likely to foster a culture of OCB, leading to enhanced organizational effectiveness and performance. This is consistent with the research conducted by Vondey (2010), which also found a relationship between Servant Leadership and OCB. The variable of Servant Leadership was identified as an antecedent variable, with a sample of 114 individuals in a study conducted in the industrial sector in the United States.

Relationship between Job Social Support and Organizational Citizen Behavior (OCB)
The test results show a t-statistics value of 0.1740 with a significance level of 0.862. Based on the calculation, the significance value of 0.862 is above 0.05. The original sample estimate value is -0.031, indicating that there is no positive relationship. Based on the test results, it can be concluded that H0 is accepted, indicating that there is no significant positive influence between job social support and OCB. This is consistent with a study conducted by Costa et al. (2021) on IT company employees, where the results show that the Social Support variable does not have a significant influence on OCB.

Relationship between Servant Leadership and Organization-Based Self Esteem (OBSE)
The test results show a t-statistics value of 2.596 with a significance level of 0.010. The original sample estimate value is 0.406, indicating a positive influence between the two variables. Based on the calculation, the significance value of 0.010 is smaller than 0.05, so it can be concluded that H0 is rejected, indicating that servant leadership has a positive and significant effect on OBSE.

Relationship between Job Social Support and Organization-Based Self Esteem (OBSE)
The test results show a t-statistics value of 3.595 with a significance level of 0.000. The original sample estimate value is 0.409, indicating a positive influence between the two variables. Based on the calculation, the significance value of 0.000 is smaller than 0.05, so H0 is accepted, with the conclusion that Job Social Support has a positive and significant effect on OBSE.

Relationship between Organization-Based Self Esteem (OBSE) and Organizational Citizen Behavior (OCB)
The test results show a t-statistics value of 3.622 with a significance level of 0.000. The original sample estimate value is 0.630, indicating a positive influence between the two variables. Based on the calculation, the significance value of 0.000 is smaller than 0.05, so H0 is accepted, with the conclusion that OBSE has a positive and significant effect on OCB. This is in line with the views of Dyne and Pierce (2004), who argue that positive employee attitudes such as OBSE, commitment, and other positive attitudes can influence OCB. Therefore, employees who have high OBSE will become a strength within the organization.

Relationship between Servant Leadership and Job Social Support on Organizational Citizen Behavior (OCB) through Organization-Based Self Esteem (OBSE)
For the indirect relationship between servant leadership and OCB through OBSE, the test results show a t-statistics value of 1.805 with a significance level of 0.072. The original sample estimate value is 0.256, indicating a positive relationship. Based on the calculation, the significance value of 0.072 is greater than 0.05, so H0 is accepted, concluding that OBSE has a positive but insignificant mediating effect on the relationship between servant leadership and OCB. Conversely, the test results for the indirect relationship between Job Social Support and OCB show a t-statistics value of 2.404 with a significance level of 0.017. The original sample estimate value is 0.258, indicating

a positive relationship. Based on the calculation, the significance value of 0.017 is smaller than 0.05, so H0 is rejected, indicating that OBSE has a positive and significant mediating effect on the relationship between Job Social Support and OCB. The results of the analysis indicate that OBSE is able to mediate the relationship between job social support and OCB.

5. CONCLUSION

Based on the previous data analysis, it has been proven that Servant Leadership has a positive but insignificant effect on OCB, but it has a positive and significant effect on OBSE. The Social Support variable, on the other hand, has a positive and significant effect on OBSE but a negative and insignificant effect on OCB. However, this research concludes that Servant Leadership and Social Support play a role as antecedents to OBSE. In organizations with good leadership and social support, OBSE will be enhanced, which in turn affects OCB, leading to improved organizational performance in achieving shared goals. It is recommended for future studies to conduct research in sectors other than government, such as the service industry, finance, and others, to enrich the research topic. Additionally, it is suggested to increase the population and sample size to generate more comprehensive research conclusions. Furthermore, in future studies, it would be beneficial to include and incorporate other relevant variables to make the research in this area more comprehensive.

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THE INFLUENCE OF ORGANIZATIONAL CLIMATE AND JOB AUTONOMY ON PERFORMANCE THROUGH HARMONIOUS WORK PASSION AS A MEDIATING VARIABLE

Nurlita Nisa Handini[1], Tetra Hidayati[2], Siti Maria[3]

Faculty of Economy and Business, Mulawarman University, Indonesia

[*]*Corresponding author: nisahandini32@gmaol.com*

Abstract

Higher education institutions continue to demand professionalism from their employees in providing services, requiring employees to be aware of their responsibilities towards the organization's success. This study aims to investigate the relationship between Organizational Climate (X1) and Job Autonomy (X2) on Lecturer Performance (Y2) mediated by Harmonious Work Passion (Y1). The research was conducted at State Agricultural Polytechnic Samarinda in Samarinda city with a sample size of 112 lecturers. Data was collected using questionnaires distributed through Google Forms. The analysis approach was tested using Partial Least Square (PLS). The empirical findings validate that Organizational Climate and Job Autonomy play an important role in significantly enhancing Performance. Meanwhile, Harmonious Work Passion (Y1) has a positive and significant impact on Lecturer Performance (Y2). Moreover, when mediated by Harmonious Work Passion (Y1), Organizational Climate (X1) and Job Autonomy (X2) improve and are capable of enhancing Lecturer Performance (Y2). Lecturer Performance is crucial for the organization as it provides an overview of how the organization operates.

Keywords: *Organizational Climate, Job Autonomy, Harmonious Work Passion, Performance*

1.INTRODUCTION

State Agricultural Polytechnic Samarinda or Politani Samarinda, as one of the state higher education institutions in Indonesia, has been facing its toughest challenges in the past 28 years until now in producing highly skilled and experienced graduates in line with the needs of the labor market. This is one of the strategic objectives of Politani Samarinda in order to compete in the current educational landscape, where the number of higher education institutions in Indonesia has reached 3,151. Sianturi & Daryanto (2019) stated that there are 3,151 higher education institutions in Indonesia, indicating a high demand in the education market, with competent higher education institutions being the interest of all prospective students. In the Performance Report of Politani, it is stated that producing skilled, excellent, and entrepreneurial graduates is one of the important strategic goals within the educational environment of Politani Samarinda.

The challenge of producing the best graduates according to the needs of the labor market has become increasingly prominent, especially in the past three years. Based on data presented in the form of a graph, as cited by researchers from the Performance Report of Politani, it is evident that the teaching and learning process (KBM) is still hindered. This is due to the percentage of D4 and D3 courses that utilize project-based learning as part of the evaluation criteria. The target was set at 35%, but only 11% or 31.43% of the target was achieved. It is worth noting that only one program, namely Software Engineering Technology, has implemented this learning approach. There has

been a decrease from the previous year, as in 2021, the target of 35% was able to achieve 29%.

The failure to achieve the target of one of these indicators indicates the need for improvement in lecturer performance. Manopo (2019) states that higher education's quality improvement can enhance the education market and the nation's competitiveness through the mastery of knowledge and technology. By enhancing lecturer performance, the mastery of knowledge and technology can be ensured in the future. Salju (2020) asserts that competent lecturers in the digital era should have an impact on students, higher education institutions, and the education sector, particularly in producing job-ready graduates. Waluyo et al. (2023) argue that the product of lecturer-based performance is the production of graduates who meet the job market's qualifications. When the lecturers' teaching standards are met, supported by their success in producing competent students in actuality, the lecturer's performance is considered good. Li (2022) states that universities with a tradition of educating and training students must be able to quickly and collaboratively overcome challenges in the job market through performance improvement. This enables students to develop the necessary skills to fully participate in the future workforce.

Politani Samarinda has made efforts to improve lecturer performance by implementing five policy programs aimed at enhancing competence and professionalism. However, since its introduction in 2020, these programs have not shown optimal results. Therefore, it is crucial to address important factors that are believed to influence performance improvement. Olalekan et al. (2018) argue that many higher education institutions are finding it increasingly difficult to achieve their set performance targets due to various institutional crises. Kusumawati et al. (2020) state that as a result, continuous evaluation is conducted, focusing on lecturer performance to create human resources capable of innovation. However, improving lecturer performance is not limited to competence and professionalism alone, as there are other determining factors involved.

Based on field research, it is evident that the dense workload of Politani lecturers, who often work as experts in other non-educational institutions, combined with family responsibilities, leads to fatigue. This ultimately affects their ability to effectively fulfill their teaching schedules, resulting in suboptimal performance. Benitez et al. (2023) highlight a strong consensus regarding the negative impact of fatigue, such as a lack of enthusiasm for work, which is an important indication of performance hindrance. Hussain (2022) argues that Harmonious Work Passion is characterized by individuals who have a harmonious passion for their work and, as a result, experience improved performance. Ding (2022) adds that Harmonious Work Passion is believed to be a key factor in enhancing performance and is an important issue that needs to be addressed as it impacts workplace comfort. In the study by Jiantreerangkool & Boonsathorn (2019), Harmonious Work Passion refers to the focus and engagement individuals feel when performing tasks, and it has a direct positive effect on performance. However, the research by Kemie (2020) and Wulandari (2021) contradicts these findings and suggests that an employee's work passion does not necessarily lead to improved performance.

The differences in findings from previous researchers call for further research to identify factors that can enhance Harmonious Work Passion (HWP), one of which is organizational climate. Fatigue in work is not only a contributing factor to HWP, but observations conducted by researchers indicate that the work environment, such as harmonious relationships with colleagues, can increase work passion in the workplace. Organizational climate describes the quality of relationships within the organization, including relationships with colleagues and leaders at Politani Samarinda. If there is a harmonious work climate, lecturers will continuously develop their performance because they feel comfortable in the workplace. However, the lack of support and opportunities provided for participating in recognized training programs by external agencies can diminish work passion and create tension and dissatisfaction, leading to a less favorable work atmosphere and decreased performance.

The study conducted by Cheah et al. (2023) states that organizational climate is one of the explanatory factors that influence employee work passion. They recommend that companies providing a supportive work environment may have an influence in recruiting and retaining valuable individuals. Gao & Jiang (2019) suggest that harmonious passion can reflect the extent to which an activity has been autonomously internalized into a person's identity. Therefore, in line with the research conducted by Maqsood et al. (2023), organizational climate has an impact on Harmonious Work Passion (HWP). Organizational climate describes the quality of relationships within an organization, including relationships with colleagues and leaders at Politani Samarinda. If there is a harmonious work climate, lecturers will continuously develop their performance because they feel comfortable in the workplace. Paisal et al. (2019) state that organizational climate plays a crucial role in improving employee performance. Organizational climate generates patterns of the environment that foster motivation and focus on reasonable perceptions and impacts on employee performance. This statement supports the research findings presented by Mutonyi & Lien (2020), who found that organizational climate has a positive impact on performance. However, in contrast to those findings, Rizqi & Qamari (2022) and Siregar et al. (2023) found in their research that organizational climate has a non-significant influence on performance.

The factor of job autonomy emerges as a novelty in this research, where employees who are given a high degree of job autonomy tend to have high work passion, as they can freely channel their talents and skills in their work. Benitez et al. (2023) argue that individuals with Harmonious Work Passion are associated with those who are able to leverage job autonomy. In line with this, Jung & Sohn (2022) state that autonomy strengthens the positive effect of harmonious work passion on job enrichment. The research by Obeng & Zhu (2021) found that the mediating role of HWP can strengthen the relationship between job autonomy and performance.

Based on field research, it shows that in the work environment of Politani Samarinda, job autonomy has not been fully utilized, even though the institution has provided full freedom to lecturers to exercise their autonomy by independently developing the Semester Learning Plan (RPS) for each course for D4 and D3 students. This includes supporting project-based learning as part of the performance evaluation, where small groups of students collaborate to complete a practical project and present tangible products or new findings related to agricultural products. In line with this, E. Zhou (2020) found that job autonomy is not always a resource that consistently provides positive impacts. Excessive job autonomy can have negative effects on employees and organizations, in other words, "doing too many unnecessary things," which can result in neglecting what is truly important.

Autonomy in the context of performance is discussed by Tentama et al. (2020), who define performance as all activities involving employees to fulfill their obligations in achieving organizational goals and objectives. Individuals who lack autonomy are often characterized by a lack of responsibility and selfconfidence, which can ultimately impact their performance. Wong et al. (2022) highlight that in terms of performance, lecturers with high autonomy can minimize work stress as there is no intervention from the institution. Mworia et al. (2021) found in their research that job autonomy has a positive impact on performance. Similarly, Gao & Jiang (2019) state that job autonomy contributes to performance enhancement. However, a research gap is identified in the study by Putra et al. (2021), which suggests that job autonomy does not have an impact on performance. Furthermore, Dewi & Kurniawan (2023) argue in their research that organizations should not overly focus on the autonomy system if they want to achieve superior organizational performance.

Based on the presentation and research gap that has been discussed, an interesting research title would be: "The Influence of Organizational Climate and Job Autonomy on Performance through Harmonious Work Passion as a Mediating Variable" (A Case Study on Lecturers at Politani Samarinda).

2.LITERATURE REVIEW

Performance refers to the work outcomes that an individual or a group of individuals can achieve within an organization, both quantitatively and qualitatively, in accordance with their authority and responsibilities in an effort to achieve the goals of the organization, legally and ethically, without violating any laws or moral and ethical standards (Iendy Zelviean Adhari, 2019). Performance represents the accomplishments of an employee in the workplace based on specific criteria for a particular job (Budiyanto & Mochklas, 2020). The performance of educators is crucial in upholding quality, as it directly affects the performance and, most importantly, the satisfaction of students (Zulkarnain et al., 2023).

The performance of lecturers refers to the work outcomes achieved by lecturers within a specific period of time, in accordance with their authority and responsibilities as academic professionals. The operational definition of lecturer performance is the assessment of their performance in supporting the performance of the study program according to the Ministry of Education Department, which includes: (1) lecturers' role in education delivery, (2) lecturers' role in research implementation, (3) lecturers' role in community service, and (4) lecturers' role in supporting tasks (Nur Aisyah, 2019). Performance reflects the internal ability to perform and complete all tasks assigned to lecturers. These tasks are generally based on indicators of successful implementation (Silaen et al., 2021).

The performance of lecturers refers to the outcomes or level of success achieved by lecturers as a whole during a specific period of time in carrying out their tasks compared to various possibilities, such as work standards, targets, or predetermined criteria that have been agreed upon (Yamin, 2022). Lecturer performance is part of the results of educator competence, and if educator competence is low, their performance will also be low. Therefore, the performance of educators holds a crucial position in the context of enhancing and controlling the quality of education because the measurement is based on the competencies that indicate the quality of educators (Fauziyah et al., 2021).

The performance of lecturers is a part of the outcomes of educator competence, and if educator competence is low, their performance will also be low. Therefore, the performance of educators holds a crucial position in the context of enhancing and controlling the quality of education because the measurement is based on competencies that indicate the quality of educators. According to Fauziyah et al. (2022), there are four competencies mentioned as aspects of assessing educator performance, which are:

1. Pedagogical Competence: The ability to manage student-centered learning to achieve learning objectives.
2. Personality Competence: The ability to possess a stable personality, noble character, wisdom, and authority, and serve as a role model for students.
3. Professional Competence: The ability to understand educational foundations, plan the learning process, implement the learning process, and evaluate the learning process.
4. Social Competence: Having an inclusive attitude, acting objectively, and avoiding discrimination.

These four competencies must be fulfilled by professional educators to achieve quality learning outcomes.

2.1 Harmonious Work Passion

Harmonious Work Passion can be defined as a strong orientation towards work activities that are considered important by employees, and in its realization, individuals dedicate their time, energy, and personal and organizational resources. There are two types of passion that are distinguished:

harmonious (autonomous) and obsessive (compulsive). When passion is harmonious, work is internalized as an autonomous activity, meaning individuals voluntarily engage in it by deciding when and how to do it. If passion is obsessive, individuals feel compelled to work and have difficulty disengaging from workrelated matters (Benitez et al., 2023). Work passion can drive individuals to achieve career success, but it also has its drawbacks. Obsessive passion refers to a strong and compelling drive towards a series of self-imposed activities (Ding, 2022).

Harmonious Work Passion refers to an individual's internal drive to engage in an activity they enjoy. Work passion is one of the important inputs that "makes a difference in someone's life" (Hussain, 2022). Harmonious Work Passion is a response to holistic comfort, including strategies, policies, processes, production, and executive processes (Jiantreerangkool & Boonsathorn, 2019). Harmonious Work Passion is associated with various cognitive attitudes and outcomes, characterized by a strong inclination towards activities that are enjoyed, considered important, invested with time and energy, and internalized in one's identity (Obeng & Zhu, 2021). Harmonious Work Passion encompasses challenges, ease, and joy in work, transforming goals into effective performance. Work passion enables creativity and innovation, encourages employees to seek new sources of knowledge and possibilities, and build relationships within and outside the organization (Mantiri et al., 2023). Harmonious Work Passion is related to a strong inclination towards activities that allows individuals to be enthusiastic in engaging in those activities freely and voluntarily. Indicators to measure Harmonious Work Passion consist of four aspects: having intrinsic motivation, greater job satisfaction, higher engagement in their work, and experiencing less fatigue and work-related stress (El-Gazar et al., 2023).

2.2 Organizational Climate

According to Wirawan (2008:34) as cited in Arifin et al. (2020), organizational climate refers to the relatively enduring quality of the internal organizational environment experienced by its members, influencing their behavior and can be described in the form of a set of organizational characteristics or features. Organizational climate refers to the overall functioning of the organization from the perspective of employee roles. Thus, organizational climate is a metaphor that describes the individual employees' perception of their organizational environment. Zam-zam & Yustini (2021) add that organizational climate is something unique and intriguing, not visible or directly influenced, but its presence is strongly felt.

According to Litwin and Stringer as cited in Astar et al. (2023), organizational climate is also defined as a measurable set of workplace characteristics that are directly or indirectly perceived by individuals living and working in that environment, and its existence is assumed to influence motivation and behavior. Sirisha & Lakshmi (2019) argue that organizational climate is the collective perception of what exists within the organization, such as activities, strategies, processes, routines of organizational units, rewards, and planned behaviors. Simply put, organizational climate is a psychological collection of the work environment, which is the individual's perception of their work environment. However, defining climate within an organization is not an easy task as it is based on employees' perceptions (Paisal et al., 2019). Organizational climate is the human environment in which employees of an organization perform their work. From this understanding, it is clear that organizational climate encompasses all the environments that exist or are faced by individuals within an organization, which influence them in carrying out their organizational tasks (Sutrasna, 2022). Organizational climate is the environment in which employees of an organization perform their work. Climate surrounds and influences everything that operates within the organization, making it a dynamic concept. The indicators to measure organizational climate consist of Responsibility, Identity, Warmth, Support, and Conflict.

2.3 Job Autonomy

According to Hackman and Oldham, as cited in Prasetyo (2022), job autonomy is defined as the

provision of substantial freedom, independence, and discretion to employees to determine their work schedules and the procedures to be used in carrying out their tasks. In the study by Handayani et al. (2018), it is argued that job autonomy gives individuals the authority to make necessary decisions within their field of responsibility and in line with the tasks and responsibilities of their job. Job autonomy is also consistent with the job demands-resources theory, where job resources are aspects of a position that assist employees in achieving goals or meeting personal needs and expectations. Job autonomy has also been identified as a characteristic of professionals (Prataksita & Sasmoko, 2022).

Employees who have high autonomy are identified as being able to decide what, how, and when to perform assigned tasks. High job autonomy can give employees the time, energy, and freedom to engage in specific behaviors, thereby increasing their willingness and motivation to further develop and plan their work (Q. Zhou et al., 2019). In their research, Tentama et al. (2020) state that autonomy refers to an individual's ability to think and act without assistance or influence from others, as well as the ability to make decisions about what needs to be done. Job autonomy is a characteristic of work that can have many positive impacts. From the perspective of the job demands-resources model, on one hand, job autonomy can be a positive job resource, but it can also have negative implications. For example, excessive job autonomy can decrease employee happiness, and researchers have supported this view through empirical studies (E. Zhou, 2020). Indicators of job autonomy can be categorized into three categories: flexibility in scheduling work, independence in determining the procedures to be used in carrying out the work, and freedom in decision-making, which have been included in the contemporary conceptualization of job autonomy (Clemons et al., 2021).

2.4 Relationship Between Variables

2.4.1The relationship between organizational climate and harmonious work passion

In their study (Maqsood et al., 2023), it is argued that organizational climate is defined as the psychological and social characteristics and interactions among various groups working within an organization. Positive interactions within the organization can foster an increase in work passion. To enhance this service, the behavior exhibited by employees regarding their organization and the organizational work environment is an important focus of organizational behavior that can enhance work passion.

H1 : Organizational Climate has an impact on Harmonious Work Passion.

2.4.2 The relationship between job autonomy and harmonious work passion

Job autonomy refers to employees being highly self-directed and free to participate in workplace activities, enhancing their capacity and motivation to grow and prepare for the future (Peter et al., 2022). Job autonomy can increase work passion as it refers to a set of procedures or methods that involve hierarchical task assignment, giving employees more decision-making authority to fulfill their core responsibilities (Okolie & Egbon, 2023).

H2 : Job Autonomy has an impack on Harmonious Work Passion

2.4.3 The relationship between harmonious work passion and performance

Harmonious work passion is generally characterized by a strong determination to work hard in line with the goals to be achieved. This determination acts as a factor that fosters enthusiasm and

eagerness in performing tasks, particularly when they align with the lecturer's interests and competencies. Consequently, as an implication of this determination, it leads to a sense of comfort in working towards the achievement of organizational objectives. This comfort, in turn, contributes to positive work behavior, resulting in changes or improvements in performance (Hussain, 2022). H3 : Harmonious Work Passion has an impact on Lecturer Performance.

2.4.4 The relationship between organizational climate and performance

A positive internal organizational climate offers a collaborative and supportive working situation among lecturers, which can even motivate lecturers to enhance their work productivity, resulting in high performance (Paisal et al., 2019). It is stated that climate has a strong influence on the formation of an individual's attitudes in the workplace, particularly regarding personal relationships and performance. The perceived organizational climate by an individual affects the high work motivation of lecturers, thus leading to higher performance.
H4 : Organizational Climate has an impact on Lecturer Performance.

2.4.5 The relationship between job autonomy and performance

According to Mworia et al. (2021), job autonomy enables employees to participate in various activities due to the perceived comfort in their work, thereby enhancing their willingness and motivation to learn and further develop themselves. Tentama et al. (2020) state that autonomy can direct individuals to strive for improving their performance to assist organizations in achieving their targeted goals. H5 : Job Autonomy has an impact on Lecturer Performance.

2.4.6 The relationship between organizational climate, job autonomy, performance, and harmonious work passion as a mediating variable.

According to Gao and Jiang (2019), a supportive work climate and the provision of job autonomy can trigger the emergence of an internal drive, such as harmonious work passion. Jiantreerangkool and Boonsathorn (2019) state that this relationship leads to the development of innovative behavior or competitive advantage within the members of the organization, along with an improvement in performance.

H6 : Organizational Climate and Job Autonomy have an impact on Lecturer Performance through Harmonious Work Passion as a mediating variable.

Based on the explanation above, the proposed conceptual framework for this research is presented in the following diagram:

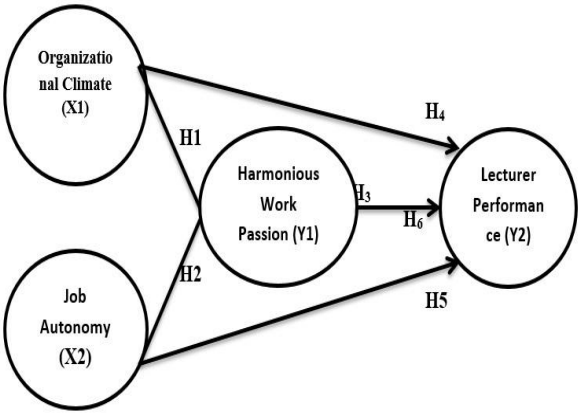

Figure 1. Framework

3.METHODOLOGY

The current research being conducted by researchers falls under the category of quantitative research, where numerical data is used as a measure for analysis in order to make decisions and answer research hypotheses. The selection of this method aims to provide objective results without being contaminated by researchers' perceptions (Neliwati, 2018). Quantitative research uses instruments (data collection tools) that generate numerical data. Data analysis is performed using statistical techniques to reduce and categorize data, determine relationships, and identify differences between data groups (Hermawan et al., 2021). Similarly, in the conclusion stage of the research, it is preferable to include figures, tables, graphs, or other visual representations to enhance the clarity of research findings.

This study is also designed with a descriptive correlational approach because it aims to identify the influence between variables. Descriptive correlational design seeks to investigate the reality as it naturally occurs, without manipulating treatments or subjects. The focus of this design is to measure the relationship between two or more phenomena (Fauzi et al., 2022). In this study, there are four variables that will be used: Organizational Climate (variable X1) and Job Autonomy (variable X2) as endogenous variables, Harmonious Work Passion (variable Z) as a mediating variable, and Performance (Y) as an exogenous variable.

The population used in this study consists of 130 lecturers from Politani Samarinda. The sampling method used is non-probability sampling, which is a sampling technique that does not provide an equal chance for every member of the population to be selected as a sample. One of the techniques used is purposive sampling, which is a method of selecting a sample based on specific considerations (Abdullah et al., 2021). The sample in this study must meet the characteristics of Civil Servants, have served for more than 2 years, and have undergone competency tests. Based on these characteristics, the researchers have determined a sample size of 112 respondents.

Data collection in this study is done through a questionnaire that contains questions and statements with a Likert scale ranging from 1 to 5 or from criteria of strongly disagree (SD) to strongly agree (SA). The questionnaires are distributed over a period of two weeks. The data analysis technique involves using Structural Equation Modeling (SEM) with the assistance of the Smart PLS software.

4.RESULT AND DISCUSSION

4.1 Outer Model Analysis

Phase I Outer Model Analysis

Table.1. Evaluation of Outer Model Stage 1

	Harmonious Work Passion (Y1)	Organizational Climate (X1)	Performance (Y2)	Job Autonomy (X2)
X1.1		**0,985**		
X1.10		**0,885**		
X1.2		**0,980**		
X1.3		**0,739**		
X1.4		**0,785**		
X1.5		**0,572**		
X1.6		**0,792**		
X1.7		**0,703**		
X1.8		**0,799**		
X1.9		**0,965**		
X2.1				**0,489**
X2.2				**0,870**
X2.3				**0,795**
X2.4				**0,787**
X2.5				**0,777**
X2.6				**0,320**
Y2.1			**0,617**	
Y2.2			**0,847**	
Y2.3			**0,920**	
Y2.4			**0,730**	
Y2.5			**0,719**	
Y2.6			**0,731**	
Y2.7			**0,093**	
Y2.8			**0,733**	
Y1.1	**0,836**			
Y1.2	**0,890**			
Y1.3	**0,882**			
Y1.4	**0,832**			
Y1.5	**0,234**			
Y1.6	**0,809**			
Y1.7	**0,790**			
Y1.8	**-0,111**			

Table 1 displayed by the researchers has shown that several variables have loading factors < 0.7, namely X1.5 with a loading factor of 0.572, X2.1 with a loading factor of 0.498, and X2.6 with a loading factor of 0.320. Y2.1 has a loading factor of 0.617, Y2.7 has a loading factor of 0.093. Y1.5 has a loading factor of 0.234, and Y1.8 has a loading factor of -0.111. Therefore, these indicators need to be removed, and a retesting is conducted. The output of Smart PLS for loading

factors provides the following results in the table:

Table 2. Outer loading Stage 2

	Harmonious Work Passion (Y1)	Organizational Climate (X1)	Performance (Y2)	Job Autonomy (X2)
X1.1		**0,477**		
X1.10		**-0,440**		
X1.2		**0,552**		
X1.3		**0,220**		
X1.4		**0,027**		
X1.6		**-0,363**		
X1.7		**-0,241**		
X1.8		**-0,147**		
X1.9		**-0,448**		
X2.2				**0,278**
X2.3				**0,765**
X2.4				**0,604**
X2.5				**0,462**
Y2.2			**0,222**	
Y2.3			**0,282**	
Y2.4			**0,549**	
Y2.5			**0,439**	
Y2.6			**-0,406**	
Y2.7			**0,451**	
Y1.1	**0,108**			
Y1.2	**0,617**			
Y1.3	**0,615**			
Y1.4	**-0,329**			
Y1.6	**0,465**			
Y1.7	**0,137**			
Y1.8	**-0,441**			

Several variables that did not meet the criteria have been removed from the loading factors, and a retesting was conducted. The researchers presented the results of this retesting in Table 2, which shows that all indicators have loading factors > 0.70. This indicates that all indicators are valid for measuring their respective constructs.

Average Variance Extracted (AVE)
This research has shown that the required number for research data to meet the AVE standard is > 0.5 which is presented in the table below.

Table 3. Outer model evaluation requirements

	Average Variance Extracted (AVE)
Harmonious Work Passion(Y1)	**0,651**
Organizational Climate (X1)	**0,699**
Performance (Y2)	**0,701**
Job Autonomy (X2)	**0,654**

The Average Variance Extracted (AVE) value for Harmonious Work Passion (Y1) is 0.651 > 0.5, Organizational Climate (X1) is 0.699 > 0.5, Performance (Y2) is 0.701 > 0.5, Work Autonomy (X2) is 0.654 > 0.5.

Discriminant Validity

It is mentioned that the research has demonstrated that the data meets discriminant validity because the data has the highest cross-loading values for each indicator compared to other variables. Here are the cross-loading values for each indicator:

Table 4. Discriminant Validity

	Harmonious Work Passion (Y1)	Organizational Climate (X1)	Performance (Y2)	Job Autonomy (X2)
Harmonious Work Passion (Y1)	0,388			
Organizational Climate (X1)	0,421	0,337		
Performance (Y2)	0,532	0,194	0,403	
Job Autonomy (X2)	0,163	0,307	0,252	0,476

The cross-loading testing, which shows higher values for each indicator within their respective constructs compared to indicators in other constructs, indicates that there are differences among the concepts of the variables measured through the indicators used to depict the research variables.

Composite Reliability

This research has shown that careful data shows a Composite reliability value of > 0.7, so the data used for research meets the data requirements.

Table 5. Composite Reliability

	Composite Reliability
Harmonious Work Passion (Y1)	0,289
Organizational Climate (X1)	0,362
Performance (Y2)	0,363
Job Autonomy (X2)	0,403

The composite reliability of each variable indicates that the construct values are > 0.70. This result shows that the data is stable and consistent from the beginning to the end of the observation period.

4.2 Inner Model Evaluation

R-Square

Based on data processing that has been carried out using the SmartPLS 3.0 program, the R Square value is obtained as follows:

Table 6. R-Square

	R Square	R Square Adjusted
Harmonious Work Passion (Y1)	0,698	0,836
Kinerja (Y2)	0,717	0,799

The test results have shown that the Harmonious Work Passion (Y1) variable has an R-square value of 0.836 or 83.60%. This value indicates that Organizational Climate (X1) and Job Autonomy (X2) account for 83.60% of the variance in Harmonious Work Passion (Y1), while the remaining 16.40% is influenced by other variables.

Similarly, the performance (Y2) variable has an R-square value of 0.799 or 79.90%. This value indicates that Organizational Climate (X1), Job Autonomy (X2), and Harmonious Work Passion (Y1) collectively account for 79.90% of the variance in performance (Y2), while the remaining 20.10% is influenced by other variables. ***Model Fit***

Based on data processing that has been carried out using the SmartPLS 3.0 program, the model fit values are obtained as follows:

Table 7**.** Model Fit

	Saturated Model	Estimated Model
SRMR	0,111	0,111
d_ULS	6,454	6,454
d_G	1,460	1,460
Chi-Square	803,655	803,655
NFI	0,680	0,680

The table above shows an NFI (Normed Fit Index) value of 0.680, indicating a good fit. This value suggests that the model used in this study has a high level of goodness of fit and is suitable for testing the research hypotheses.

Q-Square predictive relevance

Q-Square predictive relevance for the structural model in this research will prove that the measured data has shown good observation value. Q-square value > 0 indicates the model has predictive relevance;

Conversely, if the Q-Square value ≤ 0 indicates the model lacks predictive relevance.

Table 8. Q-Square predictive relevance

	SSO	SSE	Q^2 (=1-SSE/SSO)
Harmonious Work Passion (Y1)	812,000	825,259	0,063
Organizational Climate (X1)	1044,000	1044,000	
Performance (Y2)	696,000	713,763	0,114
Job Autonomy (X2)	464,000	464,000	

The Q2 value for the Harmonious Work Passion (Y1) variable is 0.063 > 0 and Performance (Y) 0.114 > 0, this proves that the observation value in this research is good and good because the Q square value > 0 (zero).

Hypothesis test Direct Influence

After testing the inner model, the next step is to evaluate the relationships between latent constructs as hypothesized in this study. Hypothesis testing in this research is conducted through Path Coefficients analysis by examining the p-values. Hypotheses are considered accepted if the p-values are < 0.05. Here are the results of the path coefficients from the hypothesis testing of direct effects

Table 10. Direct Effect Test Results

	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Harmonious Work Passion (Y1) -> Performance (Y2)	0,231	2,661	0,000
Organizational Climate (X1) -> Harmonious Work Passion (Y1)	0,264	2,732	0,001
Organizational Climate (X1) -> Performance (Y2)	0,332	3,380	0,000
Job Autonomy (X2) -> Harmonious Work Passion (Y1)	0,277	3,273	0,000
Job Autonomy (X2) -> Performance (Y2)	0,212	2,295	0,003

The conducted testing indicates that Organizational Climate (X1) has a positive and significant impact on Harmonious Work Passion (Y1) because it has a t-statistic > 1.960 (2.732 > 1.960) and

P-values (0.000 < 0.05). Job Autonomy (X2) has a positive and significant impact on Harmonious Work Passion (Y1) because it has a t-statistic > 1.960 (3.273 > 1.960) and P-values (0.001 < 0.05). Furthermore, Harmonious Work Passion (Y1) has a positive and significant impact on Performance (Y2) because it has a t-statistic > 1.960 (2.661 > 1.960) and P-values (0.000 < 0.05). Organizational Climate (X1) has a positive and significant impact on Performance (Y2) because it has a t-statistic > 1.960 (3.380 > 1.960) and P-values (0.000 < 0.05). Job Autonomy (X2) has a positive and significant impact on Performance (Y2) because it has a t-statistic > 1.960 (2.295 > 1.960) and P-values (0.000 < 0.003).

Indirect Influence

Testing the influence of Organizational Climate (X1) and Work Autonomy (X2) on Performance (Y2) through Harmonious Work Passion (Y1) in this research can be seen from the table below.

Table 11. Indirect Effect Test Results

	Specific Indirect Effects
Organizational Climate (X1) -> Harmonious Work Passion (Y1) -> Performance (Y2)	0,030
Job Autonomy (X2) -> Harmonious Work Passion (Y1) -> Performance (Y2)	0,004

The tests carried out show that the mediating impact of Harmonious Work Passion (Y1) can increase the influence of Organizational Climate (X1) on Performance (Y2) because it has a value of > 0.05 (0.030 <

0.050) and mediates the influence of Work Autonomy (X2) on Performance (Y2) because it has a value < 0.05 (0.004 < 0.050).

5. CONCLUSION

Organizational climate (X1) and job autonomy (X2) have a positive and significant impact on Harmonious Work Passion (Y1) and performance (Y2). Additionally, Harmonious Work Passion (Y1) has a positive and significant impact on performance (Y2). The mediating role of the variable Harmonious Work Passion (Y1) can also be seen as a mediating variable that enhances the positive and significant influence of organizational climate (X1) and job autonomy (X2).

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RELEVANCE OF P4 TEAM AS A TAX COUNSELING ORGANIZER: REVEALING PERSUASIVE EFFORTS OF SAMARINDA ILIR PRATAMA TAX SERVICES OFFICE IN ACCELERATING THE DISBURSEMENT OF TAX RECEIVABLE

Rahmad Wardiyansah[1], Zaki Fakhroni[2*]

[*]*Corresponding author: zaki.fakhroni@feb.unmul.ac.id*

Abstract

This research aims to reveal relevance of P4 Team as a tax counseling organizer through their role in accelerating the disbursement of tax receivables at Samarinda Ilir Primary Tax Service Office from tax officers perspective. Informants in this research are tax officers from Samarinda Ilir Primary Tax Service Office who are being the members of P4 Team. This research uses a study case approach with data collection methods through semi-structured interviews, observation and documentation. Results from this research shows relevance of the P4 Team as a tax counseling organizer through from their role in accelerating the disbursement of tax receivables. First, the P4 Team takes a direct role in implementing the strategies of persuasive efforts and the value of the Ministry of Finance into the work unit section. Second, the P4 Team takes a role in profiling taxpayers. Third, the P4 Team has a role in realizing coordination and synergy through tax counseling practices. Those roles have relevance with the problem of tax receivables that must be handled immediately at Samarinda Ilir Primary Tax Service Office. From their role, P4 Team can assist taxpayers in fulfilling their tax payable to be repaid immediately. The existence of P4 Team has the potential to enhance the tax income specifically from the material supervision and compliance sector. This research takes contribution to the Slippery Slope Theory that juxtaposes between enforced tax compliance and voluntary tax compliance. Contributing to practice, tax counseling has an important role in fostering voluntary tax compliance because it can provide taxpayers with essential knowledge and guidance regarding their tax receivables. Through offering expert advice and assistance, tax counseling can help taxpayers to understand about complexities of tax laws and regulations, thereby encouraging them to fulfill their tax payable willingly by. minimizing the frequency of tax audits.

Keywords: *P4 Team, Tax Receivables, Tax Counseling, Disbursement Of Tax Receivables*

1.INTRODUCTION

Tax is one of the components that have an important role in the life of a state. In utopian macro perspective, taxes are seen as one of part responsibility from citizens who take a role in fund government and become the backbone of state revenue for development (Santoso, 2019). In Indonesia, taxes are not only limited to one aspect as the source of state revenue to state development but also used in the social, economic, educational and other sectors (Adiyanta, 2020).

As one of the contributors in state revenue, tax system always continues to undergo reformation. The scope of reformation is not just only take a focus on the regulation of the applicable tax rate, but also take attention in updates the information system and tax collection procedures that already applied.

The Target and Realization Report from Samarinda Ilir Primary Tax Service Office is noted that in 2022 years, the nominal amount of tax revenue was at IDR 1,569,701,097,366. This revenue figure increased by IDR 491,830,777,551 or 45.6 percent higher when it compared with 2021 years which reached IDR 1,077,870,319,815. In addition, in 2022 there was an increase in the percentage of tax

revenue realization of 42 percent when it compared to 2021 years which is presented in the table as follows:

Table 1 Details of Target and Realization Tax Revenue Samarinda Ilir Primary Tax Service Office

Year	Receipt Target	Realization	Percentage Realization
2021	IDR 1.063.379.389.000	IDR 1.077.870.319.815	101%
2022	IDR 1.100.447.202.000	IDR 1.569.701.097.366	143%

Source: Samarinda Ilir Primary Tax Service Office Target and Realization Report, 2023

Furthermore, Directorate General Taxes (DGT) Performance Report also notes that the amount of Tax Bailiffs in nationally as of December 29, 2022 are 654 people. Ideally, the amount of Tax Bailiffs formations according to KEP-212/PJ/2021 jo. KEP-244/PJ/2021 are 863 people (Direktorat Jendral Pajak, 2022). So, there is a shortage of Tax Bailiffs in 2022. This condition certainly affects to the amount of tax collection actions that taken in order to accelerate the disbursement of tax receivables. At Samarinda Ilir Primary Tax Service Office, there is a shortage of tax bailiffs. Where the amount of tax bailiffs at Samarinda Ilir Primary Tax Service Office as of 31 December 2022 was only two people, this amount was not in accordance with amount of organizational needs, where ideally the minimum amount of tax bailiffs in each Tax Office is three people.

Departing from this phenomenon, Samarinda Ilir Primary Tax Service Office as the frontliner in collecting state revenue through taxes asserts that a special strategy should be implemented so that taxpayers can immediately settle their tax receivables. The strategy implemented includes increasing the synergy between work units as well as increasing the role of Tax Auditors, Functional Tax Appraisal and State Tax Bailiffs. In establishing special attention to taxpayers who experience tax arrears through the formation of a special work unit that can make persuasive approaches to taxpayers. Persuasive approach to taxpayers can be realized through the tax counseling practice. Tax counseling is a tool provided by DJP for taxpayers to clarify the data stated in the Appeal Letter.

In its optimization, tax counseling cannot be implemented partially through one section unit only. It requires synergy from all section units to optimize the implementation of tax counseling through a persuasive approach to taxpayers. Therefore, Samarinda Ilir Primary Tax Service Office formed a special unit team called the *Percepatan Pencairan Piutang Pajak*: Acceleration of disbursement of tax receivables (P4) Team. The P4 Team is a special work unit section that only exists at Samarinda Ilir Primary Tax Service Office. The P4 Team was formed as a special work team that initiated the implementation of tax counseling practice. In carrying out its role, P4 Team collaborates with all section units in Samarinda Ilir Primary Tax Service Office with the *Pemeriksaan, Penilaian dan Penagihan:*Inspection, Assessment and Tax Collector section unit as the leading unit in carrying out its duties.

The P4 team have a main focus to relevance the role of tax counseling as a persuasive effort in accelerating the disbursement of tax receivables. Research from Amilin (2017) shows that tax counseling is considered to massively strengthen taxpayers' awareness in complying with their tax payable. P4 Team also plays a role in assisting taxpayers in fulfilling their tax payable by providing information to taxpayers regarding the procedures for resolving tax receivables, the stages of collection actions that will be carried out to the legal consequences that can be caused if taxpayers are unable to fulfill their tax payable.Taxpayers are required to sign the minutes of commitment to pay tax arrears after receiving counseling regarding their arrears. Through a persuasive approach, P4 Team can understand the taxpayer's situation, specifically on the aspect of the taxpayer's ability to settle the tax payable. In carrying out its duties, P4 Team does not only

view taxpayers as tax contributors who play a role in state revenue, but taxpayers are also seen as part of "*kawan pajak*: Tax Friends" who need to be empowered.

This research uses case study approach that will reveal relevance of P4 Team as a tax counseling organizer. The research on tax counseling with a case study approach that had a focus on revealing persuasive efforts through P4 Team at Samarinda Ilir Primary Tax Service Office has never been carried before. So far, the research related to the role of tax authorities in tax receivables is still limited to identifying the role of tax bailiffs through tax collection on tax revenues, such as research conducted by Gea et al., (2023) explained that Tax Bailiff has a crucial role in the tax collection process which then has an impact on the receipt of tax receivables.

This research has objective to determine the relevance of P4 Team as a tax counseling organizer through from their role in accelerating the disbursement of tax receivables at Samarinda Ilir Primary Tax Service Office. In theoretical benefits, this research expected can be provides an overview about the practice of tax counseling in accelerating the disbursement of tax receivables so, it can be enriching literature to developing theories in the field of tax collection, especially those related to persuasive strategies that can be used as a reference in accelerating the disbursement of tax receivables. Results on this research are also expected can be a reference for the Tax Service Office and further research in understanding the determinants that can accelerate the disbursement of tax receivables.

2. LITERATURE REVIEW

In qualitative research, the utilization of literature review has the aim of placing the results of previous research into the discussion of newly discovered results in the context of studying the same problem. However, this does not absolutely define that the results of the research that has been carried out have deep similarities with previous research (Heriyanto, 2018). The use of relevant literature is a natural thing in qualitative research after data collection and analysis to find out more clearly about everything related to research (Ridwan et al., 2021). In addition, some qualitative researchers also argue that qualitative researchers are not advised to use literature review research at the beginning of the study before researchers collect data and then analyze the data (Afiyanti, 2016). This aims to prevent researchers from directing informants towards previously known research talks (Streubert & Carpenter, 2003). Thus, the used of literature review in qualitative research is not a necessity before the research is conducted.

2.1 Tax Receivables

According to the Director General of Taxes Regulation No. 08 of 2008, Tax Receivables are receivables arising from tax revenues as stipulated in the tax law, which have not been paid until the end of the financial reporting period. From the taxpayer's side, tax receivables are recognized as tax payable, so that according to Law No.19 of 2000 concerning amendments to Law No.19 of 1997 concerning Tax Collection by Force, tax receivables can be defined as taxes accrued by taxpayers including administrative sanctions in the form of interest, fines or tariff increases stated in the Tax Assessment Letter or similar letter based on the provisions of tax legislation.

2.2 Tax Counseling

Tax counseling activities are one form of guidance activities conducted by the Directorate General Taxes to taxpayers. Directorate General Taxes Regulation Number 170/PJ/2007 defines Tax Counseling as a means provided for taxpayers to clarify the data stated in the Appeal Letter. Appeal Letter is a letter issued by the Tax Service Office based on the results of internal research aimed at requesting clarification to the Taxpayer on the suspicion that tax obligations have not been fulfilled in accordance with the provisions of the tax law. Tax counseling is one of the efforts to improve voluntary taxpayer compliance, with the aim of realizing transparency in the process of

utilizing taxpayer data.

2.3 Slippery Slope Theory

Slippery Slope Theory is used by several researchers to study taxpayer compliance in recently years. This theory sees social-psychological variables to be as important as deterrence variables such as tax audit rates, and tax fines (Kirchler et al., 2008). This theory states that social psychological variables and deterrence effect have a positive relationship of influence on tax compliance (Ratmono, 2015). Social-psychological variables tend to influence voluntary tax compliance, while deterrence variables tend to influence tax compliance due to the fear of negative consequences (enforced tax compliance) (Mahadianto et al., 2017). In addition, Mahadianto et al., (2017) also explained that the slippery slope theory also states that policies aimed at increasing voluntary tax compliance depend on public trust in the authorities. Policies such as tax audits and fines tend to increase perceptions of the power of the authorities which will affect the enforcement of tax compliance. Based on this slippery slope, increasing public trust in tax authority policies should be prioritized to increase voluntary tax compliance(Ratmono, 2015) and (Mahadianto et al., 2017).

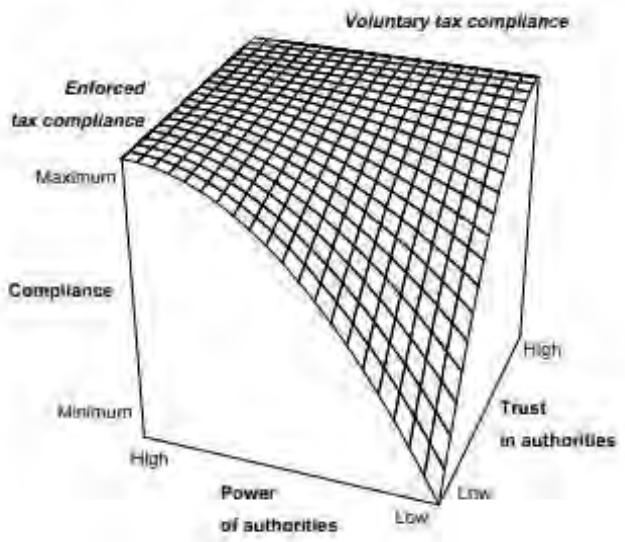

Figure 1 Model of the Slippery Slope Theory

Source: Kirchler et al., (2008)

According to the Slippery Slope Theory, taxpayer compliance is influenced by two primary factors: the trust of taxpayers and the oversight of the tax authority's taxation process. If taxpayers have genuine trust in the taxation process and are not influenced by the tax authority's power of influence, they will willingly pay their duties (Kirchler et al., 2008). If stringent tax audits are conducted to support taxpayer trust, there will be a significant increase in voluntary taxpayer compliance. However, it will continue to be elevated even in the event of a lenient tax audit. This is in line with research that conducted by (Yasa et al., 2019), which found that taxpayers' trust in the tax authority can encourage them to voluntarily pay their taxes without considering the tax authority's power of influence. Different compliance is shown if taxpayers have low trust in tax authorities. In conditions where taxpayers have low trust and low tax authority is weak, taxpayers will be forced to evade their taxes because they feel safe to do so offense, due to the weak tax authority overview of the tax process. Based on research by (Wahl et al., 2010), these conditions lead to low levels of taxpayer voluntary compliance. However, even when the taxpayer's level of trust is low, if the tax authority has high power in reviewing the tax process, taxpayers will be

afraid to avoid paying taxes so that they can be forced to pay their taxes, even though compliance is indeed forced (low taxpayer voluntary compliance).

3. METHODOLOGY

This research was one of qualitative research type that used case study approach. Case study is one of the approach that can be used in qualitative research. Slamet, (2019) defines qualitative research as one of type research that aims to gain an in-depth understanding of the reasons underlying behavior and ways of thinking by explaining the quality of social phenomena that cannot be described through a quantitative approach. This research conducted at Samarinda Ilir Primary Tax Service Office, Samarinda as the agency office that formed P4 Team. P4 Team is a work unit that plays a role in accelerating the disbursement of tax receivables at Samarinda Ilir Primary Tax Service Office.

The data type that used in this research are primary data and secondary data. Primary data is data obtained by researchers through words described by informants to be further analyzed and interpreted by researchers. Primary data in this study was obtained by conducting research in directly on the intended research object in order to obtain correct and reliable data. Meanwhile, secondary data in this study were obtained through the Directorate General Taxes Performance Report, applicable tax laws and regulations.

To obtain relevant data and information, this research uses primary data sources which obtained in directly through informants. Researchers will review the object of research in directly by compiling a list of questions, doing observations, conducting semi-structured interviews and conducting documentation, directly with the informants who have been determined.

The criteria for informants in this research are as follows:

1. Civil servants who are fiscal officers, served at Samarinda Ilir Primary Tax Service Office and willing to be interviewed.
2. That fiscal officer is a member of P4 Team and understands the flow in the process of accelerating the disbursement of tax receivables. These criteria are determined with the assumption that the informan knows in detail about the process of disbursement of tax receivables so, the informants can be trusted to provide an overview about background of the establishment P4 Team, strategic of persuasive efforts, untill the implementation of these persuasive efforts at Samarinda Ilir Primary Tax Service Office in accelerating the disbursement of tax receivables.

Based on these criteria, the amount of informants determined in this study was 3 (three) people from P4 Team with details of 1 (one) informan from each work unit of the examination, assessment and collection section as the leading unit that has a crucial role in the implementation of accelerating the disbursement of tax receivables. This Informants is considered to have represented the delivery of information that needed in this research. The researcher will hide the identity of the informants and only mention the initials of the name and work unit section in order to protect their privacy. So, the informants that selected based on the criteria mentioned are as follows:

Table 2 Informant

Informant	Information Obtained
Tax Bailiff of the Samarinda Ilir Primary Tax Service Office: (MF)	Information on the background of the formation P4 Team, the important role of tax bailiffs in P4 Team
Tax Auditor Executive of the Samarinda Ilir Primary Tax Service Office: (NAH)	Information on the background of the formation P4 Team, the important role of tax auditors in P4 Team

Functional Tax Appraiser of the Samarinda Ilir Primary Tax Service Office: (DAN)	Information on the background of the formation P4 Team, the important role of tax assessors in P4 Team

Source : Researcher, 2023

To obtain relevant data, researchers used 3 data collection methods, there are: interviews, documentation and observation to be further analyzed using triangulation of data sources. Hadi, (2016) explains that the data source triangulation technique is used to compare the results of interviews from informants with the aim of obtaining facts to strengthen the validity of the research results.

1. Interview, according to Herdiansyah, (2013) interview can be defined as a process of communication interaction conducted by at least two people based on availability in a natural atmosphere, where the conversation leads to a predetermined goal by prioritizing trust as the main foundation in the process of understanding. Researchers asked questions based on semistructured interviews. According to Sugiyono, (2017) semi-structured interviews are one of the process interviews where the research subject can provide free and unrestricted answers, but the subject under research should not out of the flow from the predetermined theme. Questions in semi-structured interviews can be evolve by adjusting in conditions and information obtained during the interview process. Guidelines in semi-structured interviews are not fixed and detailed as in structured interviews. So, the information that expressed from informant can be broader. The questions that have been prepared before are only used as guidelines, so the interviews process can be more focused on the objectives and avoid unnecessary topics of conversation.
2. Documentation, is one of data collection technique through the search for accurate evidence based on the focus from research problem. Through the documentation method, researchers will explore data in the form of tax revenue realization reports, profiles of work units involved, photo documentation and others.
3. Observation, is one of the data collection techniques carried out by researchers through a process of direct in-depth observation of the object of research. Through observation, researchers can see and understand the tax counseling activities carried out by P4 Team.

The data analysis technique used in this research uses a Case Study approach with a research model according to Creswell, (2015). Before conducting research, researchers must determine whether a case study approach is appropriate for reviewing research problems. Case studies were chosen in this research because it is in accordance with the research objectives who want to gain an in-depth understanding of a particular case, namely the Relevance of P4 Team as the tax counseling organizer as a persuasive effort in accelerating the disbursement of tax receivables. After the identification process was completed, the next step was to collect data. Data collection is obtained through various sources of information such as observation, interviews, documentation and observation processes. In this study, the sources of information that became research data came from interviews, documentation, and observation results. The technique of analyzing and presenting narrative research with a case study approach according to the Creswell, (2015) method as follows:

1. The data analysis process begins with write the interview results into written notes in the form of interview transcripts as a form of creating and organizing files for research data.
2. Read through the data, making notes of findings and forming initial codes. In an effort to find meaning in relation to information from research data, the author conducted a reassessment of the results of the data collected. The reassessment of the data aims to obtain the meaning of the information conveyed by the informants while reducing the data by adjusting to the research focus.
3. Doing categorical aggregation to form themes and patterns
4. Presenting themes or concepts derived from the categorical process into a report of research findings.

5. Interpreting the research findings.

4. RESULTS AND DISCUSSION OF RESULTS

4.1 P4 Team Overview

P4 Team was formally established through from a Decree of the Head Office (KEP) which also established several sub-teams to support their performance role. Results of interviews with informants that explaining the legal basis for the establisment P4 Team at Samarinda Ilir Primary Tax Service Office are as follows:

"...The P4 team was authorized through KEP (Head of Office Decree) which contains several teams. So there are 4 sub-teams and each sub-team has its own role. Some are in the field of data and information collection. Some are focused on approaching taxpayers and some are observing and profiling taxpayers."

(NAH)

Based on the interviews that have been carried out, it can be known that each work unit section which is incorporated to P4 Team has the same vision to always synergizing to achieve the goal of accelerating the disbursement of tax receivables.

In accordance with the name of team, P4 Team has the main objective of accelerating the disbursement of tax receivables with the main focus on the implementation of persuasive efforts to taxpayers. The main objective of P4 Team is illustrated in the results of interviews with informant as follows:

"...Well yes, if one goal is returned to the P4 team again, the goal is tucked in there, the goal is to educate taxpayers to be more aware with their tax receivables, namely through DHDC, which is now called the Acceleration of Tax Receivable Disbursement, according to the name of the team. So, there we prioritize persuasion and education."

(MF)

Based on the results of these interviews, it can be seen that in order to accelerate the disbursement of tax receivables at *KPP Pratama Samarinda Ilir*, P4 Team has four special subteams unt, there are: data collection unit sub-team, approach unit sub-team, observation unit subteam and taxpayer profiling unit sub-team. P4 Team has the main objective of accelerating the disbursement of tax receivables by focusing on the implementation of persuasive collection of tax receivables to taxpayers.

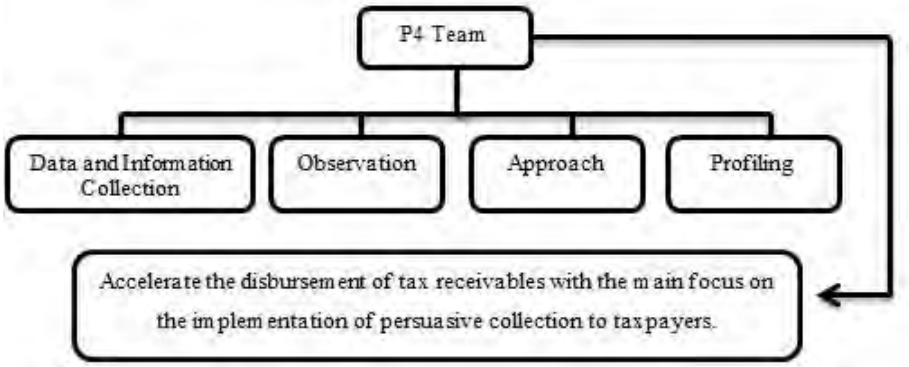

Figure 2. P4 Team General Overview
Source: Researcher, 2023

4.2 Role of P4 Team In Accelerating the Disbursement of Tax Receivables

4.2.1 Implementing Persuasive Efforts and Ministry Of Finance Value Into The Work Unit Section

Implementation comes from word of "to implement" that means to implement. Implementing can be interpreted as a provision of means to carry out something that can have an impact on something. In this context, something can be interpreted as a policy that involves concrete steps in accelerating the disbursement of tax receivables. P4 Team acts as a party directly involved in the process of implementing the Ministry of Finance's persuasive and value strategy into the work unit. P4 Team has a central role in carrying out the implementation of persuasive efforts by integrating the values of the Ministry of Finance in order to realize the quality of service to taxpayers. The results of interviews with informants that illustrate the role of P4 Team in implementing persuasive efforts are as follows:

"...the persuasive efforts becomes our basis in implementing it. So, instead of being harsh and putting a boundary between the Tax Authority and the Taxpayer. We prioritize the persuasive effort." (NAH)

"...the persuasive effort is prioritized, then if based on the existing data, the persuasive effort has not been implemented, it will be increased to further activities like that."

(DAN)

"...we must continue to prioritize excellent service. There are five values of the Ministry of Finance. Integrity, professionalism, synergy, service, perfection. We must uphold them. So our goal is to serve the people."

(MF)

Results from interview explain that P4 Team has a role in implementing persuasive efforts that oriented towards to excellent service quality rather than be harsh and put wall boundaries between tax authorities and taxpayers. The wall boundary intended is based on a rigid, formal and authoritarian approach in the process of interacting with taxpayers. In addition, the value of synergy can be implemented through the process of build and ensuring productive internal cooperative relationships by establishing harmonious partnerships with stakeholders in order to produce a useful and quality idea. Through this practice, the value of synergy is not only interpreted as a value concept but must also can be realized in the internal coordination process to achieve optimal results in accelerating the disbursement of tax receivables.

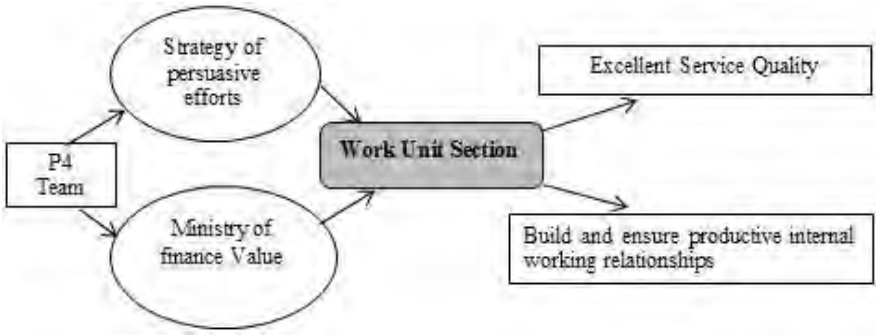

Figure 3 The Role of P4 Team in Implementing the Ministry of Finance's Value and Persuasive Efforts
Source : Researcher, 2023

4.2.2 Conducting Taxpayer Profiling

In order to achieve the target of tax receivable disbursement at Samarinda Ilir Primary Tax Service Office, there are several legal products that can be used as an effort to disburse tax receivables. These legal products include the issuance of a *Surat Teguran, Surat Paksa, Surat Perintah*, Confiscation Action, other efforts such as blocking taxpayer accounts, seizing assets, auctions and others that can be justified by law. However, the issuance of these legal products requires complete information regarding taxpayer data so that the process of disbursing tax receivables can be carried out appropriately and in accordance with applicable legal provisions. Besides doing collection actions on available tax receivables, P4 Team also take a role to finding and completing taxpayer data. The following data below are the results of interviews with informant that describe the role of P4 Team in searching and completing taxpayer data:

"...The P4 team was also deployed to search for taxpayer data."

(MF)

"...in addition to collecting about existing receivables, we also expand the databases so that in the future when an arrears of existing tax provisions needs to be followed up with a further collection process, such as confiscation to prevention, we already have the master data file..we do the profiling so that the tax collection is carried out more deeply."

(NAH)

Process in finding and completing taxpayer data can be retrieved by profiling taxpayers. Taxpayer profiling can be help fiscus officer in knowing taxpayer data comprehensively. All taxpayer data is then stored in a database called Taxpayer profile. This profile contains important information on taxpayer data that the tax authorities need to know. Thus, further coordination is needed in finding information about taxpayer data. The effort can be done by visiting, hunting through online media, file research and others. Making data on taxpayer profiles plays a role in monitoring taxpayer compliance so that it can facilitate tax authorities in efforts to accelerate the disbursement of tax receivables. Through taxpayer profiling, the tax authorities can find out the location of the taxpayer's residence, track record, chain of business operations and assets owned by the taxpayer in case of evasion from the taxpayer or when the taxpayer runs away from the obligations that must be fulfilled. The following is one of the formats of the taxpayer profile contained in the Directorate General of Taxes Information System Website.

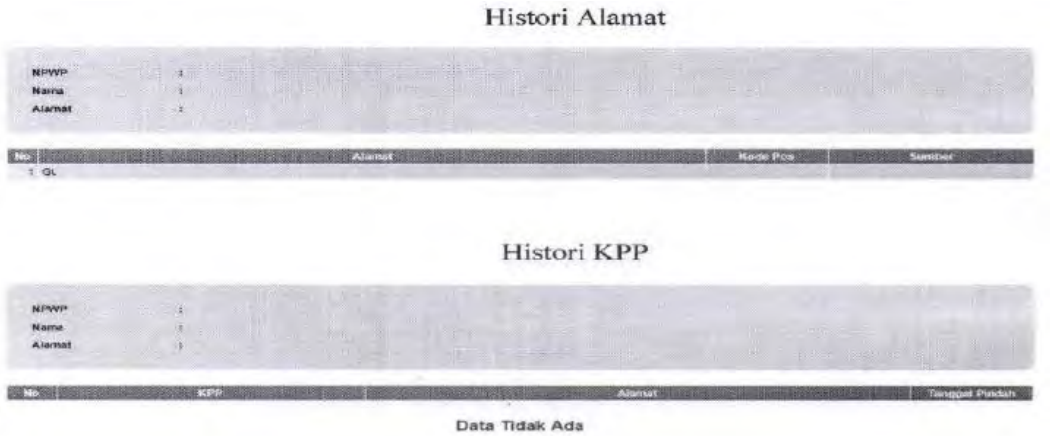

Figure 4 Taxpayer Profile Format

Source: Samarinda Ilir Pratama Tax Services Office (edited), 2023

Based on the example of a taxpayer profile contained in the Directorate General taxes information

System Web through the picture above, there is a sentence "*Data Tidak Ada:* Data doesn't exist" which mean indicates that the data is incomplete so, the profile of the taxpayer needs to be completed immediately. P4 team has a crucial role in the process of completing data related to the taxpayer profile as an effort to accelerate the disbursement of tax receivables. The following are the results of interviews with informants that show the need to expand the database evenly through taxpayer profiling:

"...KPP Pratama Samarinda Ilir itself still has an assignment in expanding the taxpayer profiling. So, sometimes we are too concerned with one potential taxpayer to continue to explore the potential and tax collection. In the end, maybe, not forgetting, but maybe there are other taxpayers who might be displaced, even though the profiling should be done evenly, especially for one particular commodity, which should be examined by research and should be used as a mirroring for other sectors."

(NAH)

Based on the results of the interview, it can be seen that P4 Team has a role in profiling taxpayers. P4 Team is involved in the process of expanding the taxpayer database evenly to all taxpayer sectors and commodities. Database expansion through taxpayer profiling can be an effort to provide a more accurate picture of the potential disbursement of tax receivables from each sector by ensuring that each taxpayer can be given special attention evenly. In addition, the result of taxpayer profiling can also be used as a reference or reflection of the audit process for other sectors. This indicates that the findings in the tax profiling process can be adapted to serve as a description by the tax authorities of the business operational chain in other taxpayers' commodity sectors with similar characteristics. Thus taxpayer profiling efforts not only provide direct benefits in knowing comprehensive information about a taxpayer's sector and commodity but can also be a

medium that can increase efficiency in accelerating the disbursement of tax receivables.

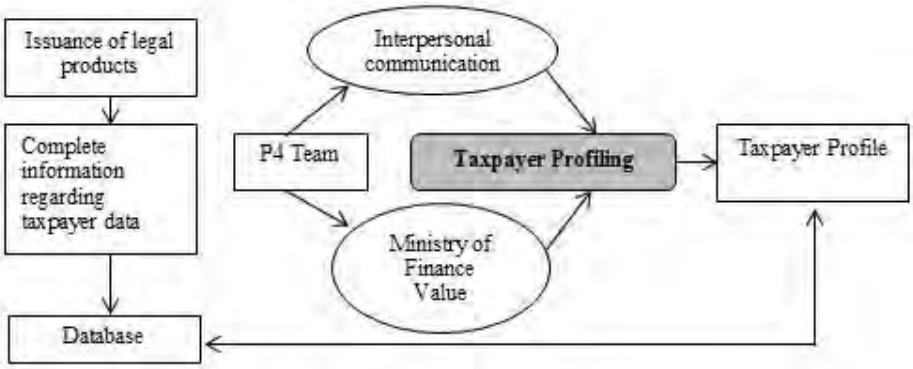

Figure 5 P4 Team Role In ProfilingTaxpayers
Source: Researcher, 2023

4.2.3 Realizing Coordination and Synergy Through Tax Counseling Practice

Coordination and synergy of fiscal officers refer to efforts that can be work together in an integrated and efficient. In this case, the coordination role carried out by P4 Team in implementation of tax counseling is more directed to its role in initiating data exchange, system integration and synergy in accelerating the disbursement of tax receivables. Data exchange and system integration can be realized through integrated coordination through P4 Team involving tax bailiffs, tax auditors and tax appraisser in validating tax arrears that owned by taxpayers. P4 Team acts as a special work unit section that accommodates the coordination process. The role of P4 Team in realizing coordination and synergy through tax counseling practice is illustrated through the following interview results:

"...we realize the form of coordination and synergy in the P4 Team. So, we make and emm...so that if in the P4 Team, the advantage is that there are other programs, yes, when we deal with taxpayers, we have..ee..backups that are indeed from direct sources."

(MF)

The value of synergy through tax counseling practice is one form of effort to optimize strategies in accelerating the disbursement of tax receivables. The implementation of synergy values from all unit section can strengthen the role of availability from tax authorities. So, the education process from tax officers to taxpayers can be carried out in quickly. The following are the results of interviews with informants that describe the denote of synergy through tax counseling practice: *"...why we need other synergies is because of the acceleration effort, to be fast, we need a lot of energy. So the term is why the P4 Team carries the theme of acceleration and there are more people invited at once so that it will be faster, the faster we provide education to taxpayers. The faster the taxpayers can fulfill their obligations or choose to exercise their rights, the easier the settlement will be."*

(MF)

The informants statement was reinforced by the results of observations that conducted by researchers who observed that in the implementation of tax counseling practice, there was coordination and synergy that carried out by P4 Team in providing directions to other section units To facilitate the resolution of taxpayer arrears and aid in giving taxpayers with explanations. The results of the researcher's observations can be seen in Figure 6 as follows:

Figure 6 Coordination Through Tax Tax Counseling

Source: Researcher, 2023

Coordination and synergy realized by P4 Team can be straightforwardly carried out by providing more mandatory directions to each section unit as a form of position affirmation and strengthening the availability of tax authorities so that the education process through tax counseling can be carried out quickly. The results of interviews with informants that show coordination and synergy aimed at providing mandatory directions are as follows:

"Our synergy is more realized with the existence of the P4 Team, so that the information and tasks and functions are firmer. Who is this taxpayer, ask the AR. But we need it on the same day, but sometimes the AR is no longer there, sometimes thy visiting, sometimes they has something to do, we don't know right ... so every time there is an activity, you are ready, whatever happens, if you can explain it, what the problem is, so it's for position affirmation. If you say this is applied to other tax offices, you caN. DJP is the same. But the reason why there is a P4 Team is again to strengthen the avaliability...So that the task is clear."

(MF)

Based on the results of interviews and observations that made by researchers, it can be seen that P4 Team take a role in realizing coordination and synergy through tax counseling. The coordination and synergy are realized through mandatory assignments by strengthening the availability of each tax officer in the implementation of tax counseling.

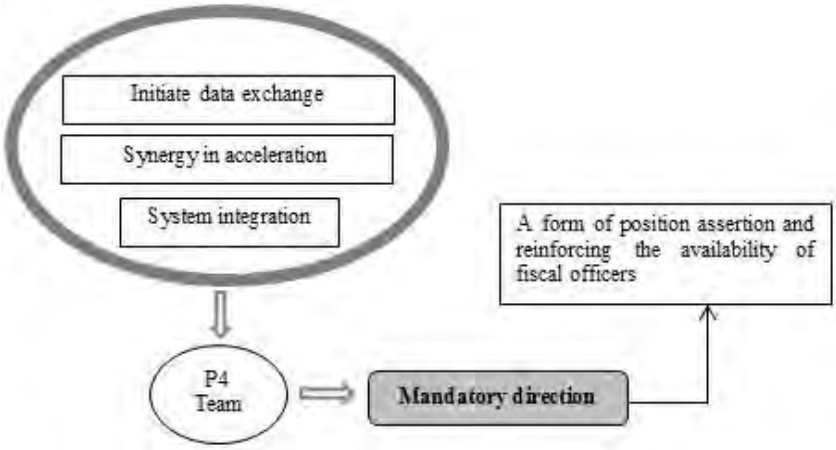

Figure 7 The Role of P4 Team in Realizing Coordination and Synergy Through Tax Counseling
Source: Researcher, 2023

Implementation Of Persuasive Efforts Acceleration of disbursement of tax receivables Program

Acceleration of disbursement of tax receivable is a tax counseling practice as the flagship work program Team P4. At the first time, Percepatan Pencairan Piutang Pajak program was namely DHDC (Dua Hari menjadi Debt Collector: Two days being Debt Collecror). However, because the connotation of the name, Debt Collector was considered unfavorable, this program then renamed to be Acceleration of disbursement of tax receivables program in accordance with the name of P4 Team. The results of interviews with informan that show Acceleration of disbursement of tax receivables program is a flagship program of P4 Team are as follows:

"...one of the flagship programs in the P4 Team is DHDC."

(NAH)

"...which nowadays is called the Acceleration of Tax Receivables Disbursement, according to the name of the team."
(MF)

Acceleration the disbursement of tax receivable program had a objectives to give attention to the taxpayers who have low tax payable arrears that are often overlooked while implementing persuasive efforts to appeal to taxpayers through education with the concept doing by calling taxpayers in simultaneously way. The types of tax arrears that being concern in acceleration of disbursement of tax receivable programs are all types of taxes who are included in the National tax category with the basis of implementation to taking attention in to the formil aspects of taxation. The formil aspect means that the taxpayer can only be known to have tax arrears after the tax officer issuance of "*Surat Ketetapan Pajak*: Tax Assesments". The results of interviews with informants showing that the acceleration of disbursement of tax receivable program has a focus on giving attention to taxpayers who have low tax arrears with the concept by calling taxpayers in simultaneously way are as follows:

"We also establish a program to accelerate the disbursement of tax receivables, the purpose is also to give attention to small arrears that are often overlooked and make persuasive efforts in the sense of appealing first by educating." (MF)

"Taxpayers are summoned simultaneously based on the STP, no longer personally one by one,

now from the simultaneous summons later, all section units are expected to be on standby as well to provide explanations to taxpayers." (MF)

"The types of taxes are all, but it is more about the nominal arrears and material aspects."

(MF)

Tax assesments and Tax bill letter are the basis for calling taxpayers in tax counseling practice through acceleration of disbursement of tax receivable program. Tax assesments consist about taxpayers financial information records in a certain of accounting period that issued by tax auditors. Meanwhile, Tax assesments is issued by the tax Account Representative in connection with a tax bill letter. The basis for calling taxpayers through Tax assesments letter and Tax bill letter are explained by the informan through the following interview results as follows:

"...the balance of arrears is the result of the examination, so if I can say that the role of the examiner is more like counseling assistance, for some taxpayers whose cases are the result of arrears from the examination." (NAH)

"The core part is that the audit produces a Tax Assessment Letter. Well, each of the results, there are SKPKB, SKPLB, SKPN if it is zero. Well, the result of the SKP is called tax debt, now the tax debt has a period of time, within one month from the issuance it should have been paid. But in reality, it's not always like that, so there is a continuation to the collection section, so for tax debts that are not paid according to the predetermined time period and become tax arrears, they are billed to taxpayers."

(NAH)

"So if you can say that the supervision issues the STP, even if the STP is issued, it can be said that the taxpayer if for example there is eee what is the subtle language. Maybe in plain language, he might have made a mistake, be it for example late payment, late reporting, so it's not wrong either." (MF)

In the implementation of tax receivable disbursement acceleration program, the tax bailiff acts as the leading unit in initiating the tax counseling practice. Departing from the implementation of the accelerated tax receivable disbursement program carried out by calling taxpayers in simultaneously way, the tax bailiff as the leading unit is also assisted by all the members of P4 Team. The following are the results of interviews with informants who explain the role of tax bailiff as the leading unit in acceleration of disbursement of tax receivable program as follows:

"The tax bailiff himself in the P4 Team is indeed the leading in the sense that he is the owner of the billing ... optimization as the leader of the P4 Team so, for example, if a friend has difficulties, difficulties or difficulties in dealing with WP who are less cooperative, the Bailiff must be ready to back up, we can explain more optimally." (MF) *"...the collaboration process is like if we invite many taxpayers at once, for example, there are only two bailiffs in this office. So it is impossible for all tax bailiffs to meet. Of course there is a role for our P4 Team friends."* (MF)

In addition, there is also an internal meeting process that conducted P4 Team to determine the targets for the implementation of acceleration of disbursement of tax receivable program. In every evaluation, P4 Team always doing payment capability from taxpayers until they finds the most effective composition of amount taxpayers and the amount of arrears that need to be implemented. However, in several conditions, there are separate considerations that made by P4 Team through the head of the collection section and tax bailiffs decisions. This is explained by Informan NAH in the following interview:

"So, in the implementation of tax counseling, we usually have a small meeting to determine the target. So, not always those who, for example, the amount of debt is large like 100 million and above, not always those who are 10 million and below, we see from each evaluation. In each evaluation we map, for example in this tax counseling we take the 100 million and above with the

number of WP, let's say from each tax bailiff is 100. Then we see how many came, and how many arrears turned out to be paid if for example the target was not right. We try to shift the target until we find the composition of the number of invitations and also the layer of arrears that is most effective. But again, yes, because everything can't be too theoretical. So sometimes the number also has its own considerations from the bailiff and section head.

(NAH)

The method of implementing tax counseling through acceleration of disbursement of tax receivables program is carried out based on cases that perceived by taxpayers. For example, if there is a taxpayer who has tax arrears in connection with the assessment results from the audit, the tax auditor can assist in tax counseling practice. Tax auditors take a role in providing explanations and clarifications related to the audit results to taxpayers and explaining the legal consequences that can be caused if taxpayers do not immediately fulfill their Tax Payable. Methods implementation of tax counseling is explained by informants through the following interview results:

"Case by case, they do not stand by. As an example, suppose a taxpayer's tax arrears are the consequence of an audit. Well, if the examiner is present, he will assist with the counseling." (NAH)"

"Their job in the execution of tax counseling is that of a counseling partner because we observe that when there are arrears, there are WP arrears. So, for example, when SKP is billed, we bring the examiner directly, so yes, this is a result of a failure to comply with tax duties. So, for example, if WP wants to ask questions, there is someone who wants to answer them, and the questions are valid, they can be sent to the source. So, for example, if it is billed for SKP, we bring the tax auditor directly, so yes, this is a result of a missed opportunity to implement the tax responsibilities."

(NAH)

The informant statement above is reinforced by the results of observations from researchers who observed that in the implementation of acceleration the disbursement of tax receivable, tax bailiffs are assisted by functional tax auditors in order to provide explanations and clarifications regarding the results of the audit process and explain the legal consequences that can be arise if the taxpayer fails to promptly fulfill their tax obligations The results of the researcher's observations can be seen in Figure 4.8 as follows:

Figure 8 Implementation of Tax Receivables Disbursement Acceleration Program
Source: Researcher, 2023

The explanation of legal consequences that can be arises if taxpayers do not fulfill their tax payable aims to educate and giving deterrent effect to taxpayers. The deterrent effect that given to

taxpayers aims to provide encouragement and motivation so taxpayers can immediately settle their tax payable arrears. In addition, the deterrent effect is expected to provide the same overview to the other taxpayers related with the tax receivable settlement process. The results of interviews with informants that show the role of deterrent effect in motivating taxpayers are as follows:

"There are certain taxpayers who should be treated in a way that has a deterrence impact. So, the hope is that if one taxpayer is affected. So, the hope is that when one taxpayer is touched, it will cause a domino effect, so the audit team will provide counseling assistance while being informed of the consequences, such as if they are not compliant because some have attempted to be educated, given counseling education in supervision, and it turns out that there are still some missed obligations that have not been fulfilled, so we increase the treatment level in the audit. Well, the objective is to have a deterrence impact. As a result, even those who have not undergone the inspection procedure are reflecting. Okay, it should be like this; it has a significant impact on certain commodities, which are fairly strong from the network."

(NAH)

The deterrent effect treatment commences by engaging a community of specific taxpayer commodities through the implementation of fundamental measures, commencing from the lowest tier. This involves the provision of monitoring to one of the most influential taxpayers within a particular community. The surveillance process commences with the dissemination of knowledge through tax counseling services and the assessment of taxpayers' tax reporting, with the understanding that the treatment provided is solely confined to the evaluation phase of tax payment and reporting. However, in actuality, as observed by the P4 Team, the delivery of therapy to taxpayers does not consistently operate in this manner. Despite receiving instruction, surveillance, and tax counseling from tax authorities, certain taxpayers continue to commit errors, necessitating further intervention up to the tax audit stage. It is anticipated that granting preferential treatment to the primary taxpayer in a certain taxpayer commodity will have a deterrent impact on other taxpayers, as they may contemplate the treatment that has been previously administered.

Based on the results of interviews and observations that conducted by researchers, it can be seen that the implementation of persuasive efforts through tax counseling practices can be realized through the acceleration of disbursement tax receivable program. Acceleration of disbursement tax receivable program focuses on providing attention and education to taxpayers who have low tax arrears through the concept of calling taxpayers in simultaneously way by involving all section units in Samarinda Ilir Primary Tax Service Office. The education method that used is in the form of an approach to the case experienced by the taxpayer. The implementation of the acceleration of disbursement tax receivable program also aims to provide a deterrent effect of taxpayers through the process of providing treatment to one dominant taxpayer in a particular commodity community. The provision of deterrent effect aims to provide encouragement and motivation for taxpayers to immediately settle their tax debt arrears.

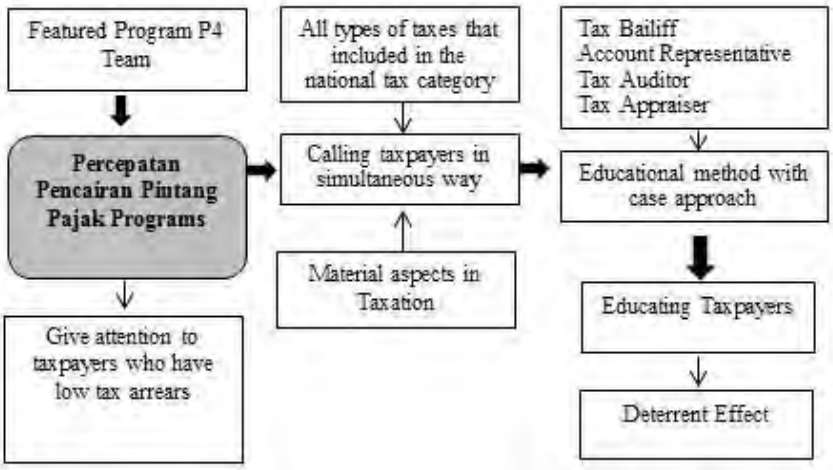

Figure 9 Scheme of Tax Receivables Disbursement Acceleration Program Source: Researcher, 2023

Serving With Assertive Behavior

Assertive behavior is a translation of the term assertiveness or assertion, which has the meaning of a midpoint between non-assertive behavior and aggressive behavior, in other words, assertive behavior is the behavior to maintain a principle by expressing it through thoughts, feelings and beliefs conveyed directly in an appropriate manner. In the context of this research, assertive behavior can be interpreted as the ability of tax authorities to manage communication about tax responsibilities to the taxpayers through interpersonal communication. Assertive behavior can be used to direct taxpayers to immediately fulfill their tax payable. In the implementation of the tax receivable disbursement acceleration program, there are gestures that must be considered by the tax authorities so as not to be tendentious and emphasize more on communication and discussion methods in order to find the best solution to the problems that faced by taxpayers. The results of interviews with informants that show the importance of serving taxpayers with assertive behavior are as follows:

"At the time of implementation, yes, of course, from the gesture, the explanation cannot be what's the name, and we, as fiscal officials, are not inclined to collect. We're just sitting together, as if we're looking for a win-win solution... just like okee, we know you have arrears of.... of such magnitude. Then we'll question what the scenario is right now, whether the business is still running and working, and what the situation is. It's as though we profiled them during the interview. Then we assist them in providing multiple options and solutions, because taxpayers have rights in the settlement of tax receivables."

(NAH)

Assertive behavior of tax authorities can be characterized by an effort to prioritize persuasive efforts to taxpayers, it was because there is awareness from tax authorities who are aware about the complexity from tax regulations, so tax authorities can take position themselves as taxpayers. The existence of gaps in obtaining information on taxation is also the basis for fiscal officers to understand their position as taxpayers. The results of interviews with informants that show the awareness of fiscal officers in understanding their position as taxpayers are as follows

"So persuasive efforts are critical, particularly for tax advising. Perhaps you might argue that those who do not work in the tax office are unlikely to be familiar with taxes; this is not intended to be a negative statement. However, I must admit that if I do not work in the tax office, I know nothing about taxes. Aside from that, there is still an information gap between tax officials and

taxpayers.

(MF)

The existence of gap in the way of obtaining information on taxation also has an impact to the Taxpayer's interpretation of the language conveyed by Directorate General Taxes through written communication media. Therefore, it is deemed necessary for the tax authorities to re-explain the taxpayers regarding about the meaning conveyed through the written media (Tax Assessment Letter or Collection Letter) which mostly used highly standard language by using general language that more easier to understand by taxpayer. The results of interviews with informants indicating the importance of providing a re-explanation of the intentions contained in written communication media to taxpayers are as follows:

"*The language in the Letter of Reprimand and Collection Letter is indeed standard language, the language of the law and sometimes it is difficult to understand, so we help explain it again using more general language."*

(MF)

Taxpayers are seen as "Tax Friends" who must be empowered. Even though the taxpayer is in quotes "guilty" in the sense of having arrears on taxes, the tax authorities still strive to provide the best quality of service by prioritizing persuasive efforts but still in the line of applicable tax regulations. The results of interviews with informants that show the efforts of fiscal officers in prioritize persuasive efforts but still take a guidance by applicable tax regulations are as follows:

"For the collection, yes, because there is, let's say in quotes, „guilt" for the present and the future, if it can be improved. We always prioritize that. We usually say for those who are late with their reports, don't be late, for the payment next time pay more attention to the time period, what kind of deductions and so on. Yes, what is the point of tax counseling if for example in the future it will be the same again." (MF)

"We confirm in a good way to the taxpayer, if for example there is a difference. But so far, we still maintain our assessment result, like that. The difference in value with the taxpayer is a normal thing...there is no decrease in value, negotiation or anything with the taxpayer. If there is a difference, please resolve it by going through the channels."

(DAN)

Based on the results of interviews with informants, it can be seen that the implementation of persuasive efforts can be realized by P4 Team through serving taxpayers with assertive behavior. Assertive behavior can be realized by prioritize persuasive efforts through interpersonal communication through not being tendentious and trying to understand the position frome taxpayer but still guided by the applicable tax laws and regulations. Through assertive behavior, P4 Team can show a firm attitude but still pay attention to the rights of taxpayers. Service quality with assertive behavior is expected to have a positive impact in increasing the synergy between P4 Team and taxpayers in order to accelerate the disbursement of tax receivables.

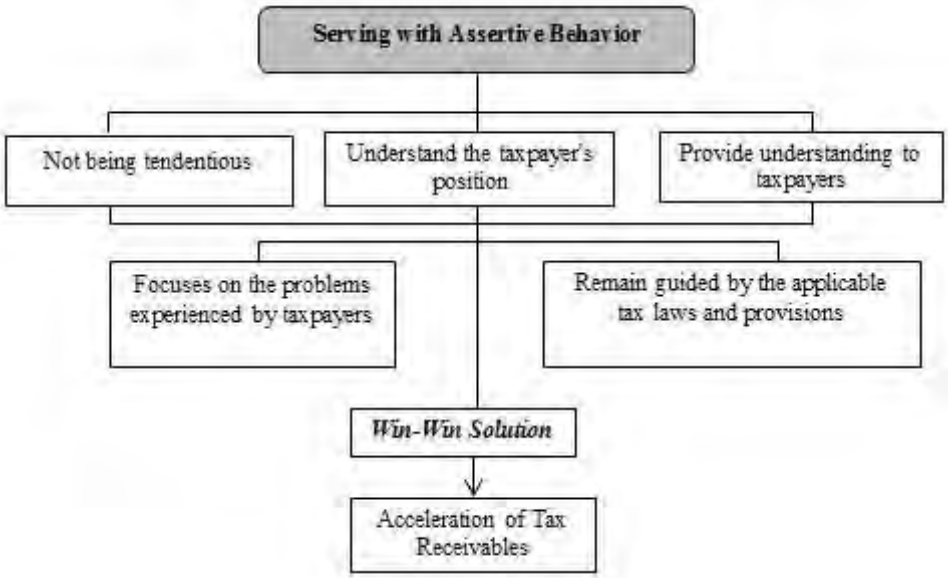

Figure 10 Serving Taxpayer with Assertive Behavior
Source: Researcher, 2023

4.3 DISCUSSIONS

4.3.1 Relevance of P4 Team as a tax counseling organizer

Relevance of P4 Team as a tax counseling organizer through from their role as tax counseling organizer can be seen from their role as work unit section that can be bridge related with communication between tax officers and taxpayers. Team P4 has four sub-teams, namely: data collection sub-team, approach sub-team, observation sub-team and taxpayer profiling sub-team with the main objective of accelerating the disbursement of tax receivables by focusing on the implementation of persuasive collection of tax receivables to taxpayers. The separating division of tasks into sub-teams aims to maximize the performance of P4 Team in achieving goals, this finding is in line with research conducted by (Walenta, 2021) and (Haykal & Suhendra, 2022) which explains that the existence of a clear goal, separation of duties and responsibilities can improve the quality of an organization's performance in achieving goals.

P4 team has the main objective in accelerating the disbursement of tax receivables with the main focus in implementation of persuasive efforts to taxpayers. P4 Team as tax counseling organizer has relevance with the problem of tax receivables that must be handled immediately at Samarinda Ilir Primary Tax Service Office. The implementation of tax counseling practice can assist taxpayers in fulfilling their tax payable. The existence of the P4 Team can increase tax revenue. This can be seen from the increase in tax revenue at Samarinda Ilir Primary Tax Service Office in 2022. There was an increase of 42%. Increasing realization of tax revenue in 2022 is also supported by an increase in tax revenue derived from Material Compliance Monitoring of 146% when compared to the Material Compliance Monitoring Level in 2021 that shown from the table as follows:

Table 3 Details of Revenue Realization

Year	Realization	Period Payment Supervision	Material Compliance Monitoring
2021	IDR 1.077.870.319.815	IDR 913.282.575.462	IDR 164.587.744.353
2022	IDR 1.569.701.097.366	IDR 1.165.604.254.870	IDR 404.096.842.496

Source: Samarinda Ilir Primary Tax Service Office Target and Realization Report, 2023

Based on the data table above, it can be seen that the results of the 2022-2021 year-end evaluation have been successfully realized. This can indicate that the existence of the P4 Team can have a significant effect on tax revenue, specifically on revenue derived from material tax compliance. Realization of tax revenue by KPP can be acquired from two main componen, there are from Period Payment Monitoring (PPM) and Material Compliance Monitoring (PKM). Tax Officer needed to ensure that both of components can be realized in properly. PPM is a taxpayer supervision activity on the behavior of reporting and payment in the period of current tax year. Meanwhile, PKM is a taxpayer compliance by testing activity as a follow-up to data analysis in the context of supervision, audit, and collection activities. The strategy for this supervision is explained in Director General of Taxes Circular Letter number SE-05/PJ/2022 on Taxpayer Compliance Monitoring.

The strategy to improve PKM begins with the mapping of the Supervision Priority List (DPP). DPP contains information of taxpayers who are being the priority targets of PKM by Tax Office in the current year. In DPP there is also an estimate of the potential revenue which is determined as an effort to fulfill the revenue target from PKM activities. The preparation from DPP aims to make the PKM implementation can be more effective and efficient. At Samarinda Ilir Pratama Tax Services Office, P4 Team has an important role in the preparation of the DPP, that was realized through an internal meeting that doing by P4 Team in mapping of the ability payment from taxpayers. The DPP is determined at the beginning of the year as a form of supervision in the first quarter and then updated in the second, third and fourth quarters by adding the amount of taxpayers, tax period or year.

The increase realization of tax revenue, through the Material Compliance Monitoring aspect may indicate that there have been optimization efforts on tax receivable collection actions so that they can be paid off. As stated by Indaryani et al, (2020) in her research explained that increasing the frequency and quality of tax collection is more necessary in reducing the level of tax arrears.

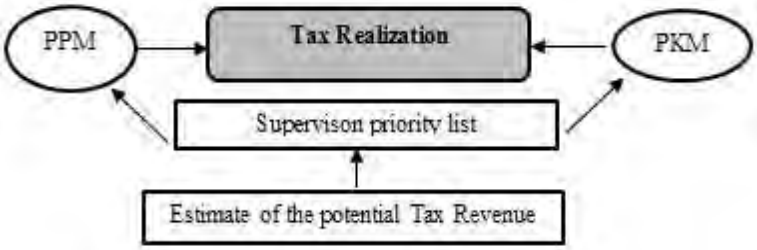

Figure 11. Strategy To Improve Tax Revenue

Source: Researcher, 2023

Darussalam et al., (2019) explained that the interaction relationship between tax authorities and taxpayers, which has been rigid and conventional, is no longer considered relevant to be applied. New paradigm is needed to form interactions between institutions and tax officers and taxpayers that are based on mutual trust in each other. Apart from that, voluntary compliance is determined by how good the relationship and communication between the DJP as a tax institution and taxpayers. In this way, it is hoped that new perspectives and good forms of interpersonal communication between tax authorities and taxpayers can increase taxpayers' voluntary compliance in carrying out their tax payable.

Tax counseling practice though *Program Percepatan Pencairan Pajak* is also aims to provide a deterrent effect to the taxpayers through the process by providing treatment to one dominant taxpayer in a particular commodity community. This finding research is in line with the research

result that conducted by Birskytei, (2013) which shows that tax audits can have an effect on tax revenue and behavior. In general, there is increasing tax revenue, but this increase will be accompanied by a decrease in voluntary compliance behavior from taxpayers. When the tax authorities increase the frequency of tax audits, there is a signal that will be formed that the tax authorities are playing a role like cops and robbers, which indicates there is distrust between tax authorities and taxpayers who have paid taxes. The Slippery Slope theory can be used as a guideline for fiscal officers to always consider the motivation of taxpayers in an effort to increase their voluntary compliance. When the tax authorities act in antagonistically way, the taxpayers will also try their best way to avoid tax. It's tottaly different, when tax authorities try to build a synergistic situation through a persuasive approach, taxpayers will tend to behave in accordance with applicable tax regulations so as to form voluntary compliance. This research finding in line with this theory it was because the actions that implemented by P4 Team in creating a deterrent effect on taxpayers through the implementation of tax counseling are expected can reducing the level of tax audit intensity by emphasizing persuasive efforts as an effort to increase voluntary taxpayer compliance.

4.3.2 Implementation of Persuasive Efforts

The implementation of persuasive efforts through tax counseling practices can be realized to acceleration the disbursement of tax receivables program. acceleration the disbursement of tax receivables program has a main focus on providing attention and education to the taxpayers who have low tax arrears with the concept of calling taxpayers in simultaneously way by involving all section units in Samarinda Ilir Primary Tax Service Office. The educational strategy employed is derived from the case study from taxpayer. Tax counseling practice though acceleration the disbursement of tax receivables also aims to provide a deterrent effect to the taxpayers through the process by providing treatment to one dominant taxpayer in a particular commodity community. This finding research is in line with the results of research conducted by Birskytei, (2013) which shows that tax audits can have an effect on tax income and behavior. In general, tax revenue will increase, but this rise will be followed by a decline in taxpayers' voluntary compliance behavior. The findings from this research are also in line with the Slippery Slope Framework that directly juxtaposes enforced tax compliance and voluntary tax compliance, which can be understood as a framework that combines the authority of tax authorities with taxpayers' trust in tax authorities (Kirchler et al., 2008). Therefore, the approach in generating deterrent effect conducted by P4 Team in touching one dominant taxpayer from a taxpayer commodity with the hope that it can be a mirroring for other taxpayers is considered appropriate in its implementation.

The implementation of persuasive efforts can be also realized through serving taxpayers with assertive behavior. Assertive behavior is a form of direct communication of one's needs, wants, and opinions without punishing, threatening, or demeaning others. Assertive behavior involves the principle of sticking to one's legitimate rights without violating the rights of others and without being overly fearful in the process. Assertive behavior also involves the direct expression of one's feelings, preferences, needs, or opinions in a way that does not threaten or punish others. Serving taxpayers with assertive behavior can be realized by prioritize persuasive efforts through interpersonal communication by not being tendentious and trying to understand the position of taxpayers but still in guided by the applicable tax laws and regulations.

5. CONCLUSION

The results on this research findings about relevance of P4 Team as a tax counseling organizer through from their role in accelerating the disbursement of tax receivables at Samarinda Ilir Primary Tax Service Office. First, P4 Team take a direct role in implementing the strategic of persuasive efforts and the value of the Ministry of Finance into the work unit section. Second, P4 Team take a role in profiling taxpayers. Third, P4 Team has a role in realizing coordination and synergy through tax counseling practices. Those roles has relevance with the problem of tax

receivables that must be handled immediately at Samarinda Ilir Primary Tax Service Office. From their role, P4 Team can assist taxpayers in fulfilling their tax payable to be repaid immediately. The existence of P4 Team can increase tax revenue in spesificly from material supervision and compliance sector.

Furthermore, the implementation of persuasive efforts can be realized through tax counseling practice that called as "*Percepatan Pencairan Piutang Pajak:* Acceleration the Disbursement of Tax Receivables" program which has the main focus in giving attention to the taxpayers who have low tax arrears with the type of national tax. This program primarily targets taxpayers with minimal tax arrears, specifically those with low national tax obligations. The implementation of persuasive efforts can be achieved by serving taxpayers with assertive behavior. This involves prioritizing persuasive efforts without being biased and understanding the taxpayer's position while adhering to the relevant tax laws. This research has several limitations. First, this research yet directly compared list of tax receivable balances and the target data for tax receivable disbursement and its realization. Second, this research yet discussed in a depth way about form of monitoring of the repayment commitment minutes that should be carried out by P4 Team after they do tax counseling practice. Third, this research yet knowing the relevance of the p4 team as tax counseling organizer from the taxpayer's side, future research is expected can develop research objectives by referring in to some of the limitations on this research.

Based on the analysis of findings research, there are several suggestions related to the relevance of P4 Team as the organizer of tax counseling. First, P4 Team as the tax counseling organizer needs to classify tax receivables derived from the implementation of tax counseling through a "*Percepatan Pencairan Piutang Pajak*" program to get know the actual level of commitment from taxpayers. Second, consistency is needed in tax counseling practice, P4 Team must have highly commitment through reinforcement cooperation from internal and external to improve the system, strategies that implemented and the best mechanism in accelerating the disbursement of tax receivables.

Results from this research have implications for policies that can be implemented by the Directorate General Taxes, in specifically for the Tax Office. Identification from this research are expected can be reference that can influence policies in improving a system, regulations and mechanisms that have been implemented to support the acceleration of tax receivable disbursement. Results from this research show the important role of persuasive efforts in the context of accelerating the disbursement of tax receivables by motivating taxpayers to understand their tax payable so it can have implications for taxpayer awareness. This awareness is related to the taxpayers awareness to understand about their role and contribution as a part of active participation as citizens to the state.

Acknowledgement

We would like to express our sincere gratitude to our parents for their invaluable support in terms of moral, material, and spiritual guidance during the process of writing this journal. Without their assistance as the main source of inspiration and motivation in the creation of this journal. Additionally, we would like to extend our appreciation to the Accounting Study Program for their kind financial support, which greatly aided the optimal pursuit and finalization of this article. We acknowledge with humility that the collaborative endeavors of all relevant stakeholders have been instrumental in our successful completion of the content of this journal.

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REAL-TIME TEXT RECOGNITION OPTIMIZATION ON EMBEDDED SYSTEMS USING A DEEP LEARNING

Septian Cahyadi[1], Suci Sutjipto[1], Anton Sukamto[1], Yan Rianto[2]

[1] Informatic Technology, Institute Business and Informatic Kesatuan, Indonesia
[2] Informatics Research Center, Indonesian Institute of Sciences

[*]*Corresponding author: scahyadi@ibik.ac.id*

Abstract

Text recognition in image processing poses several challenges, including variations in background texture, light intensity, and image clarity, which continue to stimulate research efforts. Addressing these challenges often demands the utilization of high-spec computers for efficient computation. However, implementing existing methods on embedded systems like Raspberry Pi presents a significant challenge in assessing their efficacy. This study endeavors to evaluate the performance and accuracy of Deep Learning techniques, specifically Convolutional Neural Networks (CNN), when applied to text recognition tasks on Raspberry Pi. The research also introduces algorithmic enhancements tailored for CNN models to operate optimally within the constraints of limited computing resources, leveraging TensorFlow and Keras libraries. Through experimentation, the study achieves promising results, with text recognition accuracy reaching 95.29% on the Kaggle dataset and 95.94% on test images. These findings underscore the viability of deploying deep learning techniques on resource-constrained platforms like Raspberry Pi for text recognition applications. The proposed enhancements pave the way for more efficient utilization of embedded systems in image processing tasks, with implications for various fields requiring real-time, low-power text recognition solutions.

Keywords: *Text recognition, Deep learning, CNN, Embedded System*

1.INTRODUCTION

Text recognition is a very popular topic of Pattern Recognition because it is still being developed, especially the real-time reading of camera devices. This can be seen from the many international conferences that discuss and even make the text recognition as a competition. In the real-scene image the text recognition has its own challenges such as diverse background images, uneven lighting, or the proportion of unfavorable text. The number of techniques applied to the text recognition process also contributes to the results.

The most widely used technique currently in pattern or object recognition is the convolutional neural network (CNN), especially in the field of image processing. This can be seen from the number of researchers who use the development of the CNN method for the classification process. High accuracy results are also obtained by this method, ranging from 70-95% depending on the data and network architecture used. In the implementation of digital image processing required a good computing device in terms of computing. High hardware specifications become one of the decisive factors in text recognition process quickly. But to do the reading of text in the image in real-time required a portable computing device, making it easier to carry. Fortunately, the technology has grown rapidly with the birth of the computer in mini size or called the embedded system, one of which is Raspberry Pi. By using Raspberry Pi, the computation process can be done where the image is taken.

Portability is the most interesting in terms of development, especially for the development of computing with a minimal budget. But on the other hand, portability has its own constraints, i.e. in terms of process speed. So that processing the text recognition on Raspberry Pi is a challenge. Because of this we intend to analyze whether the methods that have been done so far can run optimally on Raspberry Pi devices, given the specifications of Raspberry Pi which although currently is good enough but not able to compete with computing on PC or laptop devices, thus increasing opened various research possibilities to do. Text recognition is tested on road markings, using MSER algorithm for text detection and CNN algorithm for classification. The optimization algorithm that applied on the classification method is expected to recognize the text with a deep learning on Raspberry pi.

2.LITERATURE REVIEW

In text recognition, especially in the context of image processing and the application of deep learning to object detection, various studies have been carried out which became the basis for this research. (Neumann et al., 2011) propose a new method for locality and recognition of text in real-world images by introducing hidden text line parameters through the MSERs (Maximally Stable Extremal Regions) approach, although the results have only achieved 60% accuracy. In the same year, Neumann and Matas also developed the MSERs method for character classification using SVM, although accuracy was still low, at around 67%. (Coates et al.,2013) presents a feature learning method without supervision in endto-end text recognition with an average accuracy result of 82.66%.

Furthermore, (Neuman et al, 2012) used the ERs (Extremal Regions) approach for real-time text recognition, although the accuracy was only about 68.7%. In 2016, they improved this method by adding synthetic fonts to classification, which resulted in a significant improvement in text recognition accuracy.

In a separate experiment, (Neuman et al., 2013) proposed an Oriented Stroke Detection approach for text segmentation, resulting in 72% accuracy for text locality and 45.2% for end-to-end text recognition. (Yildirim et al., 2013) proposed the use of Multiclass Hough Forests for direct text detection and recognition in natural images, with an accuracy of 85.7%. An innovative approach is also offered (Shi et al., 2016) with the RARE (Robust Scene Text Recognition with Automatic Rectification) method, which can deal with variations in text shapes in images with good accuracy. (Jaderberg et al., 2016) achieved the best results in text recognition using the CNN method, achieving an average of 93% for truncated word recognition accuracy and 75% for end-to-end text spotting.

3.METHODOLOGY

The method proposed and implemented in this research is the Convolutional Neural Network (CNN). CNN is a model of deep learning that is widely used for image recognition, for the process of text segmentation to the process of classification. To explain this method, we will start by providing a description of the proposed text recognition system. In this research we propose two module principles, the first is the text detector and the second is the text classification.

To develop a text detection system, we use the method used by (Neumann et al., 2011). The approach used is Maximally Stable Extremal Region (MSER), a method used to detect regional differences in an image, such as brightness or color as compared to the surrounding area. The most common method for detecting blobs is convolution. To detect the region of invariant transformation there are things to consider, namely changes in illumination, translation, rotation, and scale. Region detection must be re-established and stable, and able to discriminate between regions.

Figure 1. An example of MSER selection

To detect Extremal Region, the first stage is to detect anchor point (for example the use of a Harris Detector to detect the angle of the image where there is a contrasting illumination difference). Anchor point detected on many sides is an extreme local intensity. Next around the area of the anchor point is explored. The detected contour lines will be connected until the f function of extremal is reached. The function description can be seen in the picture below.

$$f(t) = \frac{|I(t) - I_0|}{\frac{1}{t}\int_0^t |I(t) - I_0|\,dt}$$

Figure 2. characteristic of function f in region (1 inside, 0 outside)

After that we classify from 62 possible characters (26 uppercase, 26 lowercase letters, 10 numbers) found on the image filter 32x32 earlier. It should be noted that in the process of classifying the outcome in the form of one character, in other words apart from the class 62 it will not produce any output. After all characters in the image can be found, then the text aggregation algorithm is executed, i.e. the process of unifying letters into one and stored in one string variable to send to bash shell programming and call eSpeak text-to-speech generator. The illustration of the text recognition process is shown in Figure 2.

Figure 4: Illustration of text recognition process

In the process of implementation of methods on the proposed text recognition there are stages as follows,

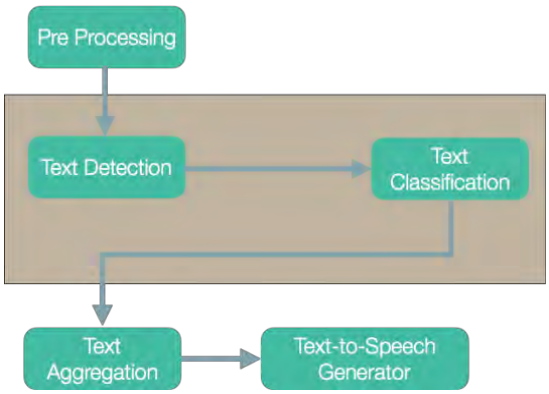

Figure 5: Implementation method diagram

From the schematic above can be seen that there are 5 stages of introduction of text:

1. Pre-Processing

The pre-processing stage is the image acquisition stage. Insert image will be taken using Pi Camera in limited range, i.e. less than 5 meters. This is because the camera used is a simple modular camera with a maximum resolution of 1024 x 768 pixels or VGA equivalent. The images taken should be light enough and in good focus.

2. Text detection

We are using MSER approach to Text Detection by converting the image first into an 8-bit channel by converting it to grayscale. The grayscale image is rearranged threshold, so it can increase the contrast of the contour of the image. This is done with the aim that the background color difference with the text color becomes farther away.

3. Text Classification

The process at this stage of the authors uses an unsupervised learning algorithm that is almost identical to that used [10] and uses the first convolution layer of CNN. The goal is to develop a good initial stage representation of insert data (a 32x32 pixel grayscale image). The first stage begins by extracting from a small m image-patch from the training set. The patch images used are 3x3 pixels in size. Notify the pixel value of the 3x3 image into a 1-dimensional matrix of 9 pixels to obtain a set of vectors $\tilde{x}^{(i)} \epsilon \mathbb{R}^9, i = 1, \dots, m.$

The second stage is to normalize each vector to get the brightness and contrast by reducing the vector x with the mean and dividing it with the standard deviation to obtain the appropriate results.

The Next Phase by adjusting the image augmentation by adjusting the rotation range by 20 degrees, the length and width range is about 0.15, the shear range is 0.4, the magnification range is 0.3 and the channel shifting range is 0.1. In contrast to (Coates, A., 2011), the authors do not use ZCA whitening and feature wise to reflect the image because it has little effect on network performance, given the generally contrasting text color.

Finally run the unsupervised learning algorithm (K-means) on $\hat{x}^{(i)}$ to do the mapping from the patch image insert into the feature vector, $z^{(i)} = f(x^{(i)}$. For the activation function used is nonlinear activation function, as follows: $z = h(z') = \max\{0, |z'| - \alpha\} = max\ \{0, |D^T x| - \alpha\} \in \mathbb{R}^d$ *(3.2).* Where α is a hyper-parameter. For all the experiments described in this research the author uses the

value α = 0.5.

The result of pooling image with size 32x32 pixels then processed in hidden layer which then classified by class with division of 62 (26 letters of small alphabet, 26 letters of capital alphabet and 10 number). Using a smaller number of kernel layers and generating a greater number of neurons, the architecture model would look like this:

Table 1: CNN architectural model

Layer Type	**Parameters**	
	Input	**Output**
Conv2D (input layer)	(none, 1, 32, 32)	(none, 1, 32, 32)
Conv2D_1	(none, 1, 32, 32)	(none, 128, 32, 32)
Conv2D_2	(none, 128, 32, 32)	(none, 128, 32, 32)
Maxpooling2d_1	(none, 128, 32, 32)	(none, 128, 16, 16)
Conv2D_3	(none, 128, 16, 16)	(none, 256, 16, 16)
Conv2D_4	(none, 256, 16, 16)	(none, 256, 16, 16)
Maxpooling2d_2	(none, 256, 16, 16)	(none, 256, 8, 8)
Conv2D_5	(none, 256, 8, 8)	(none, 512, 8, 8)
Conv2D_6	(none, 512, 8, 8)	(none, 512, 8, 8)
Conv2D_7	(none, 512, 8, 8)	(none, 512, 8, 8)
Maxpooling2d_3	(none, 512, 8, 8)	(none, 512, 4, 4)
Flatten_1	(none, 512, 8, 8)	(none, 8192)
Dense_1	(none, 8192)	(none, 4096)
dropout_1	(none, 4096)	(none, 4096)
Dense_2	(none, 4096)	(none, 4096)
dropout_2	(none, 4096)	(none, 4096)
Dense_3	(none, 4096)	(none, 62)

This research used 7-layer convolution with 3x3 size filter and ReLu activation. MaxPolling layer on each layer of the next convolution. The grid used for the kernel layer is 3x3 to produce more filters. After the convolution layer is used 2 hidden layers with dropout and the last use of softmax to calculate the activation function at the classification stage, with the general equation:

$$\sigma(\mathbf{z})_j = \frac{e^{z_j}}{\sum_{k=1}^{K} e^{z_k}} \quad \text{for } j = 1, \ldots, K.$$

To improve the accuracy of the predicted, add loss function on the softmax calculation, which is already available on Keras with a technique called auto-differentiation that can calculate the loss value of the gradient and update the parameter value to the more appropriate.

4. Text Aggregation

At this stage all the text that has been identified will be collected into one variable that will be sent to the text-to-speech generator.

5. Text-to-speech

The final stage of this research is converting text into sound. At this stage the authors utilize eSpeak applications. The workings of the application is quite simple, ie by sending the predicted word results from the previous process in the form of variables, sent to the terminal and executed with bash shell. ESpeak is called through a terminal which then reads the previously sent variable.

4.RESULT AND DISCUSSION

4.1. Pre-processing

Almost all images on the dataset are color images. The first step of preprocessing is to convert the whole image to grayscale. This change helps process the model because it uses only 1 color channel, it will also make it easier to equate all images, any color other than white and black can be considered the same. This will not affect the accuracy because each text is generally colored in contrast to the background color.

Related image dimensions insert, the decision taken is to use image dimension 32x32 pixel. Using a 16-pixel image does speed up the process, but identification is difficult. Giving a 64x64 pixel size gives better results but the process is slow. Slowing the process on devices with limited resources is certainly a problem because the purpose of this research is to be able to process images in real time conditions. From the results of the comparison of the size then the decision to use dimension size 32x32 pixel is the best choice in terms of accuracy and speed. In this research also used the conversion of label from string to One-hot Vector. The goal is to speed up the classification process because it uses binary data. To make it takes two steps, first find how to change from character to integer and vice versa, in this study used ASCII code, and second is change from integer to One-hot Vector.

4.2. Text detection

MSER produces a selection of contours that have significant differences in the angle of the illumination image. So MSER is a polyline that is interconnected around different contour areas. Of course, the polyline form will complicate the extraction process on the image to be taken its character, because in addition to the text that can be cut off, other forms of text also carried.

Figure 5: MSER detection image

Because MSER will basically look for contrasting color changes before the image contour is performed, the image is first converted into Grayscale image. Then the image is set Threshold for more visible differences between the text with the background. Here is the result of the best average threshold value adjustment obtained so far.

Figure 6: Threshold adjustment image

After the image is adjusted its threshold value, then the contours will be taken. We also make improvements to the algorithm to take the contours in the form of square instead of polyline, i.e. by taking the initial value of the array as the upper left boundary and the final point of the contour as the lower right boundary, to obtain the form of box selection. To ensure that there are not too many elements outside of the text that come along, we also limit the length of the box to no more than 15 pixels in 1 selection. The following is the result of MSER algorithm improvement.

Figure 7: Image of MSER algorithm improvement result

We tested text detection on 12 images and the results are as shown in table 6, the average obtained is 86.27%. Detection errors occur because there are other elements that are not text, such as punctuation lines and other symbols along with the text on the board.

Table 2. compares text segmentation.

Name	Total Character	Character detection	Accuracy
Image1	32	31	96.87%
Image2	41	40	97.56%
Image3	78	53	67.94%
Image4	36	26	72.22%
Image5	23	23	100%
Image6	37	37	100%
Image7	8	5	62.5%
Image8	29	20	68.96%
Image9	38	31	81.57%
Image10	13	13	100%
Image11	12	11	91.66%
Image12	51	49	96.07%
	Average		86.27%

Table 2 shows the comparison of detected characters with the number of characters it should be,

but outside of the text, there is still a lot of noise or non-character element involved to interfere with the classification process. The amount of noise depends heavily on the light conditions and the image object is taken, but the average noise taken can reach 30-50% of the object detected by MSER.

4.3 Text Recognition

Test results data can be seen in the following test table:

Table 3 Comparison of text recognition table

Device Name	Image amount	Text Detected	Duration	Accuracy
PC	6.220	5.959	7 seconds	95.29%
Raspberry Pi	6.220	5.959	47 minutes 45 seconds	95.29%

Table 4 Table classification of test image text

Image Name	Text Detected amount	The detected characters are correct	Accuracy
Image1	31	31	100%
Image2	40	40	100%
Image3	53	53	100%
Image4	26	23	86.46%
Image5	23	21	91.30%
Image6	37	37	100%
Image7	5	5	100%
Image8	20	20	100%
Image9	31	28	93.33%
Image10	13	12	92.30%
Image11	11	9	90%
Image12	49	48	97.96%
	Average		95.94%

Although the accuracy of the resulting value is high but can still be repaired again in the future. The tested network model can be said to have errors that humans do not, and the error is:

1. Distinguish lowercase and uppercase letters that are very similar like the letter W and w or C and c.
2. Figures 1, I and l (one, large "I", and small "l")
3. O and 0 (uppercase "o" with number "0")
4. Characters that have similarities in uppercase and lowercase letters such as W, X, Z, K, S, etc.
5. Letters rotated 90 degrees, etc.

Humans will distinguish between all these cases with the help of the context. Unfortunately, we have no context in the dataset. However, there may be ways to better detect and classify the letters rotated by 90 degrees. By training algorithms to classify straight and rotated letters, one can perform a preprocess dataset to correct the rotated image to be tested.

The application of CNN algorithm optimization results proved to work well, as shown in table 3

although the speed of the process in Raspberry Pi runs very slowly than using a PC, it has no effect on its accuracy, which previously had been worried that the speed of the process would affect accuracy.

4.4 Text-to-Speech

Testing at this stage can be said not yet successful, the main cause is segmentation that has not reached 100% and the order of segmentation results that have not been appropriate. This factor disrupts the vocabulary received by eSpeak so the word becomes unrecognizable. Of all the tests performed there is no single insert image that can be converted precisely about the word what is meant.

4.5 Evaluation of research

From the results of this study conducted some optimization, including:

1. Replace CNN text detection method with MSER with some adjustments to detect text.

```
mser = cv2.MSER_create()
img = cv2.imread(sys.argv[1])
gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)
vis = img.copy()
regions, _ = mser.detectRegions(gray)

hulls = [cv2.convexHull(p.reshape(-1, 1, 2)) for p in regions]
mask = np.zeros((img.shape[0], img.shape[1], 1), dtype=np.uint8)
cv2.polylines(vis, hulls, 1, (0, 255, 0))

for contour in hulls:
    cv2.drawContours(mask, [contour], -1, (255, 255, 255), -1)

text_only = cv2.bitwise_and(img, img, mask=mask)
cv2.imshow('img', vis)
```

Figure 7: Early MSER Source code

```
mser = cv2.MSER_create()
img = cv2.imread(sys.argv[1])
gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)
vis = img.copy()
regions, _ = mser.detectRegions(gray)
ret,thresh = cv2.threshold(gray,127,255,0)
im2,contours,hierarchy = cv2.findContours(thresh, 1, 2)
mask = np.zeros((img.shape[0], img.shape[1], 1), dtype=np.uint8)

idx = 0
for cnt in contours:
    x, y, w, h = cv2.boundingRect(cnt)
    minRangeX= (x+w)-x
    minRangeY= (y+w)-y
    if (minRangeX > 15 or minRangeY > 15) and minRangeX < 100:
        idx += 1
        cv2.rectangle(im2, (x, y), (x + w, y + h), (0, 0, 255), 1)
        roi = vis[y:y + h, x:x + w]
        cv2.imwrite("data/" + str(idx) + '.jpg', roi)

text_only = cv2.bitwise_and(img, img, mask=mask)
```

Figure 8: MSER Sourcecode after optimization

2. Adjust the CNN algorithm to run in limited resources.

```
batch_size = 128 nb_classes = 62
epoch = 200

load_train_folder
load_label_train

split_train_test
refricationImage(rotation,width,height,shear,zoom,channel_shift)

model_network_applied

model.compile(SGD)
model.fit(X_train,Y_train, batch_size,epoch=20)

model.save()
model.fit_generator(epoch=epoch)

model.load_weights(mode.save)

save_prediction(path+"file.csv")
```

Figure 8: Early CNN algorithm

```
batch_size = 20 nb_classes = 62 epoch = 20

load_train_folder load_label_train

split_train_test
refricationImage(rotation,width,height,shear,zoom,cha
nnel_shift)
for ID in range(3) model_network_applied

model.compile(cross_entropy, adadelta)
model.fit(X_train,Y_train, batch_size,epoch=20)
model.compile(cross_entropy, adamax)
model.saveBestPrediction()
model.fit_generator(epoch=epoch)
model.load_weights(mode.save)
end for
save_prediction(path+"file.csv")
```

Figure 9: CNN algorithm after optimization

3. Change the model structure to avoid run out of memory.

The third optimization is the change of the model structure is done by replacing the SGD algorithm with Adadelta and Adamax and reducing the number of fully connected layer which originally used 4,096 filters to 1,024 as shown in table 4. The result as already stated that the classification runs well on Raspberry Pi devices with an accuracy of approximately 95%.

5.CONCLUSION

The use of CNN methods in this research is based on this method of being the leader in the field of pattern recognition. In this research proposal, the author intends to analyze the results of CNN method implementation for Text Recognition on limited computer environment (embedded system) such as Raspberry Pi. By analyzing the results and optimizing the CNN method on the limited resources it is expected to increase in terms of performance, so that the application of the method becomes more effective and efficient.

Stages in this method start from pre-processing, then text detection, text segmentation, text classification, text aggregation and then text-to-speech generator is done to generate sound. In principle the authors do two stages in the introduction by using two algorithms that is MSER and CNN. The first step is text detection, and the second one is text classification. At the stage of text detection is done to find the text and separate with the background. Only in the classification phase of the text is the introduction of letters.

The optimization process in Raspberry Pi is a different challenge than the introduction of the text itself. Very limited hardware specifications make computational processing on embedded systems must be efficient. For that required optimization at the implementation stage, several approaches have been tested to obtain optimal results in the text recognition process. Architectural changes have been made due to the limitations that exist without ignoring the target accuracy. Initially the slow process on embedded systems is feared will affect the accuracy or initial segmentation process.

The concerns associated with the slow process on embedded systems will affect accuracy did not occur. Decrease accuracy on text recognition does not occur, only the process is slow. Errors about counting characters appear, plus an inconspicuous sequence characterization make eSpeak unable to pronounce the word correctly. So, it can be said the process of research related conversion techniques from text to sound has not been successful.

Outside of lack of recognition of word structure, optimization of this embedded system can be said to work. Raspberry pi has been able to recognize text on the image, although the process is still running slowly. The accuracy resulting value can also be said to be quite relevant, i.e. 95.29% in the Kaggle dataset. And 95.94% on the test image.

Acknowledgement

The authors are grateful to the Institute of Business and Informatics Kesatuan, and Informatics Research Center, Indonesian Institute of Sciences for funding research.

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THE ROLE INTRINSIC MOTIVATION IN STRENGTHENING THE INFLUENCE OF LEARNING STRATEGIES, LECTURER COMPETENCE AND LEARNING ENGAGMENT ON ACADEMIC ACHIEVEMENT

Prima Hanugerah Yudhabarata*, Ardi Paminto, Doddy Adhi Mursandi

Faculty of Economic and Business, Mulawarman University

**Corresponding author: phyprima80@gmail.com*[1]

Abstract

The output of higher education institutions is expected to produce high-achieving students, especially in the field of agriculture, in order to meet the demand for agricultural experts in both the national and global job markets. This research aims to investigate the role of Intrinsic Motivation (Y1) in strengthening Learning Strategies (X1), Lecturer Competence (X2), and Work Involvement (X3) on Student Academic Achievement (Y2). The study was conducted at a State Agricultural Polytechnic in Samarinda, involving 300 students as samples. The analysis approach was tested using Partial Least Squares (PLS). The empirical findings validate that Learning Strategies (X1), Lecturer Competence (X2), and Work Involvement (X3) have a positive and significant impact on Student Academic Achievement (Y). Furthermore, the important finding shows that Intrinsic Motivation (Y2) can strengthen the role of Learning Strategies (X1), Lecturer Competence (X2), and Work Involvement (X3) in enhancing Student Academic Achievement (Y2). Student Academic Achievement is crucial in shaping qualified individuals who are ready for the workforce.

Keywords: *Learning engagement, lecturer competence, intrinsic motivation, learning strategies, student academic achievement.*

1.INTRODUCTION

The improvement of student academic achievement is currently a priority at Samarinda State Agricultural Polytechnic. It is important for students not only to have academic achievements that can compete within their own campus, but also to be able to compete in various competitions with students from other campuses or to enhance their expertise. Therefore, improvements can only be made once the factors that can enhance academic achievement are identified. One of these factors is learning strategies. Learning strategies formulated according to the students' ability to absorb knowledge transferred by lecturers are believed to enhance academic achievement. This is considered as one of the external factors. Generally, lecturers use time benchmarks in the teaching and learning system, such as high study hours. For students, this learning system increases their focus on studying and inhibits them from being distracted by other things. This results in better mastery of the material, making it easier to apply their knowledge at an advanced level, such as in practical settings. Wang et al. (2022) suggest that lecturers can modify learning strategies and teaching methods at the appropriate time as a way to enhance academic achievement.

The research conducted by (Hafeez et al., 2022) revealed that learning strategies can be a way to develop important skills within individuals. Research by (Biwer et al., 2023) indicates that without

a strong understanding and knowledge base, students will struggle to transfer and apply their knowledge effectively. Therefore, effective learning strategies are crucial for long-term student achievement. (Amorri, 2020) suggests that learning strategies are essential for achieving effective academic performance. Additionally, (Muelas & Navarro, 2015) and (Mariana et al., 2023) have also demonstrated that learning strategies have a positive and significant impact on student academic achievement.

The research conducted by Hafeez et al. (2022) reveals that learning strategies can be an effective way to develop important skills within individuals. Biwer et al. (2023) also emphasize that without a strong understanding and knowledge foundation, students may struggle to transfer and apply their knowledge effectively in practice. Therefore, effective learning strategies are crucial for long-term student achievement. Amorri (2020) supports this notion by highlighting the importance of learning strategies in achieving effective academic performance. Furthermore, the studies by Muelas & Navarro (2015) and Mariana et al. (2023) provide evidence that learning strategies have a positive and significant impact on student academic achievement. These findings underscore the significance of implementing effective learning strategies to enhance student performance.

Samarinda State Agricultural Polytechnic has implemented a learning strategy with the concept of fullday learning (8 hours) for 5 days every week or its equivalent. This approach aims to enhance academic achievement, but it has not yet yielded optimal results in terms of improving academic performance in national competitions. This learning system is part of Samarinda State Agricultural Polytechnic's strategic plan (RENSTRA) for the period from 2020 to 2024. However, as mentioned, these efforts have not yet demonstrated the desired academic achievements among students. (Samarinda, 2020) states that the implemented learning system in the RENSTRA 2020-2024 aims to enhance students' academic performance, enabling them to compete in the job market with adequate agricultural skills. Castillo et al. (2019) also highlight that a quality learning system plays a crucial role in determining the academic quality and improvement of students. The learning strategies outlined in the RENSTRA guide lecturers in implementing them in day-to-day campus life.

According to the phenomenon observed by researchers at Samarinda State Agricultural Polytechnic, the study conducted by Tan et al. (2021) suggests that there is no significant relationship between learning strategies and academic achievement. Agreeing with this perspective, Viet (2022) clarifies that this may be due to the fact that students often feel pressured by the learning load imposed by the implemented learning strategies, which ultimately leads to a decline in their academic performance. Additionally, Almoslamani (2022) reveals that academic achievement of students cannot solely be improved through learning strategies, but there are other factors to consider, such as the competence of the lecturers. Therefore, further in-depth research is needed to understand the various factors that contribute to enhancing student academic achievement.

Another factor that can enhance academic achievement is the competence of the lecturers. Adequate competence among lecturers promotes effective teaching systems, as experienced lecturers are able to innovate teaching techniques that are easily comprehensible for students, thereby positively impacting their academic performance. The competence of lecturers is considered an external factor. Research conducted by Qurtubi (2023) reveals that the excellence of an educational institution cannot be separated from its lecturers. The competence of lecturers is crucial for the success of any educational process. Furthermore, Baryanto (2020) explains that the competence of lecturers is a systematic effort to develop competent human resources, such as enhancing students' academic achievements. Suwarni et al. (2020) describe the competence of lecturers as a combination of knowledge, skills, creativity, and innovation possessed by lecturers. Their study, along with the research conducted by L´opez-Martín et al. (2023) and Azis et al. (2020), found that the competence of lecturers has a positive and significant impact on students' academic achievement.

Indeed, it is a fact that the competence of lecturers at Samarinda State Agricultural Polytechnic has improved, but the academic achievements of students have not yet shown the desired results. As cited from (Samarinda, 2020), the increase in lecturer competence is attributed to their adequate experience. Additionally, the lecturers at Samarinda State Agricultural Polytechnic also work as practitioners and consultants in relevant industries. They actively engage in fostering student activities to enhance their academic achievements on a national scale. Several programs have been implemented to support these efforts, including the Student Creativity Program, Student Entrepreneurship Program, Talent and Interest Development, and Collaboration Programs with various industries such as PT SKJ.

Based on the data provided, the percentage of lecturers engaged in tridharma activities at other universities listed in QS100 by subject, working as practitioners in the industry, or mentoring students who have achieved national-level achievements has shown significant improvement. In 2020, the percentage reached 94.50%, then increased to 100% in 2021, and further rose to 217.14% in 2022. Furthermore, the percentage of permanent lecturers with academic qualifications of S3, recognized competency/professional certificates from the industry and the working world, or coming from professional practitioners, the industrial sector, or the working world has also experienced a notable increase. In 2020, the percentage was 60%, which then rose to 116.17% in 2021, and reached 117.14% in 2022. These figures demonstrate the significant efforts made by Samarinda State Agricultural Polytechnic in enhancing the quality of lecturers and bridging the gap between education and industry. It is expected to provide positive benefits for students in achieving better academic performance.

Based on the research conducted by Asnani & Nurismilida (2017), it supports the findings of the problem phenomenon discovered by researchers at Samarinda State Agricultural Polytechnic. The study states that there is no influence between lecturer competence and academic achievement of students. Additionally, Prasetio et al. (2017) found that lecturer competence is not considered a significant factor in improving academic performance, especially in the higher education environment where students are already considered adults. They have the autonomy to make decisions to engage themselves in enhancing academic achievement. Therefore, further research on student engagement in learning is necessary.

According to recent research by L. Zheng et al. (2023), one of the factors that can enhance academic achievement is Student Engagement in Learning. This factor has been receiving increasing attention in the field of human resource development. Effective group learning involvement can enhance collaborative knowledge and academic achievement through knowledge transfer among peers. Yulhendri et al. (2022) explain that student engagement involves the application of intellect, perseverance, and participation within a learning community. It is essential for students to actively participate in learning activities through interactions with others and group work in completing tasks. Zhu et al. (2023) affirm that the learning experiences and academic success of students are widely recognized to be influenced by their engagement in group work and task completion. Research by Northey et al. (2018) supports the notion that collaborative learning yields greater benefits compared to individual efforts. Specifically, studies conducted by Luo et al. (2023), González & Blackford (2022), Schnitzler et al. (2021), and Jian (2022) reveal positive correlations between student engagement and academic achievement. Therefore, it can be concluded that Student Engagement in Learning is an important external factor that contributes to enhancing academic performance.

Based on the findings of the researcher in (Samarinda, 2020), it has been observed that the competence of lecturers at Samarinda State Agricultural Polytechnic has been actively implemented, especially in 2022, where a group learning system has been included in the Semester Learning Plan (RPS). The competence of lecturers is carried out through case method or team-based project methods. In the implementation of this learning system, the lecturers provide the materials and instructions for the practical exercises, whether in laboratories or fields, and the

students follow and carry out the given instructions, analyze, discuss, and report on them. However, it has not been proven effective in improving the academic performance of students at Samarinda State Agricultural Polytechnic, as stated by the researchers.

Based on the phenomenon discovered by researchers at Samarinda State Agricultural Polytechnic, a study conducted by Rajabalee et al. (2020) found that student engagement in learning does not have a significant impact on academic achievement. This suggests that there may be other factors at play in determining students' academic performance. Furthermore, Fuertes et al. (2023) explain that the inability to fully engage in learning can stem from issues between students and the practical activities conducted on campus. This means that students may struggle to connect the theoretical knowledge with the practical aspects of group work. When students feel disconnected from their practical experiences, it often leads to a decline in academic performance. Therefore, the research indicates that there is a relationship between student engagement in learning and academic achievement. However, it is important to address other factors such as the alignment between theory and practice, as well as providing adequate practical experiences, in order to promote improved academic performance.

2.LITERATURE REVIEW

2.1 Self Determination Theory

This research refers to the Self-Determination Theory (SDT). The theory primarily focuses on the importance of intrinsic motivation in achieving success, taking into account three fundamental human needs. First, the need for autonomy or self-regulation. Second, the need for competence improvement. Third, the need for social interaction with others. The main theme of this theory revolves around financial well-being and health well-being (Martin, 2019).

In this research, we can elaborate on the variables related to the Self-Determination Theory (SDT). Firstly, there is the need for self-regulation or the ability to determine one's own learning strategies freely. This includes the intrinsic motivation to create personal learning strategies and effectively adapt to the study schedule independently established by the course instructor. Secondly, there is the need for self-improvement of competence. This involves intrinsic motivation to actively seek and accept teachings from competent instructors, aiming to enhance one's own competencies in the subject matter. Thirdly, there is the sense of relatedness or engagement in learning activities both inside and outside the classroom. Intrinsic motivation drives students to actively participate in class discussions led by the instructor and engage in discussions with fellow classmates in study groups. These three aspects of intrinsic motivation, when fulfilled by the students themselves, will have a positive impact on the achievement of their learning goals.

2.2 Academic achievement

Academic achievement in Human Resources (HR) is the result of an individual's work in fulfilling their responsibilities. The completion of tasks and responsibilities by a group of individuals collectively in an organization can also be referred to as achievement (Silaen et al., 2021). Academic achievement serves as a record of success that stems from the performance of a specific job or activity over a certain period, which serves as evidence of accomplishment after completing assigned tasks (Budiyanto & Mochklas, 2020).

Meanwhile, academic achievement is the success of students after going through the learning process, which is evidenced by a grade (Rawi et al., 2022). Academic achievement is the demonstration of planned results in academic attainment (Nabizadeh et al., 2019). Academic achievement is the tangible outcome that can be measured based on the completion of academic tasks and activities (Julianti, 2022). Students who succeed in academic achievement are not only those who have more efficient and effective learning technologies to acquire and apply

information, but also those who have the ability to motivate themselves, assess, and adjust their behavior if their learning is not on track or if they lack motivation (Al-Abyadh & Azeem, 2022).

Academic achievement is indeed the result of complex human activities and cannot be easily conceptualized through a simple model due to its influence from various factors (Sakız et al., 2021). These factors include environmental factors, instrumental factors, and physiological conditions (Brew et al., 2021). Environmental factors encompass the influence of the learning environment, such as the physical conditions and social atmosphere in schools or universities. Instrumental factors involve the available resources and support, such as access to learning materials, technology, and mentors that can aid in enhancing academic achievement. Meanwhile, physiological conditions involve aspects of health and life balance, such as sufficient sleep patterns, proper nutrition, and a balance between academic activities and other pursuits. In understanding and conceptualizing academic achievement, it is crucial to consider all these factors as they interact and contribute to the academic outcomes achieved by individuals.

Academic achievement is important for students as it represents the knowledge, skills, and attitudes gained through their educational experiences in higher education. It serves as a key factor in determining the success of students in their future careers (Mappadang et al., 2022). In order to maintain the quality of graduates, academic programs must be proactive, as postgraduate students will carry the reputation of their alma mater when they enter the professional world in their respective fields. The continuity of academic achievement performance needs to be created and maintained (Naaj et al., 2023). Academic achievement is a direct manifestation of the effectiveness of learning and serves as a valid indicator to assess the effectiveness of teaching and education in higher education, as well as the overall development of students (Z. Zheng & Mustappha, 2023). Indicators of academic achievement include procedures, learning activities, discipline, deadlines, achievement of learning goals, and evaluation. There are assessment activities conducted by instructors to assess academic achievement (Abduloh et al., 2022).

2.3 Learning strategies

Learning is an integral part of developing a human resource framework. The goal of learning is to achieve what can be done, explained, or demonstrated through the learning process at the end of the training period. A good learning objective is performance-based and clear, and the final outcome of the learning objective can be observed or measured through methods such as performance assessments to determine the level of achievement (Rahadi et al., 2023). It is important for learning to provide a more authentic design that allows students to collaborate in creating solutions to solve learning problems. Problem-solving leads to questioning and seeking answers by students, which can then be applied to finding solutions within the context of learning using available information resources (Mukaffan, 2022).

Learning strategies are action plans that include the use of methods and utilization of various resources/strengths in a learning process. This means that in developing a strategy, it involves the process of planning before implementation (Haudi, 2021). Learning strategies are activities/actions carried out by students, aiming to facilitate the acquisition, storage, retrieval, and use of information in a more meaningful way to enhance efficient learning (Viet, 2022). Learning strategies are processes, techniques, method determinations, and steps in learning that teachers establish to help students learn more efficiently and optimally (Hasriadi, 2022). Effective learning strategies refer to the techniques and approaches used by learners to achieve knowledge acquisition (Almoslamani, 2022). Each student has various ways or strategies to solve problems, but they will choose one or a few strategies to solve a particular problem. From previous theories, we can observe three things. First, one strategy cannot be used to master all subjects. Second, learning strategies are not limited to only one type but encompass various types. Third, the selection of

learning strategies by students can be influenced by the subject being taught (Mariana et al., 2023). The measurement of learning strategies can be done by focusing on goals, activities, individuality, and integrity (W. N. Nasution, 2017).

2.4 Lecturer competence

Competence is the knowledge, skills, and core values that are reflected in consistent and continuous habits of thinking and acting, enabling someone to be competent, meaning they have the knowledge, skills, and core values to perform a certain task (Febriana, 2019). Competence can be defined as the authority and ability of an individual to carry out tasks or work in accordance with their position or role (Syamsuri, 2021). The competence of lecturers encompasses knowledge, skills, abilities, and behaviors applied by lecturers in carrying out their work, which are key factors for achieving relevant outcomes with the appropriate strategies. (Rahadi et al., 2021). The competence of lecturers relates to everything that an individual possesses in terms of knowledge, skills, and other internal factors needed to perform a task based on their knowledge and skills. (W, 2019). The competence of lecturers can be defined as the acquisition of suitable skills for task execution, or the ability to make decisions, using acquired skills and knowledge, to act in specific situations, synthesizing theoretical aspects and discipline as well as experiences. (Asnani & Nurismilida, 2017). Lecturers have the responsibility to provide learning activities that aim to achieve the learning objectives of their students. Lecturers are expected to update their knowledge and master the teaching materials. Preparation of materials is important and can be done by seeking information through various sources such as reading the latest books, accessing the internet, keeping up with the latest developments and advancements in the materials being taught. (Azis et al., 2020).

The main task of a lecturer is to provide lessons in a specific field of knowledge. Therefore, students and lecturers are inseparable entities. (Baryanto, 2020). Lecturers must undergo training in specific subjects to enhance their knowledge level. (López-Martín et al., 2023). Competence can be acquired through schooling, training, and self-learning with the help of learning resources. (Qurtubi, 2023). They can help change students' attitudes and assist them in achieving better performance outcomes. Therefore, lecturers must have the appropriate competence and experience. (Prasetio et al., 2017). Indicators of lecturer competence include knowledge, skills, self-concept, personal traits, and motives. (Anwar et al., 2020).

2.5 Learning engagement

Learning engagement is a stable personal characteristic that represents a tendency to engage in activities with high enthusiasm. The character of engagement is demonstrated by a balanced character in the cognitive, emotional, and body language sectors, which focus on goal achievement. (Adi & Fithriana, 2018). Work engagement can also mean how to encourage someone to perform at a high level so that they can contribute maximally to the organization. (Febriansyah, 2020). Learning engagement is expected to cultivate a high sense of social interaction in every student. They are nurtured to control their emotions, thereby fostering a spirit of social solidarity in the classroom. (Basir, 2017). Lecturers organize group activities to prevent the development of problems or difficulties among students. The content of these group activities includes providing information related to educational, professional, personal, and social issues that are not presented in the form of regular lessons. (H.S. Nasution, 2019). Learning engagement is a system in which individuals collaborate in groups to achieve shared learning goals. (Northey et al., 2018). Learning engagement is an instructional approach that provides opportunities for students to collaborate with their peers in structured tasks. (Prihatmojo & Rohmani, 2020). Engagement refers to the high level of student involvement in learning activities, which can reflect various student behaviors in the

learning process. (Zhu et al., 2023). Learning engagement has great potential as a focus of significant educational reform and is a stated goal in several school development initiatives at the university level. (Jian, 2022). Therefore, it is imperative to enhance the experience of engagement in lectures and learning to achieve the potential benefits of participation. (Yulhendri et al., 2022). Indicators of learning engagement include vigor, dedication, and absorption. (Luo et al., 2023).

2.6 Intrinsic motivation

Intrinsic motivation refers to motives that are active or functional without the need for external stimulation. This is because every individual already has an inherent drive to do something. When someone has intrinsic motivation, they consciously engage in activities that do not require external motivation. In the context of learning activities, intrinsic motivation is highly essential, especially in self-directed learning. It is challenging for someone without intrinsic motivation to sustain continuous learning activities. (Fithri, 2021). Intrinsic motivation refers to motives that are active or functional without the need for external stimulation, as every individual has an inherent drive to do something. On the other hand, extrinsic motivation refers to motives that are active and functional due to external stimuli. (Parnawi, 2019). Intrinsic motivation has also been labeled by some researchers as emotional engagement. (Froiland & Worrell, 2016). Intrinsic motivation can be measured through four aspects: self-determination, self-satisfaction, positive habits, and awareness. (Muhammedi, 2017).

3.METHODOLOGY

Researchers use quantitative research methods because they want to present research results that are objective and not based solely on assumptions, using precise numbers. Rahmat (2020) states that a good research method generally must fulfill scientific elements such as being rational, empirical, and objective. Rationality refers to the basis of research that employs certain methods that can be understood or reasoned by humans. Sahir (2020) asserts that this is one method with a research process based on perceptions of a phenomenon, with data approached through descriptive analysis in the form of oral statements from the research object. Hardani et al. (2020) state that quantitative research is more systematic, planned, structured, and clear from the beginning to the end of the study, and is not influenced by the conditions present in the field, characterized by the use of numerical or nominal data.

The research object of this study is the students of the State Agricultural Polytechnic in Samarinda. The sampling method used in this research is the Hair formula, with a sample size of 220 respondents. This sample size is determined based on the 5 latent variables multiplied by 44 operational variables, resulting in a required sample size of 220 students from a total population of 1,084. Data collection was conducted through a questionnaire containing questions and statements using a Likert scale ranging from 1 to 5, or from "strongly disagree" to "strongly agree." The questionnaires were distributed over a period of two weeks. The data analysis technique used in this study is Structural Equation Modeling (SEM) with the assistance of the Smart PLS application.

4.RESULT AND DISCUSSION

4.1 Outer Model Analysis

Convergent Validity

Convergent validity testing, the indicated value must show a loading number of at least 0.7, the structural model of the test results in this research is shown in the following image.

The Smart PLS output for the loading factor provides the results in the following table:

Table 1. *Outer loading* Stage 1

	Learning Engagement (X3)	Lecturer Competence (X2)	Intrinsic Motivation (Z)	Academic Achievement (Y)	Learning Strategies (X1)
X1.1					**0,780**
X1.2					**0,897**
X1.3					**0,982**
X1.4					**0,781**
X1.5					**0,334**
X1.6					**-0,009**
X2.1		**0,891**			
X2.2		**0,987**			
X2.3		**0,710**			
X2.4		**0,784**			
X2.5		**0,765**			
X2.6		**0,015**			
X2.7		**0,903**			
X2.8		**0,777**			
X3.1	**0,793**				
X3.2	**0,785**				
X3.3	**0,809**				
X3.4	**-0,016**				
X3.5	**-0,009**				
X3.6	**0,164**				
X3.7	**0,810**				
X3.8	**0,760**				
Y.1				**0,754**	
Y.2				**0,717**	
Y.3				**0,790**	
Y.4				**0,900**	
Y.5				**0,988**	
Y.6				**0,730**	
Y.7				**0,712**	
Y.8				**0,730**	
Z.1			**0,891**		
Z.2			**0,754**		
Z.3			**0,733**		
Z.4			**0,720**		

Z.5			**0,979**		
Z.6			**0,255**		

Table 1 shows that several variables have a loading factor <0.7, namely variable X1.5 of 0.334, X1.6 of -0.009, X2.6 of -0.015. X3.4 is -0.016, and X3.5 is -0.009 and X3.6 is 0.164, then Z.6 is 0.225, because it does not meet the requirements, the indicators mentioned are deleted.

The Smart PLS output for the loading factor provides the results in the following table

Table 2. Description of answers to Outer loading Stage 2

	Learning Engagement (X3)	Lecturer Competence (X2)	Intrinsic Motivation (Z)	Academic Achievement (Y)	Learning Strategies (X1)
X1.1					**0,905**
X1.2					**0,960**
X1.3					**0,890**
X1.4					**0,760**
X2.1		**0,785**			
X2.2		**0,701**			
X2.3		**0,700**			
X2.4		**0,970**			
X2.5		**0,999**			
X2.7		**0,993**			
X2.8		**0,889**			
X3.1	**0,760**				
X3.2	**0,754**				
X3.3	**0,760**				
X3.7	**0,781**				
X3.8	**0,867**				
Y.1				**0,809**	
Y.2				**0,780**	
Y.3				**0,932**	
Y.4				**0,913**	
Y.5				**9,333**	
Y.7				**9,600**	
Y.8				**7,604**	
Z.1			**0,704**		
Z.2			**0,793**		
Z.3			**0,734**		
Z.4			**0,759**		
Z.5			**0,791**		
Z.6			**0,865**		

After the invalid indicators were removed and the second stage of outer loading was carried out, in Figure 2 and Table 2 it is shown that all indicators have a loading factor > 0.70, which also proves that the indicators are valid and their constructs can be measured. Average Variance Extracted (AVE) Value

The average value is used to check data variance between research variables provided that the data meets the AVE standard of > 0.5 which is presented in the table below.

Table 3. *Average Variance Extracted (AVE)*

	Average Variance Extracted (AVE)
Learning Engagment (X3)_	0,743
lecturer Competence (X2)_	0,642
Intrinsic Motivation (Z)	0,650
Academic Achievement (Y)	0,701
learning strategies (X1)__	0,870

Average Variance Extracted (AVE) data from this research has shown a construct of more than 0.5. It can be said that the research indicators have no error in the variance value of the construct.

Discriminant Validity
Discriminant Validity is carried out with the aim of assessing differences in indicators, good research data should have differences between indicators, this is to maximize research results based on the statements answered by respondents.

Table 4. *Discriminant Validity*

	Learning Engagement (X3)_	Lecturer Competence (X2)_	Intrinsic Motivation (Z)	Academic Achievement (Y)	Learning Strategies (X1)__
Learning Engagement (X3)_	0,789				
Lecturer Competence (X2)_	0,065	0,757			
Intrinsic Motivation (Z)	0,616	0,243	0,644		
Academic Achievement (Y)	-0,285	-0,087	-0,275	0,424	
Learning Strategies (X1)__	-0,158	-0,014	-0,166	0,200	0,309

Discriminant Validity testing proves that there are differences between one indicator and another used in this research as evidenced by the results of cross loading values between indicators which are higher in the construct itself

Composite Reliability
Nilai A good *Composite reliability* value is at least 0.7, this test aims to check the

reliability of the data. Data should not change and must be consistent from the beginning to the end of the observation.

Table 5. *Composite Reliability*

	Composite Reliability
Learning Engagement (X3)	0,838
lecturer Competence (X2)	0,712
Intrinsic Motivation (Z)	0,708
Academic Achievement (Y)	0,958
learning strategies (X1)	0,890

Composite reliability for each variable shows a construct value > 0.70. These results show that each variable has met *Composite Reliability* so it can be concluded that all variables have a high level of data reliability.

4.2 Evaluation of the Inner Model

R-Square Testing

Based on data processing that has been carried out using the SmartPLS 3.0 program, the R Square value is obtained as follows:

Table 6. R-Square

	R Square	R Square Adjusted
Intrinsic Motivation (Z)	0,426	0,592
Academic Achievement (Y)	0,119	0,904

The research has demonstrated that Intrinsic Motivation (Z) has an R-square value of 0.592, indicating that the Learning Strategy (X1), Teacher Competence (X2), and Learning Engagement (X3) collectively account for 59.20% (100% x 0.592) of the variance in Intrinsic Motivation (Z). The remaining 40.80% (100% - 59.20%) is influenced by other variables not examined in this study. Regarding Academic Achievement (Y), it has an R-square value of 0.904, or 90.40% (100% x 0.904). This indicates that the Learning Strategy (X1), Teacher Competence (X2), Learning Engagement (X3), and Intrinsic Motivation (Z) collectively explain 90.40% of the variance in Academic Achievement (Y). The remaining 9.60% (100% - 90.40%) is influenced by other variables not examined in this study.

Model Fit (Goodness of the Model)

Based on data processing that has been carried out using the SmartPLS 3.0 program, the model fit values are obtained as follows:

Tabel 7. Hasil Model Fit (Goodness of the Model)

	Saturated Model	Estimated Model
SRMR	0,111	0,111

d_ULS	5,322	5,329
d_G	1,415	1,415
Chi-Square	665,253	665,388
NFI	0,750	0,750

The goodness of fit test results of the PLS model show that an NFI value of 0.750 means FIT. Thus, from these results it can be concluded that the model in this research has a high goodness of fit and is suitable for use to test research hypotheses.

Relevance of Q2 Predictions

The results of Q-Square *predictive relevance* in the structural model in this research have proven that the measured data has shown good observation value. Q-square value > 0 indicates the model has *predictive relevance*; conversely, if the Q-Square value ≤ 0 indicates the model lacks *predictive relevance.*

Table 8. Nilai Q^2

	SSO	SSE	Q^2 (=1-SSE/SSO)
Learning Engagement (X3)	500,000	500,000	
lecturer Competence (X2)	700,000	700,000	
Intrinsic Motivation (Z)	600,000	521,209	0,632
Academic Achievement (Y)	700,000	734,635	0,844
learning strategies (X1)	400,000	400,000	

This test displays Q2 in the Intrinsic Motivation (Z) variable of 0.632 > 0 and Academic Achievement (Y) of 0.844 > 0, thus the observation value in this study is good and good because the Q square value > 0 (zero).

Hypothesis test

Direct Influence

Testing this hypothesis shows that there is a direct influence of Learning Strategy (X1), Lecturer Competence (X2), Learning Engagement (X3) on Academic Achievement (Y) through Intrinsic Motivation (Z) positively and significantly. The results of this test are explained in the table below.

Table 9. Direct Effect Test

	T Statistics (|O/STDEV|)	P Values
Learning engagement(X3)_ -> Intrinsic motivation (Z)	6,730	0,000
Learning engagement(X3)_ -> Academic achievement (Y)	4,190	0,001
Lecturer competence (X2)_ -> Intrinsic motivation (Z)	4,087	0,003
Lecturer competence (X2)_-> Academic achievement (Y)	3,003	0,005
Intrinsic motivation (Z) -> Academic achievement (Y)	3,986	0,000
Learning strategies (X1)__ -> Intrinsic motivation (Z)	8,012	0,000
Learning strategies (X1)__ -> Academic achievement (Y)	13,309	0,000

Based on the table above, it shows that the influence of Learning Strategies (X1) on Intrinsic Motivation (Z) yields a T-Statistics value of 8.012 ≥ 1.96 with P-values of 0.000 ≤ 0.05. Furthermore, the influence of Lecturer Competence (X2) on Intrinsic Motivation (Z) yields a T-Statistics value of 4.087 ≥ 1.96 with P-values of 0.003 ≤ 0.05. Lastly, the influence of Learning Engagement (X3) on Intrinsic Motivation (Z) yields a T-Statistics value of 6.730 ≥ 1.96 with P-values of 0.000 ≤ 0.05. Therefore, Learning Strategies (X1), Lecturer Competence (X2), and Learning Engagement (X3) have a direct positive and significant influence on Intrinsic Motivation (Z).

The influence of Intrinsic Motivation (Z) on Academic Achievement (Y) yields a T-Statistics value of 3.986 ≥ 1.96 with P-values of 0.000 ≤ 0.05. Learning Strategies (X1) on Academic Achievement (Y) yields a T-Statistics value of 13.309 ≥ 1.96 with P-values of 0.000 ≤ 0.000. Furthermore, the influence of Lecturer Competence (X2) on Academic Achievement (Y) yields a T-Statistics value of 3.003 ≥ 1.96 with P-values of 0.005 ≤ 0.05. Lastly, the influence of Learning Engagement (X3) on Academic Achievement (Y) yields a T-Statistics value of 4.190 ≥ 1.96 with P-values of 0.001 ≤ 0.05. Therefore, Learning Strategies (X1), Lecturer Competence (X2), Learning Engagement (X3), and Intrinsic Motivation (Z) have a direct positive and significant influence on Academic Achievement (Y).

Effects of Mediation

Hypothesis testing carried out to test the indirect effect shows that Intrinsic motivation (Z) is able to strengthen the influence of Learning strategies (X1), Lecturer competence (X2), Learning engagement (X3) and Intrinsic motivation (Z) on Academic achievement (Y) positively. and significant.

Tabel 10. *Effects of Mediation*

	Specific Indirect Effects
Learning engagment(X3)_ -> Intrinsic motivation (Z) -> Academic achievement (Y)	-0,085
Lecturer competence (X2)_ -> Intrinsic motivation (Z) -> Academic achievement (Y)	-0,029
Learning strategies (X1)__ -> Intrinsic motivation (Z) -> Academic achievement (Y)	0,010

Based on the table above, the significance values displayed indicate 0.010 ≤ 0.05 for the mediating role of Intrinsic motivation (Z) in strengthening the influence of Learning strategies (X1) on Academic achievement (Y). Similarly, the mediating role of Intrinsic motivation (Z) in strengthening the influence of Lecturer competence (X2) on Academic achievement (Y) yields a significance value of 0.029 ≤ 0.05. The mediating role of Intrinsic motivation (Z) also strengthens the influence of Learning engagement (X3) on Academic achievement (Y) with a significance value of -0.085 ≤ 0.05. Therefore, it is evident that Intrinsic motivation (Z) can act as a moderating variable in the tested variables.

5.CONCLUSION

Based on the research findings, it can be concluded that there is a significant and positive influence of learning strategies (X1), lecturer competence (X2), and learning engagement (X3) on intrinsic motivation (Z). Furthermore, learning strategies (X1), lecturer competence (X2), learning engagement (X3), and intrinsic motivation (Z) directly affect academic achievement (Y). Another significant finding is that intrinsic motivation (Z) strengthens the influence of learning strategies

(X1), lecturer competence (X2), learning engagement (X3), and intrinsic motivation (Z) on academic achievement (Y). These findings highlight the importance of various factors, such as effective learning strategies, competent lecturers, and active engagement in learning, in enhancing intrinsic motivation. Moreover, intrinsic motivation plays a crucial role in reinforcing the impact of these factors on academic achievement. These results provide valuable insights for the development of educational approaches and strategies to foster intrinsic motivation and improve academic performance.

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IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY IN FOOD AND BEVARAGE COMPANIES TO SUPPORT SUSTAINABLE DEVELOPMENT GOALS IN 2030

Putri Maharani, Dwi Risma Deviyanti, Zaki Fakhroni*

Mulawarman University, Indonesia

Corresponding author: zaki.fakhroni@feb.unmul.ac.id

Abstract

In the context of companies listed on the IDX, the implementation of Sustainable Development Goals (SDGs) in sustainability accounting and financial reporting may face certain challenges. These challenges can include limited availability of data, measurement and reporting complexities, and alignment between company business practices and SDG targets. Therefore, further research and deeper understanding of the implementation of Corporate Social Responsibility (CSR) in Food and Beverage companies to support the Sustainable Development Goals by 2030 are crucial to drive progress in sustainability practices in the Indonesian capital market. The research adopted a qualitative descriptive analysis methodology. The process of gathering information technique for this research uses online data search method. The findings of this research are The first aspect is Good Health and Well-being. Another prominent aspect that companies focus on is No Poverty. The Conclusion are CSR disclosure, when viewed from the 17 aspects of SDGs, still needs further improvement. The analysis conducted indicates that only 2 aspects out of the 17 SDGs aspects. Based on result and discussion, the disclosure made by the companies in 2021 and 2022 shows a significant level of consistency, indicating that the information disclosed in 2021 was further developed and reiterated in 2022. This is evident from the aspects disclosed by the companies in 2021, which were reiterated in 2022. Subsequent researchers are encouraged to identify the factors influencing corporate disclosure through interview methods.

Keywords: *Sustanable Development Goals, Corporate Social Responsibility, Sustainability, Food and Bevarage*

1.INTRODUCTION

Continuous accounting implementation provides numerous advantages for organizations. In addition to the financial value of the organization, sustainability accounting also considers the organization's sustainability strategy. Meanwhile, the company's management has resolved to disclose the social and economic impact of the organization's operations in a concerted effort to incorporate the concept of sustainability into its operationsIn the era of globalization, businesses worldwide are more aware of the significance of integrating sustainability factors into their operations, as a result of social and environmental concerns. The notion of corporate social responsibility (CSR) started to develop in the 1950s. A few of the terms and concepts that have evolved over time that are closely related to CSR include corporate philanthropy, corporate social performance, corporate reputation, corporate sustainability, and corporate citizenship.

As stated by SAR Khan, Z. Yu, and K. Farooq cited in (Asrol et al., 2023), the 17 sustainable development goals (SDGs) provide a comprehensive program for all nations, encompassing objectives such as eradicating hunger and poverty, as well as safeguarding the planet, to be achieved by 2030. The Triple Bottom Line (TBL), which refers to the incorporation of economic, social, and environmental factors, is an essential element of the SDGs. TBL is a business

framework that evaluates an organization's performance by considering not only its financial profitability but also the social and environmental impact of its activities on the earth and society. John Elkington (1997) introduced this approach to assess business success by taking into account its influence on it.

The SDGs encompass a total of 17 objectives and 169 specific targets that address a wide range of concerns, including poverty eradication, gender equality, climate change, and sustainable energy. The aim of the SDGs is to provide a comprehensive conceptual framework to improve human well-being and preserve our planet. In response to the need for transparency and accountability in sustainability, companies have adopted sustainability reporting.

Sustainability reporting serves as a communication tool for companies to their stakeholders, providing information on the company's performance in achieving sustainability goals. In sustainability reports, companies disclose information about their business activities that impact social, environmental, and economic aspects, as well as their contributions to achieving the SDGs. Sustainability reports demonstrate a company's commitment to social and environmental responsibility and provide critical data that is distributed to stakeholders, encompassing investors, customers, and the wider public, in order to assess the effectiveness and influence of the organization's sustainability initiatives.

Food and Beverage companies that are publicly traded on the Indonesia Stock Exchange (IDX), are businesses engaged in the production, distribution, and sale of food and beverages consumed by the public. However, behind their operational activities, these companies inevitably have an impact on the environment. As companies listed on the IDX, Food and Beverage companies must also consider and take into account the social, environmental, and economic impacts of their operational activities. They can implement sustainable business practices, integrate sustainability into their supply chains, manage waste and emissions efficiently, and transparently communicate their sustainability performance to stakeholders.

Companies that have reported their contributions to achieving the SDGs vary in the quality of their reporting. The guidelines issued by the Financial Services Authority (OJK) in the appendix to POJK No. 51/POJK.03/2017 state that companies can present a Sustainability Report in quantitative or qualitative form, relating to economic, environmental, and social aspects. Some companies provide only brief descriptions, even mentioning only the SDGs goals they are working towards. On the other hand, some companies provide detailed reports with measurable data, showcasing their performance in achieving the SDGs. This may include percentages of their performance, percentages of affected communities, the number of engaged communities, and so on (Arifianti & Widianingsih, 2022).

However, in the context of companies listed on the IDX, the implementation of SDGs in sustainability accounting and financial reporting may face certain challenges. These challenges can include limited availability of data, measurement and reporting complexities, and alignment between company business practices and SDG targets. Therefore, further research and deeper understanding of the implementation of Corporate Social Responsibility (CSR) in Food and Beverage companies to support the Sustainable Development Goals by 2030 are crucial to drive progress in sustainability practices in the Indonesian capital market. These challenges may include resource constraints, weaknesses in processes and systems, lack of employee awareness and understanding of the importance of internal controls, as well as vulnerabilities that can be exploited by fraud perpetrators.

2.LITERATURE REVIEW

2.1 Legitimacy Theory

According to Hadi (2014) cited in the article (Theresia, 2018) A management philosophy known as legitimacy theory favors society, the government, people, and neighborhood organizations. Based on Chariri & Ghozali (2014) in (Arifianti & Widianingsih, 2022) Legitimacy Theory suggests that the boundaries of setting norms, social values, and reactions can drive the analysis of organizational behavior in terms of environmental considerations, making it an important aspect. According to the Legitimacy Theory, corporate social responsibility initiatives are a response to external constraints, such as political, social, or economic factors, as stated in (Marharani & Yulianto, 2016). The Legitimacy Theory is founded on the concept of a "social contract" between the corporation and the community in which it operates. The social contract delineates the diverse anticipations of the community for the functioning of the organization. Over time, social expectations change, necessitating companies to be vigilant about the context in which they function. (Rokhilinasari, n.d.). According to Wilmshurst T. and Frost, G. (2000) cited in (Rokhilinasari, n.d.) Due to the Legitimacy Theory, businesses must consistently show that they uphold social values in their operations. Disclosure in business reports is frequently used to accomplish this. Based on Legitimacy Theory, it is assumed that companies use corporate social responsibility (CSR) disclosure to maintain their image in the eyes of the public (Ratmono & Sagala, 2015).

2.2 Corporate Social Responsibility (CSR)

As per the Ministry of Health in the Republic of Indonesia, businesses adopt Corporate Social Responsibility (CSR) as a way to fulfill their obligations towards the social and environmental aspects of the communities they serve. This includes participating in activities that benefit the neighborhood and the environment. Based on Theresia (2018), CSR is described as the enhancement of quality of life by addressing current social issues and promoting environmental sustainability. Put simply, it enables businesses to organize their operations in a way that benefits the community. Corporate sustainability reporting can help firms and organizations review their performance across all aspects of sustainable development, set targets, and achieve them. As such, it is an effective instrument for gathering data, tracking progress, and evaluating companies' contributions to overall SDGs. It can be argued that businesses utilize the concept of Corporate Social Responsibility (CSR) to enhance the well-being of communities and address social and environmental issues.

2.3 Sustainability Report

A sustainability report provides comprehensive details about the financial, ecological, and societal effects of a company's operations. Just like a certified management accountant (CMA), businesses are required to provide information on social and environmental practices, in addition to their regular financial reports such as profit and loss statements, balance sheets, and cash flows. As per the guidelines of the Global Reporting Initiative (GRI), stakeholders, both internal and external, can utilize data from sustainability reports to assess an organization's dedication towards sustainable development goals.

According to GRI (2020) in (Nurfitriana, 2020) sustainability reporting is a report that covers economic, environmental, and social information derived from a company's activities and published to provide information to stakeholders. Based on such reports, stakeholders can obtain more information to use as a basis for decision-making. In addition to financial information, stakeholders can also obtain non-financial information included in sustainability reporting. NCSR (2020) states that through sustainability reporting, we can assess the contribution made by companies in supporting the SDGs. Therefore, a sustainability report can be defined as a report that provides information on the social, environmental, and economic aspects sourced from a company's activities, regulated by the GRI standards, and presented to stakeholders. Through the Sustainability Report, companies contribute to supporting the SDGs. It is also expected that

companies operating in the food and beverage sector can contribute to achieving the SDGs by 2030, thereby addressing social, environmental, and economic challenges worldwide.

2.4 Sustainable Development Goals (SDGs)

According to the National Center for Corporate Reporting (2020), Sustainable Development Goals (SDGs) are a global agenda that has been in progress since its official launch in 2015. The Government of Indonesia and stakeholders, including practitioners, have taken various strategic steps to support their achievement. SDGs have become a common framework for understanding among all involved parties. According to the National Development Planning Agency, SDGs are an improvement over the Millennium Development Goals (MDGs) that involve a larger number of countries, both developed and developing, expand the sources of funding, emphasize human rights, and promote inclusivity through the involvement of Civil Society Organizations (CSOs), media, philanthropy and businesses, as well as academia and experts. SDGs represent International and domestic commitments in efforts to improve societal well-being, encompassing 17 goals: "1) No Poverty, 2) Zero Hunger, 3) Good Health and Well-being, 4) Quality Education, 5) Gender Equality, 6) Clean Water and Sanitation, 7) Affordable and Clean Energy, 8) Decent Work and Economic Growth, 9) Industry, Innovation, and Infrastructure, 10) Reduced Inequalities, 11) Sustainable Cities and Communities, 12) Responsible Consumption and Production, 13) Climate Action, 14) Life Below Water, 15) Life on Land, 16) Peace, Justice, and Strong Institutions, and 17) Partnerships for the Goals".

Based on B20 Sustainability 4.0 Awards (2022), a collection of new universal objectives, targets, and indicators constitute the SDGs. expected to be used by UN member countries to frame their agendas and policy decisions for the next 15 years. Sustainable Development Goals aim to eradicate poverty, reduce inequalities, and protect the environment. SDGs are a global development agreement that the principle of universality dictates that all nations, regardless of their level of development, bear a moral responsibility to attain the goals and targets set forth by the SDGs. In conclusion, SDGs are goals and targets involving both developed and developing countries in global development efforts to address social, environmental, and economic challenges, encompassing 17 goals.

3. RESEARCH METHOD

The research focuses on multiple Food and Beverage firms that are publicly traded on the Indonesia Stock Exchange (BEI). The research subject comprises a total of seven companies: These are the companies: PT Campina Ice Cream Industry Tbk, PT UltraJaya Milk Industry & Trading Company Tbk, PT Indofood Sukses Makmur Tbk, PT Diamond Food Indonesia Tbk, PT Garudafood Putra Putri Jaya Tbk, PT Cisarua Mountain Dairy Tbk, PT Nippon Indosari Carpindo Tbk. The research employed a qualitative descriptive analysis, a method used to explain ongoing processes or occurrences that serve as the focus of the study. Subsequently, the data or information is analyzed in order to derive problem-solving solutions. The qualitative approach is a method that emphasizes a deep understanding of a problem (Theresia, 2018). This research focuses on the research process based on phenomena or real evidence in the field. The descriptive method aims to provide a clear description or overview of a particular condition or phenomenon. The data collection technique for this research uses online data search method. The process of searching for data using online media and sustainability report, such as the internet or other network media that offer online facilities, is known as the "online data search method" in addition to reports that are available for direct acquisition via the stock exchange of Indonesia or the official website of the company. This method enables researchers to use online data as quickly, conveniently, and academically as feasible.

4. RESULT AND DISCUSSION

In the implementation of SDGs by several companies in the Food and Beverage sector, there are notable dominant aspects that receive significant attention. The first aspect is "Good Health and Well-being", the objectives of good health and wellbeing encompass the pursuit of a sound physical and mental state, as well as the advancement of overall wellness across all age groups. The stakeholders of these companies are primarily the communities residing in the operational areas. Due to the potential impact of the companies' operations, it is crucial to enhance this aspect to prevent any adverse effects on the affected parties. Therefore, the companies contribute to improving health and well-being. For example, PT Campina Ice Cream Industry Tbk, in their 2021 Sustainability Report, does not explicitly mention this aspect. However, they express their commitment to social aspects via corporate social responsibility (CSR) initiatives. Since 2012, one of their corporate social responsibility (CSR) initiatives has been the production of oyster mushrooms in Kuniran Village, Sine District, Ngawi Regency, East Java. Campina consistently cultivates and reinforces its corporate culture, referred to as "SALAM", across its whole workforce. It stands for Enjoyment in working, Actively obtaining flawless results, Preserve resources, Adaptive and youthful attitude, and Respect for everyone. This accurately represents the element of optimal health and overall well-being in attaining the aims of SDGs.

PT Campina Ice Cream Industry Tbk published their 2022 sustainability teport explicitly discloses their contributions to SDGs, such as providing healthcare services to employees, collaborating with GO-TIX, PT SIER Surabaya, St. Aloysius Alumni Association (IATOP) in COVID-19 vaccination efforts, organizing blood donation activities involving 1,000 donors in cooperation with the alumni association of UNIBRAW, and ensuring customer health protection through high-quality product standards. Similarly, PT Garudafood Putra Putri Jaya Tbk, in 2021, focused on internal activities to promote employee health, while in 2022, they emphasized their contributions to food security, employee health insurance, implementation of hygiene and health protocols during the COVID-19 pandemic, and occupational health and safety (K3) practices.

PT Ultrajaya Milk Industry & Trading Company Tbk supports SDGs on providing UHT milk nutrition and healthy UHT beverages made from natural ingredients, without preservatives or artificial sweeteners, suitable for consumers above 2 years old. Equally important is their commitment to ensuring the well-being and secure environment of every employee, striving for a zero catastrophic accident rate.. Additionally, they support communities in accessing healthcare facilities through the provision of integrated health posts (posyandu)/community health centers, ambulances, and donations for routine health activities. The company also provides COVID-19 vaccination facilities for employees, their families, business partners, and the surrounding community.

Table 1. Data Presentation Table Based on Corporate Sustainability Report

NO	INDICATOR	PT Campina Ice Cream Industry Tbk		PT UltraJaya Milk Industry & Trading Company Tbk		PT Indofood Sukses Makmur Tbk		PT Diamond Food Indonesia Tbk		PT Garudafood Putra Putri Jaya Tbk		PT Cisarua Mountain Dairy Tbk		PT Nippon Indosari Carpindo Tbk		TOTAL 2021	TOTAL 2022
		2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022		
1	No Poverty	1	1	0	0	1	1	1	1	1	1	1	1	0	1	5	6
2	Zero Hunger	1	0	0	0	1	1	0	0	1	1	0	0	1	1	4	3
3	Good Healt and Well-Being	1	1	1	1	1	1	1	1	1	1	0	0	1	1	6	6
4	Quality Education	0	1	1	1	1	1	0	0	1	1	0	0	1	1	4	5
5	Gender Equality	1	1	0	0	1	1	1	1	0	1	1	1	0	1	4	6
6	Clean Water and Sanitation	1	1	0	0	1	1	1	1	0	1	1	1	0	0	4	5
7	Affordable and Clean Energy	1	1	0	0	1	1	1	1	0	1	1	1	0	0	4	5
8	Decent Work and Economic Growth	1	1	0	0	1	1	1	1	1	1	0	0	0	1	4	5
9	Industry, Innovation, and Infrastructure	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	3
10	Reduced Inequalities	1	1	0	0	1	1	0	0	1	1	0	0	0	0	3	3
11	Sustainable Cities and Communities	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	3
12	Responsible Consumption and Production	1	1	0	0	1	1	1	1	0	1	1	1	0	1	4	6
13	Climate Action	0	1	0	0	1	1	1	1	1	1	0	0	0	1	3	5
14	Life Below Water	0	0	0	0	1	1	0	0	0	1	0	0	0	1	1	3
15	Life On Land	1	1	0	0	1	1	0	0	1	1	0	0	0	1	3	4
16	Peace, Justice, and Strong Institutions	0	1	0	0	1	1	0	0	0	1	0	0	0	1	1	4
17	Partnership For The Goals	1	0	0	0	1	1	1	1	0	1	0	0	0	0	3	3

*If not disclosed=0 and if disclosed=1

Another prominent aspect that companies focus on is "No Poverty", aiming to eradicate poverty in all its forms and dimensions. For instance, PT Campina Ice Cream Industry Tbk contributes to this target by hiring 1,327 workers and enrolling them in the Jamsostek/BPJS programme. They also provide assistance to earthquake victims in Cianjur, support 1,000 vulnerable workers such as street vendors and scavengers around the Campina Factory (Rungkut Area), and offer meals, wages, Eid present packages, and nutritious food packages to communities and orphanages.

PT Indofood contributes to SDGs through socio-economic inclusion by partnering with farmers and smallholders and providing decent job opportunities with appropriate remuneration for all employees. PT Diamond Food Indonesia strengthens the achievement of the SDGs through assistance to micro, small, and medium-sized businesses (MSMEs). They integrate marketing strategies for products distributed by their subsidiary, PT Sukanda Djaya, with the concept of Creating Shared Value (CSV). This initiative positively impacts society, especially housewives, by providing additional sources of income to supplement family finances.

PT Garudafood supports SDGs by fulfilling employee rights in accordance with applicable laws in terms of employment and Occupational Health and Safety (OHS). They also address the social impact on the community through the Sehati CSR program, which involves the local community around their operations.

5.CONCLUSION

The following conclusions can be made in light of the research's findings:

1) CSR disclosure, when viewed from the 17 aspects of SDGs, still needs further improvement. The analysis conducted indicates that only 2 aspects out of the 17 SDGs aspects were disclosed by the 7 companies examined in the study.
2) Based on Table 1, the disclosure made by the companies in 2021 and 2022 shows a significant level of consistency, indicating that the information disclosed in 2021 was further developed and reiterated in 2022. This is evident from the aspects disclosed by the companies in 2021, which were reiterated in 2022.
3) The dominant disclosure focuses on social aspects such as good health and well-being, as well as gender equality.

The research findings depict the Dominant disclosure by Food and Beverage Companies in supporting SDGs 2030. Subsequent researchers are encouraged to identify the factors influencing corporate disclosure through interview methods. For companies, this research can serve as an evaluation of the dominant and less disclosed aspects of CSR disclosure, ultimately enhancing motivation for CSR disclosure that aligns with SDGs.

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ACCOUNTING INFORMATION QUALITY, INVESTMENT EFFICIENCY AND AUDITOR SPECIALIZATION: EVIDENCE FROM INDONESIA

Dayang Anna Anjelina, Dwi Risma Deviyanti, Zaki Fakhroni*

Department of Accounting, Faculty of Economics and Business, Mulawarman University, Indonesia

**Corresponding author: zaki.fakhroni@feb.unmul.ac.id*

Abstract

Using a sample of 47 Indonesian firms classified as an IDXBASIC in the Indonesian Stock Exchange, the purpose of this article is tries to provide the relationship between accounting information quality and investment efficiency with auditor specialization as a moderator variable. Previous research has tried to find the relationship between these three variables, and the result still inconsistent. Therefore, this research attempted to try this research with different object and in special period, which are 2021-2023 or when COVID-19 pandemic period just recently decreased. With quantitative analysis and three years observations, this article has 130 observations as a final sample for the two research models. From the first model, the result found that there is an existence of positive effect between the quality of accounting information with the efficiency of company's' investment. For the second model, the result found that there is no direct relationship between auditor specialization and investment efficiency. The conclusion is auditor specialization is the pure moderator between accounting information quality and investment efficiency. This article suggests for the future research to enlarge the sample and tries this research in different countries, especially for developed countries or frontier countries.

Keywords: *accounting information quality, investment efficiency, auditor specialization*

1.INTRODUCTION

A corporation must be able to make the best possible use of the resources it has. It goes without saying that the stockholders expects its company resources to be done as effectively and efficiently as possible since they gave fund for company's activities (Freeman et al., 2010). With that expectation, a company has a responsibility to become more profitable for their stakeholders. Unfortunately, these expectations are not realized as a result of unscrupulous people exploiting corporate assets. The three types of fraud schemes identified by ACFE in 1996's Fraud Tree include financial statement fraud, asset theft, and corruption. Misuse of the company's assets is one of the fraud acts. According to Jensen and Meckling's agency theory (1976), a manager's interests differ from those of the principle or owner. Given their greater knowledge of the company's circumstances, they occasionally conceal the truth; this is known as information asymmetry (Scott, 2015). By concealing the truth, managers can operate in accordance with their own priorities, particularly when deciding how to use the company's assets, and the company's investment operations are no exception.

In a perfect market, a company should be able to greenlight projects that bring in more money than they put out, a measure known as investment efficiency (Biddle et al., 2009). Such circumstances are rare or nearly unattainable in practice due to the information asymmetry between proprietors and managers and the agency costs (Biddle et al., 2009) that influence the inefficient use of firm resources. Managers employ extra resource allocation owned by the company to engage on initiatives with negative NPV for personal purposes (Lin et al., 2021). In other words, there are

situations where managers possess the ability to allocate financial resources towards a project that exhibits a favorable net present value (NPV); however, they deliberately elect to forego the undertaking in order to maintain a safe margin (Rocca et al., 2007). Due to this, the consequence is that organizations end up facing two situations in their investment operations, namely the overinvestment scenario and the underinvestment scenario or better known as investment inefficiency (Samet & Jarboui, 2017).

A condition referred to as "overinvestment" is characterized by an organization's excessive investment in initiatives that yield negative NPV (Biddle et al., 2009; Gomariz & Ballesta, 2014). This overinvestment condition may also manifest in situations where a company has ample cash flow, or free cash flow, which is utilized by company executives to fund projects with negative net present value (NPV) for personal gain (Lara, et al., 2016; Fakhroni et al., 2018). Conversely, underinvestment transpires when an organization neglects a venture that possesses a favorable NPV on account of inadequate communication between shareholders and management regarding pertinent information (Biddle et al, 2009; Gomariz and Ballesta, 2014); or, when the company is experiencing financial challenges (Samet & Jarboui, 2017), wherein managers elect to forego potentially hazardous risks that could compromise the company's long-term viability. If the organization's investment activities are consistently inadequate and ineffective, the financial performance of the company may be adversely affected (Benlemlih & Bitar, 2016). To surmount such obstacles, a strategy that addresses the information asymmetry of the organization is necessary. Considerable scholarly investigation has been undertaken in the domain of accounting in recent years to ascertain the variables that might influence a firm's investment efficiency. (Dutta & Nezlobin, 2017; Elaoud & Jarboui, 2017; Lara et al., 2016). An potential strategy for organizations to address information asymmetry is to improve the overall quality of their accounting data.

Accounting information regarding a company is disclosed in their annual reports, financial statements, and sustainability reports, which encompass the economic dimension as well. Due to the fact that accounting information is frequently used as a benchmark to track the development of a company's performance, it is vitally important for all report users. As a result, it is critical for companies to disclose their performance accurately in their reports. As per the most recent fraud report released by the ACFE in 2020, financial statement fraud constitutes the rarest form of fraudulent activity on a global scale, comprising a mere 10% of all reported incidents. However, what is most surprising is that this fraudulent activity resulted in the most substantial loss when compared to the other undertakings. The nearly one million USD loss is extremely concerning for users of financial statements, especially investors and lenders who are considering making investments or extending loans. Consequently, businesses must curtail this type of conduct and improve their reputation with the general public. The business should employ a special auditor to improve the accuracy of its accounting data in order to decrease this activity (Elaoud & Jarboui, 2017).

Balsam et al. (2003) created a research methodology that demonstrated how auditor specialization increases the reliability of information. Other studies that used this methodology discovered that good audit quality could increase company investment. This is conceivable because specialized audits have more latitude in offering discretionary accruals due to the performance of management ambiguity that may result in particular issues (Lai, 2011). Drawing on the findings of two prior studies, Elaoud and Jarboui (2017) ascertained that the relationship between the dependability of a company's accounting information and the efficacy of its investment activities would be influenced by the moderator variable of auditor specialization. They discover that hiring a specialized auditor can deliver important and trustworthy information about its legitimacy. In keeping with earlier research, this research will also examine how the excellence of accounting information affects the effectiveness of firms' investments by utilizing auditor specialization as a moderating variable. Aside from that, the most recent research published by ACFE (2020) discovered that an external auditor's function in detecting errors and fraud in financial statements is vital in identifying disclosure errors made by companies. Consequently, this study used the assumption that it would be easy for a specialist auditor to reduce investment inefficiency that results from information asymmetry with their expertise and knowledge of an industry.

Prior research by Hidayat and Mardijuwono (2020) investigates the same thing but with Indonesian companies. Their findings are consistent with those of Elaoud and Jarboui (2017), who discovered that the efficacy of company investments is significantly impacted positively by the reliability of accounting information. Rembulan (2019) conducted the same study under the same title, however the outcomes were opposite this time around. According to the findings presented in his study, specialty of auditors was able to supply adequate information to improve a company's investment efficiency while the excellence of accounting information showed to be less efficient in doing so. The research findings differ from those of other studies, which may be a result of variations in the research objectives and financial data gathered. In addition to the studies already mentioned, a number of earlier research projects in Indonesia focused solely on determining how auditor specialization influences audit quality (Diyanti & Wijayanti, 2019; Nida & Nurbaiti, 2018; Sarwoko & Agoes, 2014). However, the impact of auditor expertise as a moderator variable has received little attention. Therefore, this becomes the reason why this research decided to determine the extent to which the presence of a specialized auditor could improve the effectiveness of the firm's investment operations and play a crucial role in advising managers on how best to spend the resources of the company.

Earlier, Chen et al. (2011) conduct a study with private companies in emerging markets as the sample. According to the study's outcomes, companies in emerging countries may not have as many data analysts, would not receive as much media coverage, and have other disadvantages when it compared to developed economies. Due to the existence of this option, it will be helpful for investors to rely on reliable accounting information from developing market companies as a basis for their decision-making regardless of other considerations. Furthermore, investment in private enterprises venturing into developing markets could potentially be bolstered by the strength of information, according to the findings of this researcher. Information asymmetry is the principal contributor to ineffectual investment decision-making; Biddle et al. (2009) propose that an improvement in the dependability of accounting information may be able to alleviate this issue. Research by Biddle et al. (2009) also discovered that organizations with a reliable accounting information tend to assist managers in avoiding poor decisions as well as moral risks and give managers the ability to comprehend and recognize better investment opportunities. The, other study by Elaoud and Jarboui (2017) investigated that the reliability of accounting data can help businesses with their inefficiency investment issues. Given the results obtained, it is possible to deduce that the reliability of accounting information significantly influences the investment efficacy of a corporation, particularly in developing countries.

Another research about investment efficiency in emerging countries were conducted by Anjelina (2024). This research found that underinvestment phenomenon still occurred since the last research by Chen et al. (2011). The difference is Chen et al. (2011) assuming that this phenomenon happened because private enterprises in emerging countries have a lower reliability of their accounting information compared to developed countries, while research by Anjelina (2024) found that underinvestment was occurred in emerging countries because of COVID-19 pandemic that impacted every region and make company’s financial performance become unstable, and therefore they face financial constraint and hard to make investment in contingency situation. Anjelina (2024) assuming that underinvestment also happened because of manager action to avoid risk and save the company’s resources. This assertion is corroborated by the findings of Altarawneh et al. (2023), who discovered that the CEO of an organization significantly influences its investment choices. Consequently, this study is motivated by the desire to provide novel insights or outcomes regarding the development of accounting research in the area of investment efficiency.

The research gap in this study are the research object and research timeframe. Previous research included more businesses listed on the New York Stock Exchange (Biddle et al., 2009). Chen et al. (2011) conducts research on private enterprises in emerging nations. Meanwhile, study by Hidayat & Mardijuwono (2020) examined manufacturing entities listed on the IDX from 2014 to 2016 in Indonesia. Rembulan (2019) also solely used manufacturing enterprises as research objects across a

five-year period from 2012 to 2017. Lastly, Devi et al. (2023) conducted another study employing property and real estate entities that were publicly traded on the IDX as a sample from 2014 to 2017, with a four-year observation period covered. This study will use companies classified as IDXBASIC listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023, with a three-year observation period as a research novelty, because this period can be considered as a period when COVID-19 has recently decreased, and thus this research is conducted to see how much COVID-19 is affecting investment activities in the IDXBASIC sector. The primary objective of this study is empirically to provide organizations with insights into the various factors that may impact their investment efficacy. Theoretically, this study is anticipated to make a scholarly contribution to the field of accounting research in developing countries, particularly Indonesia, with respect to domains including corporate accounting, investment efficiency, and auditor proficiency. For the chosen period, which are the COVID-19 pandemic period is expected to have a consistent result with previous research despite the situation that can be conclude as a unique situation.

2.LITERATURE REVIEW

2.1 Investment Efficiency

Investment is fundamentally critical for financial growth of both developed and emerging nations. The accuracy of accounting and financial data becomes a significant issue when investors try to invest in developing nations (Eye, 2020). It was also discovered that although investors had done some research and analysis prior to making any investments, the unique risks related to emerging markets forced investors to conduct thorough and effective analyses of every potential investment opportunity, making the accuracy of accounting information crucial for both individual investors and potential corporate investors (Elaoud & Jarboui, 2017). This viewpoint leads to the conclusion that a company's investment efficiency is highly impacted by the correctness and dependability of its accounting data. Executives at companies are consistently pressured to embark on all projects with a positive NPV (Gao & Yu, 2020). Corporations' funders will undoubtedly reap significant benefits from projects with a good NPV. Subsequently, managers might be unable to undertake every project that demonstrates a positive net present value due to the widespread lack of consistent funding at businesses (Gomariz & Ballesta, 2014). One study discovered that because of the financial market friction, it is challenging for businesses to make the best and most efficient investments (Chen et al., 2011). As a result, businesses are forced to choose between two investment scenarios: overinvestment and underinvestment.

Overinvestment scenario can occur because the company's management wants to take over some of the resources used by other businesses, and that becomes an investment inefficiency. In contrast, an underinvestment scenario happens when businesses are purposefully unable to accept projects with a positive NPV for a variety of reasons, such the high cost of capital that must be issued and other factors. When managers exploit the remaining free cash flow for their personal needs, overinvestment can also happen (Fakhroni et al., 2018). Conversely, underinvestment refers to the circumstance wherein organizations allocate a smaller amount of capital for investment than they should (Gomariz & Ballesta, 2014). Information asymmetries and agency problems are the two primary types of financial market friction that have a negative impact on the efficacy of corporate investments, according to a multitude of prior empirical and theoretical studies.

2.2 Agency Theory

Agency theory was first introduced some decades ago by Jensen and Meckling (1976). The concept of agency theory can be seen as a tool for explaining and resolving conflicts between corporate executives acting as agents on behalf of stockholders and those executives acting as agents. This argument makes the supposition that shareholders don't always agree with business executives. Shareholders trust the company's executives to make good use of their resources (Scott, 2015). Therefore, in order to provide profitable results for shareholders as principles, business executives as agents have a professional and moral duty to employ these resources as efficiently as possible. Although business leaders do make judgments, they must do it as efficiently as possible to avoid subsequently harming shareholders. The company's executives will be paid for their efforts if this goal is fulfilled. This is the fundamental idea behind agency theory—that principals and agents

have different objectives.

Information asymmetry, which is also referred to as adverse selection and moral hazard, is a recurring dispute within organizations that has the potential to affect a company's investment efficiency (Biddle et al., 2009). Adverse selection is an information asymmetry that frequently arises in financial markets involving lenders and borrowers because the debtor is more aware of the financial data offered by the lender (Scott, 2015). Info asymmetry is frequently brought about by discrepancies in the passage of information between the management and shareholders of a company. The executive possesses expertise regarding the internal workings of the organization, in addition to making prognostications regarding its future prospects. Theoretically, executives provide information to shareholders in a transparent manner, but because they frequently put their own interests first, there is information asymmetry. Because the stockholders are unable to evaluate the actual performance of the company's management, situations like these frequently result in market failure. The term "moral hazard" is frequently used to describe this asymmetrical information scenario (Scott, 2015).

The credibility of the company's accounting information will be impacted by the advent of information asymmetry. Therefore, it requires the competence of specialized auditors to evaluate the reliability of this information in order for the company's accounting information to continue to be credible (Elaoud & Jarboui, 2017). Accounting information that has undergone specialized auditing is anticipated to be more current and reliable in order to improve the company's future. Organizations can make more effective investments by using accounting information, for instance, as the foundation for executive decision-making prior to making investments.

2.3 Accounting Information Quality, Investment Efficiency, and Auditor Specialization

According to the Statement of Financial Accounting Concept No. 8, there are seven qualitative aspects of accounting information that must be present in company financial reports: relevance, verifiability, ease of understanding, neutrality, timeliness, comparability, and completeness (Maines & Wahlen, 2003). This information will later be used as a decision-making basis by users of financial statements, including investors, management, government, data analysts, employees, and others. But if this information lacks these features, there is concern that it will be useless to those who utilize the company's financial statements (Azar, 2022).

When a company's accounting information possesses all of the aforementioned traits, its level of reliability will undoubtedly rise. Management, or corporate executives as decision-makers, is one of the consumers of financial statements. It is typically assumed that the choices they make, like business investments, will be able to produce profitable returns for shareholders. As mentioned in the preceding section of the literature review, companies will generally confront two circumstances, namely overinvestment and underinvestment. It is challenging for businesses to manage their investment efficiency under these two conditions. However, with the excellence of accounting information that is dependable and trustworthy, management will use all of their abilities when making decisions that benefit shareholders.

In COVID-19 phase, a company have to disclose more accurate information of their accounting data since the financial statements users need to see how companies face COVID-19 situation and how they go through it. If they disclose their accounting information properly and reliable, investor may consider to give them additional money if they need for their operational activities and to make an investment. But, if company disclose accounting information that only benefits company and managers, then investor may take all their money since their trust to the company is decreased.

With the explanation described above, therefore this is the first hypothesis in this study:

H_1: The greater company’s accounting information quality, the greater its impact to increase investment efficiency by decreasing information asymmetry.

Companies need quality auditors with industry-specific expertise to reduce information asymmetry when disclose accounting information (Elaoud & Jarboui, 2017). Industry-specific auditors are said to be capable of comprehending the strengths and weaknesses of the industrial sector they oversee, business strategies employed by companies, evaluation of company accounting information systems, and results of their assessment of the fairness of financial reports issued by companies (Hakim & Omri, 2010; Sun & Liu, 2011). The capabilities of specialized auditors are said to make the information they relay more trustworthy and beneficial for the business internally, particularly for resolving potential issues with cash flow and management choices in the future. The company's planned investment activities are one of the decisions made by management.

The second hypothesis in this investigation is the following in light of the aforementioned details:

H_2: Auditor specialization could increase the company's investment efficiency by detecting improper disclosure in financial statements and reducing information asymmetry.

To achieve the required investment efficiency, organizations must be able to increase the excellence of their accounting information, one of which is by engaging the services of a trained auditor to analyze company accounting information. One of the prerequisites for the auditor before accepting a company as a client is that the auditor comprehends the client's business industry (Arens et al., 2017). The disparities in accounting concepts, accounting systems, accounting standards that serve as guidelines, and applicable tax legislation typically result from disparities between industries. Before reviewing their clients' financial statements, auditors should be aware of such anomalies. Companies require the presence of specialized auditors to increase the dependability of firm accounting information.

It is generally accepted that financial statements scrutinized by specialists are more reliable than those scrutinized by non-specialist auditors. Previous research (Elaoud & Jarboui, 2017; Hidayat & Mardijuwono, 2020; Nidal, 2020) has investigated the potential moderating effect of auditor expertise on the association between accounting information quality and investment efficiency. The similarity of the results obtained from all three indicates that auditor specialization has an impact on both of these variables. The research conducted by Hidayat and Mardijuwono (2020) suggests that the expertise of auditors amplifies the impact of the reliability of accounting information on the efficacy of investments.

Based on the results of the earlier research, the third hypothesis in this study is:

H_3: The potential for auditor specialization to act as a moderator and enhance the favorable impact of accounting information quality on investment efficiency exists due to their industry-specific expertise.

3.METHODOLOGY

3.1 Research Framework

In this quantitative study, the hypotheses put forth are examined through the utilization of IBM SPSS version 25.0 and the statistical analysis tool EViews 10. A multitude of control variables were incorporated alongside the independent variables to alleviate the impact of extraneous factors. The following describes the framework for this study:

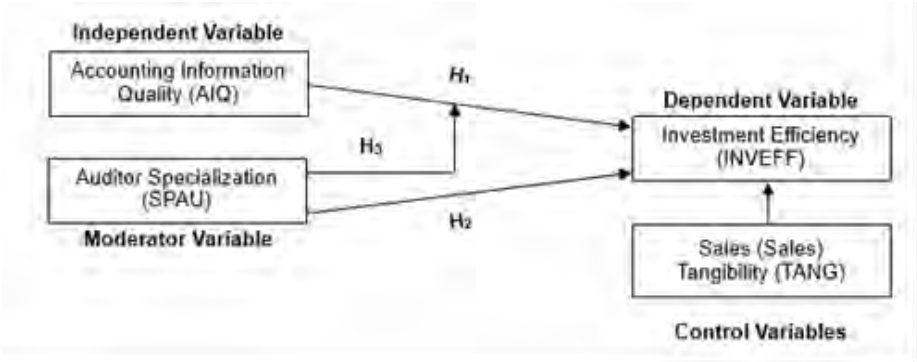

Figure 1. Research Framework

3.2 Population and Sample Selection

A sample of companies classified as IDXBASIC firms and listed on the Indonesia Stock Exchange is utilized for this study. The complete details regarding the auditor specialization, investment effectiveness, and variable quality of accounting information is included in the company's annual financial report. Three years, or from 2021 to 2023, are utilized in this study's observation period in order to analyze these three variables. Purposive sampling was utilized in the sampling procedure for this study. Thus, employing this methodology, the final research sample for the study consisted of 47 companies prior to outliers.

Table 1. Research Samples Selection

	Total
Quantity of firms in the IDXBASIC sector during the period 2021-2023	97
Companies that present financial reports in currencies other than Rupiah	(49)
Incomplete company data for the variables studied from the 2021-2023 period	(1)
Selected companies	47
Research observation time (3 Years) before outlier	141

3.3 Dependent Variable: Investment Efficiency (INVEFF)

The efficiency of investments is the dependent variable of the investigation. In the context of this study, investment efficiency refers to the extent to which an organization allocates its resources towards fixed assets and research and development (R&D) endeavors. To determine whether the investment is efficient or inefficient, the company's investment need to be regress with company's sales growth. This is to see the deviation of company expected investment and accrual investment. Therefore, the residual value derived from the regression between sales growth and the fixed asset investment value, then multiple by -1 is known as investment efficiency. This is because the residual is the deviation of company's expected investment. The greater the value, the more efficient the investment activities of the company. According to the following formula used by Biddle et al., (2009), Gomariz & Ballesta (2014), and Sari & Suaryana (2014), the way to calculated efficiency of investment is:

$$Invest_{i,t} = \beta 0 + \beta 1 SalesGrowth_{i,t} + \varepsilon_{i,t} \quad (1)$$

Invest is a company's total fixed asset investment spending that subtracted by fixed asset disposal, and then it is scaled to company's total assets in year t. SalesGrowth is the change in sales as a percentage from t-2 to t-1 in a company.

3.4 Independent Variable: Accounting Information Quality (AIQ)

The AIQ-annotated quality of accounting information functions as the independent variable in this study. In order to quantify this variable, the McNichols and Stubben (2008) equation will be utilized. This equation employs discretionary income as a substitute for earnings management, and it will be employed in order to quantify this variable. The identical formula was utilized in prior investigations conducted by Chen et al. (2011), Elaoud & Jarboui (2017), and Gomariz & Ballesta (2014). This is because earnings management, a managerial intervention in the financial reporting process that can affect the actual profits of a company, is inversely related to the accuracy of accounting information. Consequently, the residual value, which is produced as the discrepancy between sales and receivables, constitutes the value of this AIQ variable. An increase in value corresponds to a higher degree of precision in the accounting data. This variable is quantified utilizing the subsequent model:

$$\Delta AR_{i,t} = \beta 0 + \beta 1 \Delta Sales_{i,t} + \varepsilon_{i,t} \quad (2)$$

ΔAR defined as the change in receivables of company i in year t and the next is divided it by the total assets of the previous year. ΔSales is the change in sales of company i in year t which the next is divided by total assets of company i from the previous year.

3.5 Moderator Variable: Auditor Specialization (SPAU)

Auditor specialization is a moderating variable in this investigation. This variable was calculated in the exact same way as by Elaoud & Jarboui (2017), i.e., by utilizing a dummy variable. If a company's auditor has industry-specific expertise, they receive a score of 1, and if not, they receive a score of 0. The ratio of clients a public accounting firm audits in a certain industry to the total number of enterprises in that area is used to determine the specialty of auditors.

$$\text{SPAU} = \frac{\Sigma \text{total client of public accountant firms in the industry}}{\Sigma \text{total all issuers in the industry}} \quad (3)$$

An audit firm is deemed a specialist when it possesses a market share that exceeds 10%. Minutti-Meza (2013) and Syifaudin (2016) adopted a 10% market share criterion for specialist auditors.

3.6 Control Variables

A number of control variables that are anticipated to affect the dependent variable, investment efficiency, are incorporated into this study. Elaoud & Jarboui (2017), Gomariz & Ballesta (2014), and Hidayat & Mardijuwono (2020) mentions sales and tangibility as some of these control variables. For the sales variable, this study uses total sales at firm i in year t as a control variable and then proxies it with the natural logarithm, or LnSales. The TANG variable is therefore the proportion of the firm's total assets comprised of fixed assets in year t relative to the total assets of all companies.

3.7 Model Specification

There are two regression models in this research, which are:

$$INVEFF_{i,t} = \alpha + \beta 1 AIQ_{i,t} + \beta 2 LnSALES_{i,t} + \beta 3 TANG_{i,t} + e_{i,t} \quad \text{(a)}$$

And,

$$INVEFF_{i,t} = \alpha + \beta 1AIQ_{i,t} + \beta 2SPAU_{i,t} + \beta 3(AIQ_{i,t} X\ SPAU_{i,t}) + \beta 4LnSALES_{i,t} + \beta 5TANG_{i,t} + e_{i,t} \quad \text{(b)}$$

Two study models were constructed as part of this examination in order to evaluate the impact that auditor expertise and the reliability of accounting information have on the investment efficiency of a company. Model (b) investigates the role of auditor expertise on the connections between investment efficiency (INVEFF) and accounting information quality (AIQ), in addition to the partial or individual effect of auditor expertise to test Hypotheses 2 (**H_2**) and 3 (**H_3**). In contrast, model (a) is employed to examine Hypothesis 1 (**H_1**), which posits that investment efficiency (INVEFF) is directly influenced by accounting information quality (AIQ).

4. RESULT AND DISCUSSION

4.1 Descriptive Statistics

In this investigation, the investment efficiency variable (INVEFF), scaled by total assets and computed using the investment to sales growth formula, serves as the dependent variable. The quality of accounting information (AIQ), which is determined by dividing the annual change in accounts receivable and sales by the total assets from the prior year, is the independent variable utilized. It is anticipated that auditors' specialization (SPAU), a moderating variable, will enhance the impact of accounting information quality on a firm's investment efficiency. Last but not least, there are control variables that are believed to have a strong link with investment efficiency, namely the natural logarithm of sales (LnSales) and tangibility (TANG). Table 2 contains a statistical description of this research. Table 2 shows the lowest value, highest value, mean or average value, and standard deviation for each variable. The criteria for the sample for this study were met by 47 firms with three years of monitoring and after reducing the outlier data, this study finally employs 130 observations as a final samples.

Table 2. Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
INVEFF	130	-.52	1.03	.0099	.25781
AIQ	130	-1.32	.74	.0318	.24390
SPAU	130	.00	1.00	.2385	.42779
LnSales	130	.00	31.46	27.6825	3.78199
TANG	130	.00	776.01	6.3608	68.02634

Discretionary accrual, as a surrogate for the reliability of accounting information regarding investment efficiency, has an average value (mean) that is positive by a mere 0.03%, according to the results of the descriptive statistical analysis. Given the 130 observations in this study, it is possible to conclude that the company's discretionary accruals are categorized as very low. The quality of accounting information has a standard deviation of 0.24, which is a variance of 24%. The AIQ has a lowest value of -1.32 and a highest value of 0.74. The company's investment efficiency, as measured by INVEFF in table 1, demonstrates how efficiently it is utilizing investment opportunities, the outcomes of which are measured by growth opportunities. The calculations' findings indicate that efficiency ranges from -.52 to 1.03, with 1.03 being the highest value. With a standard deviation of 0.25 or 25%, an average value of investment efficiency is calculated to be.0099.

In conclusion, the SPAU variable exhibits a standard deviation of 42% and a mean value of 0.23. The existence of a binary variable, which assumes the value zero for the lowest category and one for the highest, is responsible for this. Furthermore, the investigation also assesses the interaction variables and control factors. The sales proxies, which are calculated using the natural logarithm of

sales, exhibit a range of values between 0 and 31.46. The average value of LnSales is 27.68, and it has a standard deviation of 3.78. The TANG variable represents the proportion of fixed assets of firm i in year t relative to the total gross assets of company i in year t. The range of this variable is from 0 to 776. The average value is 6.36 with a standard deviation of 68.02. The descriptive statistics are the outcomes obtained after assessing the normality of the data and conducting case-wise diagnostics to address any outlier data. The descriptive statistics outcomes for a final sample of 130 observations gathered over a three-year duration from 2021 to 2023 are displayed in Table 2.

About the company's investment scenario for the IDXBASICS sector from 2021 to 2023, this research try to divide it into two, which are known as over and under scenario. The details is shown in the following table:

Table 3. Sample Composition by Investment Scenario

Year	Under	%	Over	%
2021	38	57.57	7	10.93
2022	10	15.15	30	46.88
2023	18	27.28	27	42.19
Total	66	100	64	100

Based on the table, it is evident that enterprises in Indonesia's basic materials sector truly faced underinvestment conditions in 2021, the year following the global spread of COVID-19. This study argue that organizations chose to avoid risk and save its assets for long-term use rather than investing them in the expansion of its fixed assets. Nevertheless, the effects of COVID-19 were so severe that the underinvestment scenario significantly decreased in the following two years, and company faced overinvestment scenario. It seems that organizations may be pressured to purchase fixed assets even in situations where financing is tight in order to satisfy stakeholders. Future researchers are particularly encouraged by this study to look into the variables that led to the overinvestment scenario that occurred in the IDXBASIC sector for the following years 2022 and 2023. The research emphasizes the originality of its findings because developing countries, particularly those with limited resources, barely experience overinvestment scenarios.

4.3 Hypotheses Testing Results

This study employs two regression equations. The first equation is to ascertain the direct effect of the accounting information quality variable (AIQ) on investment efficiency, while considering the chosen control variables. Next, the second equation is utilized to examine the direct impact of the interaction factors on investment efficiency, as well as the specific impact of SPAU on INVEFF. The outcomes of the initial regression model are as follows:

Table 4. First Model Regression Result

Variables	**Prediction**	**Coefficients**	**P>**	**Sig**
C		.889	.000	***
AIQ	(+)	.653	.000	***
LnSales	(-)	-.033	.000	***
Tang	(-)	.000025	.903	
R-Sq	.636			
Prob > F	.000			***
N	130			

The table above displays the outcomes of the initial model's multiple linear regressions. These regressions analyze the relationship between the quality of accounting information, the efficiency of a company's investment, and all control variables included in this research. INVEFF refers to the absolute value of the investment model, multiplied by -1. AIQ is defined as the absolute value of the discretionary accruals model developed by McNichols and Stubben in 2008. LnSales represents the natural logarithm of the sales value. Tang: The tangibility metric is constructed by calculating the ratio of tangible fixed assets to gross assets. The symbols *, **, and *** indicate statistical

significance at the corresponding significance levels of 1%, 5%, and 10% respectively.

According to the above-mentioned linear regression's findings, the AIQ variable has a 0.000 significance level and a positive coefficient of 0.653 effect on Investment Efficiency. This shows that the initial hypothesis (**H_1**) is viable. The results of this investigation align with the research conducted by Elaoud & Jarboui (2017), Gomariz & Ballesta (2014), and Hidayat & Mardijuwono (2020). Indonesia is still categorized as a developing nation in the Southeast Asia Region according to Morgan Stanley Capital Investment (2022). These findings demonstrate that a company's investment is more efficient the better the accuracy of its accounting information. This is because investors will have more confidence in investing in companies that provide dependable and credible information (Chen et al., 2011). In the absence of any constraints impeding a company's capacity to make effective investments, the infusion of funds from investors will unquestionably enhance resources and facilitate enterprises in making lucrative investments. The manager's capacity to make the best and most affordable investment decisions will rise if the company has surplus resources. For COVID-19 period, it is advisable for companies to disclose their accounting performance accurately and reliable, so investor and lenders as well as other financial statement users can measures company's capabilities in contingency situations. This is important since no one knows if something bad like this can happen again in the future.

In Table 4, the outcomes of statistical computations in multiple linear regression (Model 1) yielded an R^2 value, also known as a coefficient of determination, of 0.636. This finding suggests that the dependability of accounting information (AIQ), denoted as the natural logarithm of sales (LnSales), accounts for 63.6% of investment efficiency. The remaining 36.4% can be ascribed to additional variables not included in the research model. The variable LnSales exhibits the anticipated outcomes, resulting in a notable adverse impact on investment efficiency. If the company's sales increase, it can be argued that the company's investment may not be efficient or optimal, and there is a possibility that it could decrease. This is because the company will need to acquire additional fixed assets to support its operations, leading to a state of overinvestment or investment inefficiency. The TANG variable does not impact investment efficiency.

Table 5. Second Model Regression Result

Variables	Prediction	Coefficients	P>	Sig
C		.896	.000	***
AIQ	(+)	.608	.000	***
SPAU	(+)	-.043	.183	
AIQ*SPAU	(+)	.308	.050	**
LnSales	(-)	-.032	.000	***
Tang	(-)	.000010	.962	
R-Sq	.644			
Prob > F	.000			***
N	130			

The presented table showcases the results of the multiple linear regressions conducted in the second model. This model encompasses the regression analysis of accounting information quality, investment efficiency, auditor specialization, along with the control variables. INVEFF: the absolute value of the investment model, multiplied by -1, that represents the residual. AIQ refers to the residual absolute value of the discretionary accruals model created by McNichols & Stubben (2008). SPAU: Auditors who have the highest number of clients in the business are designated as specialists and assigned the number 1. Otherwise, they are assigned the number 0. The relationship between the quality of accounting information and the specialization of auditors is being examined in this study. LnSales represents the logarithm of sales using the natural logarithm function. Tang: The tangibility metric is constructed by calculating the ratio of tangible fixed assets to gross assets. The symbols *, **, and *** indicate statistical significance at the 1%, 5%, and 10% significance levels, respectively.

The outcomes of the second model's regression were employed to evaluate the validity of the second hypothesis (**H_2**) and the third hypothesis (**H_3**). The lack of significant influence of the SPAU variable on the investment efficiency variable is apparent from the obtained result of 0.183, which exceeds the predetermined threshold of 0.05. Therefore, hypothesis two (**H_2**) is rejected. The lack of a direct correlation between the auditor's specialism and the firm's investment efficiency is due to the fact that the decision-making process for investments is conducted by internal parties within the organization. While auditors with specialized knowledge contribute insights on corporate investment operations, their opinions cannot serve as a reference for company management when making investment decisions. Furthermore, it is evident that the AIQ*SPAU variable has a noteworthy impact on Investment Efficiency, as indicated by a significance level of 0.050 and a positive coefficient of 0.308. Consequently, the acceptance of the third hypothesis (**H_3**) is implied. The findings of this investigation are in line with the studies carried out by Elaoud & Jarboui (2017), Gomariz & Ballesta (2014), and Hidayat & Mardijuwono (2020). Based on these findings, it can be concluded that the auditor specialization variable functions solely as a moderator, as it does not directly interact with investment efficiency but rather with the reliability of accounting information (AIQ).

The addition of a moderating impact resulted in a 0.8% rise in the coefficient of determination (R^2), equivalent to a value of 0.644. Based on these results, it seems that the skill of the auditor can improve the link between the accuracy of financial data and the effectiveness of business investments. The involvement of external auditors in the process of auditing accounting information can serve to bolster its credibility and dependability. Companies that have undergone an initial public offering in Indonesia are required to conduct a compulsory examination of their financial statements. Based on the findings of this investigation, it can be inferred that the expertise of auditors specialized in accounting enhances the efficacy of a company's investment by improving the reliability of audited accounting information. Specialized auditors possess extensive expertise in their respective sectors and possess a comprehensive understanding of the industry, resulting in the production of highly accurate and reliable information (Balsam et al., 2003; Elaoud & Jarboui, 2017). The implementation of a professional auditor-led study can efficiently reduce the potential for moral hazard and adverse selection to occur between a corporation's proprietor and agent. The scrutiny of information conducted by the expert auditor will facilitate management in making more efficacious and streamlined investment choices.

5. CONCLUSION

The reliability of accounting information is crucial for all companies because financial reports or accounting information are considered to reflect the condition of the company quantitatively and as a whole. Accounting information reflects all activities that occur within the company on a quarterly or annual basis with last year's information that can be compared to see progress. The credibility of accounting information is highly questionable, especially for users such as investors, creditors and lenders. If the reliability of the company's accounting information is good, it will have an influence on the investment efficiency of a company. Managers are required to invest optimally and efficiently by considering all available resources (Gao & Yu, 2020). In order for this information to be more accurate and credible, the degree of conformity must be checked by a competent and independent party, which is none other than the company's external auditor. However, the auditor is also required to understand the client's business industry before auditing a company. On this matter, the auditors can be classified into specialist and non-specialist auditors. Auditors who are classified as specialists are believed to be able to provide more accurate information and advice because of their in-depth knowledge of an industry (Balsam et al., 2003; Elaoud & Jarboui, 2017), so of course the quality of accounting information will increase if audited by specialists. This information will later be used by company management as a consideration before making decisions regarding company investments.

Companies that classified as IDXBASIC are used in this study. Of the 97 companies listed, only 47 companies met the requirements to be the research sample. The selected research period is from 2021 to 2023. The selected period can be said to be an extreme period, where the COVID-19

pandemic has recently decreased. For this reason, this research was conducted. According to the study's findings, a company's investment performance is significantly enhanced by the greater of its accounting information reliability. This is in line with previous studies by Elaoud & Jarboui (2017) and Hidayat & Mardijuwono (2020). However, the auditor specialization variable has only a tiny effect on investment efficacy. The findings of this study diverge from those of Hidayat & Mardijuwono (2020), who discovered a significant positive relationship between auditor expertise and company's efficiency of investment activities. Furthermore, this research demonstrates that the auditor specialization variable merely moderates the relationship between the reliability of accounting information and the investment efficiency of a company. This study also discovered that in Indonesia, enterprises indexed as IDXBASICS were observed to have underinvestment circumstances. This suggests that COVID-19 is truly extraordinary, as it has affected all businesses worldwide and all locations. It can be inferred that during dire circumstances like the COVID-19 pandemic, corporations undeniably require financial support from other entities to sustain their operations. The accounting information supplied by the company is a vital aspect that might capture the attention of external parties. Furthermore, if this information undergoes an audit or verification process conducted by a qualified and impartial entity, such as a professional auditor, it will greatly benefit the organization.

There are various limitations associated with this research. The study simply utilizes two control variables, specifically Sales and Tangibility. It is strongly advised to conduct additional study using additional variables that are anticipated to impact investment efficiency, in addition to Sales and Tangibility. Despite the fact that the number of observations in this study exceeded 100 and the selected sample represented over 50% of the chosen population, it is recommended to extend the duration of the study and increase the sample size in order to ensure the dependability of the research findings. Furthermore, this study examines COVID-19 as a phenomenon. Therefore, it is recommended that future research explore different phenomena or investigate in normal circumstances. Furthermore, this research did not categorize the investment scenario into two distinct classifications, namely underinvestment and overinvestment. Future research should include dividing the investment into two groups in order to analyze the impact of excellence of accounting information and control variables on both scenarios. Finally, the study focuses on the country of Indonesia, which falls under the category of a developing nation. Therefore, it is plausible that the research findings may vary when applied to objects categorized as developed countries or those that are still in the process of development. The study's findings are expected to enhance both theoretical and empirical understanding.

Acknowledgement
I wish to extend my sincere appreciation to Dr. H. Zaki Fakhroni and Mrs. Dwi Risma Deviyanti, whose invaluable expertise and knowledge were incorporated into this research endeavor. I could not have completed this investigation without their assistance at every stage. The financial support extended by the Faculty of Economics and Business of Mulawarman University is also deserving of my sincere appreciation.

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THE EFFECT OF ACCOUNTING CONSERVATISM AND DEBT MATURITY STRUCTURE ON INVESTMENT EFFICIENCY

Febby Wulandari Putri, Dwi Risma Deviyanti, Zaki Fakhroni*

Mulawarman University, Indonesia

Corresponding author: zaki.fakhroni@feb.unmul.ac.id

Abstract

Investment efficiency is a hot research topic that is critical to a company's growth and success. The aim of this research is to determine the influence of accounting conservatism and debt maturity structure on investment efficiency in raw materials companies listed on the Indonesia Stock Exchange and its impact within the framework of agency theory. This research was motivated by a discrepancy with previous studies. Research findings show that accounting conservatism has no effect on investment efficiency. This is because managers who apply the principle of accounting conservatism do not always choose investments with positive NPV and accounting conservatism can increase information asymmetry between management and investors. In addition, the debt maturity structure has a positive influence on investment efficiency. This means that a short debt maturity structure can speed up the collection of funds and subsequent renewal of debt agreements, which will result in greater flexibility and monitoring of emerging investment opportunities.

Keywords: *Investment Efficiency, Accounting Conservatism; Debt Maturity Structure*

1.INTRODUCTION

There has been a worldwide rise in accounting scandals in recent years, characterized by fraudulent activities and opportunistic behavior by management. These scandals undeniably surprise and provoke concern among many individuals, prompting inquiries about the stability and integrity of businesses and financial institutions. Fraudulent accounting refers to the intentional act of concealing losses or inflating profits with the purpose of deceiving shareholders, financial analysts, and other stakeholders, in order to manipulate management decisions. Furthermore, occurrences of managerial opportunism, such as embezzlement and manipulation of financial papers, have the potential to undermine confidence and openness inside a company. This behavior is considered unethical in the field of accounting. Hence, the presence of immoral behavior might have a substantial impact on the dependability of the information provided, namely financial accounts. These statements are vital financial documents that are required forvarious stakeholders, including company owners, shareholders, and the general public. Financial statements serve as the primary instruments utilized by stakeholders to assess and articulate a company's performance. The primary aim of overseeing a company is to ensure that the objectives are in congruence. This involves creating financial statements that precisely reflect the vision, mission, and goals of the organization. Intra-organizational discrepancies might adversely impact the accuracy of information viewed by authorized individuals. Information asymmetry occurs when one party within a firm possesses a larger quantity of information than the other parties, potentially leading to the exploitation of that information. Furthermore, the presence of knowledge asymmetry enables managers to inequitably allocate and underutilize business resources in order to enhance shareholder profit (Lawal and Hassan, 2021). One strategy for enhancing shareholder wealth is to allocate investments with a high degree of efficiency.

An efficiency corporate investment strategy entails disregarding projects with a negative net

present value or abbreviated as NPV and allocating cash exclusively to those with a positive NPV. Agency concerns might provide a major obstacle to the efficacy of an investment for a firm. The gap arises from divergent perspectives between the agent and the principal, as seen by the inclination of risk managers tochoose investment projects with a negative NPV above those with a positive NPV. This inclination towards personal profits can lead to an excessive allocation of resources and an erroneous conviction that the investments are unproductive, ultimately resulting in significant losses of resources. Adopting accounting rules or protocols that safeguard legal rights and duties and promote the well-being of all stakeholders, including owners, company executives, shareholders, and other interested parties, is a strategy to prevent such incidents. The principle of conservatism is a much-debated accounting theory in the domains of accounting and finance. The cited principle is closely linked to accounting as it emphasizes the timely acknowledgment of negative information above positive information, hence confirming its importance (Zhong and Li, 2017).

Razzaq and Ashfaq, (2016) conducted a study which demonstrates that accounting conservatism enhances the efficiency of corporate investment. Conservatism mitigates underinvestment through the augmentation of cash flow and the meticulous examination of managerial decisions. Conservative corporations have the ability to hinder or restrict excessive capital investment. Furthermore, conservatism has the potential to impact the effectiveness of a company. Conservatism, as a reaction to excessive investment, restricts and impairs management's capacity to invest in projects that are not profitable (Abd-Elnaby and Aref, 2019). However, conditional conservatism, which is based on non- public information regarding potential financial losses caused by management, small-scale management firms, and foreign investors, is inversely correlated with excessive investment (Cho and Choi, 2016). In order to improve the effectiveness of investments, it is necessary for management to be careful when reporting results and predicting decreases in assets and earnings. This caution is driven by the need to provide consumers with more detailed and comprehensive financial reports, which is a characteristic of conservative financial practices.

The efficiency of investments is also influenced by the structure of debt maturity. Companies possessinga significant competitive edge frequently opt for short-term debt issuance to circumvent the expenses linked with long-term debt financing. (Diamond, 1993; Kale and Noe, 1990). Long-term debt agreements often contain lender-imposed terms that restrict an organization's capacity to obtain future high-risk loans, leading to costly periods of limited options. As a result, companies are considering the possibility of acquiring a debt in the future with more advantageous terms. Thus, participating in short- term borrowing provides increased financial flexibility while reducing the potential impact of expensive obligations. Therefore, the utilization of short-term debt functions as a strategy to alleviate the consequences arising from insufficient information and unsuccessful attempts at debt financing. Creditors' requests for debt renewal result in heightened levels of external oversight. Research conducted by Cutillas Gomariz and Sánchez Ballesta, (2014) found that the issuance of short-term debt can enhance investment efficiency, regardless of whether investment levels are excessive or insufficient. Hence, the presence of debt maturity arrangements may impact our capacity to secure the required financing for initiatives. Companies that own long-term debt generally have a greater abundance of resources at their disposal for undertaking long-term initiatives. Short-term debt hinders a company's ability to participate in long-term initiatives aimed at reducing liquidity risk. This research offers empirical proof regarding the effect of accounting conservatism and debt maturity structure on investment efficiency within the basic materials sector in Indonesia.

2.LITERATURE REVIEW

2.1 Agency Theory

The study of the relationship and interactions between principals and agents constitutes agency theory.A principal is a legal entity that confers the power and accountability for creating decisions within the company on an agent. An agent is an individual designated by a principle to operate the firm or given specific rights and tasks by the management. Principals employ agents to manage

their enterprises and make lucrative commercial choices (Jensen, Michael C.; Meckling, 1976). Agency theory posits that corporations, acting as agents for both principals and management, may adopt actions that serve their own interests, leading to a mismatch of goals. It also pertains to management acquiring a greater amountof information compared to firm shareholders.

2.2 Investment Efficiency

Companies are required to invest efficiently, avoiding the problem of under-investment or over-investment. Investment efficiency refers to the investment a company makes only in projects with high net present value or profitability. Underinvestment occurs when a company does not take advantage of investment opportunities in a project with a positive NPV, and overinvestment occurs when a company continues to invest despite the project's negative NPV. Appropriate decision-making by management is necessary to improve investment efficiency.

2.3 Accounting Conservatism

Conservatism is a principled approach that prioritizes recognizing profitable events promptly, ratherthan focusing on events that are predicted to be profitable. Conservatism can be described as an inclination of accountants to use accounting techniques that acknowledge lower values of assets and income, while considering larger values of liabilities and costs (Basu, 1997). Furthermore, accounting researchers have classified accounting conservatism into two specific kinds, namely conditional and unconditional conservatism. The concept of conditional conservatism entails the practice of expeditiously recognizing and addressing negative information, while postponing the assimilation of positive news (Ruch & Taylor, 2014). Conditional conservatism is based on economic events, where accounting profit is recognized more quickly for negative economic news than for positive economic news. This form of conservatism exhibits a biased treatment of both positive and negative economic news, showing an imbalance in how they are perceived. Unconditional conservatism is an accounting method that seeks to reduce the reporting of net assets (Watts, 2003). Unconditional conservatism is based on news events that result from the acknowledgment of accounting net income, such as the acceleration of research and development costs (Zhong & Li, 2017).

2.4 Debt Maturity Structure

Debt maturity structure refers to how a company arranges the length of time it holds its debt. The main emphasis is on the length of time needed to settle the debt, which can be categorized as either long-term or short-term. The decrease in expenses associated with financing debt depends on the maturity of the debt. Various theoretical assessments indicate that short-term debt provides more benefits compared to long-term debt (Ozkan, 2000). According to Brick and Ravid, (1985), taking on long-term debt may lead to higher tax obligations, which could potentially raise the overall worth of the company. Nevertheless, studies have shown that corporations facing a consistent increase in information asymmetry tend tofavor long-term debt (Goswami et al., 1995).

2.5 Hypothesis Development

2.5.1 Accounting Conservatism and Investment Efficiency

Conservatism refers to accounting bias that prioritizes caution in the gathering, assessment, and revelation of financial information. Conditional conservatism typically induces management (agents) to adopt a more cautious approach when making predictions and revealing a company's financial performance. Conditional conservatism, during periods of excellent economic conditions, discourages management from aggressively increasing stated earnings, hence reducing the likelihood of management engaging in potentially damaging opportunistic behaviors. In times of economic decline, management is inclined to more precisely and cautiously recognize losses linked to inadequate business performance, thus avoiding the risk of underestimating the detrimental effects of unfavorable economic conditions.

Investment decisions are influenced by conditional conservatism. The management adopts a prudent strategy when it comes to reporting profit and loss, and they tend to steer clear of high-risk

investment ventures that have a negative or unfavorable present value. Hence, the existence of conditional conservatism might enhance investment efficiency by incentivizing management to meticulously strategize investment projects that have the potential to yield benefits for the organization. Moreover, conditional conservatism serves as a deterrent to opportunistic conduct exhibited by managers (Latif et al., 2020). Managers are inclined to refrain from taking activities that could jeopardize the organization in order to benefit themselves. Conditional conservatism serves as an internal control mechanism that enhances the sharing of information. Unconditional conservatism, in contrast, maintains a consistent level of conservatism but places greater emphasis on making management more responsive to potential risks and losses during periods of poor firm performance. Furthermore, management can enhance their ability to regulate the expenses accrued by the organization. Managements are unlikely to bear these charges if they are unneeded. Hence, the use of unconditional conservatism empowers management to effectively oversee the company's risks, losses, and expenses. Additionally, it allows them to exert influence over corporate investment decisions, leading to a tendency for corporations to steer clear of high-risk projects with negative or unprofitable net present values (NPVs) in order to enhance investment efficiency.

H_1: Accounting conservatism has a significant and positive effect on investment efficiency

2.5.2 Debt Maturity Structure and Investment Efficiency

The notion of debt maturity structure pertains to the pre-established duration for debt repayment and can be classified into two categories: long-term debt and short-term debt. Short-term debt, according to Flannery, (1986) may be utilized as a means to alleviate the knowledge asymmetry problem that borrowers face. Short-term debt enables corporations to promptly return their financial obligations, enhance their rapport with creditors, and afford corporate management increased authority and supervision. According to the findings of Jeon and Oh, (2017), having more flexibility in short-term debt can enhance investment efficiency. Short-term borrowing enables management to swiftly raise cash, leading to more frequent negotiations for debt agreement renewals. This provides management with increased flexibility and greater supervision of investment opportunities as they arise. Through increased utilization of short-term debt, it is possible to prevent both overinvestment and underinvestment, according to research conducted by Cutillas Gomariz and Sánchez Ballesta, (2014). This is because short-term debt enables organizations to acquire capital at a quicker pace, as opposed to long-term debt. As a result, the risk of underinvestment is consequently reduced. Moreover, by imposinga shortened repayment period, short-term debt aids in the prevention of overinvestment by compelling businesses to meet their debt obligations in a more-timely manner. Therefore, a short-term loan structure offers advantages in mitigating underinvestment and managing overinvestment, ultimately enhancing the efficiency of firm investments.

H_2: Debt maturity structure has a significant and positive effect on investment efficiency

3. METHODOLOGY

3.1 Model Specifications

This paper introduces a model that seeks to analyze the effects of accounting conservatism as the first independent variable and debt maturity structure as the second independent variable on investment efficiency as dependent variable. The equation can be expressed as $InvEff_{it} = \alpha + \beta_1 CONACC_{it} + \beta_2 STDebt_{it} + \varepsilon_{it.}$. InvEff represents the variable that measures investment efficiency. The variable i symbolizes the firm, while t denotes the period. Alpha is a constant, while beta 1-3 represent the coefficients of the independent variables. The CONACC metric is utilized to assess accounting conservatism, whereas STDebt offers valuable information regarding the maturity structure of debt, specifically the ratio of short-term to total debt.

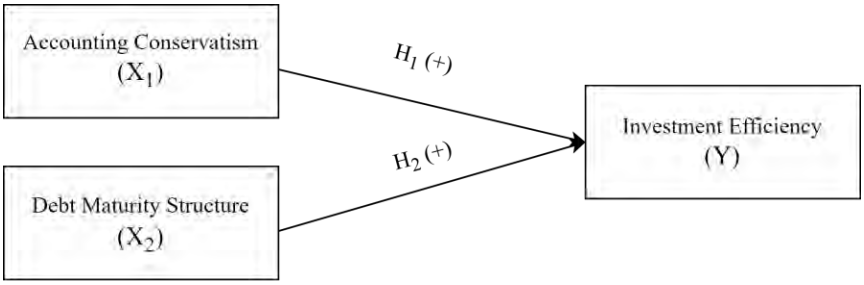

Figure 1. Research Model

3.2 Data Analysis Method

By utilizing multiple linear regression models and statistical analysis techniques implemented in IBM SPSS version 25, this study precisely elucidates the functional relationship between the dependent variable and two or more independent variables. Hypothesis testing and conventional assumption testingare employed in this investigation.

3.3 Data and Samples

This study makes use of secondary data in the form of financial statements from companies that operate in the basic materials industry. For the years 2021 and 2023, these businesses have been categorized in accordance with the IDX Industrial Classification. The procedure for selecting the sample was purposive sampling, in accordance with predetermined criteria that were derived from the research conducted by Xu et al., (2012). The criteria were as follows: (1) Inclusion of companies belonging to the basic material sector, classified according to the IDX Industrial Classification for the 2021-2023 period; (2) Selection of companies that reported financial statements in Rupiah; (3) Inclusion of companies that published audited financial statements for the years 2021-2023; (4) Selection of companies that engaged in fixed asset investment activities, involving the acquisition or sale of investment fixed assets on an annual basis. Therefore, the ultimate sample size utilized in this study consisted of 47 firms, which corresponds to a total of 141 observations.

3.4 Variable Measurement

3.41 Dependent VariableInvestment Efficiency

Investment efficiency is assessed through the utilization of investment models that function as avenues for growth. The investment model employed is based on the methodology utilized in the study conducted by (Biddle et al., 2009). It calculates the total new investment in fixed assets, including machinery, vehicles, equipment, land, and buildings, as well as research and development (R&D) expenditures. This value is then adjusted by subtracting the total sales of fixed assets in year t and dividing it by the total assets. The utilized models are displayed below.

$$\text{Investment}_{i,t+1} = \beta_0 + \beta_1 * \text{Sales Growth}_{i,t-1} + \varepsilon i,_{t+1}$$

The total capital invested in fixed assets is represented by the variable $\text{investments}_{i,t+1,}$ whereas the percentage deviation between the current year and the previous year is denoted by sales $\text{growth}_{i,t-1}$. The aforementioned investment model facilitates the computation of the residual value, which functions asan indicator of the efficacy of the investment. Proceed by computing the negative of the residual value.

3.4.2 Independent VariableAccounting Conservatism

According to conservative ideas, the current period may have less unfavourable provisions than the previous one. The negative allowance is the result of subtracting the operational cash flow from the operating income before fixed asset depreciation, dividing it by the total assets, and then multiplying it by negative one. As stated by Givoly & Hayn, (2000), the proxy is employed in the calculation of accounting conservatism.

$$\frac{CON_{i,t} = (NI_{i,t} + DEP_{i,t} - CFO_{i,t}) \times (-1)}{TA_{i,t}}$$

The conservatism level of companies i in year t is denoted by the accrual value $CON_{i,t}$. The net income before extraordinary items and depreciation of firm i in year t is represented as $NI_{i,t}$. The operating cash flow of firm i in year t is denoted as $CFO_{i,t}$. Finally, the entire assets of firm i in year t are represented bythe notation $TA_{i,t}$.

Debt Maturity Structure

The term "maturity structure" commonly refers to the arrangement of a company's debt obligations. In the study by Cutillas Gomariz & Sánchez Ballesta, (2014), STDebt serves as the proxy to assess the effect of debt maturity structure on investment efficiency. This proxy calculates the debt maturity structure as short-term debts to total debts.

4. RESULT AND DISCUSSION

4.1 Results

Table 1 displays the range of values for the accounting conservatism variable (ConAcc) and the debt maturity variable (DebtMat), along with the investment efficiency variable for selected companies.

Table 1. Results of Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Accounting Conservatism	141	-1,42	,36	-,2752	,24935
Debt Maturity Structure	141	,02	1,00	,6349	,24552
Investment Efficiency	141	,01	,03	,0187	,00305
Valid N (listwise)	141				

For instance, PT Tirta Mahakam Resources Tbk exhibits the lowest accounting conservatism score of -1.42, whereas PT Waskita Beton Precast Tbk shows the highest score of 0.36. PT Jakarta Kyoei Steel Tbk demonstrates the lowest debt maturity value of 0.02, while PT Alakasa Industrindo Tbk presents the highest value of 1.00. Regarding investment efficiency, PT Jakarta Kyoei Steel Tbk has the lowest score of 0.01, whereas PT Central Omega Resources Tbk has the highest score of 0.03. Additionally, the mean values for the variables are -0.2752 for accounting conservatism, 0.6349 for debt maturity, and 0.0187 for investment efficiency. Their corresponding standard deviations are 0.24935, 0.24552, and 0.00305, respectively. The sample size (N) for the study comprised 141 observations.

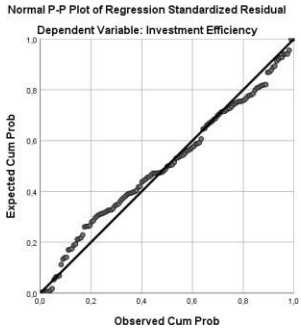

Figure 2. Results of Normality Test

Based on the normal P-Plot results above, the plot follows the fit line, indicating that the data isnormally distributed, according to the normal P-Plot results above.

Table 2. Results of Multicollinearity Test

Coefficients[a]			
		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	Accounting Conservatism	,982	1,019
	Debt Maturity Structure	,982	1,019
a. Dependent Variable: Investment Efficiency			

The VIF values and Tolerance for the variables of accounting conservatism and debt maturity meet theassumptions mentioned earlier. Thus, in the test this assumption is fulfilled.

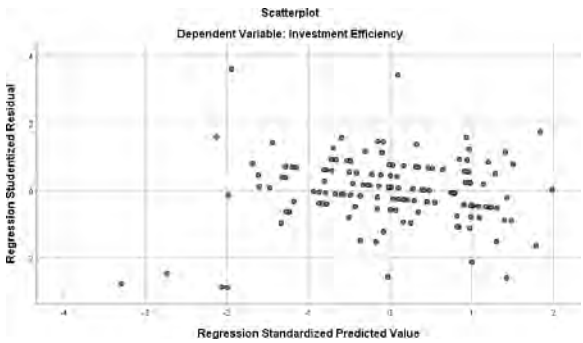

Figure 3. Results of Heteroscedasticity Test

Based on the scatterplot above, there are no signs of heteroscedasticity in this regression model. Thereason for this is that the points are dispersed both above and below the zero.

Table 3. Results of Autocorrelation Test

Runs Test	
	Unstandardized Residual
Test Value[a]	-,00002
Cases < Test Value	70
Cases >= Test Value	71
Total Cases	141
Number of Runs	73
Z	,254
Asymp. Sig. (2-tailed)	,799
a. Median	

The autocorrelation test utilizing the Run test yielded a substantial value of 0.799, showing the lack of any indicators of autocorrelation.

Table 4. Results of Coefficient of Determination Test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,211[a]	,045	,031	,00300	2,279
a. Predictors: (Constant), Debt Maturity Structure, Accounting Conservatism					
b. Dependent Variable: Investment Efficiency					

The adjusted R-square value, calculated to be 0.031 or 3.1%, indicates that the combined effects of the accounting conservatism and debt maturity structure on the investment efficiency variable is 3.1%, asper the discussed data.

Table 5. Results of Simultaneous Effect Test (F Test)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,000	2	,000	3,224	,043[b]
	Residual	,001	138	,000		
	Total	,001	140			
a. Dependent Variable: Investment Efficiency						
b. Predictors: (Constant), Debt Maturity Structure, Accounting Conservatism						

Table 5 indicates that the F value is 3.224 > F table is 3.00. This means that, when considering the F test hypothesis from the perspective of decision-making, it is accepted. Furthermore, the derived significance value is 0.043 < 0.05, indicating that the investment efficiency is simultaneously influenced by the loan maturity structure and accounting conservatism variables.

Table 6. Results of Partial Effect Significance Test (T Test)

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	,017	,001		21,957	,000
	Accounting Conservatism	,001	,001	,074	,881	,380
	Debt Maturity Structure	,002	,001	,188	2,241	,027
a. Dependent Variable: Investment Efficiency						

The presented table presents the outcomes of a multiple linear regression model obtained in this experiment, with the equation Y = 0.017 + 0.001 + 0.002. The constant value, defined as 0.017, signifies that when all independent variables remain constant, there is a proportional increase of 0.017 in investment efficiency. Furthermore, the primary factor being studied, accounting conservatism, exhibits a coefficient of 0.001. This indicates that with each incremental increase in accounting conservatism, the investment efficiency variable will correspondingly increase by 0.001 units.

The second independent variable, denoting the debt maturity structure, exhibits a coefficient of 0.002. The findings of this study suggest that a one-unit increase in the debt maturity structure is associated with a 0.002-unit improvement in investment efficiency. In addition, the significance value precisely characterizes the results of the hypothesis. Consequently, this refutes the initial hypothesis that accounting conservatism affects investment efficiency. The assertion is substantiated by the significance of 0.380, surpassing the pre-established threshold of significance set at 0.05. The second hypothesis, which explores the impact of debt maturity structure on investment efficiency, receives support througha statistically significant value of 0.027.

4.2 Discussion

4.2.1 The Effect of Accounting Conservatism on Investment Efficiency

The statistical study reveals that there is no substantial effect accounting conservatism on investment efficiency, as evidenced by a significance value of 0.380. The author therefore disproves the initial hypothesis. The company's management shall exercise prudence and discretion in the disclosure of financial gains and losses by adhering to accounting conservatism. Additionally, management will be more likely to avoid engaging in high-risk investment opportunities or assets that have negative net present value (NPV) calculations. However, empirical evidence has demonstrated that the concept of accounting conservatism does not have any effect on investment efficiency. Information asymmetry between investors and corporations can result in a scenario where investors have unique knowledge about the company that differs from what the management knows. The use of the accounting conservatism concept can be complex and occasionally lead to inconsistent precision in the information provided, perhaps causing investors to misread business data. This analysis contradicts the assertions made by Latif et al., (2020), who claimed that accounting conservatism affects investment efficiency. Instead, it aligns with the conclusions drawn by Houcine, (2013), indicating that accounting conservatism does not affect investment efficiency. Furthermore, the research suggests that investment efficiency depends on the efficacy of alternative governance mechanisms.

4.2.2 The Effect of Debt Maturity Structure on Investment Efficiency

As evidenced by the current debt divided by total debt, the the structure of debt maturity positively effect on investment efficiency. This is corroborated by a significance value of 0.027, which is below the probability threshold of 0.05, signifying the acceptance of the second hypothesis. Short-term debt can limit management's independence by reducing their willingness to take excessive risks, hence increasing shareholder supervision of managerial performance in corporate management. Short-term debt can reduce information asymmetry by increasing the frequency of corporate loan payments, hence improving the company's relationship with creditors. Moreover, the existence of short-term debt could improve supervision for company executives.

Consistent with the findings of Jeon and Oh, (2017), which suggested that increased flexibility in short- term debts can boost the efficacy of investments, the results of this study support this conclusion. Using short-term debt can improve creditors' capacity to carefully monitor the functioning of a company. Consequently, creditors are able to assess the company's financial performance beforehand and make well-informed decisions about extending contracts or adjusting contract terms with borrowers. By employing this data, investment decisions can be adjusted to align with the company's present condition.

5.CONCLUSION

This study investigates the effect of accounting conservatism and debt maturity structure on investment efficiency in the basic materials industry that are classified in the IDX industrial classification. The investigation was performed for the time frame encompassing 2021 to 2023. Among the 97 enterprisesin the basic materials sector that were included in the sample, only 47 of them satisfied the specified criteria for sampling. Consequently, the study comprised a grand total of 141 observations. This study proposes two theories, however, only one of them is considered to be legitimate.

The study's findings suggest that there is no observable effect of accounting conservatism on investment efficiency. Despite the adoption of accounting conservatism by the corporation, there has been no evident effect on investment efficiency. The potential cause for the disparity in corporate data analyses may be the knowledge asymmetry between investors and corporations. The complexity of accounting conservatism can occasionally lead to errors in data, perhaps causing misinterpretations by investors. Moreover, the specific structure of debt maturity significantly influences the efficiency of investments in a positive manner. Implementing limitations on short-term debt management reduces the propensity of management to engage in risky behavior and enhances the oversight of managerial performance by shareholders. Moreover, it reduces the disparity in information, so strengthening the relationships between creditors and management supervision.

The present investigation is susceptible to certain constraints. Initially, the author employs a restricted sample comprising solely companies specializing in fundamental materials that are publicly traded on the Indonesian Stock Exchange. The second issue concerns the insufficient amount of time allotted for the gathering of survey data. Moreover, the diverse measurements display substantial limitations, which could potentially affect the results of the inquiry. Therefore, it is advisable for researchers to increase the size of the study sample and extend the period of the investigation. Furthermore, researchers might strengthen the association between the independent and dependent variables by investigating other moderator variables that influence investment efficiency. This work is expected to provide new insights and perhaps expedite subsequent research endeavors.

Acknowledgement

The authors express their gratitude to Mrs. Dwi Risma Deviyanti and Mr. Zaki Fakhroni for their assistance and guidance in the creation of this article. Furthermore, the authors express their gratitude to the Faculty of Economics and Business of Mulawarman University for their generous financial support in conducting this research.

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EMPIRICALLY EXAMINING THE IMPACT OF CORPORATE GOVERNANCE ON THE SUSTAINABILITY REPORT: EVIDENCE FROM INDONESIA MINING INDUSTRY

Yesisca Hana Gunawan, Sutarti

Departemen of Accounting, Institut Bisnis dan Informatika Kesatuan, Indonesia

*Corresponding author: 201210152@student.ibik.ac.id

Abstract

Increasing pollution in Indonesia can threaten lives because the quality of the air inhaled is currently inadequate to WHO standards. Increased pollution is caused by burning fossil fuels, industrial activities, inadequate room ventilation, agricultural activities, mining activities, and illegal logging. The impact affects the environmental, social, and economic conditions around the company, causing public concern about the company's concern for the adverse impacts generated. Based on this, companies are required to issue sustainability reports. This study aims to determine the influence of corporate governance using the characteristics of the board of commissioners as well as audit committee attributes. Sustainability report measurement is done with a score system between 0 to 4, where the highest score is obtained when the company's sustainability report has a guarantee provided by one of the Big-4 companies or other audit companies. The lowest score is obtained if the company does not publish a sustainability report. This study measured 20 mining companies listed on the Indonesia Stock Exchange for the period 2017-2022 using multiple regression analysis methods. The results stated that the size of the board of commissioners, independent board of commissioners, gender diversity of the board of commissioners, financial expertise of the board of commissioners, and financial expertise of the audit committee negatively affect sustainability reports. Meanwhile, the size of the audit committee and the frequency of audit committee meetings have a positive effect on sustainability reports.

Keywords: *corporate governance, sustainability reports, environmental pollution, mining industry, Indonesia stock exchange*

1.INTRODUCTION

This study examines the influence between corporate governance and sustainability report quality. Sustainability report is an important communication tool from the company to stakeholders, investors, and even the community around the company. According to (MajalahCSR.id, 2022) in Indonesia, the number of sustainability reports in the last 2 years has increased, where on December 30, 2021, 154 companies published and reported sustainability reports in 2020. However, this is still not optimal in creating business sustainability in Indonesia. Stakeholders have an important role in a company. Fulfilling the interests and desires of stakeholders is the responsibility of the company so that the relationship between the company and stakeholders can be well established. Efforts to maintain this relationship can be made by publishing a sustainability report (Hörisch et al., 2020). The sustainability report contains the concept of triplebottom-line, namely, economic peace, environmental quality, and social balance (Destiana, 2023). Disclosure of sustainability reports must be accountable, accurate, coherent, comparable, appropriate, and balanced (GRI G3 Guidelines, 2021). Research on sustainability is important in Indonesia because there are many environmental problems such as increasing air pollution, especially in the

Jabodetabek area, increasing global warming, and the spread of higher sulfur dioxide emissions (Amri, 2020). This phenomenon does not solely affect the environment but can have a major social and economic impact around the company. So that is important to analyze crucial factors such as corporate governance that are directly related to sustainability reports.

Internationally and nationally, several studies have empirically examined corporate governance on sustainability reports have been conducted. However, the results are still diverse. Research (Alodat et al., 2023; Erin et al., 2022; Girón et al., 2021; Masud et al., 2018; Maswain, 2020; Suharyani et al., 2019; Wijayana & Kurniawati, 2018) reveals that corporate governance has a significant influence on sustainability reports. Meanwhile, according to research (N. Dewi & Silfi, 2014; Mufida & Syafruddin, 2023; Rashid, 2018; Sriningsih & Wahyuningrum, 2022) argues that corporate governance does not have a significant influence on sustainability reports.

This research replicates (Erin et al., 2022) in 2022. The reason the author replicates this research is because the topic in the journal is interesting to research, where the topic of sustainability reports has an impact that can be felt directly not only by companies but also by ordinary people. In addition, there are still few studies that raise this issue, especially in mining sector companies.

The selection of Indonesia as the country to be studied in this study is because the OJK revealed that the rise of various cases in companies, especially insurance companies since the Covid-19 pandemic was caused by several companies not implementing Good Corporate Governance (GCG) optimally (Sidik & CNBC Indonesia, 2021). In addition, collusion and nepotism also still occur in many companies that conflict with financial interests (Wahyuni, 2022). Thus, the implementation of GCG in each company requires good internal control.

Researchers analyzed 20 mining companies listed on the IDX for the period 2017-2022 using the ordinal logistic regression method. This study reveals that corporate governance has a negative effect on sustainability reports.

2.LITERATURE REVIEW

2.1 Theoretical explanation

This study uses agency theory. Agency theory explains that agency relationships arise when one or more people (principal) employ another person (agent) to provide a service and then delegate decision-making authority to the agent (Lesmono & Siregar, 2021). The management party is a professional agent who understands better in carrying out company management so that the company owners get the maximum possible profit at the most efficient cost possible. Meanwhile, the principal is the owner of the company

(shareholder) who wants the maximum possible profit at the cost he has incurred and will provide incentives to agents of various kinds of facilities, both financial and non-financial (Anggraeni, 2011; Lesmono & Siregar, 2021).

In a company, management will have more internal information than the owner, so that all decisions enacted cannot provide benefits to both parties if they do not have communication. The agency theory occurs because of the different interests of the agent and principal, this difference is called information asymmetry (Fitriyani, 2023). Information asymmetry occurs if the distribution of information is not the same between the agent and the principal (Sambera & Meiranto, 2013). In the journal (Fitriyani, 2023) company management knows more about the information in the company, so there is an information gap between the owners and management. So that decisions will not be able to satisfy the principal and agent together, both parties agree because of the contract that binds both parties. Differences in interests lead to the creation of sustainability reports. The problem occurs because the manager does not want to spend a lot of money to make a

sustainability report, while the owner or investor wants disclosure of the company's environmental and social responsibility activities in the company. Environmental and social responsibilities in company is made in the disclosure of sustainability reports (Shamil, Shaikh, Ho, & Krishnan, 2012) in the journal (Fitriyani, 2023). Agency theory is the basis for implementing corporate governance because agency theory explains that there is information asymmetry between management and shareholders. So agency theory is the basis for the company to be better and achieved because of GCG. Corporate governance is a management mechanism for companies based on agency theory. To realize GCG, the company must apply the principles of corporate governance, namely: accountability, transparency, responsibility, fairness, and independence. The existence of governance, namely board governance and audit committee attributes, is one way to resolve agency theory and improve sustainability report disclosure. Governance of the board of commissioners and audit committee is expected to oversee non-financial and financial reporting practices and can minimize information asymmetry between management and stakeholders (Josua & Septiani, 2020) in journals (Fitriyani, 2023).

2.2 Corporate governance and sustainability report

According to Amarogi, (2021), corporate governance is the principles, values, and processes that ensure that companies operate in an ethical, transparent, and accountable manner. The company must uphold the interests of all stakeholders, including stockholders, employees, consumers, and the public the goals of corporate governance. It is not only oriented towards shareholders, but now its reach has become wider so that it must pay attention to the interests of stakeholders. A good relationship with stakeholders can encourage the realization of an increase in company performance for the better (Amarogi, 2021). Meanwhile, the definition of sustainability report is responsibility to all stakeholders about the company's ability to produce sustainable development goals as a practice in announcing company activities (Kurniawati, 2017). Currently, companies as much as possible make reports to describe the economic, environmental, and social impacts of the company. The container for making this report is called sustainability reporting. The principles for disclosing sustainability reports are contained in the GRI G3 Guidelines (Kurniawati, 2017). To produce a quality sustainability report, it must apply these principles. (GRI G3 Guidelines, 2021) States that the sustainability report contains elements of economic, environmental, human rights (HAM), society, product responsibility, and social. The economy is related to the consequences produced by the company on the economic situation of stakeholders and the local, national, and international economic systems. The environment is related to the consequences of the company to living things and ecosystems in the environment around the Company. Human rights are related to transparency in choosing investors and suppliers. Society relates to the impact that the Company produces on the community around the Company. Product responsibility relates to product reporting whether it affects customers or not. The last one is social related to social activities carried out by the Company.

2.3 Empirical review and hypotheses development

Studies that examine the relationship between corporate governance and sustainability reports produce mixed results. Therefore, based on the description of the research background, the following are several problem formulations:

1) Is there an influence between the board size variable (the size of the board of commissioners) on the sustainability report?
2) Is there an influence between the board gender diversity variable (gender diversity of the board of commissioners) on the sustainability report?
3) Is there an influence between the independent board variables (independent board of commissioners) on the sustainability report?

4) Is there an influence between the board's financial expertise variable (the expertise of the board of commissioners) on the sustainability report?
5) Is there an influence between the audit committee size variable on the sustainability report?
6) Is there an influence between the audit committee expertise variable on the sustainability report?
7) Is there an influence between the audit committee meeting variables on the sustainability report?

The following research hypothesis will be used as the basis for this study.

2.3.1 *Board Size*.

The board of directors of a public company must consist of at least 2 people, while the board of commissioners must consist of at least 2 members, of which one is an independent commissioners based on Financial Services Authority Regulation (POJK) Number 33/POJK.04/2014 Article 2 and Article 20 regarding the board of commissioner of public companies (Otoritas Jasa Keuangan, 2014). The board of directors is the individual responsible for organizing a company, while the board of commissioners is tasked with paying attention to or supervising company activities based on POJK number 33/POJK.04/2014 article 1 regarding the board of directors and the board of commissioners of public companies (Otoritas Jasa Keuangan, 2014). Based on this explanation, the research hypothesis is stated as:

H1: Board size has a positive effect on the sustainability report

2.3.2 *Board Independence*.

(Otoritas Jasa Keuangan, 2014) POJK Number 33 of 2014 Article 1, the board of commissioners from outside the company and fulfilling the qualifications as independent commissioners is the definition of independent commissioner. (Otoritas Jasa Keuangan, 2015) Article 6 POJK Number 55 of 2015 mandates that Independent Commissioners must fulfill the qualifications as regulated in POJK Number 33 of 2014 (Otoritas Jasa Keuangan, 2014), namely:

1) "The Board of Commissioners consists of 2 (two) members of the Board of Commissioners, of which 1 (one) is an Independent Commissioner."
2) "The Board of Commissioners consists of more than 2 (two) members of the Board of Commissioners, where the number of Independent Commissioners must be at least 30% (thirty percent) of the total number of members of the Board of Commissioners." Based on this explanation, the research hypothesis is stated as:

H2: Independent commissioner members have a positive effect on the sustainability report

2.3.3 *Board Gender Diversity*.

(Cox, Jr (1991) In (Fitroni & Feliana, 2022) problems such as miscommunication and conflicts between individuals within a company can occur due to gender diversity on the board. However, there are positives, namely a broad perspective in making decisions, innovating, variations in creativity, and increasing marketing to various types of customers. (Maltz and Borker (1982) in (Fitroni & Feliana, 2022) explain that communication styles in gender differences can increase. In improving women's ability to respond to interactions and conditions can be done by women by being patient. Meanwhile, men are more fixated on hierarchy, which is more concerned with their status and higher competitive spirit. Based on this explanation, the research hypothesis is stated as follows:

H3: Gender diversity on the board has a positive effect on sustainability reporting

2.3.4 *Board Financial Expertise*.
In general, fraud in the presentation of financial statements can be minimized by control from an independent board, where reducing the possibility of fraud on the disclosure of financial statements can be overcome by the competence of the board of commissioners (Hariani, 2020). Law No. 40 of 2007 (Wisnu, 2023) concerning limited liability companies, one of the main tasks of the board of commissioners is to oversee the management of the company by paying attention to the company's financial statements, agreeing on the budget, and overseeing its performance. Therefore, by having expertise in finance or accounting, it is hoped that the board of commissioners will be able to reduce and overcome fraud in financial reports. Based on this explanation, the research hypothesis is stated as follows:

H4: The board's expertise in the financial sector has a positive effect on the sustainability report

2.3.5 *Audit Committee Size*
(Fakri & Taqwa, 2019) The measurement for the size of the audit committee is the audit committee members who assist the duties of the board of commissioners and are fully responsible to the board of commissioners for carrying out supervision of the company's financial statements, the effectiveness of SPI, risk management, and the effectiveness of the duties of external and internal auditors. A company must have at least three audit committee members who can come from independent commissioners or from outside the company. Based on this explanation, the research hypothesis is stated as follows:

H5: The size of the audit committee has a positive effect on the sustainability report

2.3.6 *Audit Committee Financial Expertise*
POJK Number 55/POJK.04/2015 states that the audit committee must have at least one member who has experience or educational background in accounting and finance (Otoritas Jasa Keuangan, 2015). These members can help find any expertise that can minimize earnings management and fraud activities. The financial expertise possessed by the audit committee can reduce managers' opportunistic attitudes in carrying out earnings management. In addition, this expertise can also be used to evaluate company’s financial statements (Widasari & Isgiyarta, 2017). The benefit of an audit committee's financial expertise is that it can report financial reporting with effective timing. Based on this explanation, the research hypothesis is stated as follows:

H6: The financial expertise of the audit committee has a positive effect on the sustainability report

2.3.7 *Audit Committee Meeting*
(Otoritas Jasa Keuangan, 2015) POJK Number 55 of 2015 Article 13 audit committees are recommended to attend meetings at least 1 (one) time in 3 (three) months. Meanwhile, in Article 14, if attended by more than ½ (one-half) of the number of audit committee members, the audit committee meeting can be held. The activeness and effectiveness of the audit committee in protecting its profession can be reflected in the frequency of the audit committee in conducting regular meetings. Based on this explanation, the research hypothesis is stated as follows: H7: Audit committee meetings have a positive effect on sustainability reports.

3.METHODOLOGY

3.1 Data
This study used a sample of 20 companies from 32 mining companies listed on the IDX for the period 2017-2022. By using purposive sampling technique, 12 mining companies were obtained

that did not publish complete annual reports. In addition, all companies cover all research variable data completely. So that the number of annual reports and sustainability reports used as samples for this study were 20 companies with total research data of 120 companies (20 companies x 6 years). The data collection needed for this research uses library research methods and secondary data (internet research). The information needed in this study was taken from sustainability reports, annual reports, as well as the IDX website page, and the official website page of each company.

Following previous journal (Al-Shaer & Zaman, 2016), Sustainability reports are measured using (AlShaer & Zaman, 2016; Erin et al., 2022) a score of 0-4 which is used to assess the quality of data disclosed in sustainability report. With 0 = no sustainability report available; 1 = sustainability report available; 2 = sustainability report available and sustainability audit committee attached to the board of directors; 3 = sustainability report available and non-audit firm providing assurance; 4 = sustainability report available and assurance provided by either a Big 4 firm or another audit firm. To predict the interaction between the dependent variable and the independent variable, this research uses an ordinal logistic regression model. By taking a 5-scale ordinal variable to define the quality of the sustainability report, namely "Poor", "Low", "Average", "Above average", and "Excellent" (Al-Shaer & Zaman, 2016).

In addition, the independent variable in this study is corporate governance which is divided into the quality of the board of commissioners and the characteristics of the audit committee.

a) Quality of the board of commissioners

1) Size of the Board of Commissioners (board size)

The size of the board of commissioners in this study is the number of members of the board of commissioners in the company (Erin et al., 2022).

2) Independent Board of Commissioners (independent board)

In this study, the independent board of commissioners was measured using the proportion of the number of independent commissioners from the total number of board members (Erin et al., 2022).

3) Gender Diversity of the Board of Commissioners (board gender diversity)

The gender diversity of the Board of Commissioners is measured using the number of female commissioners from the total number of board members (Erin et al., 2022).

4) Financial Expertise of the Board of Commissioners (board financial expertise)

The board of commissioners financial expertise variable is measured by the number of commissioners who have degrees in accounting, finance and economics and / or have experience working as an accountant, auditor, head of finance, financial manager, financial advisor or financial analyst in both financial and non-financial companies (Krishnan, 2007; Sarwar et al., 2019).

b) Character of the audit committee

1) Size of the Audit Committee (audit committee size)

In this study, the size of the audit committee is measured by the number of audit committee members in the company (Erin et al., 2022).

2) Audit Committee financial expertise (audit committee financial expertise)

The audit committee financial expertise variable is measured by the number of audit committee members who have degrees in accounting, finance and economics and / or have experience working as an accountant, auditor, head of finance, financial manager, financial advisor or financial analyst in both financial and non-financial companies (Krishnan, 2007; Sarwar et al., 2019).

3) Audit Committee Meeting (audit committee meeting)

The frequency of audit committee meetings is measured using the frequency of audit committee

meetings in that period (Erin et al., 2022).

Researchers use several control variables to avoid biased results, namely the firm growth variable (the difference between the current year growth and previous year growth divided by previous year growth); return on equity (net income divided by equity); and leverage as measured by the debt to equity ratio (debt divided by equity). Researchers hope that the higher the firm growth, return on equity and leverage indicate that SRQ is also getting better.

Information about the sample companies is contained in appendix 1 and 2; data measurement methods are contained in appendix 3.

3.2 Research model

As explained earlier, to predict the interaction between the dependent variable and the independent variable, this research uses an ordinal logistic regression model. By taking a 5-scale ordinal variable to define the quality of the sustainability report, namely "Poor", "Low", "Average", "Above average", and "Excellent" (Al-Shaer & Zaman, 2016). Researchers used the following regression model:

$$SRQi,t = \alpha + \beta 1BODSIZEi,t + \beta 2BODINDPi,t + \beta 3BODGENi,t + \beta 4BODEXPi,t + \beta 5ACSIZEi,t + \beta 6ACFEi,t + \beta 7ACMEETi,t + \beta 8GROWTHi,t + \beta 9ROEi,t + \beta 10LEVi,t + \varepsilon i,t$$

Where:

SRQ = Sustainability report quality

BODSIZE = Board size (board size)

BODINDP = Independent board (independent board)

BODGEN = Board gender diversity (board gender diversity)

BODEXP = Board expertise (board expertise)

ACSIZE = Audit committee size (audit committee size)

ACFE = Audit Committee financial expertise (audit committee financial expertise)

ACMEET = Audit committee meeting (audit committee meeting)

GROWTH = Company Growth Rate

ROE = Company Profitability LEV = Corporate Leverage ε = error

4.RESULT AND DISCUSSION

Table 1 shows the descriptive statistics for the variables used, which contains the mean, minimum and maximum values, as well as the standard deviation values. The N column shows the amount of data analyzed in this study. Looking at the dependent and independent variables, the average SR shows 1.58. This indicates that mining companies in Indonesia perform below average in terms of sustainability report disclosure.

Regarding governance characteristics, the average board size results range from 4-5, with the maximum number of directors being 8. Board independence has a minimum value of 1 and a maximum value of 3. While board size has a minimum value of 1 and a maximum value of 3. These results are in accordance with POJK. Where these results are in accordance with POJK Number 33 of 2014 Article 1, where (1) "The Board of Commissioners consists of 2 (two) members of the Board of Commissioners, of which 1

(one) of them is an Independent Commissioner. "; (2) "The Board of Commissioners consists of more than 2 (two) members of the Board of Commissioners, where the number of Independent Commissioners must be at least 30% (thirty percent) of the total number of members of the Board of Commissioners." (Otoritas Jasa Keuangan, 2014). The number of female directors on the board ranges from 0-1 with a mean of 0.21, while the average value of board expertise is 0.62. In addition, examining the audit committee attribute, the average size of the audit committee size is 3.10 around five members constituting the audit committee. This is in accordance with the POJK that audit committee members should not be less than 3 people. The average value of audit committee expertise is 0.78. The results of the audit committee meetings show that, on average, board members meet 6-7 times a year to discuss issues related to the company's activities.

Table 1. Descriptive Statistics Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Y0 (SR)	77	1	3	1.58	.714
X1 (BODSIZE)	77	2	8	4.68	1.831
X2 (BODINDP)	77	1	3	1.82	.683
X3 (BODGEN)	77	0	1	.21	.408
X4 (BODEXP)	77	0	1	.62	.294
X5 (ACSIZE)	77	3	5	3.10	.416
X6 (ACEXP)	77	0	1	.78	.217
X7 (ACMEET)	77	0	14	6.03	2.942
GROWTH	77	-82.24	173.59	25.3311	55.93125
ROE	77	-1.07	4.32	1.1169	1.12708
LEV (der)	77	-1.99	11.91	1.7298	2.60108
Valid N (listwise)	77				

Baseline findings

Table 2 explains the results of multiple regression analysis. Where there are columns of variables, coefficients, std. error, t-value, significance, and information on whether the hypothesis is accepted or rejected. Overall, this study explores seven research hypotheses to investigate corporate governance's influence on SR. research hypotheses one to four predict the role of the board in SR. the findings show a negative association between board size and SR indicated by a significance of more than 0.05, namely 0.215. Hence, the first research hypothesis (H1) is rejected. The results of this study are consistent with previous research on the sustainability reporting literature (Buallay & Al-Ajmi, 2020; Ningrum, 2015; Önder & Baimurzin, 2020; Setyawan et al., 2022) showing that the board size has no influence on sustainability report disclosure. According to (Setiawan & Ridaryanto, 2022), members of the board of commissioners have not carried out their duties to supervise and provide direction to the management or management of the company. In its implementation, the board of commissioners has not carried out supervision optimally. The reason is that the supervision of the board of commissioners is not only seen from its size but also seen

from the norms, values, and beliefs in the organization.

The second research hypothesis focuses on the relationship between board independence and SR. the findings show no significant relationship between board independence and SR. indicated by a significance value of more than 0.05, namely 0.078. hence, the second research hypothesis (H2) is rejected. This result is consistent with the research (P. I. Dewi & Pitriasari, 2019; Ningrum, 2015; Setyawan et al., 2022) which believes that board independence has a negative impact on sustainability disclosure. The supervision carried out by the independent board of commissioners has not been carried out properly, which has an impact on the lack of management disclosure of sustainability reports. Even though the company has an independent board of commissioners, the independent board of commissioners does not have time to supervise because of other activities that take up the time of the independent board of commissioners, so it cannot be carried out effectively. The supervisory function is not good and creates a lack of encouragement for management to disclose sustainability reports. In addition, another factor in not disclosing sustainability reports is due to the lack of understanding and knowledge of independent commissioners about the importance of disclosing sustainability reports (Diono, 2017).

The third research hypothesis focuses on the relationship between board gender diversity and SR. the findings show a negative association between board gender diversity and SR. indicated by a significant value that is above 0.05, namely 0.979. hence, the third research hypothesis (H3) is rejected. The results of testing this third hypothesis are in line with research (Ningrum, 2015; Setyawan et al., 2022) which found no significant relationship between board gender diversity and sustainability reporting quality. In a company, female commissioners show more sympathy for social responsibility. A larger number of female commissioners can help make better decisions by seeing more issues that are then considered (Diono, 2017). The Indonesian state still uses a patrilineal kinship system or paternal lineage. The system explains that men control all family members, decision-making, sources of income, and ownership of goods. With this system, the presence of women in the company's management ranks is not dominant (Setiawan & Ridaryanto, 2022).

The fourth research hypothesis predicts the association between board financial expertise and SR. the analysis shows that board expertise has a negative significant influence on SR. indicated by a significant value that is above 0.05, namely, 0.193. hence, the fourth research hypothesis (H4) is rejected. Regarding the impact of experience and education of the board of commissioners, this study supports research from (Fitriyani, 2023; Ningrum, 2015). The competence of the board of commissioners cannot be measured only by the number, but also the characteristics and personal qualities possessed, these characteristics include racial background, culture, and educational background (Ningrum, 2015). However, the results of this study were unable to prove the truth of this theory. This can happen because education is not only obtained through formal channels. The educational background referred to in this study is formal education in economics and business strata 1 and above. The ability of board members to decide on sustainability report disclosure policies can be supported by work experience, training and informal courses (Yuniasih et al., 2011). In addition, the intelligence ability of the board of commissioners can be determined by the soft skills of the board of commissioners (Kusumastuti et al., 2007). Experience as an entrepreneur can be an important factor that supports the competence of the board of commissioners to determine what information policies need to be published to stakeholders. The involvement of the board of commissioners in environmentally and socially oriented organizations can also influence their decisions and supervision of corporate sustainability disclosure.

While the fifth, sixth and seventh hypotheses examine the relationship between audit committee size, financial expertise, audit meetings and SR. the fifth hypothesis focuses on the relationship between audit committee size and SR. the findings show a strong positive association between

audit committee size and SR. indicated by a significant value that is below 0.05, namely 0.001. hence, the fifth research hypothesis (H5) is accepted. This is in line with research journals (Erin et al., 2022; Lusiana & Sari, 2023; Mufida & Syafruddin, 2023), where the audit committee is responsible for enforcing corporate governance ethics and overseeing the financial reporting process. A strong audit committee will perform an effective oversight function to ensure that management complies with regulations related to sustainability reporting (Mufida & Syafruddin, 2023).

The sixth research hypothesis predicts the association between audit committee financial expertise and SR. the analysis shows no significant relationship between audit committee financial expertise and SR. indicated by a significant value that is above 0.05, namely 0.343. hence, the sixth research hypothesis (H6) is rejected. The results of this test are in line and have similarities with research conducted by (Buallay & Al-Ajmi, 2020; Mufida & Syafruddin, 2023).

The seventh research hypothesis focuses on the relationship between audit committee meetings and SR. the findings show a strong positive association between audit committee meetings and SR. indicated by a significant value that is below 0.05, namely 0.000. hence, the seventh research hypothesis (H7) is accepted. The results of this test are in line with the journal (Mufida & Syafruddin, 2023; Ruhana & Hidayah, 2019) that audit committee meetings show active involvement of audit committee members on issues related to company activities, including sustainability reporting. Regular committee meetings will result in high quality sustainability reporting, as audit committee members will have more time to discuss financial reporting activities. Companies that have more audit committee meeting frequency will result in audit committee members meeting more frequently and being more active in monitoring the company's financial reporting and sustainability reporting (Mufida & Syafruddin, 2023).

Table 2. Order Logistics Regression

	Coefficient	Std. Error	t-value	Sig	Hypotheses accepted/rejected
Constant	-.790	.623	-1.267	.210	
Board size (X1)	-1.240	.991	-1.251	.215	Rejected
Board independent (X2)	1.851	1.033	1.791	.078	Rejected
Board gender diversity (X3)	-.005	.184	-.026	.979	Rejected
Board financial expertise (X4)	.337	.257	1.314	.193	Rejected
Committee audit size (X5)	.547	.164	3.325	.001	Accepted
Committee audit financial expertise (X6)	.337	.353	.956	.343	Rejected
Committee audit meeting (X7)	.100	.025	3.970	.000	Accepted
GROWTH	.002	.001	1.878	.065	
ROE	-.097	.066	-1.479	.144	
LEV	.012	.026	.487	.628	

F value 6.237 Sig. F .000 R^2 .486
Significance pada level 5% or 0.05

5.CONCLUSION

We investigate the relationship between corporate governance and SR in Indonesia. We measure corporate governance using board governance (board size, board independence, board gender diversity, and board expertise) and audit committee attributes (audit committee size, audit expertise, and audit meetings). We measure SR using a scoring system, which ranges between 0 and 4. The highest score is when sustainability reporting is independently assured by one of the big four audit firms or other audit firms. The lowest score indicates no sustainability reporting, which signifies no disclosure. This study seeks to better understand the corporate governance mechanisms (board governance and audit committee) that influence SR in Indonesia.

With a sample size of 20 companies for the period 2017 to 2022 using ordered probit and logistic regression methods, the analysis results show that corporate governance does not have a significant influence on SR. Future research is expected to add samples of companies in other sectors so that the sample is more diverse. This research is expected to contribute to the improvement of sustainability report disclosure in Indonesia and the implementation of corporate governance in Indonesia. This research is expected to have important implications for practitioners, stakeholders, society and academics. Companies are encouraged to restructure their boards to enhance better oversight and support SR in Indonesia.

Quality disclosure requires continuous control by the board during the data collection, selection, and dissemination process, which is conducted through the large number of annual meetings. The role of external assurance cannot be ignored in improving the quality of sustainability reporting. External auditors must be prepared for this new challenge by ensuring that the content and form of presentation of sustainability reports are reliable and credible. The main contribution of this study highlights the strong link between the board of directors and the audit committee in driving SR in the organizational context. There is a need for standard setters and regulators to continuously engage corporate organizations on how best to deliver high quality sustainability reports that serve multiple stakeholders.

Board governance and external assurance seem to be the main assumed factors behind higher levels of SR. It is important for corporate boards to have dedicated committees that specialize in sustainabilityrelated tasks and provide independent external assurance that helps stakeholders assess the quality of sustainability reports. This will further strengthen non-financial disclosures that will ultimately enhance the credibility of corporate reporting in the organizational context.

This study has several limitations that provide opportunities for future research. First, the number of samples obtained in this study is only 20 companies so that it does not describe the development of this disclosure as a whole. In addition, future research can consider other company sectors so that the samples used can be more diverse. Second, many companies only disclose sustainability reports with assurance from internal companies without assurance from audit or non-audit companies.

Acknowledgement

This paper and the research behind it would not have been possible without the exceptional support of Mr. Sudrajat, Mrs. Sutarti and Ms. Kusuma Dewi for their enthusiastic encouragement, their

patience and knowledge that they provided while I was developing this research. Their willingness to give their time so generously has been greatly appreciated. Nobody has been more important to me in the pursuit of this paper than the members of my family and my friends for their support and encouragement as I completed this research.

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Appendix

Appendix 1: List of Samples of Mining Sector Companies Listed on the Indonesia Stock Exchange for the Period 2017-2022.

No.	Company Code	Company Name
1.	ADRO	Adaro Energy Indonesia Tbk.
2.	FIRE	Alfa Energi Investama Tbk.
3.	ARII	Atlas Resources Tbk.
4.	BSSR	Baramulti Suksessarana Tbk.
5.	BOSS	Borneo Olah Sarana Sukses Tbk.
6.	PTBA	Bukit Asam Tbk.
7.	BUMI	Bumi Resources Tbk.
8.	DEWA	Darma Henwa Tbk.
9.	DOID	Delta Dunia Makmur Tbk.
10.	GTBO	Garda Tujuh Buana Tbk.
11.	SMMT	Golden Eagle Energy Tbk.
12.	HRUM	Harum Energy Tbk.
13.	ITMG	Indo Tambangraya Megah Tbk.
14.	PKPK	Perdana Karya Perkasa Tbk.
15.	PTRO	Petrosea Tbk.
16.	KKGI	Resource Alam Indonesia Tbk.
17.	TOBA	TBS Energi Utama Tbk.
18.	DSSA	Dian Swastatika Sentosa Tbk.
19.	INDY	Indika Energy Tbk.
20.	CNKO	Exploitasi Energy Indonesia Tbk.

Appendix 2: Distribution of Research Samples

No.	Sample Criteria	Total
1.	Mining companies listed on the Indonesia Stock Exchange for the period 2017-2022.	32
2.	Mining companies listed on the Indonesia Stock Exchange for the period 2017-2022 that do not publish complete annual reports.	(12)
3.	Mining companies listed on the Indonesia Stock Exchange for the period 2017-2022 which do not fully cover all research variable data.	(0)
	Total Research Sample	20
	Final total research sample (20x6)	120

Appendix 3: Description of Measurement of Independent, Dependent, and Control Variables

Variable	Symbol	Measurement	Source
Sustainability reporting quality	SRQ	Measured with a score of 0-4 using the guidelines shown in appendix 4.	Annual Report and Corporate Website
Board size	BODSIZE	Number of members of the board of commissioners.	Annual Report and Corporate Website
Board independence	BODINDP	The proportion of the number of independent commissioners divided by the number of members of the board of commissioners.	Annual Report and Corporate Website
Board gender diversity	BODGEN	The proportion of female commissioners divided by the total number of commissioners.	Annual Report and Corporate Website
Board financial expertise	BODEXP	The number of commissioners who have a degree in accounting, finance, and economics and/or have experience working as an accountant, auditor, chief financial officer,	Annual Report and Corporate Website
		financial manager, financial advisor or financial analyst in both financial and non-financial companies.	
Audit committee size	ACSIZE	Number of audit committee members.	Annual Report and Corporate Website
Audit committee financial expertise	ACFE	The number of audit committee members who hold degrees in accounting, finance and economics and/or have experience working as an accountant, auditor, chief financial officer, financial manager, financial advisor or financial analyst in both financial and non-financial companies.	Annual Report and Corporate Website
Audit committee meeting	ACMEET	Number of audit committee meetings in a year.	Annual Report and Corporate Website
Company GROWTH	GROWTH	Measured by reducing the current year's revenue by the previous year's revenue then divided by the previous year's revenue then multiplied by 100%.	Annual Report and Corporate Website
Company	ROE	Measured by dividing total net income by	Annual

Profitability		total company equity and then multiplied by 100%.	Report and Corporate Website
Leverage	LEV	Measured by dividing total debt by total company equity and then multiplied by 100%.	Annual Report and Corporate Website

Appendix 4: Score measurement and interpretation of Sustainability Report Quality (SRQ)

Score	Benchmark	Interpretation	Result
0	No sustainability report available.	No disclosure - Not disclosed in the report.	Poor
1	*Sustainability report available.*	Lower level of disclosure - The subject is only briefly mentioned in the report with little context provided.	Low
2	Sustainability report available and sustainability	Disclosure at a moderate level - The subject is	Average
	audit committee attached to the board of directors.	mentioned in the report.	
3	Sustainability report available and a non-audit firm provides assurance.	Disclosure to a large extent - Subjects are disclosed and explained in the report.	Above Average
4	Sustainability report available and assurance is provided by one of the Big 4 or another auditing firm.	Full disclosure - The subject is disclosed and explained in the form of an independent assurance statement report in the sustainability report.	Excellent

THE EFFECT OF MANAGERIAL OWNERSHIP, PROFITABILITY, AND SOLVENCY ON TAX AGGRESSIVENESS ON PROPERTY AND REAL ESTATE COMPANIES IN INDONESIA

Noor'ain Ramadhani*, Airin Nuraini

Department of Accounting, Institut Bisnis dan Informatika Kesatuan

Corresponding author: 201210042@student.ibik.ac.id

Abstract

This study examines tax aggressiveness in property and real estate companies in Indonesia, which involves the use of legal and potentially illegal methods to reduce taxable income. This research focuses on the effect of managerial ownership, profitability, and solvency on tax aggressiveness, and uses quantitative analysis of secondary data in the form of financial and annual reports of 84 companies listed on the Indonesia Stock Exchange from 2016 to 2022. The sample was narrowed to 44 companies using a purposive sampling method. Multiple linear regression analysis is used to test the proposed hypothesis. The study results show that there is a positive relationship between managerial ownership and solvency and tax aggressiveness. That is, higher levels of managerial ownership and solvency are associated with more aggressive tax strategies. Furthermore, profitability does not have a significant effect on tax aggressiveness, which shows that the company's profit level does not change its tax planning strategy substantially. This information is important for understanding tax planning behavior in the Indonesian property and real estate industry, thereby providing valuable insights for stakeholders.

Keywords: *tax aggressiveness, managerial ownership, profitability, solvency*

1.INTRODUCTION

The country with the largest area in Southeast Asia is Indonesia. Its geographically strategic location and abundant natural resources characterize it. Even so, Indonesia is still categorized as a developing country whose main income comes from taxation. This is in accordance with the data in the financial statements of the government of the Republic of Indonesia, which shows that tax revenue is always the largest component in total state revenue every year.

However, in practice, there are still many cases where business taxpayers try to minimize or even not fulfill their tax obligations. For example, PT Adaro Energy Pte Ltd, a coal mining company, allegedly used transfer pricing techniques to avoid taxes through its Singapore-based subsidiary, Coaltrade Services International Pte Ltd. The move was made to lower the company's domestic tax burden and increase profits for its shareholders. Financial records containing transactions with non-arm's length transfer prices, and when compared to world coal market prices shows evidence of this tax avoidance (Detik.com, 2019).

Furthermore, according to a CNBC Indonesia press release, the Directorate General of Taxes (DG of Taxes) is taking action against the case of PT European Investment Bank which has resulted in a loss to the state of IDR 111 billion. The suspect potentially faces a maximum imprisonment of 6 years for deliberately committing tax evasion by issuing tax invoices that do not reflect actual transactions and submitting incorrect or incomplete tax returns on behalf of taxpayer PT EIB from

2020 to 2021.

The cases mentioned above have caused considerable losses to the state. The government has not been able to fully realize the potential tax revenue due to rampant tax avoidance and evasion by businesses. Corporations aim to minimize expenses to generate profits that can be accounted for by shareholders and to maintain their survival (Yoehana, 2013). This creates a conflict of interest between the government which wants to increase tax revenue and corporate taxpayers who seek to lower their tax burden. The problem arises because taxpayers cannot fulfill their commitments due to differences in fundamental objectives between the government and the company.

Tax evasion and avoidance are part of tax aggressiveness. According to Susanto and Kelly (2022), tax aggressiveness is a tax planning tactic in the form of legal or illegal actions to reduce income subject to tax. In general, companies that have status as corporate taxpayers can take advantage of the grey area, which is the area between tax planning or calculations that are legally permitted and those that are not legally permitted. The existence of this area generates several variables that can influence a company's tendency to use aggressive tax planning strategies.

Managerial ownership incentivizes managers to ensure revenue stability and maximize profits, aligning their interests as both managers and shareholders. This dual role fosters an active and effective organizational environment. Additionally, the extent of managerial ownership influences their authority in decision-making processes, including taxation matters. Profitability significantly affects the tax burden a company faces. Higher income levels lead to greater tax liabilities, while lower profitability or losses can mitigate tax obligations through mechanisms like tax loss compensation.

Moreover, a company's solvency ratio, reflecting its debt-to-equity ratio, correlates with its financial risk; a lower solvency ratio implies higher financial risk (Kasmir, 2019). Tax aggressiveness indicators also manifest in a company's financial policy. Utilizing debt for financing incurs interest expenses, impacting the company's tax responsibility. Therefore, financial policy decisions play a pivotal role in determining a company's tax strategy and overall financial health.

This study aims to determine how much influence managerial ownership, profitability, and solvency have on tax aggressiveness on property and real estate sector listed on the Indonesia Stock Exchange (IDX) for the period 2016 - 2022. This study is expected to provide empirical evidence regarding the effect of managerial ownership, profitability, and solvency towards tax aggressiveness and is expected to provide additional insights, information and references for the academic environment, managers and regulators in decision making.

This research endeavors to assess the impact of managerial ownership, profitability, and solvency on tax aggressiveness within the property and real estate sector listed on the Indonesia Stock Exchange (IDX) spanning from 2016 to 2022. Through empirical analysis, the study seeks to uncover the extent to which managerial ownership, profitability, and solvency influence tax aggressiveness. The findings are anticipated to contribute valuable insights, information, and references for academia, managerial decision-making, and regulatory frameworks.

2.LITERATURE REVIEW

The agency problem, arising from differing interests between principals (owners) and agents (managers), can significantly impact a company's performance, particularly its tax policies. In Indonesia, taxation operates under a self-assessment system, where companies independently calculate and report their taxes. Tax aggressiveness, as defined by Frank et al. (2009), involves actions taken by companies to reduce tax burdens through tax planning, regardless of legal compliance.

Various methods exist to gauge corporate tax aggressiveness, including Effective Tax Rate (ETR), book-tax differences, discretionary permanent book-tax differences (DTAX), unrecognized tax benefits, tax avoidance activities, and marginal tax rates. However, prior studies often prefer ETR as a measure of tax aggressiveness. Lanis and Richardson (2012) advocate for ETR's use because it encompasses all aspects of tax aggressiveness, building on previous research by Slemrod (2004), Dyreng et al. (2008), and Robinson et al. (2010), who utilized ETR in their studies. Companies employing tactics to minimize taxable income while maintaining profits typically exhibit lower ETRs, making ETR a viable indicator of tax aggressiveness.

Managerial ownership refers to the ownership of shares by members of a company's management who play an active role in decision-making. When managers hold a significant portion of shares in a company, they are motivated to safeguard the interests of shareholders, including themselves, aiming to maximize their compensation from business profits. Previous research by Rohmansyah (2017), and Lubis et al. (2018) has consistently demonstrated a significant positive relationship between managerial ownership and tax aggressiveness.

H1: Managerial Ownership has a positive effect on tax aggressiveness.

Profitability in business signifies the capacity of a company to earn profits from its assets and investments over time. Research by Rodriguez and Arias (2012) reveals a significant correlation between profitability and tax strategies. Essentially, companies that perform well in profitability tend to engage more actively in tax planning.

This relationship can be understood through two key factors. Firstly, highly profitable companies typically possess greater resources and flexibility in managing their taxes effectively. Secondly, companies that experience substantial profits often face elevated tax obligations, motivating them to adopt more aggressive tax planning measures to mitigate their tax liabilities and, consequently, boost their earnings. This viewpoint aligns with findings from various studies by Tanko (2022), and Hariani and Waluyo (2019), all indicating a positive and significant association between profitability and the level of aggressiveness in corporate tax management.

H2: Profitability has a positive effect on tax aggressiveness.

Solvency serves as a crucial gauge of a company's capability to meet its debt obligations, which represent a significant source of financing for its operations. Debt typically incurs interest, constituting a fixed cost component. Research by Hidayat and Fitria (2018) and Lemmuel and Sukadana (2020) has shown that solvency plays a role in influencing tax strategies. This observation finds support in the studies conducted by Putri et al. (2019) and Cahyadi et al. (2020), which affirm that solvency correlates positively with the level of tax aggressiveness. In simpler terms, when a company's solvency is higher, it tends to exhibit a greater inclination towards adopting aggressive approaches in managing its tax affairs.

H3: Solvency has a positive effect on tax aggressiveness.

The research also aims to simultaneously examine several independent variables that are believed to impact tax aggressiveness, which is the dependent variable. These variables include managerial ownership, profitability, and solvency.

3.METHODOLOGY

This study employs a quantitative approach and focuses on companies within the property and real estate sector listed on the Indonesia Stock Exchange (IDX) between 2016 and 2022. Data for the research is collected from the financial statements of these companies, which are consistently available on the website www.idx.co.id. The selection of samples follows a purposive sampling method, where companies are chosen based on specific criteria. Out of the 84 companies in the sector during the mentioned period, only 7 met the criteria initially, resulting in a sample size of 49. However, due to outlier data, the final sample size was reduced to 44.

4.RESULT AND DISCUSSION

Table 1. Descriptive Statistics Test Results

	N	Minimum	Maximum	Mean	Std.Deviation
Managerial Ownership	44	0,10	4,92	1,6905	1,44951
Profitability	44	0,56	4,18	2,5033	0,88311
Solvency	44	2,93	13,20	7,5148	2,72191
Tax Aggressiveness	44	0,10	4,31	1,2286	1,08734

Source: SPSS, Data processed 2024

Table 2. Kolmogorov-Smirnov Test Results

Variable	Asymp. Sig. (2 tailed) Value
Unstandardized residual	0,200[c]

Source: SPSS, Data processed 2024

According to the SPSS output, for the data to be considered normally distributed, the significant value (sig) of the Kolmogorov-Smirnov test should exceed 0.05. The table above indicates that the Asymp.Sig value is 0.200, suggesting that the data conforms to a normal distribution.

Table 3. Multicollinearity Test Results

Variable	Tolerance	VIF
Managerial Ownership	0,811	1,234
Profitability	0,530	1,887
Solvency	0,578	1,730

Source: SPSS, Data processed 2024

Table 3 presents the tolerance and Variance Inflation Factor (VIF) values for three variables: managerial ownership, profitability, and solvency. The tolerance values for managerial ownership, profitability, and solvency are 0.811, 0.530, and 0.578, respectively, all exceeding the threshold of 0.10. Additionally, the VIF values for these variables—1.234, 1.887, and 1.730, respectively—are all below 10. This indicates the absence of multicollinearity among the variables, as per standard practice in statistical analysis.

Table 4. Glejser Heteroscedasticity Test Results

Variable	Sig.
Managerial Ownership	0,080
Profitability	0,177
Solvency	0,348

Source: SPSS, Data processed 2024

The Glejser test results indicate the absence of heteroscedasticity in the residuals, as all independent variables examined exhibit significance values greater than 0.05. Specifically, the managerial ownership variable shows a significance value of 0.080, the profitability variable (measured by return on assets, ROA) has a significance value of 0.177, and the solvency variable (measured by the debt-to-equity ratio, DER) has a significance value of 0.348. These findings imply that none of the independent variables significantly influence the residuals' absorption in the regression model.

Table 5. Autocorrelation Test Results

Model	R	R Square	Adjusted R^2	Std. Error of the Estimate	Durbin-Watson
1	0,667[a]	0,445	0,403	0,24056	2,088

Source: SPSS, Data processed 2024

Table 6. Test Results Table Durbin-Watson

dl	du	dw	4 - dl	4 - du	Description
1.3749	1,6647	2,088	2,6251	2.3353	There is No Autocorrelation

Source: SPSS, Data processed 2024

The Durbin-Watson (DW) statistic of 2.088 falls between the lower bound (du = 1.6647) and upper bound (4 - du = 2.3353), suggesting the absence of autocorrelation in the data.

Table 7. Multiple Linear Regression Test Results

		Unstandardized Coefficients	
Model		B	Std. Error
1	(Constant)	0,317	2,348
	Managerial Ownership	0,319	0,085
	Profitability	-0,178	0,181
	Solvency	0,032	0,016

Source: SPSS, Data processed 2024

The multiple linear regression equation derived from the multiple regression test outcomes can be expressed as: Y = 0.317 + 0.319KM - 0.178ROA + 0.032DER + e

Table 8. Coefficient of Determination (R^2) Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,667[a]	0,445	0,403	0,24056

Source: SPSS, Data processed 2024

The analysis reveals that the independent variables have moderate explanatory power for the variations observed in the dependent variable, with an R-square coefficient of 0.445. This study demonstrates that managerial ownership, profitability, and solvency collectively account for 44.5% of the variation in tax aggressiveness. The remaining 55.5% of variability is attributed to factors beyond the scope of this study.

In this study, the t-test was conducted with a significance level of 5% (0.05). To obtain the t-table value, the degrees of freedom (df) were calculated using the formula n-1-k, where n represents the sample size (44) and k indicates the number of independent variables (3). Thus, the calculation resulted in 40 degrees of freedom. Since the analysis involves multiple variables, the corresponding t-table value for a two-way significance of 5% is 2.02108. The findings of the partial t test are summarized in the table below:

Table 9. Partial Test (t-Test) Result

Variable	t	Sig.	Description
Managerial Ownership	3,765	0,001	Positive and Significant Impact
Profitability	-0,985	0,331	Negative Impact but Not Significant
Solvency	2,994	0,023	Positive and Significant Effect

Source: SPSS, Data processed 2024

Table 10. Simultaneous Test (f-Test) Results

Model		F	Sig.
1	Regression	10,682	0,000[b]

Source: SPSS, Data processed 2024

The data in the table indicates that the calculated F value is 10.682, surpassing the critical F table value of 2.833, with a significance level of 0.000. According to established criteria, when the calculated F value exceeds the F table value and the significance level is less than 0.05, it suggests a significant collective impact of independent variables such as managerial ownership, profitability, and solvency on tax aggressiveness.

The study initially hypothesized that managerial ownership positively influences tax aggressiveness. The findings support this hypothesis, indicating a significant positive impact of managerial ownership on tax aggressiveness, as evidenced by a β coefficient of 0.319 and a t-count of 3.765, surpassing the critical t-table value of 2.021, with a significance level of 0.001 (<0.05). This suggests that managers tend to adopt aggressive tax strategies to enhance personal bonuses and dividends. This aligns with agency theory, which posits differing interests between shareholders and managers but suggests

alignment due to shared managerial roles. Furthermore, managerial ownership may facilitate aggressive tax practices by reducing oversight and enabling profit maximization. This conclusion is consistent with prior research by Suhartonoputri and Mahmudi (2022), further strengthening the argument for the positive relation between managerial ownership and tax aggressiveness.

The analysis of profitability's impact on tax aggressiveness reveals a β coefficient of -0.178, with a significance value of 0.331, surpassing the standard threshold of 0.05. The resultant t value of |-0.985| falls below the standard t-table value of 2.021, indicating no significant impact of profitability on tax aggressiveness. Consequently, this study rejects the hypothesis proposing a positive correlation between profitability and tax aggressiveness. Regardless of profit levels in the property and real estate sector, companies do not exhibit increased tax aggressiveness. This insignificance may stem from companies' ability to manage tax burdens efficiently using their assets. High Return on Assets (ROA) suggests a preference for tax compliance over aggressive tax strategies, considering the associated risks. Management avoids such actions to safeguard operational sustainability. These findings align with Hidayat and Fitria's (2018) research, confirming the lack of significant correlation between profitability and corporate tax aggressiveness.

The analysis of solvency's impact on tax management reveals a significant influence, as indicated by a t-statistic value of 2.994, surpassing the critical t-table value of 2.021. Regression tests on the Debt-to-Equity Ratio (DER) variable further support this, showing a β coefficient of 0.032 with a significance level of 0.023, below the 95% confidence threshold. This suggests a significant positive relationship between solvency and tax avoidance behavior. This correlation underscores that higher solvency ratios prompt companies to rely more on third-party debt financing, leading to increased interest payment obligations. Consequently, companies strategically leverage interest expenses from debt to mitigate tax liabilities, reflecting an aggressive approach to tax management. By considering the tax-reducing impact of interest expenses, companies aim to minimize pre-tax profits. This finding aligns with Shantikawati's (2020) research, which similarly concludes that solvency positively influences aggressive tax management behavior.

The study finds that Managerial Ownership, Profitability, and Solvency collectively exert a significant influence on Tax Aggressiveness. The F Test (Simultaneous) indicates a calculated f value of 10.682, surpassing the f table value of 2.833, with a significance level of 0.000. This indicates a positive and significant impact of the independent variables (Managerial Ownership, Profitability, and Solvency) on the dependent variable (Tax Aggressiveness), consistent with established criteria. These findings align with prior research by Baringbing and Wi (2022), which similarly concluded a simultaneous positive and significant influence of Managerial Ownership, Profitability, and Solvency on Tax Aggressiveness. This suggests that these factors hold considerable importance in corporate tax planning, directly shaping managerial decisions, especially regarding tax obligations.

5.CONCLUSION

Based on the problem formulation, research objectives, and hypotheses as well as the discussion of the research results that have been presented in the previous chapter, and the analysis of findings presented earlier, several key conclusions emerge from this study: 1) Managerial Ownership has a positive effect on tax aggressiveness in property and real estate companies listed on the Indonesia Stock Exchange in 2016-2022. This correlation arises because higher levels of ownership by managerial figures lead to a greater tendency towards aggressive tax strategies. 2) Profitability, however, does not demonstrate a significant influence on tax aggressiveness among property and real estate firms listed on the Indonesia Stock Exchange during the period under scrutiny. This suggests that these companies are adept at managing their tax liabilities efficiently, regardless of their profitability levels. Consequently, companies with strong profitability tend to fulfill their tax

obligations more diligently. 3) Solvency has a positive effect on tax aggressiveness in property and real estate companies listed on the Indonesia Stock Exchange in 2016-2022. This is due to entities utilizing loopholes in high solvency to engage in aggressive tax planning tactics.

Acknowledgement

I would like to express my sincere gratitude to all those who have contributed to the completion of this paper. First and foremost, I extend my deepest appreciation to my supervisor, Ms. Airin Nuraini, for her invaluable guidance and encouragement throughout the research process. Her expertise, insightful feedback, and unwavering commitment have been instrumental in shaping this work. I am also thankful to Mr. Sudrajat for his insightful lectures and constructive feedback, which have greatly enriched my understanding of the subject matter and inspired me to delve deeper into the research. I feel immensely grateful to everyone in my college, Institut Bisnis dan Informatika Kesatuan, for the continuous support and for providing me with the resources necessary to pursue my academic endeavors. I am indebted to my friends and family for their support, understanding, and encouragement throughout this journey. Their belief in my abilities has been a constant source of motivation. Lastly, I would like to express my appreciation to all the authors whose works have contributed to the foundation of this study. Thank you to everyone who has played a part, no matter how small, in the realization of this endeavor.

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IMPLEMENTATION OF ISO/IEC 27002 STANDARDS WITH BIGFIX ENDPOINT SECURITY MANAGEMENT AT XYZ COMPANY: EVALUATION OF SYSTEM SECURITY AND EFFECTIVENESS

Egi Adithia Pradana*, Muhammad Figo Haffidz Akbar, Yanto Hermawan, Aprilina Tambunan

Institute of Business and Informatics, Indonesia

Corresponding author: egiadithia@ibik.ac.id

Abstract

This journal discusses the implementation of ISO/IEC 27002 standard with BigFix Endpoint Security Management technology at XYZ Company. The purpose of the study is to evaluate the safety and effectiveness of the system after implementation. The Plan-Do-Check-Act (PDCA) method is used to organize implementation and evaluation steps. The evaluation results show a significant improvement in information security and system effectiveness in Company XYZ after the implementation of security standards and technologies. The implementation is carried out in stages and involves collaboration between the research team and the company's internal team to ensure changes in security policies and practices are carried out appropriately.Despite facing several challenges and obstacles, such as technical issues and changes in organizational culture, the corrective steps taken based on the evaluation results gave positive results. BigFix Endpoint Security Management technology is proven effective in detecting and preventing cyber threats, enhancing enterprise defenses against increasingly complex security threats. The implementation of the ISO/IEC 27002 standard with BigFix Endpoint Security Management provides a solid foundation for XYZ Enterprise to face cybersecurity challenges on an ongoing basis. The results of this study provide practical recommendations for other companies that plan to implement information security standards with similar technologies. By adopting international standards and the latest security technologies, organizations can increase their resilience to evolving cybersecurity threats.

Keywords: *ISO/IEC 27002 standard, BigFix Endpoint Security Management, information security, system effectiveness, evaluation, PDCA methods.*

1.INTRODUCTION

In this digital era that continues to develop rapidly, information security has become critical for organizations and companies throughout the world. Increasingly complex and diverse cybersecurity challenges require companies to confront threats that may result in financial losses, reputational damage, and even loss of sensitive data. To protect their information assets, many organizations have adopted the ISO/IEC 27002 standard as the leading guide for managing information security.

To support the efficient implementation of the ISO/IEC 27002 standard, XYZ Company decided to use BigFix Endpoint Security Management technology. This solution offers integrated endpoint security management and can assist in the detection and prevention of cyber threats on endpoint devices across the corporate network. It is hoped that by combining the ISO/IEC 27002 Clause 8

standard and BigFix technology, companies will be able to achieve higher levels of information security and increase the overall effectiveness of their systems.

Although efforts to improve information security through the implementation of security standards and technologies are increasingly common, detailed research that focuses on evaluating the results and effectiveness of such implementation in company XYZ is still limited. Therefore, this research will fill this knowledge gap with the aim of evaluating the success and impact of implementing the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management at company XYZ. The results of this research are expected to provide valuable insights for XYZ company and other organizations that plan to increase their level of information security through a combination of the ISO/IEC 27002 clause 8 standard and BigFix Endpoint Security Management technology.

2.LITERATURE REVIEW:

Zalewski and Smith (2020) conducts a comprehensive review of the implementation of the ISO/IEC 27002 standard in various organizations. The authors explain how organizations can adopt these information security standards and integrate them into their security framework. The results of this research provide insight into the challenges faced by organizations during implementation and the benefits they obtain in improving information security. This research becomes relevant in the context of future journals because it provides insight into the successful implementation of the ISO/IEC 27002 standard in an organizational environment.

Formulation of the problem:
This study aims to answer the following questions:

1. To what extent has the implementation of the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management succeeded in increasing the level of information security at XYZ company?
2. What are the challenges and obstacles faced by XYZ company in implementing the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management technology?
3. What are the changes in information security policies and security practices after the implementation of the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management at XYZ company?
4. What is the level of adaptation and acceptance by employees to changes in information security policies and practices following the implementation of security standards and technologies?
5. What practical recommendations can be provided based on the results of this implementation evaluation for company XYZ and other organizations planning to adopt the ISO/IEC 27002 clause 8 standard with similar security technologies?

Research purposes:
The aim of this research is to achieve a comprehensive understanding of the implementation of the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management at XYZ Company, as well as evaluating the security and effectiveness of the information system after implementation. This research aims to achieve the following objectives:

1. Assess the level of success in implementing the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management in improving information security at XYZ Company.
2. Identifying the challenges and obstacles faced by company XYZ during the process of implementing the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management technology.
3. Analyzing changes in information security policies and security practices after the implementation of the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management at XYZ company.
4. Measures the degree of adaptation and acceptance by employees of changes in information security policies and practices following the implementation of security standards and technologies.
5. Provide practical recommendations based on the results of this implementation evaluation for XYZ company and other organizations that plan to adopt the ISO/IEC 27002 standard with similar security technologies, in order to improve the security and effectiveness of their information systems.

3.RESEARCH METHODS

Research Methods using the PDCA and SSE-CMM Method Approach:

1. Planning (Plan):

a. Scope Determination: Determine the scope of research that includes the implementation of the ISO/IEC 27002 standardclause 8with BigFix Endpoint Security Management at XYZ Company.

b. Preparation of Research Plan: Planning research steps by adopting the PDCA method approach and using the SSE-CMM (Systems Security Engineering Capability Maturity Model) framework.

2. Implementation (Do):

a. SSE-CMM Implementation: Initiate implementation of the SSE-CMM framework to evaluate and improve information system security capabilities at XYZ Company.

b. Implementation of Standards and Technology: Implementing the ISO/IEC 27002 standardclause 8with BigFix Endpoint Security Management according to the plan that has been prepared.

3. Evaluation (Check):

a. SSE-CMM Evaluation: Evaluate the level of security capability of Company XYZ's information system based on the SSE-CMM framework to identify the current maturity level.

b. Evaluation of Implementation Results: Assessing the success of implementing the ISO/IEC 27002 standardclause 8with BigFix Endpoint Security Management based on data collected during implementation.

4. Action (Action):

a. Improvement Recommendations: Based on the SSE-CMM Evaluation and implementation evaluation results, develop recommendations for improvements and improvements in the security of XYZ Company's information system.

b. Implementation of Corrective Actions: Implementing corrective actions and improvements in accordance with the recommendations prepared.

4.RESULTS AND DISCUSSION

4.1 Implementation Planning

At the planning stage, the research team has formulated a plan for implementing the ISO/IEC

27002 clause 8 standard with BigFix Endpoint Security Management at Company XYZ. This plan includes identification of information security policies and practices that need to be changed or strengthened, introduction of BigFix Endpoint Security Management technology.

4.2 Implementation Implementation

Implementation of the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management is carried out in accordance with the plan that has been prepared. Research teams and internal company teams work together to ensure security policy and practice changes are implemented appropriately and comprehensively. The introduction of BigFix Endpoint Security Management technology was gradual, and intensive training was provided to employees to ensure understanding and effective use.

4.3 Information Security Evaluation (Check)

After the implementation stage, the research team evaluated the level of information security at XYZ Company. This evaluation includes measuring the success of standard implementation and the effectiveness of BigFix Endpoint Security Management technology in detecting and preventing cyber threats. This evaluation data is used to evaluate achievement of initial implementation objectives and to identify areas requiring improvement.

Table 4. 1 Calculation of Maturity Level Control Objectives A.8.1

A.8	Technology Control								
A.8.1	Asset Liability Identify organizational assets and assign appropriate protection responsibilities								
A.8.1.1	Inventory Control of assets								
No	Statement	Weight	0	1	2	3	4	5	Mark
1	The existence of a Serial Number on the Company's assets	1					√		4
2	There is maintenance and repair of company assets	1				√			3
A.8.1.2	Asset ownership								
No	Statement	Weight	0	1	2	3	4	5	Mark
1	Supporting facilities that must be owned by the company itself	1						√	5
2	Implementation of Endpoint Management for company device security	1				√			3
	Total Weight	4	Ability Level						3.75

Table 4. 2 Results of Maturity Level Clause 8

Clause	Control Objectives	Security controls	Ability Level	Average/Control Objective
8.Asset Management	8.1 User endpoint devices	8.1.1Inventory Control of assets	3.75	3.75
		8.1.2Asset ownership		
	Maturity Level Clause 8			3.75

In the process of clause 8 regarding Technology Control, the calculation of the maturity level value shows that the maturity level is regular, with the value position of 3.75 which indicates that the security of the current information system is good (managed and measurable). Management monitors and measures procedural compliance, as well as takes action to improve ineffective processes. Additionally, there is consistent improvement in the process and management provides adequate training to employees.

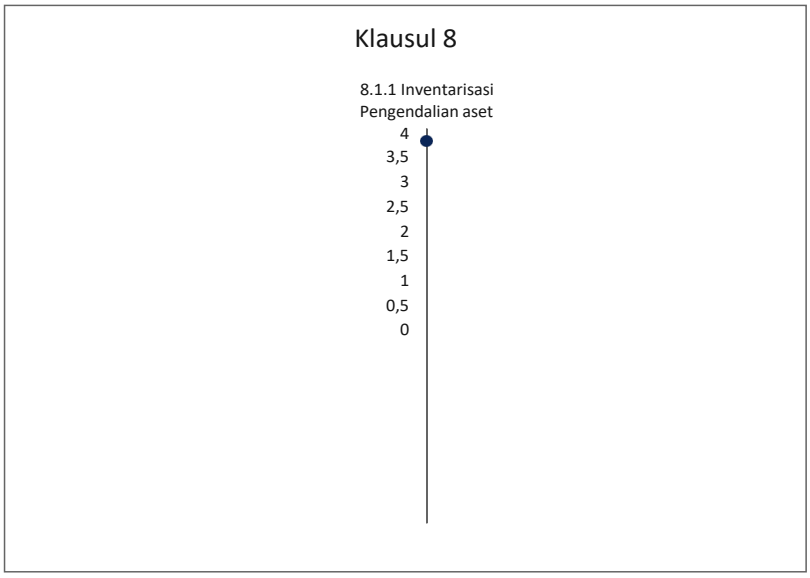

Figure 4. 7 Representation of Maturity Levels in Clause 8

4.4 Corrective and Improvement Actions (Act)

The following is a view of BigFix Endpoint SecurityManagement:

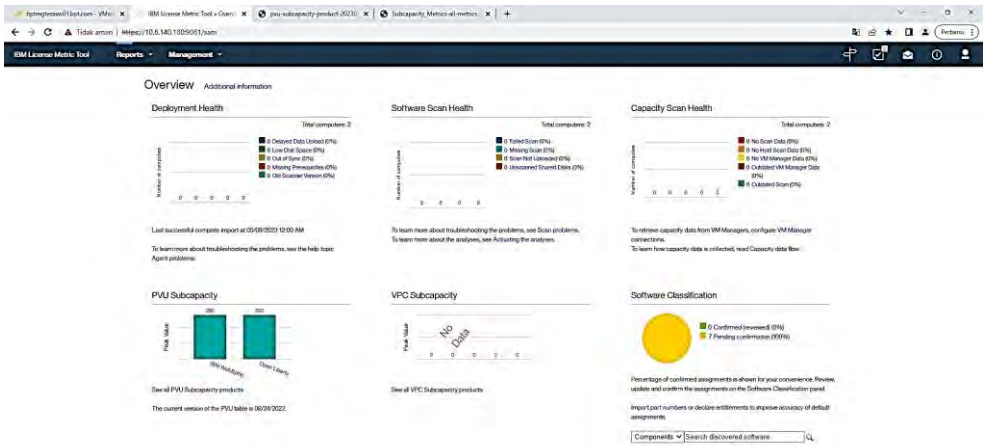

Figure 4.8 BigFix Endpoint Management Dashboard

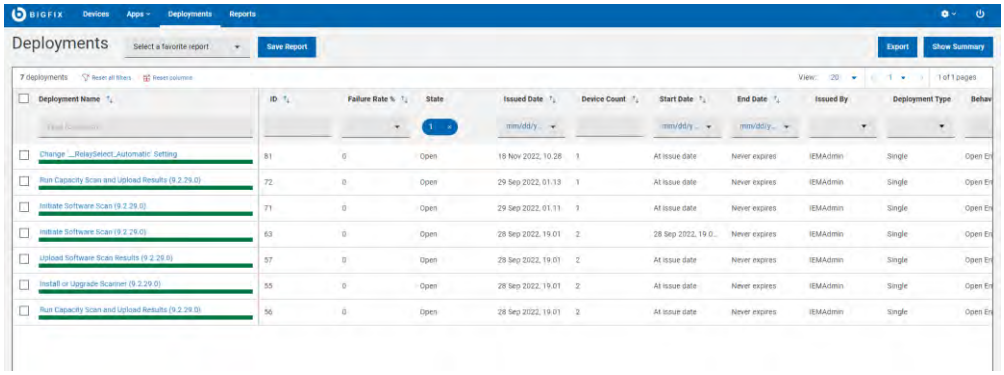

Figure 4.9 Deployment in BigFix

Based on the evaluation results, the research team prepared a corrective and improvement action plan (action plan). Remedial measures discovered include adjusting security policies, improving employee training, and improving the configuration of BigFix Endpoint Security Management technology to improve detection and response to threats.

Chapter 4 presents the results of implementing the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management using the Plan-Do-Check-Act method approach. This implementation succeeded in increasing the level of information security and system effectiveness at XYZ Company. The recommendations and corrective steps resulting from this research are the basis for XYZ Company to face the ever-growing cyber security challenges and maintain information security on an ongoing basis.

5.CONCLUSION

Application This research discusses the implementation of the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management at XYZ Company and evaluates the security and effectiveness of the system after implementation. By using the PDCA method approach, this research achieved its goal of increasing the level of information security and system effectiveness in the company.

The evaluation results show that the implementation of the ISO/IEC 27002 clause 8 standard with BigFix Endpoint Security Management has succeeded in improving information security at XYZ Company. Changes to security policies and security practices have been implemented successfully, and employees have adapted well to the changes.

This research provides a scientific contribution by combining the PDCA method approach and the SSE-CMM framework in evaluating and improving information security. The results of this research have important implications for other organizations planning to implement information security standards with similar security technologies. By leveraging international standards and leading-edge security technologies, organizations can increase their resilience to increasingly complex cybersecurity threats.

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THE COMPLEXITY OF PROBITY AUDIT IN THE PREPARATION OF PROCUREMENT FOR GOODS AND SERVICES

Fajriyah Auliyah Anugrah, Zaki Fakhroni*

Fakultas Ekonomi Dan Bisnis, Universitas Mulawarman, Indonesia

**Corresponding author: zaki.fakhroni@feb.unmul.ac.id*

Abstract

This research was conducted to examine the implementation of procurement preparation from the perspective of probity audit in the regional government agencies carried out by the Regional Inspectorate of Penajam Paser Utara District. The informants in this study are civil servants at the Regional Inspectorate of Penajam Paser Utara District who serve as auditors and are willing to provide information through interviews. In addition to gathering information through interviews, this research also uses observation and documentation methods. The findings of this study indicate the specific application of probity audit in the procurement preparation stage to ensure that all regulations are complied with correctly, honestly, and with full integrity. Thus, this is key to preventing fraud in the procurement process, as well as the challenges and obstacles faced in the probity audit preparation stage. Auditors must uphold high standards of ethics, impartiality, and professionalism in collecting, evaluating, and processing data and information from the parties being examined.

Keywords: *Probity Audit, Procurement For Goods And Services, Prevent Fraud, Professionalism*

1.INTRODUCTION

The role of local government in regional development is a highly strategic authority closely linked to its function as a public servant aiming to enhance community prosperity. An essential task of local government in regional development planning is part of their responsibility in providing public services to improve the welfare, prosperity, security, justice, and tranquility of society. Regional development planning is a future-oriented activity, conducted through stages of program and activity formulation involving various elements to achieve desired development goals. To support regional development goals, the government must be able to meet the needs of the community by providing public facilities and infrastructure. Generally, facilities and infrastructure are supportive tools for the success of processes carried out in public services toward the desired success. In its role of providing facilities and infrastructure, goods and services are needed, thus Procurement of Goods and Services is necessary

Probity Audit is an independent assessment activity aimed at ensuring that the procurement process is consistently carried out in accordance with the principles of integrity, accuracy, and honesty, and complies with applicable regulations, with the aim of enhancing accountability in the use of public sector funds (Ramadhan & Adhim, 2021). The existence of Probity Audit is based on the numerous corruption cases in the procurement of goods and services. Data from the Indonesia Corruption Watch (ICW) on Enforcement Trends in 2022 shows that out of 579 cases uncovered, 250 cases or 43% of them are related to procurement, with modes including budget misuse, mark-ups, and fictitious activities/projects. Based on this, it can be inferred that the procurement sector is one of

the most fertile grounds for fraud and requires special attention from stakeholders because every procurement process has the potential for fraud, leading to state losses and poor project outcomes.

Probity Audit can help prevent deviations by ensuring that every procurement process is carried out in accordance with applicable procurement principles and ethics. Expenditure in procurement has a strong foundation and is aligned with needs. However, emerging phenomena indicate that procurement of goods and services still does not meet needs, as evidenced by a phenomenon in Penajam Paser Utara District in 2021 where Budget Reallocation (APBD) was conducted, focusing the budget on activities that were not previously budgeted through budget amendments, specifically for accelerating Covid-19 handling. The budget intended for accelerating Covid-19 handling was misused for the procurement of School Health Units (UKS). This decision is considered irrational because it was budgeted during a pandemic where all teaching and learning activities were still conducted online. This procurement did not consider the ongoing budget deficit, which should have led to a more focused use of funds for more critical purposes.

The Probity Audit that should have been conducted in that case was not carried out due to a conflict of interest between the executing party of the Probity Audit and the auditee. It was found that the executing party of the Probity Audit had a special relationship with the auditee, in this case, a

familial relationship. This situation undoubtedly influenced their actions in their professional capacity because someone or a group had personal interests at stake.

Given this phenomenon, there is a complexity involving multiple elements, components, or factors that are interrelated because of interacting components. This undoubtedly hinders the implementation of Probity Audit, especially in the preparation stage, as the procurement of goods and services lacks budget supervision, which may lead to budget misuse and subsequently result in poor procurement quality due to failing to meet expected quality standards or specifications.

2.LITERATURE REVIEW

2.1 Procurement of Goods and Services

Procurement of goods and services is one of the important activities in an organization or government agency. The procurement process must adhere to principles of transparency, accountability, integrity, and fairness. However, in practice, many cases of fraud are still found in the procurement process of goods and services. Considering that the procurement of goods and services involves government spending using state finances sourced from the State Budget (APBN) or Regional Budget (APBD), it is essential to ensure that budget allocations are used effectively and efficiently in the procurement of goods and services by the government. This necessitates the ability to achieve transparency, accountability, and ethical conduct at all stages of government procurement processes, to ensure that expenditures are targeted appropriately and yield meaningful outcomes.

2.2 Probity Audit

Probity is defined as integrity, uprightness, and honesty. In the context of procurement processes, probity refers to "good process," meaning that the procurement of goods and services is conducted with principles of upholding integrity, uprightness, and honesty to comply with applicable laws and regulations. , Probity Audit is defined as an assurance provided by a Probity Auditor to conduct independent oversight of a procurement process and to provide an objective opinion or conclusion regarding whether the procurement process has complied with the requirements of honesty, also known as probity requirements.

2.3 Probity Audit Preparation Stage

The preparation stage is one of the crucial initial stages in the continuity of the procurement process for goods and services. There are numerous opportunities that can be exploited by a party during the preparation stage of procurement, such as inaccurately drafted specifications not aligned with the needs and not referring to the General Procurement Plan (RUP), inflation of prices (mark up) in the Estimated Cost (HPS), incorrect calculation of work volume, and so forth. If the implementation of the preparation stage audit is not carried out effectively, indications of deviations as mentioned above may occur.

Below are the steps or procedures for conducting the Probity Audit in the preparation stage of procurement of goods and services according to the Probity Audit Guidelines

1 Technical Specification
2 Self estimated price (HPS).
3 Drafting of Contract Design
4 Establishment of Other Regulations (Advance Payment, Advance Payment Guarantee, Performance Guarantee, Maintenance Guarantee, Warranty Certificates, and/or Price Adjustment).

2.4 Complexity of Probity Audit in the Preparation Stage

The aspects to be considered in conducting Probity Audit are also referred to as critical points.
Below are the critical points in the procurement preparation activities that need attention:

1. Specifications are not prepared according to needs and do not refer to the General Procurement Plan (RUP).
2. Specifications are geared towards a particular brand and provider of goods and services.
3. Technical specifications are unclear and do not describe the work method.
4. Estimated Own Price (HPS) is prepared exceeding 28 working days.
5. Inflation (mark up) in HPS.
6. Base price that is not standard in the preparation of HPS.
7. Addition of company profits to market prices.
8. Determination of estimated prices that do not comply with regulations.
9. Sources or price references for preparing HPS are nonexistent.
10. Volume calculations and design drawings for lump sum contracts are uncertain.
11. Addition of unauthorized cost items.
12. Non-standard contract drafts.
13. Selection of evaluation methods with a point system (merit point) for evaluations that should be based on a knockout system (to win certain products/brands).
14. Technical requirements that do not match the needs and execution of work.
15. Graduation criteria for evaluation are missing or unclear.
16. Addition of qualification requirements that do not comply with regulations.
17. Addition of unnecessary evaluation criteria.
18. Evaluation weighting is not detailed.
19. Tender documents are non-standard or incomplete.

3.METHODOLOGY

A qualitative method with a phenomenological research design. This method is used to gain a

deeper and contextual understanding of the phenomenon or subject under study regarding the implementation of Probity Audit in the procurement of goods and services at the preparation stage. This method involves collecting data through interviews and document analysis, which are more descriptive and interpretative, and can be used to understand aspects that are difficult to measure, such as values, norms, and subjective meanings.

This research employs a qualitative research approach, specifically utilizing a phenomenological approach that focuses on the subjective experiences of individuals to understand a particular phenomenon and comprehend the meanings that arise from an experience or phenomenon. According to (Tamangkeng & Maramis, 2022) Phenomenology is the study of uncovering and discovering the lived experiences of individuals, encompassing objective, belief, historical, cultural, and transcendent behavioral aspects.

Informants in this study are the Head of the Probity Auditor (LE) team and technical controllers (MD) who have an understanding of Probity Audit and are willing to be interviewed. These informants must understand the Probity Audit implementation process and have knowledge in the field of goods and services procurement. The informants selected for this research are deemed to have provided the necessary information. To ensure their privacy, the researcher will anonymize their identities by using only their initials and work unit section.

Researchers used several methods involving interviews to interact directly with informants to obtain perspectives, experiences and in-depth understanding related to the research topic, besides that researchers also used document analysis methods to explore information from written documents that could provide additional insights into the research context or phenomenon. (Kusumastuti & Khoiron, 2019) explains that triangulation is the best way to eliminate differences in the construction of reality that exists in the context of a study while collecting data on various events and relationships from various views. The purpose of using triangulation in research is to test the validity of data by enhancing the validity and credibility of research findings, reducing bias, and increasing the depth of understanding.

1. Interview according (Hardani et al., 2022) semi-structured interviews are oral questions and answers between two or more people directly or conversations with a specific purpose in order to obtain in-depth information. In this study, the researcher asked questions based on semi-structured interviews in order to explore the interviewees' responses. Semi-structured interviews are an interview method that uses a guide as a basis, but does not bind the interviewer to ask questions in a rigid manner

2. Documentation, is a data collection strategy that requires finding the right evidence in accordance with the focus of the research problem. In the documentation method, researchers will trace data such as reports on the disbursement of tax receivables that have been realized, profiles of the work unit units involved, as well as documentation in the form of photos and other information.
3. Observation, The researcher does not only rely on information provided by respondents or written sources, but actively observes directly the situation or behavior relevant to the research.

The data analysis technique utilized in this research employs a phenomenological approach with a research model according to (Creswell, 2015)

1. Analyzed the data by transcribing the recorded interviews into written notes.
2. Observing all the data and formulating them into initial codes to explore the meaning associated with the information from the data obtained.
3. Coding the research data to organize and systematize the data completely and in detail.
4. Conceptualize the results of coding into a report of research findings

4.RESULTAND DISCUSSION

4.1 Probity Audit Preparation of Procurement of Goods and Services Overview

The process of implementing procurement is regulated in Presidential Regulation Number 12 of 2021. These rules contain procedures for managing procurement so as to create good procurement governance. Furthermore, to complement these rules to accommodate changes in work steps in the process of procuring goods and services, rules were also issued from the Regulation of the Financial and Development Supervisory Agency of the Republic of Indonesia Number 3 of 2019 concerning Guidelines for Internal Supervision of Government Goods / Services Procurement.

"*So if the implementation of the procurement of goods and services itself, our preference is to use Presidential Regulation Number 12 of 2021, then there is BPKP regulation Number 3 of 2019 concerning Guidelines for Intermediate Supervision of Government Procurement of Goods and Services and the KPK MCP which is a mandate from the KPK*" (LE)

In the implementation of the Probity Audit , the Regional Inspectorate of Penajam Paser Utara District refers to the Regulation of Financial and Development Supervisory Agency (BPKP) Number 3 of 2019 which is a guideline for the implementation of Probity Audit, but in the process of course also looks at other related regulatory aspects. The mandate from KPK (Corruption Eradication Commission) through MCP (Monitoring Center for Prevention) to conduct Probity Audit at the preparation stage is also the basis for conducting Probity Audit at the preparation stage of procurement of goods and services at Regional Inspectorate of Penajam Paser Utara District in 2023.

According to KPK (Corruption Eradication Commission), the preparatory stage of the procurement of goods and services is a stage that needs attention. Probity Audit in the context of goods and services procurement is an important process that aims to ensure integrity, transparency, and compliance with ethical standards in all stages of the procurement process.

"*Supervision of goods and services in the form of audits carried out during the procurement process, so it's real time, well if this Probity Audit is carried out simultaneously so when the implementation we get notes or errors we immediately convey and rebuke and changes must be made immediately*" (LE)

Based on the results of these interviews, Probity Audit is carried out in conjunction with the goods and services procurement process or immediately after the goods and services procurement process occurs.

4.2 Probity Audit Team Formation Process and Work Program

The formation of the Probity Audit team is a crucial step in ensuring the effectiveness and success of the audit, the selection of Probity Audit team members is done by considering the expertise, experience, and integrity of the individuals who will be involved.

"*People who are called auditors here are definitely certified auditors, and auditors who have attended training or training related to the procurement of goods and services are also needed*" (MD)

The guidelines state that a Probity Auditor must have a certificate of auditor position, relevant experience in conducting goods and services procurement audits, and have a goods and services procurement certification. However, the interview results illustrate that not all auditors at the Regional Inspectorate of Penajam Paser Utara Regency have a certificate of goods and services procurement.

"*Just follow it, it's hard to pass the certification of procurement of goods and services, here we are only 4 people who have passed the certification, so at least you have participated and at least in one team there are those who have passed the certification of procurement of goods and services*"

(MD)
The Probity Audit guidelines themselves explain that Probity Auditors at least have auditor certification and experience in conducting procurement audits. This shows that only having experience in conducting goods and services procurement audits without having a certificate of expertise in goods and services procurement is still considered valid to become a member of the Probity Audit team.

Auditor competence is also indicated by their educational background and experience. Ideally an auditor has an educational background (formal or certification) in auditing. However, what happens in the field actually shows auditors with various educational backgrounds, the complexity of auditors who also require other expertise besides expertise in accounting

"*..... For example, there is work on bridge construction, well, those who understand civil technical people or architects, for example, if we see a fish seed project, well, it is not technical people who are needed for inspection but people from fisheries, so all the projects we want to see are adjusted*" (MD)
"*..... So far, we have considered it from the educational background, so it is impossible for finance graduates to examine those related to the physical, so it is also adjusted from the disciplinary background to the work of the assignment*" (LE)
For internal auditors, competencies are needed that are not only accountant backgrounds, but also other competencies and understanding and experience relevant to the business processes that must be given an assessment or insurance. With this, in addition to auditors with an accounting education background, government internal auditors can also have an educational background other than accounting. With this, in addition to auditors with an accounting education background, government internal auditors can also have an educational background other than accounting.

After the formation of the Probity Audit team is complete, the next step is the preparation of the audit work program by the Probity Audit team leader. This audit work program is a detailed work plan that will guide the implementation of the audit efficiently and effectively. The audit work program includes several things, namely the scope, audit objectives, audit procedures, implementers and processing time.

The following is one of the Probity Audit work programs in the preparatory stage of the procurement of goods and services

PROGRAM KERJA PROBITY AUDIT
ATAS PERSIAPAN PENGADAAN BARANG / JASA
NO PKA : LE/PA/ST.05/V/2023

A. RUANG LINGKUP
Probity audit tahap persiapan pengadaan dilaksanakan dengan melakukan audit atas penetapan spesifikasi teknis/kerangka acuan kerja (KAK), penetapan HPS, penetapan rancangan kontrak, dan/atau penetapan uang muka, jaminan uang muka, jaminan pelaksanaan, jaminan pemeliharaan, sertifikat garansi, dan/atau penyesuaian harga, serta audit atas pemenuhan kriteria pengadaan langsung, *e-purchasing*, atau pengadaan khusus.

B. TUJUAN
Untuk memberikan keyakinan bahwa :
1. Perencanaan persiapan pengadaan telah sesuai dengan tujuan, kebijakan, prinsip, dan etika pengadaan barang/jasa.
2. Mengidentifikasi kelemahan/permasalahan yang signifikan dalam proses perencanaan persiapan pengadaan barang/jasa.
3. Memberikan saran perbaikan yang diperlukan.

C. KEGIATAN
Pembangunan Sarana dan Prasarana Kejaksaan Negeri pada Dinas Pekerjaan Umum dan Penataan Ruang Kabupaten Penajam Paser Utara.

No	Tujuan dan Prosedur Audit	Rencana		Realisasi		
		Pelaksana	Waktu	Pelaksana	Waktu	Ref KKA
A.	**Penetapan Spesifikasi Teknis**					
	Tujuan Audit: Untuk meyakinkan bahwa materi Spesifikasi Teknis telah menggambarkan dari awal proses pekerjaan sampai dengan selesai pekerjaan, dan spesifikasi teknis tidak mengarah pada produk/penyedia tertentu.					
	Prosedur Audit:					
1.	Dapatkan dokumen Spesifikasi Teknis yang mendukung kegiatan pengadaan barang/jasa.	Surman Ambonai				LE.PA-A.1
2.	Pelajari dan analisis materi yang tertuang dalam Spesifikasi Teknis.	Surman Ambonai				LE.PA-A.2

Figure 1 The Work Program of Probity Audit at Prepraration Stage
Source: Regional Inspectorate of Penajam Paser Utara Regency

"*Because all the audit work program formats are already stated in the BPKP head regulation Number 3 of 2019"* (LE)

Based on the probity audit work program prepared by the Probity Audit team leader, LE refers to the format contained in the Probity Audit guidelines, there are no additional activities other than the activity format in the Probity Audit guidelines

4.3 Audit of Technical Specifications

Technical specifications are a detailed description of the provisions that are compiled in a complete and written manner which includes technical details or characteristics, technical specifications are also a communication medium that contains the needs that will be realized later into specific information for providers to identify the needs of budget users.

Activities carried out with contracts must be compared and analyzed both in terms of quality (technical specifications) and in terms of quantity, the following are the results of interviews with informants that show the process of comparing technical specifications.

"*Yes, we compare what is compiled with the Permen of Public Works because there are construction regulations, road buildings, bridge buildings and so on, there are these provisions*" (MD)

"*..... the regulations can vary, it can be LKPP, it can also be from the detailed project approval, while there are also specs and types that are also adjusted to those in the DPA, then there are also regional regulations so there are various kinds of*" (LE)

Regional Inspectorate of Penajam Paser Utara District conducted an audit of technical specifications to ensure that the material in the technical specifications had described from the beginning of the work process to the completion of the work looking at several kinds of related regulations.

4.4 Audit of Self Estimate Price

The self-estimated price is the government's or procuring agency's cost estimate made before initiating the auction or bidding process. It's determined through analysis of technical specs, required quantity, and current market conditions. Openness and transparency in the HPS preparation process is also important, including clear and detailed documentation of pricing on the Self Estimate Price.

"*..... compares the Self Estimated Price with a price survey or price reference, so if you make a Self*

Estimated Price there is a price there, for example the price of cement, he must also attach survey evidence, you can come directly to the store, search on the internet, so the point is to compare the Self est with price reference evidence" (LE)
This is in accordance with the Regulation of the Minister of Public Works No. 1 of 2022 which states that in this unit price analysis, data input and assumptions are required based on survey data, experience, and available materials, so that if there is a refutation of the unit price calculated based on the assumptions and factors designed in this calculation, all consequences caused are the responsibility of the planner, but unfortunately what happens in the field is sometimes the items contained in the Self Estimated Price are not all equipped with evidence of price surveys

"*..... should be like that but the reality is that so far not all material items in the Self Estimated Price are equipped with survey evidence so sometimes only a few of them, the rest they refer to the district standard unit price in the regent's regulation in the form of a regent regulation*" (LE)
The interview revealed that the auditee was not cooperative enough to conduct a market price survey. As a result, the cost estimates prepared may not reflect the actual market conditions, which may result in inaccuracies in the determination of the self-estimated price.

In addition, auditee non-compliance in conducting market price surveys can also lead to nontransparency in the procurement process. Auditees rely on the Regency's Own Unit Price (SHS) which is compiled one year before the current year, of course there will be price changes that occur

"*So the preparation of this Self Estimated Price should have traced the market price, sometimes the survey price is different because if you use the Regency's Own Unit Price its surveyed the previous year, while the construction will be carried out in 2025, but we do validation again because the price survey has terms and conditions, so not all price surveys submitted to us are accepted, there are also those that are not correct*" (LE)
The items in the HPS must be strictly in accordance between the items in the HPS and the needs of the project or procurement will ensure that the allocated budget is used efficiently and effectively.

"*Well, we have to be careful to check that's why we also need time in this HPS review because we have to focus so that nothing is missed.... Sometimes we focus only on the nominal or price without looking again whether this item is needed or not, when we get that oh yes this shouldn't be necessary, then later we say in the report that these items are not needed and that they should be corrected to be eliminated*" (MD)

"*..... usually we tell them to divert it to other work, usually we ask, you know how come there is this item ... well then there will be an argument, usually the argument is because there is a remaining budget so we make this for example, but it doesn't connect, well usually we suggest it directly to be made into another work item that is suitable*" (LE)
The addition of inappropriate items will certainly affect the budget to be issued, this is supported by previous research according to (Adinda, 2016) adding work items outside the contract and adding technical and non-technical overhead costs affects the total implementation cost budget. In determining the HPS, it must also pay attention to the volume of work whether the volume of work outlined in the HPS is in accordance with the design drawings attached. The following are the results of interviews with informants regarding the volume of work

"*For example, in the design we see that oh this construction needs this much iron of this size, well we see it in the HPS whether it is appropriate or not, if it is appropriate, it means it is okay if not, we immediately notify you directly, you know it should be like this, the point is we give suggestions for improvement through written and verbal attention letters?*" (MD)
When the volume of work does not match the design drawings, various problems can arise. Firstly, this mismatch can result in a gap between what is expected and what is actually done, resulting in

unsatisfactory or even non-conforming results and secondly this mismatch can also result in unforeseen additional costs due to the extra work that must be done to correct or conform to the actual design drawings. Thus, it is important for the volume of work to match the design drawings so that the project can run smoothly, on schedule, and within the set budget.

4.5 Audit of Draft Contract

A draft contract in the procurement of goods and services is a document that contains provisions governing the relationship between the parties involved in the transaction. It aims to harmonize the expectations and obligations between the employer (or procuring agency) and the suppliers or vendors involved.

The draft contract usually includes a description of the goods or services to be procured, technical specifications, payment terms, delivery or implementation schedules, as well as provisions on contract termination and dispute resolution. This draft contract aims to provide clarity and legal protection for both parties, as well as clear guidelines in carrying out the procurement process
"*Now for the draft contract, there are criteria, for example in the LKPP regulations, the range is regulated, for example, 100 to 200 million has its own, then 200 to how much there is more, now there are guidelines, indeed it is just an example and not standardized either, but in general, we usually follow it there, even if there are additional articles or paragraphs, we ask if it is logical and reasonable, we consider it appropriate. But on average, for the draft contract, PPK refers to the guidelines, LKPP Regulation Number 12 of 2021*" (MD)

According to LKPP Regulation Number 12 of 2021 , it explains that the review of the draft contract pays attention to the agreement text, general and specific terms of the contract, down payment provisions, procurement guarantee provisions, warranty certificate provisions, certificate provisions or imported goods procurement documents and price adjustment provisions.

The importance of the draft contract also lies in its function as a tool to manage risks, avoid misunderstandings, and minimize potential conflicts or disputes during the contract implementation process. Thus, a good and comprehensive contract design can be a strong foundation for carrying out the procurement of goods and services efficiently, transparently, and in accordance with applicable regulations.

4.6 Audit of Advance Payment Determination

In determining the advance payment, it is also necessary to pay attention to the balance between providing incentives to suppliers or vendors and protecting the interests of the employer. Therefore, the amount of the advance is usually set carefully, based on considerations such as project risk, contract value, and applicable policies or regulations. With the right determination of advances, it is expected to increase trust and collaboration between the employer and the supplier or vendor, and ensure the smooth implementation of the overall procurement of goods and services

"*So not all of the things mentioned must be used as collateral, yes, according to the provisions, for example for work under 200 million, well it does not use advance guarantees so according to the value of the contract. The amount refers to the LKPP regulation*" (MD)

"..... down payment guarantee we juxtapose it with LKPP regulations, for example, a maximum down payment guarantee of 30% in the regulation is mentioned like that, well we see that he wants to provide a guarantee of how much the down payment should be 30% too because the regulation

already regulates that a maximum of 30%" (LE)

LKPP (Government Procurement Policy Agency) Regulation Number 12 of 2021 regulates the amount of down payment for Micro, Small and Cooperative Enterprises. The contract value of at least IDR50,000,000.00 up to a maximum of IDR200,000,000 is given a down payment of at least 50%, the contract value of at least IDR200,000,000.00 up to a maximum of IDR2,500,000,000.00 can be given a down payment of at least 30%, and the contract value of at least IDR2,500,000,000.00 up to a maximum of IDR15,000,000,000.00 is also given a maximum down payment of 30%.

4.7 Complexity of Probity Audit of Preparation Stage of Procurement of Goods and Service

4.7.1 Self estimated price does not attach survey evidence

Surveys make it possible to obtain actual data related to the price of goods or services to be acquired, both from local and national markets. As such, the resulting cost estimate becomes more detailed and precise, reducing the risk of misjudgment or over-budgeting. In addition, survey evidence also provides transparency in the procurement process. By including survey evidence, interested parties can clearly see the basis used in determining the Self Estimated Price, thus avoiding allegations of fraud or opacity. Furthermore, survey evidence makes it possible to compare prices from several sources or providers of goods or services.

"*So the preparation of this Self Estimated Price should have traced the market price, sometimes the survey price is different because if you use the Perbub he surveyed the previous year, while the construction will be carried out in 2025, but we do validation again because the price survey has terms and conditions, so not all price surveys submitted to us are accepted, there are also those that are not correct*" (LE)

"*..... But the SKPD (Work Agency Unit) is sometimes lazy and refers to the Perbub, so that's where our role is to conduct audits to adjust the real price and provide advice to the relevant SKPD*" (LE)
The interviews revealed that it is important to find solutions that enable better cooperation between the parties involved. Thus, supplementing HPS with survey evidence is not only a necessity, but also a smart move to ensure transparency, accuracy, and efficiency in the procurement process.

4.7.2 Work Density and Limited Human Resources

In the execution of the probity audit for the preparatory stage of procurement of goods and services, workload density and limitations in human resources can pose significant challenges that need to be overcome.

The preparation process for the probity audit involves the collection and analysis of documents, evaluation of procurement procedures, as well as the identification of potential risks related to integrity and compliance. However, the limited number of personnel available often hampers the smoothness and efficiency of the process. Workload density due to other assigned tasks can result in delays in carrying out the probity audit. Meanwhile, the lack of human resources may also affect the overall quality of the audit because the audit team may not have the skills or experience required to identify and assess all aspects relevant to the probity audit.

"*You've seen for yourself that we were overworked at the time, so we were short of people. Friends overlapped work and we lacked manpower, we probably needed 40 to 60 people while we only had*

25" (MD)

Therefore, in addressing these challenges, efforts are needed to optimize the allocation of available human resources. Despite the constraints related to workload density and limited human resources, the probity audit can still be conducted effectively and produce informative and relevant reports for the transparent and accountable procurement process of goods and services.

4.8 The Leakage of Self Estimated Price Information

The leakage of Self-Estimated Price (HPS) information is a serious problem in the context of procurement of goods and services, impacting the integrity and fairness of the bidding process. Leakage of HPS information prior to the bidding process can provide unfair advantages to certain parties, such as suppliers of goods or services who have access to this information. This can lead to practices of corruption, collusion, and nepotism (KKN) that harm the state and undermine the principles of transparency and healthy competition in public procurement.

"*Well it could be a leak from the auction agency because there is already a total fixed price that is ready to be auctioned, the possibility of leaking is from the auction agency or from the SKPD maybe, if the Inspectorate is not because we are professionals in the form of reviewing and providing advice only*" (MD)

The involvement of various parties in the procurement process creates the potential risk of information leakage, whether intentional or unintentional. This can occur if members of the evaluation team or decision-makers in the government agencies have access to the HPS information and then disclose it to certain parties outside the bidding process, such as competing suppliers of goods or services. Additionally, information leaks can also occur through vulnerabilities in data management systems or through informal interactions between involved parties

4.9 The Conflict of Interest Between Superiors and Auditee

The conflict of interest between superiors and auditees has the potential to influence audit results unfairly or non-objectively. Conflict of interest can occur when superiors have personal relationships or interests with auditees, such as business relationships or personal connections that may affect their independence in evaluating or concluding audit findings

"*Well that's a bit difficult because it's in the interest of superiors, but in principle our level is audited after that we have no obligation and influence upwards, yes, the important thing is that colleagues at my level and below me I control, but if it's above outside of our authority and we are hands off about it. For example, there are findings that he wants to eliminate, well, we also cannot be reckless to agree to what he wants, of course we will have arguments, it will have an impact on us too, for example, we are often also non-job-in in the sense that we are not given assignments because we are not considered royal with the leader*" (MD)

In the interview results, it was found that there had been a conflict of interest between superiors and auditees, which the auditor attempted to communicate. It appears that there were consequences for this action, as the auditor was not assigned tasks due to being perceived as not compliant with the leadership.

5. DISCUSSION

This research has presented data on the complexity in implementing Probity Audit in the preparation stage for goods and services. The researcher first discussed the findings obtained in this

study. The research results revealed several findings that were the focus in implementing Probity Audit in the preparation stage for procurement of goods and services at the Regional Inspectorate of Penajam Paser Utara Regency. Firstly, regarding the formation of the team and the preparation of the work program, it is important to ensure that technical specifications have been prepared appropriately. There is a significant need to complete the Preparation of Self Estimated Price (HPS), a good contract design serves as the foundation for conducting procurement of goods and services in accordance with applicable regulations, and the importance of advance payments as a form of guarantee to fulfill obligations in accordance with contract provisions.

Inaccuracies in price surveys are serious concern, (Rizki et al., 2023) determining the Self Estimated Price, based on past experiences has its weakness when market conditions change, such as inflations factors, fluctuations in raw material prices, and changes in economic policies that can significantly affest prices. Therefore, it is important to update information and conduct current market analysis when determining the HPS. In addition to relying on past experiences, it is necessary to consider current factors that may affect prices, including current market conditions and recent price trends.

This situation can be addressed by improving cooperation among stakeholders involved in price surveys, such as relevant agencies, survey institutions, and users, to prevent undesirable outcomes. In (Rachmania, 2020) during the procurement committee's survey, instances were found where suppliers offered collusion in pricing goods or services to win bids, with an agreement that the procurement committee would receive a certain amount of money for their actions. This indicates collaborative actions that benefit both parties involved; therefore, good cooperation with the team involved in price surveys is needed.

Second, the workload and limited human resources pose significant challenges to the smooth implementation of probity audits. Imbalanced workload compared to the available personnel results in delays in audit execution and potential influence on the overall audit quality. In (Dewi, 2022) due to the excessive number of activities within a limited timeframe conducted with very short audit periods as per the audit implementation orders and the use of information technology becomes a way to address these shortcomings. This is perceived to significantly facilitate internal audit personnel by saving time and effort, as they no longer need to conduct on-site audit testing but can instead monitor ongoing activities to ensure compliance with norms. Additionally, careful planning and setting appropriate priorities in handling tasks are essential to avoid unnecessary delays and ensure the smooth execution of audits while maintaining overall audit quality.

Third, information leakage regarding the HPS is a crucial issue in maintaining the integrity of the bidding process, with potential sources of leaks originating from various parties involved in procurement. As discuss in (Darmawan, 2022) the confidential nature of HPS details and the independence of each business entity in submitting bids reinforce the argument that the patterned unit prices indicate the leakage of HPS details or communication between business entities before bidding. Concrete steps are needed, such as strengthening information security, providing training for all relevant parties, conducting regular internal audits, utilizing information security technology, enforcing strict sanctions, and fostering a transparent and accountable organizational culture.

Finally, the existence of conflicts of interest between superiors and auditees can affect the objectivity of audit results. Control and independence in managing interactions between superiors and auditees are key to ensuring the integrity and fairness of the audit process. By identifying and addressing these findings, the Regional Inspectorate of Penajam Paser Utara District can enhance the effectiveness and efficiency of the procurement process for goods and services, making it transparent and accountable.

To address conflicts of interest between superiors and auditees that may affect the objectivity of audit results, it is important to maintain control and independence in managing their interactions. This can be achieved by clarifying policies and procedures related to conflict of interest management, and ensuring that superiors are not directly involved in the audit process or decision-making related to audit findings.

Furthermore, strengthening independent internal and external oversight mechanisms is necessary to ensure the integrity and fairness of the audit process. As discussed in the research by (Sanusi et al., 2020) audit quality encompasses all possibilities where auditors can identify violations during audits and report them to the auditee, guided by relevant auditing standards and supervisory codes of ethics. In facing fraud, an auditor must be prepared to report such findings, even if they involve employees or even superiors, to ensure the quality of the audit obtained.

6. CONCLUSION

Based on the findings of the conducted research, the following conclusions can be drawn, which address the problem statements. This research presents findings related to the complexity of implementing Probity Audit in the preparatory stage of procurement of goods and services. The researcher identified the importance of complementing the Self Estimated Price with survey evidence to ensure accurate cost estimates and transparency in the procurement process. Discrepancies or inaccuracies in price surveys are a serious concern but can be addressed by enhancing collaboration among involved parties, ensuring regular and methodologically sound surveys, and improving communication and coordination among relevant stakeholders. Work overload and human resource limitations are major challenges also experienced by probity auditors at the Regional Inspectorate of Penajam Paser Utara Regency. Human resource evaluation and the use of technology can reduce manual workload and enhance audit efficiency. Information leakage of the Estimated Price List (HPS) is a crucial issue affecting auction integrity. Measures such as strengthening information security, training for all involved parties, internal inspections, and the use of security technology need to be implemented.

Complementing the HPS with accurate survey evidence, evaluating the allocation of human resources, strengthening information security, and maintaining independence in interactions between superiors and auditees. Thus, this research will provide practical guidance for the Regional Inspectorate to enhance transparency and integrity in procurement of goods and services.
The limitations of this study include a lack of in-depth understanding of the perspectives and experiences of auditees in the probity audit process. Although the research has explored various aspects related to the implementation of probity audit from the perspective of audit organizers, it does not sufficiently provide a comprehensive picture of how auditees experience and respond to the audit process. This can result in a limited understanding of the dynamics of interaction between auditees and auditors, as well as the potential challenges or difficulties faced by auditees during the audit process.

The findings of this research have implications for policies that can be implemented by the Regional Inspectorate of Penajam Paser Utara District. The identification of various challenges faced by the Probity Audit team can influence the outcomes of the implementation of Probity Audit in the Preparation Stage of Procurement of Goods and Services. The research results indicate the complexity experienced by the probity audit team in conducting audits in the preparation stage of procurement of goods and services.

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INTERNATIONAL ENTRY MODE SELECTION OF SMALL AND MEDIUM-SIZED ENTERPRISES - A SYSTEMATIC LITERATURE REVIEW

Elif Baykal, Bahar Divrik*

Istanbul Medipol University, Turkiye

**Corresponding author: bahar.divrik@medipol.edu.tr*

Abstract

This paper focuses on the systematic literature of international entry mode selection of small medium enterprises (SMEs). Entry mode selection is one of the most strategic aspects of international business. The selection of international market entry strategy is an institutional decision that comprises the choice of target market, entry mode, marketing plan and control system. The right entry mode decision enables companies all assets to enter the targeted foreign markets. The entry modes can be grouped in three categories; export based methods, non-equity methods (contractual entry) and equity methods (investment entry).

As a research method, a systematic literature review for articles covering entry mode selection of SMEs in international business research domains covering the period from 2000 to the present.

1.INTRODUCTION

In international business, entry mode selection has been considered as one of the most strategic decisions (Wind and Perlmutter, 1977; Anderson and Gatignon, 1986; Hill et al., 1990; Quer et al., 2007; Brouthers and Hennart, 2007; Divrik 2023). Sharma and Erramilli (2004, p. 2) define an entry mode as ‘‘a structural agreement that allows a firm to implement its product market strategy in a host country either by carrying out only the marketing operations (i.e., via export modes), or both production and marketing operations there by itself or in partnership with others (contractual modes, joint ventures, wholly owned operations)’’.

The choosing of the entry mode is mainly done according to the benefits, price and needed resources (Sharma and Erramilli 2004; Blomstermo et al. 2006; Eriksson et al. 1997). The key aspects that influence the decision of entry mode choice can be grouped into two being external and internal. The factors that have effects on the entry mode decisions are internal factors while factors that are not controlled by the company during the entry mode to the international markets are external (Zekiri and Angelova, 2011).

According to Root (1998) “how external factors influence selecting entry mode to market depends on internal factors”. Research on choosing the right entry mode is crucial as it has meaningful and important implications for general performance of the organization (Brouthers, 2002). Foreign market entry mode choice determines the firm’s degree of resource commitment to the foreign market (Hill, Hwang, & Kim, 1990), the risks the firm will bear in the host country (Hill et al., 1990; Hill & Kim, 1988), and the level of control a firm can exercise over its foreign activities (Anderson & Gatignon, 1986). Changing an initially chosen entry mode can be costly and time-consuming (Kumar & Subramaniam, 1997), so the wrong entry mode can negatively impact the firm’s performance (Lu & Beamish, 2001; Nakos & Brouthers, 2002).

After foreign direct investment and internationalization, international entry mode decision is the third researched area in the international business literature and main empirical studies in this area are; Andersen's (1997) review about theories and frameworks; Sarkar and Cavusgil's (1996) article analysis the trends in the entry modes; Zhao, Luo, and Suh's (2004) article about selection of owner based entry mode and analysis of transaction cost economics; Harzing's (2002) research focusing on national culture in entry mode selection; Tihanyi, Griffith, and Russell's (2005) research significance of cultural distance on selection of entry mode, diversification of internationalization and performance of MNEs (Canabal and White, 2008) (Divrik, 2023).

As SMEs have different characteristics compared to MNEs, those characteristics have an impact on how SMEs select their entry mode to the international markets in terms of commitment and how they cope with the opportunities and risks in the foreign market. In addition, these different characteristics of SMEs have also an effect on the control mechanisms that SMEs use in the international markets. The limited financial and human resources are the most important one amongst the different characteristics of SMEs (Brouthers & Nakos, 2004; Nakos & Brouthers, 2002). The limited resources put a constraint on SMEs' selection of the international entry modes which requires high commitment such as acquisitions (Ripolle´ s, et al., 2012). Extant research clearly states that SMEs are highly sensitive to external factors (Cheng and Yu, 2008; Erramilli and D'Souza, 1995) which have high importance for SMEs selection of the international entry modes which helps them to deal with the threats in the targeted foreign markets. Being owned either by an owner or a family is another different characteristic in managerial structure compared to MNEs (Cheng, 2008; Pinho, 2007).

The difference in ownership structure causes a selection of different entry modes as owner or family owned organizations have less desire to be involved in joint ventures (Ferna´ndez and Nieto, 2006). Driscoll (1995) classified international entry most into three categories which are; exporting, non-equity (contractual) and equity (investment). The classification of Driscoll (1995) is mainly based on the extent of the investment and control. Exporting and contractual entry modes require less investment and control compared to investment type of entry modes (Pan and Tse, 2000). In international business, selection of the international entry modes is highly related to the commitment of the resources of the company, exposure to the threats in the target market, level of the dependence and targeted profit return. In order to establish a profitable internationalization; factors of organization, external environment and moderators should be analyzed deeply and the most suitable one should be applied as a tool to enter into the international markets. Knowledge accumulated and strategic managerial skills are the most important company factors. The most important factors related to the environment are demand, political, economic and cultural. The main moderators are governmental and corporate policies and the dimension of the organizations (Wu and Zhao, 2007).

The scope and analytical approach of the review

The study is based on a technique to search online database (Chen et al., 2016) Google Scholar using keywords derived from the literature of international entry modes of SMEs such as "SMEs entry mode", "internationalization of SMEs", "entry modes of internationalization", "international entry modes" and "entry mode choice". Particularly, the articles which fulfill the criteria of SMEs international entry mode should be the main objective or important part of the study. Article selection process is done through PRISMA. Therefore, the studies which are related to multinational enterprises (MNEs) are excluded from the research. In addition, the studies which are not conducted in the international business discipline are excluded. Lastly, the studies which are not published in English are not included. In order to make the research comprehensive, recognised journals in the areas of international business, international marketing research in addition to the

larger realm of management have been looked into. The time period of the research is between 2020 and 2024. The study involves a systematic literature review that has a state-of-the-art understanding in the underlying research stream, points out research gaps, and offers upcoming research avenues (Paul and Criado, 2020).

There are 43 researches conducted in the area of international entry mode between the years 2020 and 2024. However, 31 (72 percent) of those researches use systematic and literature review, 4 (10 percent) of them use qualitative, 10 (16 percent) use quantitative and just 1 (2 percent) use mixed method.

The literature on SMEs international entry mode is reviewed systematically by the TCCM framework (Paul and Rosado-Serrano, 2019). The framework of TCCM is generally used in many review studies of articles (e.g. Billore and Anisimova, 2021; De Keyser and Kunz, 2022; Hassan et al., 2022; Roy Bhattacharjee et al., 2022; Paul and Rosado-Serrano, 2019; Cheah et al., 2022). TCCM framework analyzes the articles according to Theories (T), Contexts (C), Characteristics (C), and Methodology (M) (Paul and Rosado-Serrano, 2019; Chen et al., 2021). The framework of TCCM targets to overcome the weaknesses of the classical systematic reviews by enlightening the empirical and theoretical aspects of a research domain (Chen et al., 2021). Paul and Rosado-Serrano (2019) mentions this framework as follows; "The framework helps in answering *What*, *Where*, and *How* questions in a research domain, i.e., *What* do we know about the research topic (i.e. Theories and Characteristics), *Where* is the research happening (i.e. Context) and *How* is the research conducted (i.e. Methodology)".

Theory

The literature international entry mode choice of SMEs into foreign markets draws on various theoretical frameworks and lenses. Hunt (2002) makes the definition of theory as follows; " the set of statements that are empirically testable and systematically related". Hence, theories are the ground for linking the appropriate constructs related to each other (Chen et al., 2021). The below table 1 shows the theories used in researches about international entry mode of SMEs.

Table 1: Theory of the research

Theory	# of articles	Researcher & Year
Path Dependency	1	Menzies et al. (2020)
Knowledge Based View	1	Amankwah-Amoah et al. (2022)
Resource Based View	1	Cassia and Mango. (2021)
Uppsala & Born Global Model	2	She et al. (2020), Younis et al. (2022)
Entrepreneurial-oriented Approach	1	Pan et al. (2022)
Institutional Perspective	1	Wu and Deng. (2020)
Growth Hacking Approach	1	Maki and Toivola (2021).
No theory	2	Younis and Elbanna (2022), Arghashi and Okumus (2020)

Path Dependency Theory

Since the 1980s, path dependency theory which is taking its roots from natural sciences have become popular. David (1975) is the first researcher that integrated the "path dependence" to economics and North (1993) managed to explain the evolution of the economical system with "path dependence" theory (Douglas, 2008). Path dependency can be explained as a situation where the past exercises and achievements affect and demarcate the future of the organization (Morgan et al., 1996). If the path dependency in the system persists, the employees are surrounded by the existing bodies which manage the existing functions (Wilsford, 1994). Path dependency develops by network effect and it is described by Morgan et al., 1996, p 151 as follows "... the benefit of consuming a good or adopting a technology varies directly with the number of others who consume the good or adopt the technology".

Knowledge Based View

In today's business world, an organization's capability to acquire knowledge is the most important asset for the success of the organization (Li et al., 2010). Acquiring the knowledge and organizational learning play an important role in the process of internationalization of the SMEs (Puthusserry et al., 2020). The Knowledge based view of an organization (Grant, 1996) states that aggregation of knowledge is the core for obtaining a success in the new international markets (Sheng, 2019; Puthusserry et al., 2020). Thus, the aggregation of the knowledge can integrate the knowledge accumulated and entrenched in employees and organizations (Huang and Li, 2012). The academic literature shows that, foreign market knowledge is aroused from aggressive search for entrepreneurial challenges in the international markets (Musteen et al., 2014; Zhou, 2007). The innovativeness of an organization is mainly improved by accumulation and integration of new and actual knowledge (Jim´enez-Jim´enez and Sanz-Valle, 2011). Organizations are the repository of the knowledge that acts as a base for continuous superior performance (Conner and Prahalad, 1996). By the accumulation of knowledge through organizational learning, the companies can lower the risks of strategic mistakes when they are entering the international markets. Strategic mistakes may arise from lack of knowledge about the markets and market positioning (Ricks, 2009), in addition to unfamiliarity with the new international markets. By gaining foreign market knowledge through the partnerships and networks, companies can easily overcome the problems associated with newness in the international markets such as disadvantages of foreignness because of being non-native and lack of legitimacy (Amankwah-Amoah and Debrah, 2017; Musteen et al., 2014). Knowledge is also an important asset that enables organizations to enter emerging economies to exploit opportunities in those markets (Knight and Liesch, 2002; Puthusserry et al., 2020). This knowledge is especially important when the emerging markets are defined by a poor legal system (Acquaah, 2007) which causes a change in a company's ability to accumulate knowledge for international markets.

Uppsala Model and Born Global Model

Wright and Ricks (1994) defines Internationalization as "a firm-level activity that crosses national borders". Uppsala model is one of the most used internationalization entry mode strategies for SMEs as it can be seen in the literature (Johanson and Vahlne 2009). The main characteristic of the Uppsala model is that it assumes that the entry mode of companies occurs slowly, as a gradual and incremental process. On the other hand, Knight and Cavusgil (2004) stated that some companies may be engaged in the internationalization activities beginning from their settlement. This international activity which is in contrast to the Uppsala model is often named as "Born Global" or but sometimes called as "international new ventures," "high-tech start-ups," and/or "global start-ups" (Knight and Cavusgil 2004; Madsen and Servais 1997). Academic research shows that born global companies are more confident, positive and innovative in the process of internationalization compared to the other companies (Knight and Liesch 2016; Madsen and Servais 1997). Mainly there is a growing interest in literature about the main drivers of born global model internationalization (Madsen and Servais 1997), the features of BGs, the degree of "born

globalness" (Kuivalainen, Sundqvist, and Servais 2007), and the efficiency of the model (Lejko and Bojnec 2011).

Resource Based View

The resource-based view is one of the most used views that is used to explain the international entry mode selection and Hitt and Hoskisson (1997) states that ''international diversification seeks to use internal resources and capabilities to exploit market imperfections existing across global regions and countries". Resource-based view is mainly based on the assumption that a company's engagement in international business is mainly based on its resources and capabilities (Peng, 2001). The abundance of the resources will enable the company to use the international entry modes which require high commitment. The resource based view is based on a very simple aspect about the relation of sources to a company's internationalization strategy (Barney, 2001). The international knowledge and experience of a company which are also its resources affect its internationalization involvement (Casillas and Moreno-Men´endez, 2014).

Institutional Theory

According to institutional theory, factors of a country have an effect on the decision of the international entry mode choice choices. North (1990) states that, "... The firm's behaviour is shaped by the social, political, and economic systems surrounding it. Institutions are described as "rules of the game in a society" consisting of informal constraints and formal rules…". If there is an intense level of uncertainty occurring from weak institutional systems, it is much better to be involved in international entry modes which require less commitment such as joint ventures (Del Bosco and Bettinelli, 2020).

Context

Table 2 and Table 3 summarize our findings regarding the contexts investigated in the SMEs' entry mode decisions. In Table 2 below, the researcher, year and industry of the research is listed. From Table 2, it can be clearly seen that the manufacturing industry is studied in 3 studies out of 10.

Table 2: Industry of the research

Industry	Researcher & Year
Wholesaling and Retailing, Manufacturing, Technical Services, Biotechnology, Business and Property Services, Building and Construction, Manufacturing and Agriculture.	Menzies et al. (2020)
General SMEs	Amankwah-Amoah et al. (2022)
Food Industry	Cassia and Mango. (2021)
High-tech industry	She et al. (2020)
Manufacturing industry	Younis et al. (2022)
Finance industry	Pan et al. (2022)
Textiles & Clothing, Chemicals industry	Wu and Deng. (2020)
E-commerce industry	Maki and Toivola (2021)

Manufacturing industry	Younis and Elbanna (2022)
Beverage Industry	Arghashi and Okumus (2020)

Table 3 lists the countries where the research is conducted. Our analysis clearly shows that most of the studies are conducted in China with 25 percent. The other countries that the research conducted are; Turkey, Ghana, Italy, Gulf region, Finland and Egypt & Qatar.

Table 3: Country of the research

Country	Researcher & Year
China	Menzies et al. (2020)
Ghana	Amankwah-Amoah et al. (2022)
Italy	Cassia and Mango. (2021)
China	She et al. (2020)
Gulf Region	Younis et al. (2022)
China	Pan et al. (2022)
China	Wu and Deng. (2020)
Finland	Maki and Toivola (2021)
Egypt & Qatar	Younis and Elbanna (2022)
Turkey	Arghashi and Okumus (2020)

Characteristics

In table 4 which is below shows the area of the research in our literature review. When we examine the characteristics of the research analyzed, the main focus is on e-commerce and born globals. It should be noted that there are a very limited number of studies about international entry mode selection of SMEs.

Table 4: Research area

Purpose	Researcher & Year
Relation between SME social capital and entry mode choice	Menzies et al. (2020)
The mediating role of equity entry mode choice in the relationship between foreign market knowledge and international performance of SMEs.	Amankwah-Amoah et al. (2022)
Relationship between a SMEs information technology, international marketing and export operations capabilities and	Cassia and Mango. (2021)

its cross-border e-commerce strategic and financial performance.	
Relationship between the use of the born global model and SMEs performance	She et al. (2020)
Effect of religion on SMEs internationalization	Younis et al. (2022)
Effect of cross-border e-commerce impacts SME innovation performance	Pan et al. (2022)
Factors affecting SMEs selecting a host country with institutions different from their home country	Wu and Deng. (2020)
Contribution of knowledge about the expansion of eCommerce operations by SMEs to global markets.	Maki and Toivola (2021)
Effect of SMEs' decision-making evolves into a rational mode as SMEs progress through successive international market entries.	Younis and Elbanna (2022)
Investigate SMEs' internationalization process in emerging Islamic markets and to introduce the factors affecting SMEs' entry modes into a foreign country with emphasis on the role of country-of-origin image (COI) in these processes.	Arghashi and Okumus (2020)

3.METHODOLOGY

In methodology section, the methodological aspects of the articles studied in the area of international entry mode of SMEs are analyzed in terms of research approach undertaken; mixed, qualitative or quantitative in Table 5 below:

Table 5: Research Approach

Research Approach	Researcher & Year
Qualitative	Menzies et al. (2020)
Quantitative	Amankwah-Amoah et al. (2022)
Quantitative	Cassia and Mango. (2021)
Quantitative	She et al. (2020)
Qualitative	Younis et al. (2022)
Quantitative	Pan et al. (2022)
Quantitative	Wu and Deng. (2020)
Mixed	Maki and Toivola (2021)

Quantitative	Younis and Elbanna (2022)
Qualitative	Arghashi and Okumus (2020)

4.CONCLUSION

Our systematic literature review covers the time period between 2020 and 2024. The framework of TCCM is used in our research. TCCM framework analyzes the articles according to Theories (T), Contexts (C), Characteristics (C), and Methodology (M) (Paul and Rosado-Serrano, 2019; Chen et al., 2021). It is very clear that there are a very limited number of articles published about the international entry mode of SMEs. The articles are mainly performed in manufacturing industries in developing countries such as China, Turkey. More research should be performed which is analyzing the e-commerce, born global and service SMEs in emerging markets and their strategies when they are targeting to enter to the developed markets.

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ANALYZING CORPORATE FINANCIAL PERFORMANCE USING RETURN ON ASSETS (ROA), RETURN ON EQUITY (ROE), AND ECONOMIC VALUE ADDED (EVA)

Yayuk Nurjanah[1*], Sinta Listari, Disva Margaretha Prasetyo, Zahra Elfira Kusuma

Institut Bisnis dan Informatika Kesatuan, Indonesia

[*]*Corresponding author: yayuknurjanah@ibik.ac.id*

Abstract

A company's financial performance is crucial for stakeholders, including the public who often invest in publicly traded companies, to understand the results and progress of the company. Many people are attracted to well-known companies with a positive image. They often focus solely on profit or loss without considering other indicators such as ROA, ROE, and EVA in assessing financial performance. This study aims to evaluate the financial performance of PT Unilever Indonesia Tbk., PT Gudang Garam Tbk., and PT Bank Central Asia Tbk. over 2019-2021 using ROA, ROE, and EVA analysis. The research method employed is descriptive qualitative with secondary data obtained from the financial reports published on the official website of the Indonesia Stock Exchange (IDX). The results showed that PT Unilever experienced a decline in financial performance during the period, particularly affected by the COVID-19 pandemic without full recovery. PT Gudang Garam also saw a performance decline, although it sought to improve in 2021 by reducing capital costs. Meanwhile, PT Bank Central Asia recorded a positive financial performance with an increase in ROA, ROE, and EVA in 2021 after a slight setback in 2020, indicating a stable financial condition with an increase in total equity and assets year over year. The financial performance of these three companies demonstrates significant variation according to the indicators applied, underscoring the importance of using a range of parameters in evaluating a company's financial performance.

Keywords: *Return on Assets (ROA), Return on Equity (ROE), Economic Value Added (EVA)*

1. INTRODUCTION

The performance of a company is generally the company's ability to use existing resources to generate revenue and profit. Company performance can be measured through financial and non-financial information. Usually, most financial and accounting managers of companies measure their profit performance using the financial information they have by calculating financial ratios over a certain period, one of which is the profitability ratio.

The general public will usually see whether the company is a developing company or not only from the company image tucked into each company name mentioned, especially for large public companies listed on the Indonesia Stock Exchange (IDX) and also its financial statements. Currently, a lot of the general public are buying shares in public companies listed on the IDX because of the ease of access with the online investment application that can be accessed on mobile phones. Coupled with this phenomenon, the company's financial statements are the centre of attention for many people, especially novice investors. However, most people will usually focus directly on the company's income statement to assess the company's performance without paying

attention to other components when buying shares. One of the companies whose shares are most attractive to the public is PT Unilever Indonesia Tbk (with the issuer code UNVR). The image of the UNVR company is very well known among Indonesians, which also makes the author interested in knowing how the UNVR company is performing. However, the author saw news reported through CNBC Indonesia on 14 February 2022 that UNVR experienced a 19.6% decline in profits from its profit of IDR 7.6 trillion in 2020 to

IDR 5.76 trillion in 2021. UNVR's share price also decreased as a result of its declining financial performance during 2021. This shows that the company's financial performance as reflected in the company's financial statements greatly affects the public's view on the company's performance.

Apart from profit or loss, other financial components can also be a reference for people to invest their capital. One way to analyse these financial components is by using profitability ratio analysis in which there is Return on Asset (ROA) to determine the company's ability to manage its assets to generate profits and Return on Equity (ROE) to determine the company's ability to manage its equity to generate profits. In addition, another way that can be done is to analyse the company's value added, one of which is Economic Value Added (EVA) to find out whether the company is able to generate added value from its profits after deducting costs to support company activities. All three are interesting to study simultaneously because all three use the company's net profit as a reference for the performance of other company components.

The scope of this research is PT Unilever Indonesia Tbk (UNVR), PT Gudang Garam Tbk (with the issuer code GGRM), and PT Bank Central Asia Tbk (with the issuer code BBCA). PT Unilever Indonesia Tbk for several years until 2019 occupied the position of the most expensive stock on the IDX, which reached a price of IDR 45,000 per share, but in early 2020 PT Unilever Indonesia Tbk conducted a stock split with a ratio of 1: 5 which made its share price fall. After PT Unilever Indonesia Tbk conducted a stock split which made its share price decrease, PT GGRM replaced PT UNVR as the company with the most expensive shares on the IDX until its share price reached IDR 41,275 per share on 11 January 2021. PT GGRM is also one of the largest cigarette manufacturing companies in Indonesia. With its position replacing PT UNVR as the company with the highest share price on the IDX in early 2021. Below PT GGRM, among manufacturing companies, there is PT BBCA which occupies the second position which is a type of banking company. Not much different from PT UNVR, PT BBCA itself is also widely known among Indonesians with its good performance, satisfying services, and is one of the largest private banks in Indonesia. The author also chose the performance period in 2019, 2020, and 2021 with the intention of knowing how the financial performance of these companies was in the years before, during, and during the recovery of the COVID-19 outbreak in Indonesia in early 2020.

Several studies describe several methods and approaches used in assessing the company's financial performance. One method that is often used is Economic Value Added (EVA), which is a measure of efficiency in generating economic value added based on the resources used. EVA assesses how far operating profit after tax exceeds the cost of capital employed. In simple terms, if EVA is positive, the company is considered successful in creating added value for the investment made, while negative EVA indicates a failure to create more value than the capital invested (Prabowo, 2021; Mustoffa, 2014).

Other studies focus on analysing financial statements using financial ratios that include profitability, liquidity, and solvency ratios. These ratios help in assessing a company's ability to generate profits, fulfil short-term obligations, and manage its debts. Each ratio provides a different perspective on the financial health of the company, and when combined, they provide a comprehensive picture of the company's financial performance. This analysis is not only useful for internal stakeholders such as management to make strategic decisions, but also for investors who

want a deep understanding of the company's financial position before making investment decisions (Silvia, 2020; Midfi et al., 2021).

2.LITERATURE REVIEW

Performance is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given (Mangkunegara, 2016). Company performance is the result obtained by the organisation (company) from its activities both profit-oriented and non-profitoriented (Fahmi, 2014). It can be concluded that company performance can be assessed in two ways, namely how the company generates profits and how the company's management manages non-profit aspects such as the environment, resources, and company image. To find out the results of the company's activities, usually the company will conduct a company performance assessment. This company performance assessment aims to measure and assess how effective and efficient the company is in managing its activities to generate profits and to improve the non-profit aspects of the company. Company performance assessment is generally carried out within a certain period and is usually assessed within one accounting period. Therefore, to assess profit performance or what is often referred to as financial performance, the company will analyse the company's financial information presented in its financial statements, while to assess non-profit aspects the company will usually conduct an assessment through an evaluation of whether the governance applied in the company is running well.

The financial aspect is important in a company because the company's finances can be the driving force of the company to carry out its activities. With healthy finances, the company can continue to carry out its business activities and develop it. The company's financial information will be presented in the form of financial statements. Financial statements are the principal means through which financial information is communicated to those outside an enterprise. These statements provide the company's history quantified in money terms (Kieso, 2017). Simply put, financial statements are a record of all financial transactions that occur in the company, the results of which will be presented to parties who have an interest in knowing this information.

Company financial reports are generally prepared by the company's internal accountants. Seeing the importance of financial reports for companies, company accounting as a party who holds data on the company's financial information not only prepares financial reports, but must also be able to analyse these financial reports to find out how capable the company is of managing its finances effectively and efficiently in generating profits. Financial statement analysis is the application of financial statement analysis tools and techniques to make estimates and conclusions that are useful in business activities (Wild, John J. and Subramanyam K.R., 2014). From the analysis of financial statements, the company can find out whether the company's performance has improved or not.

3.METHODOLOGY

3.1 Type of Research and Source of Research Data

This type of research is descriptive qualitative research with secondary data downloaded from the official website of the Indonesia Stock Exchange (IDX) in

3.2 Data Analysis Technique

The data that has been collected is processed and analysed with the following formulas and calculations:

Return on Asset (ROA)

$$\boldsymbol{Return\ On\ Assets\ (ROA) = \frac{Earning\ After\ Tax}{Total\ Assets} \times 100\%}$$

Suppose the ROA value in each period increases. This can indicate that the company can manage its assets to generate profits and that the company's performance is improving or increasing.

Return on Equity (ROE)

$$\boldsymbol{Return\ On\ Equity\ (ROE) = \frac{Earning\ After\ Tax}{Total\ Equity} \times 100\%}$$

Like ROA, if the ROE value in each period shows an increase, then this can indicate that the company can manage its equity to generate profits and also indicates that the company's performance is getting better or increasing.

Economic Value Added (EVA)

$Economic\ Value\ Added$ **(EVA) = NOPAT** $- Capital\ Charge$

Description:
NOPAT = *Net Operating Profit After Tax*
Capital Charge = Invested Capital × Weighted Average Cost of Capital

NOPAT can be calculated in the following way: NOPAT = Earning After Tax

Invested Capital can be calculated in the following way:

$Invested\ Capital$ = Total Liabilities + Total Equity – Current Liabilities

The Weighted Average Cost of Capital (WACC) can be calculated in the following way:

$$WACC = [D \times rd\ (1 - tax)] + (E \times re)$$

The Level of Debt Capital (D) : Total Debt / Total Debt and Equity

Cost of Debt (rd) : Interest Cost / Total Debt

Tax Rate (Tax) : Tax Expense / Profit Before Tax

The Level of Equity Capital (E) : Total Equity / Total Debt and Equity

Cost of Equity (re) : Net Profit After Tax / Equity

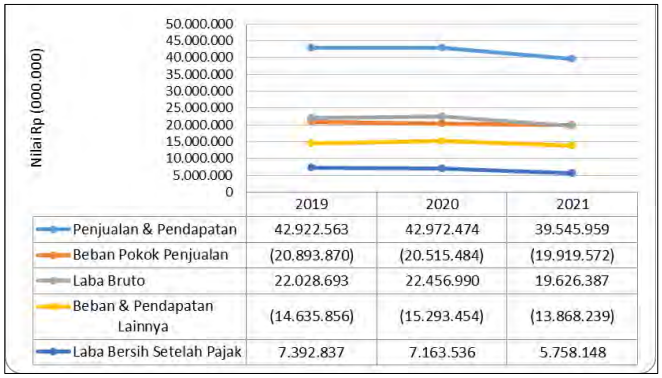
If the EVA result is greater than 0 then it indicates that the company is able to generate added value from the net profit it earns after deducting all costs to support the company and it also indicates that the company has good work performance. Then, if the results of the company's EVA show a value smaller than 0, it indicates that the company is still unable to generate added value from the net

profit it earns and this can indicate that the company's performance is not good. If the results of the company's EVA calculation show results equal to 0, it means that the company is at the break-even point between the net profit earned and all costs incurred to support the company.

4.RESULT AND DISCUSSION

4.1 Financial Performance of PT Unilever Indonesia Tbk.

In terms of ROA, UNVR continues to experience a decline in ROA from year to year. This change in ROA is mainly due to the company's declining sales every year, which also causes a decrease in company profits. In 2020, the company's profit decreased by 229,301 from 2019, and in 2021, the company's profit also decreased by 1,405,388 from the previous year. Changes in UNVR's profit from 2019 to 2021 can be seen in Figure 1.



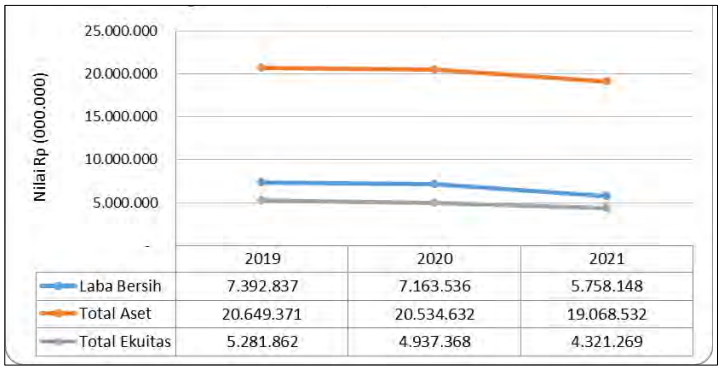
	2019	2020	2021
Penjualan & Pendapatan	42.922.563	42.972.474	39.545.959
Beban Pokok Penjualan	(20.893.870)	(20.515.484)	(19.919.572)
Laba Bruto	22.028.693	22.456.990	19.626.387
Beban & Pendapatan Lainnya	(14.635.856)	(15.293.454)	(13.868.239)
Laba Bersih Setelah Pajak	7.392.837	7.163.536	5.758.148

Source: processed data 2022

Figure 1 Comparison of Sales, Expenses, and Profit of PT Unilever Indonesia, Tbk

Figure 1 shows that the decrease in the cost of goods sold is not as high as the decrease in sales from 2019 to 2021, which in turn causes the net profit to continue to decline.

Then, the company's total assets also decreased by 114,379 in 2020 and decreased by 1,466,100 in 2021. The decrease in the company's total assets in 2020 was due to a decrease in the company's total fixed assets, and a decrease in total assets in 2021 was due to a decrease in current assets, namely a decrease in the company's cash. This decrease in cash is in line with the decline in company sales that year. In addition, this high decline in cash can also indicate that the company's finances are not sound because there is a possibility that the company is less able to collect its accounts receivable. So from here, it can be said that the performance of the UNVR company is not good in terms of ROA. A comparison of changes in the value of net income, total assets, and also total equity of UNVR can be seen in Figure 2.



	2019	2020	2021
Laba Bersih	7.392.837	7.163.536	5.758.148
Total Aset	20.649.371	20.534.632	19.068.532
Total Ekuitas	5.281.862	4.937.368	4.321.269

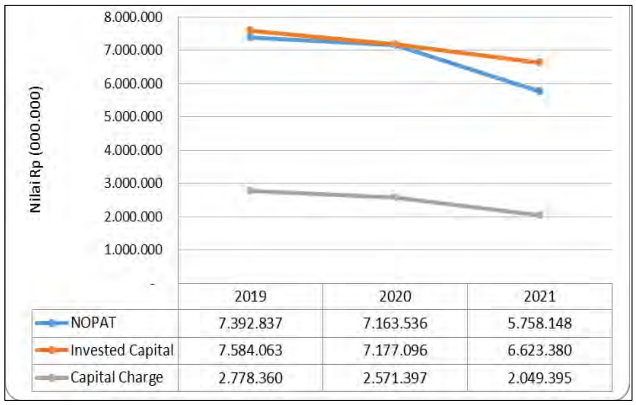
Source: proceed data 2022

Figure 2 Comparison of Net Income, Total Assets, and Total Equity PT. Unilever Indonesia, Tbk

Figure 2 also illustrates that in addition to total assets, UNVR's total equity continued to decline from 2019 to 2021. Due to the decrease in total equity in 2020, the result of UNVR's ROE also increased at the end of the current year but decreased at the end of 2021. The increase in ROE in 2020 occurred because although profits in that year decreased, total equity in that year also decreased by 344,494. So a decrease in profit of 229,301 from the previous year compared to a decrease in equity of 344,494 ultimately resulted in a higher ROE figure than the previous year. Then, in 2021. The decrease in equity in 2020 is the result of high dividend payments in 2019 which resulted in a decrease in the opening balance of equity in 2020 and a decrease in profit in the current year which caused the value of equity in 2020 to decrease.

Then in 2021 the ROE value of UNVR decreased, which was mainly due to the decline in company profits in the current year. In 2021, UNVR's equity also decreased again by 616,099 which was also caused by a decrease in profit for the year, thereby reducing retained earnings. The decrease in profit in 2021 of 1,405,388 was greater than the decrease in total equity of 616,099, so UNVR's ROE in 2021 also decreased. From this data, it can be concluded that UNVR's financial performance has decreased from 2019 to 2020 and to 2021 due to the company's inability to generate profits to increase equity.

The EVA value of UNVR every year is always greater than 0, meaning that UNVR can always generate added value or residual value of its company which is obtained after deducting net profit after tax from its capital costs (capital charge). However, UNVR's EVA value from 2019 to 2021 has decreased. The main cause of the decline in UNVR's EVA from year to year is again the decline in company profits. Although the company's cost of capital from year to year continues to decline, this decline is in fact not matched by an increase in profits, so that the final result of EVA also decreases. In terms of EVA, the company's financial performance still shows a good number where it can still finance its operating costs and capital costs. However, the company must improve its performance again because the company's performance is not in a stable position seeing the continued decline in company profits.

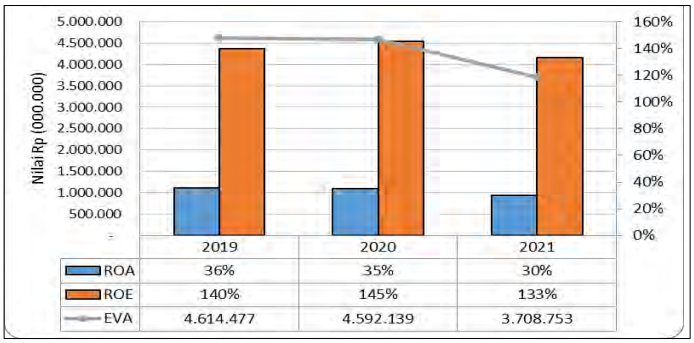


Source: Proceed data 2022

Figure 3 Comparison of NOPAT, Invested Capital, and Capital Charge PT. Unilever Indonesia, Tbk

So, seen from all the variables that test UNVR's financial performance, it can be concluded that UNVR's financial performance is in a less stable and poor position because the company has not been able to generate greater profits from year to year. Profits that continue to decline every year are the main problem of UNVR's finances. This can also indicate that the company is less able to manage its assets and equity to generate profits. The decline in financial performance in 2020 was generally caused by the Covid-19 outbreak in Indonesia. However, the decline in 2021 shows that the company has not been able to recover from the effects of the Covid-19 pandemic.

Based on the explanation above, it can be seen that UNVR's ROA and EVA results are in line. When ROA decreases, the EVA value also decreases. However, UNVR's ROE results are different from both. In 2020 ROE increased and decreased in 2021. This shows that not always the values of ROA, ROE, and EVA are in line in each period. This is due to changes and differences in the value of the company's financial components presented in the company's financial statements.



Source: proceed data 2022

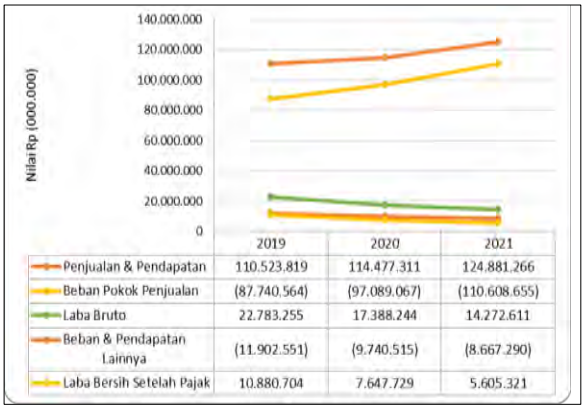
Figure 4 ROA, ROE, and EVA UNVR

However, although the increase and decrease are not always the same, the calculation results in each variable show that the performance of the UNVR company is not stable and in a good position.

4.2 Financial Performance of PT Gudang Garam Tbk.

The value of GGRM's ROA every year from 2019 to 2021 continues to decline. The decline was

caused by a decrease in the company's net profit in 2020 of 3,232,975 and decreased again in 2021 by 2,042,408 as shown in the following figure 5.

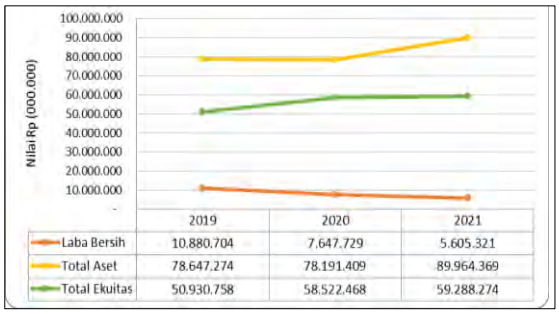


	2019	2020	2021
Penjualan & Pendapatan	110.523.819	114.477.311	124.881.266
Beban Pokok Penjualan	(87.740.564)	(97.089.067)	(110.608.655)
Laba Bruto	22.783.255	17.388.244	14.272.611
Beban & Pendapatan Lainnya	(11.902.551)	(9.740.515)	(8.667.290)
Laba Bersih Setelah Pajak	10.880.704	7.647.729	5.605.321

Source: proceed data 2022

Figure 5 Comparison of Sales, Expense, and Profit GGRM

GGRM's sales and revenue in 2020 and 2021 appear to have increased by 3,953,492 and 10,403,955 from the previous year, but in fact the cost of goods sold also increased by 9,348,503 in 2020 and increased by 13,519,588 in 2021. Because the increase in cost of goods sold was higher than the increase in sales, the company also experienced a decrease in gross profit and net profit. This also causes a decrease in ROA every year, especially in 2021. When the company's profit decreased in 2021, the company's assets increased by 11,772,960 from the previous year. This increase in total assets is partly due to the increase in the company's other current inventory from the previous year.



	2019	2020	2021
Laba Bersih	10.880.704	7.647.729	5.605.321
Total Aset	78.647.274	78.191.409	89.964.369
Total Ekuitas	50.930.758	58.522.468	59.288.274

Source: proceed data 2022

Figure 6 Comparison of Net Income, Total Assets and Total Equity GGRM

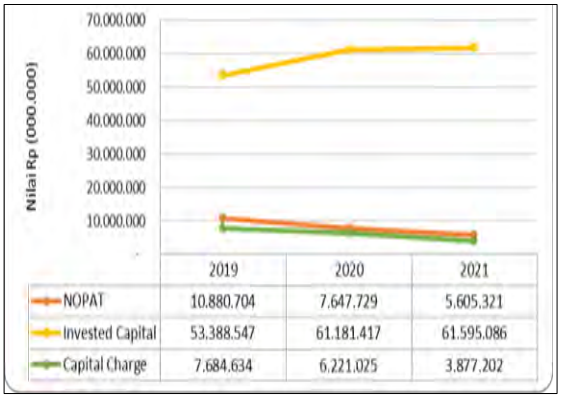
GGRM's total assets are heading in a positive direction but not so with GGRM's net profit. In addition to total assets, total equity also leads to a positive direction. This total equity affects the calculation of

GGRM's ROE. The ROE results from GGRM also continued to show a decline from 2019 to 2021. Just like ROA, the main cause of this decline is the decline in the company's net profit from year to year. In addition, there was an increase in GGRM's equity by 7,591,710 in 2020 and by 765,806 in 2021. The increase in equity in 2020 was mainly due to the absence of cash dividend payments in that year and cash dividend payments were again paid in 2021. In 2021, there was also an increase

in comprehensive income but not too high which then also caused equity to increase in that year.

From the explanation above, it can be concluded that the company is less able to manage its assets and equity to generate profits. Especially in 2021, with an increase in current inventory but a decrease in profits, it can indicate that the company is less able to manage its inventory to generate even higher sales which also generate higher profits. In addition, the absence of cash dividend payments in 2020 may indicate that the company's finances are not in a good position. Although in value, GGRM's equity looks to have increased, the increase caused by the absence of cash dividend payments may indicate that the company has not been able to pay returns to shareholders in the form of dividends.

Then, the EVA GGRM results from year to year show a value greater than 0, meaning that GGRM is able to create added value or residual value from its profit after deducting its capital costs. However, EVA GGRM in 2020 has decreased. This is due to a decrease in current year profit of 3,232,975, higher than the decrease in capital charge of 1,463,909. This decrease resulted in the residual value of GGRM in that year decreasing. In 2021, GGRM's EVA value increased due to a decrease in capital charge of 2,343,823 even though the company's profit for the year decreased by 2,042,408. The decrease in capital charge, which is higher than the decrease in profit, caused the EVA value of GGRM in 2021 to increase.



Source: proceed data 2022

Figure 7 NOPAT, Invested Capital, and Capital Charge GGRM

In terms of EVA, the company's financial performance still shows good numbers where the company is still able to finance its operating costs and capital costs. On the other hand, the company also managed to reduce capital charges or costs incurred to support the company. However, the company must improve its performance again, especially to reduce the cost of goods sold which is increasing every year, because the company's performance is not in a stable position seeing the continued decline in company profits.

So, overall it can be concluded that GGRM's financial performance is in a less stable condition where sales continue to increase but the company has not been able to manage its cost of goods sold which ultimately results in a decrease in company profits. Cost of goods sold which is getting higher every year is the main cause of the decline in company profits. This was caused by the Covid-19 outbreak which led to an increase in excise duties on cigarettes which in turn made the cost of goods sold also increase. Although sales continued to increase in 2020, it was not proportional to the expenses incurred by the company to support the company. Another impact of Covid-19 on GGRM in 2020 is the non-payment of cash dividends to its shareholders. In 2021,

GGRM's sales continued to increase from the previous year. This shows that GGRM is still able to market its products well when Covid-19 begins to subside. However, the cost of goods sold still increased from the previous year. With this increase in cost of goods sold, the company's profit still decreased in 2021. However, even though the company's profit decreased, the company managed to reduce the cost of capital it incurred in 2021 which caused the company's EVA to increase. In addition, the company also paid cash dividends to its shareholders again that year. This shows that GGRM is trying to recover its financial condition after the Covid-19 storm attacked even though the company's financial condition and performance have not been in a stable condition.

From the data above, it can be seen that the results of UNVR's ROA and ROE are in line, where in each year GGRM's ROA and ROE have decreased. However, the results of EVA GGRM are different, namely EVA GGRM has decreased in 2020 and has increased in 2021 as shown in the figure 8.

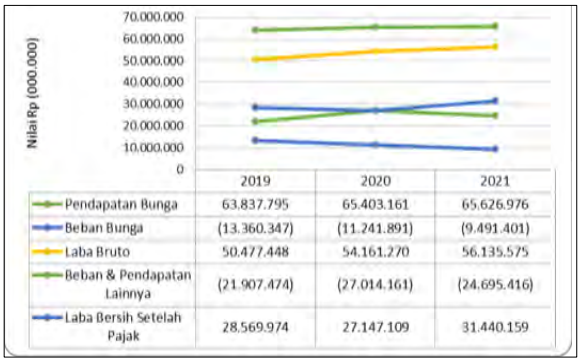
Source: proceed data 2022

Figure 8 ROA, ROE, and EVA GGRM

Figure 8 shows that the results of the three variables tested are not always in line considering that there are several different financial components calculated from each variable. However, the conclusions from the calculation of the three variables generally show that GGRM's financial performance is less stable and must improve its performance again.

4.3 Financial Performance of PT Bank Central Asia Tbk.

The calculation results of BBCA's ROA in 2020 decreased and increased in 2021. The decrease in BBCA's ROA in 2020 was due to a decrease in the company's net profit from the previous year of 1,422,865 which was accompanied by an increase in the company's total assets of 156,580,944 from the previous year. The decrease in profit in 2020 was due to the decrease in the company's other operating income from the previous year, as illustrated in the following figure 9.



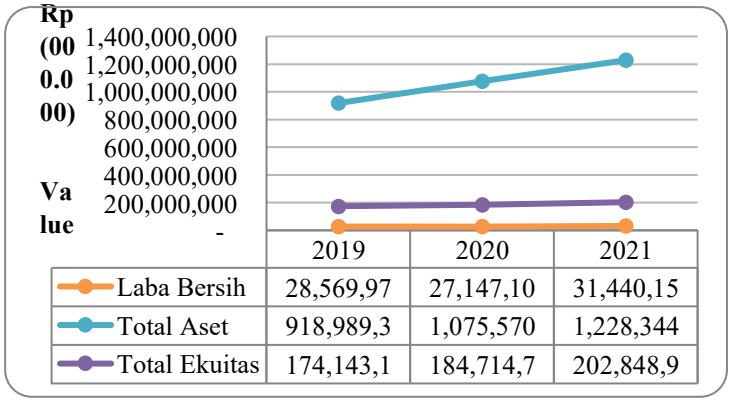
	2019	2020	2021
Pendapatan Bunga	63.837.795	65.403.161	65.626.976
Beban Bunga	(13.360.347)	(11.241.891)	(9.491.401)
Laba Bruto	50.477.448	54.161.270	56.135.575
Beban & Pendapatan Lainnya	(21.907.474)	(27.014.161)	(24.695.416)
Laba Bersih Setelah Pajak	28.569.974	27.147.109	31.440.159

Source: proceed data 2022

Figure 9 Comparison of Sales, Expence, and Profit BBCA

Meanwhile, the largest increase in assets was in securities purchased with the promise of resale which increased by 137,243,684. The securities purchased with agreements to resell account contains receivables from Bank Indonesia, other banks, and non-bank parties for assets purchased by BBCA with the promise that they will be resold to the relevant parties later.

Then, in 2021, BBCA's ROA value increased due to an increase in the company's net profit of 4,293,050 which was also accompanied by an increase in the company's total assets of 152,774,424. Although assets increased, the increase in company profits was higher than the increase in total assets, so the ROA value also increased. The following is a comparison between changes in net income, total assets, and total equity of BBCA.



	2019	2020	2021
Laba Bersih	28,569,97	27,147,10	31,440,15
Total Aset	918,989,3	1,075,570	1,228,344
Total Ekuitas	174,143,1	184,714,7	202,848,9

Source: proceed data 2022

Figure 10 Comparison of Net Income, Total Assets and Total Equity BBCA

Figure 10 shows that even though total assets are very visible increasing and profits in 2020 have decreased slightly, in 2021 BBCA is still able to increase its profits. From this data, it can be concluded that BBCA's financial condition and financial performance can be classified as stable and good, because even though there was a decrease in profit in 2020, BBCA was still able to increase its assets to provide funds in the form of securities purchased with the promise of resale to Bank Indonesia, other banks, and non-bank parties. In addition, BBCA's financial performance is seen to increase again in 2021 with an increase in corporate profits and accompanied by an increase in the company's total assets.

Then, the results of BBCA's ROE calculation in 2020 decreased and increased in 2021. The decrease in BBCA's ROE in 2020 was due to the decrease in the company's profit in that year and the increase in the company's total equity in the current year. The decrease in profit of 1,422,865 compared to the increase in equity of 10,571,553 automatically made BBCA's ROE in 2020 decrease. In 2021, BBCA's ROE increased due to the increase in company profits and total equity in that year. Although total equity increased by 18,134,255, the increase in profit for the year was higher, namely 4,293,050 from the previous year, so that the ROE value also increased that year.

Based on the data above, it can be concluded that in terms of ROE, BBCA has a fairly stable and good financial performance where even though the company's profit fell in 202l, the company was still able to increase its equity and in 2021 the company's profit managed to increase along with an increase in equity. Even though cash dividend payments continue to increase every year, the value of equity continues to increase.

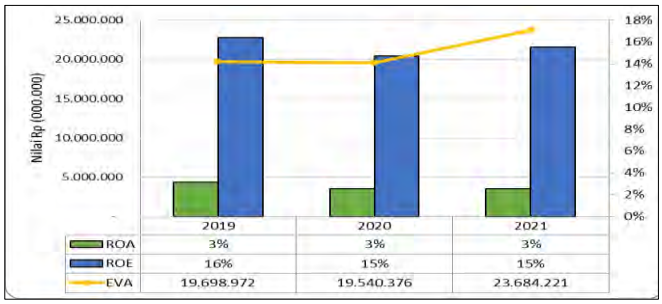
The EVA value of BBCA every year shows results greater than 0, meaning that BBCA is able to generate added value or residual value from its income after deducting its operating costs and capital costs. EVA BBCA in 2020 has decreased. This was caused by a decrease in company profits in 2020 of 1,422,865 even though the company's capital charge also decreased by 1,264,270. However, in fact, the value of the decrease in profit in the current year is higher than the decrease in capital charge, which in turn makes the EVA value decrease from the previous year.

Then, in 2021 BBCA's capital charge increased by 149,206. However, this increase in capital charge is offset by an increase in profit which is even higher than the increase in capital charge, namely 4,143,844. This caused the EVA value of BBCA in 2021 to increase. From these data, it can be concluded that in terms of EVA, BBCA's financial performance produces good value because with decreasing profits in 2020, BBCA is still able to reduce its capital charge to suppress a high decline in EVA and BBCA can increase EVA in the following year, 2021.

If assessed as a whole from the ROA, ROE, and EVA calculations, it can be concluded that BBCA's financial condition and financial performance are in good condition and in a stable position. Although there was a decrease in profit in 2020, the decrease in profit did not come from a decrease in BBCA's main income but came from a decrease in the company's other income, even BBCA's main income seemed to increase every year. Although Covid-19 is endemic in the world, the fact is that BBCA can maintain its performance by not decreasing the company's main income. The decline in the value of ROA, ROE, and EVA that occurred in 2020 was caused by the Covid-19 outbreak at that time which affected the economic sector in Indonesia and even throughout the world, but BBCA was still able to overcome it by reducing its capital charge. In addition, the company's assets and equity were seen to continue to increase even during the pandemic.

Then in 2021, BBCA's net profit also increased and provided an increase in value in the calculation of

ROA, ROE, and EVA. From this it can be seen that with the subsiding of the Covid-19 storm in 2021, BBCA began to bounce back after previously experiencing a slight decline in its profits. This shows that BBCA is able to maintain its financial performance.



Source: proceed data 2022

Figure 11 ROA, ROE, and EVA BBCA

Based on figure 11, it can be seen that the calculation of ROA, ROE, and EVA BBCA in 2020 both decreased. Then the increase also equally occurred in the company's ROA, ROE, and EVA values in 2021. With this data, it can be concluded that the value of ROA, ROE, and EVA can also have parallel changes in each period. The three variables' analysis results also show that BBCA's financial performance is in good condition. Although it had experienced a slight decline in 2020 due to Covid-19, BBCA was able to improve its performance again in 2021.

5.CONCLUSION

UNVR's financial performance from 2019 to 2021 is not good. This is indicated by the tendency to decrease the results of ROA, ROE, and EVA from 2019 to 2021 even though the EVA results in these years are greater than 0, which means that the company is able to create added value. The decline in ROA and ROE indicates that the company has not been able to manage its assets and equity to generate profits. Then, GGRM's financial performance also showed unfavourable results in 2020 and 2021 with 2019 as the starting point for comparison. This is also caused by the ROA, ROE, and EVA values which tend to decrease from 2019 to 2021, but GGRM's EVA value is still greater than 0 in those years. However, even though a decline occurred in GGRM's financial performance, the company tried to suppress the decline in various ways that could be done such as not paying cash dividends in 2020 and suppressing the cost of capital in 2021. However, BBCA's financial performance from 2019 to 2020 is relatively good and quite stable. This can be seen from the increase in ROA, ROE, and EVA in 2021 after experiencing a decline in 2020. This increase is mainly due to net income which has increased every year. This may indicate that BBCA is able to manage its assets and equity to generate profits. By being tested on three companies with different business fields, ROA, ROE, and EVA can still be used to measure the company's financial performance. From ROA, ROE, and EVA, changes in the company's financial components and their influence on each other can be traced. The results of the calculation of ROA, ROE, and EVA do not always show the same results, but all three have the same results to indicate the company's financial performance.

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THE IMPACT OF THE EFFECTIVENESS OF USING GOPAY AND OVO DIGITAL PAYMENT SYSTEMS ON TRANSACTION CHOICES IN BOGOR CITY

Sinta Listari*, Raden Naufal Ardian Utama, Uluan Silaen, Intan Vidya Mega Utami, Suharmiati

Institut Bisnis dan Informatika Kesatuan, Indonesia

Corresponding author: sinta@ibik.ac.id

Abstract

In the globalized era, financial technology (fintech) like GoPay and OVO have revolutionized economic and social integration, particularly in enhancing financial inclusion. This research investigates the impact of GoPay and OVO on modern transaction methods, focusing on their acceptance and preference among Bogor City's residents. Conducted with 100 respondents, the study employs various data collection and analysis techniques, including Validity, Reliability, Normality, and Linearity Tests, along with Multiple Linear Regression Analysis for hypothesis testing. The testing results indicate that both GoPay and OVO significantly influence the decision to use digital payment transactions. Specifically, the significance value of the F-Test is less than 0.05 with the F-calculation exceeding the F-table, indicating that both independent variables (GoPay and OVO) have a significant impact on the dependent variable. The Partial Test confirms these findings, with the t-values for both variables exceeding the ttable and the significance being less than 0.05, indicating a significant influence of GoPay and OVO separately on payment transaction usage. The Coefficient of Determination (R^2) of 0.585 indicates that 58.5% of the variation in payment transaction usage can be explained by the GoPay and OVO variables. GoPay and OVO significantly contribute to financial inclusion in Bogor City, with the features and promotions they offer appealing to users. This study underscores the importance of fintech services in today's digital transaction era.

Keywords: *GOPAY, OVO, Effectiveness, Financial Inclusion, Financial Technology*

1.INTRODUCTION

In the era of globalisation, which is full of economic and industrial integration, it has brought about technological changes that can help economies grow very quickly. When two countries are economically integrated, they work together to help each other in the financial sector, which is one way to get closer. This is a new way to help the financial sector grow and ensure everyone has access to money. It's called "fintech," or "financial technology." Financial inclusion is one of the things that makes it easier for everyone to get ahead.

The development of technology and information today is rapid, and it is changing the way people live. There are new ways to make cashless payments because of new technologies in information and communication. For the financial sector, technological innovation is not new because technology and finance have been working together for a long time. This means that financial technology, also known as "Fintech", is not new to the financial services industry. Currently, there

is a transport service industry that is leading the growth of the online motorcycle taxi and online taxi transport industry, such as Gojek and Grab, as well as other transport service companies. Currently, both applications have new features, such as Gopay for Gojek and Ovo for Grab, how to register. Any payment can be made on the Gojek and OVO applications. People using Gojek and Grab can now pay for things with digital money, not just cash.

OVO-based service providers also provide discounts to people who use their services. As of March 2018, only 9.5 million people use OVO. There are two other competitors: T-Cash users, who started using the service in July 2018, and Gopay users, who came from the tirto web in October 2017. Both reached 25 million users in October 2017. If you compare the number of people using Android phones to those using the three apps, there is a big difference in how many people use each. Other things that make people happy include discounts and reward points at places where people buy goods and services, especially young people with a modern consumer-driven lifestyle.

Several studies provide valuable insights into the factors influencing interest in e-money usage among university students. While these studies provide evidence suggesting that perceived ease of use and security affect user interest, there is an unexplored gap: how these factors interact with other aspects such as cultural influences and technology adaptation among older generations. This research tends to be limited to university students, so there is still room to investigate how similar perceptions might differ among other demographics or in different environments (Ramadhan et al., 2016; Nurmasali, 2018). In addition, research focuses on the influence of perceived convenience, risk, and technological innovation on using specific e-money services, such as GoPay. Although the results show a significant influence of these factors on usage interest, these studies have not fully explored the long-term impact of e-money usage on individual financial behavior. There is an opportunity for further research that examines the impact of e-money use on personal savings and spending or how e-money can change financial behavior on a broader scale (Rahayu, 2018; Prasetia, 2018). Based on the explanation above, further research is needed on the Impact of the Effectiveness of Using GoPay and OVO Digital Payment Systems on Transaction Choices in Bogor City.

2.LITERATURE REVIEW

There are several important concepts about organisational effectiveness and its influence on the use of digital financial technologies such as e-money. Effectiveness can be defined as the ability of an organisation to achieve its goals and adapt to its environment in order to continue to exist. In addition, effectiveness is more directed towards the results achieved by an organisation's output against its objectives. This research integrates both views to examine how financial technology companies can improve their effectiveness through technological innovation and adaptation (Chung & Megginson, 2016; Handoko, 2017).

In line with thoughts on effectiveness, it is recognised the importance of programmes to achieve effectiveness in a community context, particularly in self-empowerment. This research will take a similar approach in examining the effectiveness of using digital payment applications, reflecting how technological advances can facilitate the achievement of greater and more efficient organisational goals (Rosalina, 2012).

In the context of digital finance, several studies offer various methods to measure effectiveness, including productivity, adaptability, and job satisfaction, all of which are relevant to examine how platforms such as Go-Pay and OVO fulfil users' needs and survive the intense competition in the digital finance market. This research will adapt the framework to understand the influence of effectiveness on the acceptance and use of digital payment technology in Indonesia (Steers, 1999; Ding, 2014).

Based on this, it is clear that effectiveness depends not only on results, but also on the process of how resources are used and organised to achieve those results. This implies that fintech companies should focus not only on financial improvement but also on innovation and customer service to improve their effectiveness in the long run.

Linking this to the Theory of Acceptance Model (TAM), TAM can be very useful for understanding how individuals accept and use technology (Kasilingan, 2020; Lestari, 2019; Elwalda, et al, 2016). TAM provides a framework for measuring how well technology is accepted in an organisation, emphasising two key aspects of usefulness and ease of use (Iqbaria, et al., 1994). It is particularly relevant in the context of e-commerce, mobile payments, and various other online platforms (Thakur and Srivastava, 2013).

In previous research, the factors of financial capability, ease of use, and consumer behaviour have a significant impact on interest in using electronic money. This indicates that not only external factors but also users' internal perceptions of finance and ease of technology can influence how effectively the technology is accepted by the market. Adapting these findings, this study aims to further examine how these factors interact with the operational effectiveness of GoPay and OVO in increasing their use among consumers in Indonesia (Maghfuri, 2017).

Furthermore, research on the amount of electronic money in circulation and the number of EDC machines significantly influences the velocity of money in Indonesia. This suggests that physical infrastructure and technology availability are also important in supporting the effective use of digital payment systems. In the context of this study, the infrastructure and accessibility of GoPay and OVO could be critical factors in determining the level of adoption and effective use of these applications by the wider community. Therefore, this study will try to measure the influence of infrastructure on the effectiveness of using GoPay and OVO in daily transactions (Prasetia, 2018).

Based on the literature review, the proposed hypotheses are H1: Effectiveness affects consumer use of the Gopay application; H2: Effectiveness affects consumer use of the OVO application; and H3: Effectiveness affects consumer use of the Gopay and OVO application.

These hypotheses are based on the assumption that higher levels of effectiveness in a company's operations will drive greater adoption of their payment app, as it increases user satisfaction and fulfills their needs more effectively. These two hypotheses will be tested using data from app users to see the correlation between organizational effectiveness and app usage levels.

3.METHODOLOGY

This study uses quantitative descriptive research. Quantitative descriptive research examines data in the form of numerical values used to identify and characterize existing objects. To conclude your research, the goal is to establish a relationship or impact between two variables. The survey approach is used in this research. The survey technique is a type of quantitative research in which the same structural/systematic questions are asked to many individuals. This study records, reviews, and analyzes all the responses received. This survey technique was used to collect data from natural settings. Data were collected by distributing surveys and conducting interviews, among other methods.

3.1 Population and Research Sample

The population in this study were users of GO-PAY and OVO services as alternative payment transaction tools in the Bogor City environment. The population in this study was 100 people. The sample in the study consisted of the community, students, and workers from 100 questionnaires distributed.

3.2 Research Instruments

In this study, the instrument used to collect data was questions in the form of a questionnaire consisting of 15 question items:

1. GOPAY questionnaire to find out the level of service on the application to users, consisting of 5 questions.
2. OVO questionnaire to find out the level of service on the application to users, consisting of 4 questions,
3. GOPAY and OVO questionnaire to determine the effectiveness level in using the application, consisting of 5 questions.

3.3 Source of Research Data

The method used in data collection in this study is to use primary data sources, namely research data sources obtained directly from the original source. In this case, the primary data is the result of questionnaires filled out by the Community, Students, and Workers in the Bogor City Environment.

3.4 Data Collection Technique

The data collection technique uses a survey method, distributing questionnaires to respondents, namely the Community, Students, and Workers in the Bogor City Environment. The questionnaires were distributed online, especially to users of the GO-PAY and OVO applications.

3.5 Data Analysis Technique

The instrument was tested using validity and reliability tests, as well as assumption tests, including normality tests. Data analysis is used with multiple linear regression, with statistical tests including the t test, F-test, and coefficient of determination (R^2).

4.RESULT AND DISCUSSION

4.1 Results of descriptive research data

This research has conducted sampling on respondents who are GOPAY mobile payment users with the most results 55% female, aged 20-25 years with a percentage of 88%, based on Relationship status married with a percentage of 50% and unmarried with a percentage of 50%, the last high school / equivalent education with a percentage of 65%, Private Employment with a percentage of 64%, Monthly income of Rp 5. 000,000 - 7,5000,000 with a percentage of 51%, the length of use of GOPAY is more than 1 month with a percentage of 72% Where to do Transakasi charging balances at ATMs with a percentage of 46%, spending costs with a percentage of 62% of Rp 300,000 - Rp 500,000. In this case, it can be concluded that GOPAY offers convenience in its features so that consumers feel easier in carrying out activities.

In OVO user respondents, sampling has been carried out for people in the city of Bogor with the most results 55% female, aged 20-25 years with a percentage of 88%, based on married status relationships with a percentage of 50% and unmarried with a percentage of 50%, the last education is SMA / equivalent with a percentage of 65%, private work with a percentage of 64%, the length of use of OVO is more than 1 month with a percentage of 72% Where to make balance replenishment transactions at ATMs with a percentage of 46%, spending costs with a percentage of 62% of Rp 300. 000 - Rp 500,000, monthly income of Rp 5,000,000 - 7,5000,000 with a percentage of 51%, as an alternative transaction can be seen through the features provided OVO is a digital wallet which is a digital platform that stands independently but also collaborates with the Grab online transportation application.

4.2 Validity and Reliability Test

Validation testing measures the validity or validity of a questionnaire question. The questionnaire is considered valid if the question can reveal something that is measured from the questionnaire. The validity test in this study was processed using SPSS Version 20. The validity test in the study was used to measure whether a questionnaire was valid or not, with a total score at a significance level of 5% and a sample size of 100 respondents. To test its validity, the researcher compared the Pearson correlation of each item with the product moment r table. If rcount> rtable then the statement item is declared valid.

Table 1. Result of Validity Test

No	Variable	RCount	RTable	Result
1	Gopay (X_1)			
	1	0.651	0.1966	Valid
	2	0.650	0.1966	Valid
	3	0.710	0.1966	Valid
	4	0.744	0.1966	Valid
	5	0.752	0.1966	Valid
2	OVO (X_2)			
	1	0.742	0.1966	Valid
	2	0.844	0.1966	Valid
	3	0.805	0.1966	Valid
	4	0.818	0.1966	Valid
3	Use of GOPAY and OVO Payment Transactions			
	1	0.757	0.1966	Valid
	2	0.736	0.1966	Valid
	3	0.782	0.1966	Valid
	4	0.737	0.1966	Valid
	5	0.850	0.1966	Valid

Source: proceed data 2022; spss result

Based on the results of the validity test of the correlation coefficient of the question items in the table 1, it is found that all question items in each variable have a value of rcount> r table based on this, it can be decided that each question item is valid and can proceed to the reliability test.

Table 2. Reliability Results

No	Variabels	Cronbach's Alpha	Result
1	Gopay	0.814	Reliable
2	OVO	0.738	Reliable
3	Use of GOPAY and OVO Payment Transactions	0.831	Reliable

Source: SPSS result

Based on the results of the reliability test in table 2, the Gopay variable obtained a Cronbach's Alpha value of 0.814, this value> 0.7, it can be concluded that the variable is reliable. In the OVO variable, the Cronbach's Alpha value is 0.738, this value> 0.7, it can be concluded that the variable is reliable. In the variable Use of OVO and GOPAY Payment Transactions, the Cronbach's Alpha value is 0.831, this value> 0.7, it can be concluded that the variable is reliable.

4.3 Test for Normality

The normality test is used to determine whether the residual data obtained is normally distributed or not (Ghozali, 2018). There is to detect whether the residuals are normally distributed or not in the normality test, namely by means of graph analysis and analysis. In this study, the normality test by analysis used the Kolmogorov-Smirnov test because the data was > 30, to make a decision in the Kolmogorov statistical normality test can be done by comparing the Asymp. Sig. (2-tailed), with the significance used α= 0.05.

Table 3. Normality Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.79386815
Most Extreme Differences	Absolute	.079
	Positive	.043
	Negative	-.079
Test Statistic		.079
Asymp. Sig. (2-tailed)		.124[c]

Source: SPSS result

Based on the results of the normality test with Kolmogorov-Smirnov in table 3, the probability value p or Asymp. Sig. (2-tailed) is 0.124. Because the probability value p, which is 0.124 is greater than the significance level, which is 0.05. This means that the normality assumption is fulfilled.

4.4 Multiple Linear Regression Analysis

Multiple linear regression analysis is an analysis used to measure the strength of the relationship between two or more variables, it also shows the direction of the relationship between the independent variable and the dependent variable (Ghozali, 2018).

Table 4. Multiple Linear Regression Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.920	1.476		3.334	.001		
	GOPAY	.378	.102	.330	3.697	.000	.537	1.861
	OVO	.554	.099	.501	5.614	.000	.537	1.861
a. Dependent Variable: Use of GOPAY and OVO Payment Transactions								

Source: SPSS result

Based on the results of multiple linear regression analysis in table 4, the regression model is obtained as follows:

$$Y = 4.920 + 0.378X_1 + 0.554X_2$$

Description:

Y = Usage of Gopay and OVO Payment Transactions

X_1 = Gopay

X_2 = OVO

Based on the multiple linear regression model, it can be seen that the constant is 4,920, which means that if there is no change in the value of the independent variable (Gopay and OVO), the dependent variable (Use of GOPAY and OVO Payment Transactions) value is 4,920. The regression coefficient on the GOPAY variable (X_1) is 0.378 and positive, which means that if the Gopay variable increases by 1 point significantly, and the other independent variables are constant. This means that the Gopay variable will increase the value of the GOPAY and OVO Payment Transaction Usage variable by 0.378. The regression coefficient on the OVO variable (X_2) is 0.554 and positive, which means that if the OVO variable increases by 1 point significantly, and the other independent variables are constant. This shows that the OVO variable will increase the value of the variable Use of GOPAY and OVO Payment Transactions by 0.556.

4.5 Hypothesis Testing Results T Test Results

Partial test (T test) was conducted to determine the effect of each independent variable on the dependent variable partially. Partial tests can be carried out through the t test statistics by comparing the Sig. t value with an alpha value of 0.05 and also tcount with ttable.

Table 5. T Test Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.920	1.476		3.334	.001		
	GOPAY	.378	.102	.330	3.697	.000	.537	1.861
	OVO	.554	.099	.501	5.614	.000	.537	1.861
a. Dependent Variable: Use of GOPAY and OVO Payment Transactions								

Source: SPSS result

Based on the t-test results in Table 5, it can be seen that the Gopay variable has a significance value of 0.000; this value is smaller than 0.05. Meanwhile, the t count obtained a value of 3.697> t table (1.984). Based on this, it can be said that the Gopay variable affects the variable Use of GOPAY and OVO Payment Transactions. So the first hypothesis, H_1: the GOPAY variable, has a partially positive significant effect on the variable Use of GOPAY and OVO Payment Transactions "accepted".

The OVO variable has a significance value of 0.000, which is smaller than 0.05. Meanwhile, the t count obtained a value of 5.614> t table (1.984). Based on this, it can be said that the OVO variable affects the variable Use of GOPAY and OVO Payment Transactions. So the second hypothesis, H_2: the OVO variable has a significant positive partial effect on the variable Use of GOPAY and OVO Payment Transactions "accepted".

4.6 F Test Results

Simultaneous test (F test) is conducted to determine the effect of several independent variables together on one dependent variable. By using a sample of 100, 2 independent variables and a real level of 5%, Ftabel is obtained at (k; n-k) = (2; 98) = 3.089.

Table 6. F Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	448.812	2	224.406	68.327	.000[b]
	Residual	318.578	97	3.284		
	Total	767.390	99			
a. Dependent Variable: Use of GOPAY and OVO Payment Transactions						
b. Predictors: (Constant), GOPAY, OVO						

Source: SPSS result

Based on table 6, it is known that the significance value is 0.000 <0.05 and the Fcount value is 68.327> Ftable of 3.089, which means that the independent variables in the form of Gopay and OVO have an effect on the dependent variable in the form of Use of Gopay and OVO Payment Transactions. Thus, it can be concluded that there is a significant simultaneous effect of the independent variables in the form of Gopay and OVO on the dependent variable in the form of Use

of Gopay and OVO Payment Transactions.

4.7 Results coefficient of determination (R^2)
The coefficient of determination (R^2) is used to measure how far the model is in order to explain the variance of the dependent variable (Ghozali, 2018). The coefficient of determination is between zero and one. If the coefficient of determination is closer to 1, the effect of the independent variable on the dependent variable is higher.

Table 7. Results coefficient of determination (R^2)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.765[a]	.585	.576	1.812
a. Predictors: (Constant), GOPAY, OVO				
b. Dependent Variable: Use of GOPAY and OVO Payment Transactions				

Source: SPSS result

Based on the results of the coefficient of determination test in table 7, the R^2 (Adjusted R Square) value of the regression model is used to determine how much the ability of the independent variables (independent) to explain the dependent variable. Based on the table above, it is known that the R^2 value is 0.585, this means that 58.5% of the variation in the dependent variable Use of GOPAY and OVO Payment Transactions can be explained by variations in the two independent variables, GOPAY and OVO. While the remaining amount (100% - 58.5% = 41.5%) is influenced by other variables outside this study.

Based on the research that has been conducted, it can be seen that GOPAY and OVO offer convenience in their features, making it easier to carry out activities. GOPAY and OVO have advantages obtained by the public because they have convenience features in transactions, such as topping up balances without additional administrative costs that other digital payments do not have. This makes consumers often compare GOPAY and OVO with other digital wallets so that these two digital payments are more attractive to the public. In this case, the ease of making transactions is included in one of the dimensions of electronic service quality: flexibility, a function used in making payments or ease of transactions for customers to use.

A comparison of Gopay and OVO services for people in the city of Bogor as alternative transactions can be seen through the features provided by GOPAY and OVO, namely GOPAY, which is a digital wallet that is part of GOJEK. At the same time, OVO is a digital platform that stands independently but also collaborates with the Grab online transportation application. It is undeniable that the presence of Gojek and Grab is very helpful for the community in travelling easily and quickly because through Gopay and OVO.

5.CONCLUSION

Based on the research conducted, it can be concluded that Gopay affects the use of Gopay and OVO payment transactions, OVO affects the use of Gopay and OVO payment transactions, and both Gopay and OVO affect the use of Gopay and OVO payment transactions. In addition, the

people of Bogor City are known to have an interest where the average user of these two digital payments (GOPAY and OVO) has used more than 1 month as many as 72 respondents, so it can be concluded that the GOPAY and OVO applications are very helpful for people in Bogor City in making payment transactions because every time they make various payments they will get many discounts on merchants who have collaborated with these two applications and will get much cashback.

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GOALS, ACTIONS, PLANNING IN UNIVERSITY'S BRANDING: A CASE ONE STUDY INDONESIAN ISLAMIC HIGHER EDUCATION INSTITUTION

Fera Indasari*[1], Sepriadi Saputra[1], Ida Anggriani[2]

[1] Universitas Islam Negeri Raden Fatah Palembang, Indonesia
[2] Universitas Dehasen Bengkulu, Indonesia

**Corresponding author: Feraindasari_uin@radenfatah.ac.id[1]*

Abstract

In today's increasingly competitive Indonesian higher education landscape, universities face pressure from both the arrival of foreign institutions and the rising quality of private universities. To attract prospective students, improve their competitiveness, and achieve their educational goals, universities need to build a strong and unique identity. This research investigates the goals, actions, and planning (GAP) one Islamic university in Indonesia employs to build its brand identity. The study utilizes a qualitative approach with data collected through interviews, document analysis, and observation. The research revealed that the university conducted a PESTLE analysis, considering external factors like political climate, economic trends, social changes, technological advancements, legal frameworks, and the surrounding environment when planning activities and information dissemination. Additionally, the university attempted to identify stakeholders with potential interest in their brand development goals. However, the research found that the university didn't effectively implement SMART goals. While actions and plans were established, they lacked specificity, measurable outcomes, clear relevance, and time constraints. While the university also conducted a gap analysis, identifying discrepancies didn't significantly contribute to creating a targeted branding strategy. The lack of thorough feasibility analysis in their public relations activities led to the occasional appearance of unfavorable media coverage. Additionally, unclear and unprioritized implementation of activities during specific periods contributed to these shortcomings. The research concludes that building a positive image presents a significant challenge for the university. Stigmas surrounding racism, stereotypes associated with religious universities, and negative social media narratives can damage the university's reputation. Therefore, building a positive image requires extra effort. The university needs to conduct studies to identify appropriate tactics for minimizing negative media portrayals and maintaining its reputation as a moderate institution.

Keywords: *Branding University, Images, Reputation, Islamic University*

1.INTRODUCTION

In recent years, universities in Indonesia have faced increasingly stiff competition. As discussed in an article titled (Kampus Juga Perlu Branding Agar Citra Semakin Kuat - Maranatha News, n.d., 2023). According to data released by the Central Statistics Agency (BPS) in 2022, the number of universities in Indonesia has increased to 4,004. This represents a 0.73% increase compared to the previous year when there were 3,975 universities. The data further classifies the 4,004 universities as comprising 184 public universities (PTN) and 3,820 private universities (PTS).

Indonesian higher education landscape is becoming increasingly competitive due to the presence of foreign universities opening branches in Indonesia (Shabira, 2023). Manchester, Western Sydney, and Georgetown at King's College London in Surabaya, Curtin in Denpasar, Deakin and Lancaster in Bandung, and Monash and Swiss German Universities in Jakarta are just a few examples that can be shown, which means that the improvement in the quality of private universities is no longer in doubt. The increasing quality of private universities is a challenge for state universities to improve their quality and image so as not to be left behind.

The number of universities in Indonesia is already considered excessive, with the latest data indicating that there are 4.231 institutions (Shabira, 2023). State universities in Indonesia need to improve their quality and reputation in order to compete with private and foreign universities (Shabira, 2023). The increasing quality of private universities and the presence of foreign universities pose a challenge for state universities. To address this, state universities need to build a strong and unique identity. According to (PINAR, 2020) branding is not just a marketing effort like simple promotion but requires a stronger and more structured strategy. An effective branding strategy can help build a strong and unique identity for a university and attract prospective students. With synergy and the right branding strategy, state universities in Indonesia can be reckoned with in the world of higher education.

Universities need to engage in branding to safeguard their reputation, enhance their appeal, build trust, and boost their market value (Kristen, 2022). Effective branding helps universities achieve these goals by increasing their competitiveness and attaining their educational objectives. According to (Yaping et al., 2023), effective branding aids universities in attracting the required number of highcaliber students. Effective branding can elevate a university's standing in society by showcasing its advantages over other institutions, such as its accomplishments, successful alumni, and industry collaborations. The limited attention paid to branding in universities underscores the significance of implementing branding initiatives.

Universities with a strong reputation not only produce high-quality graduates but also bring numerous benefits to the nation (Schafran, 2015). Some of the advantages that universities with high public trust can reap include gaining recognition as leading research destinations for societal advancement (Amado Mateus & Juarez Acosta, 2022). Examples include the University of Indonesia (UI), Gadjah Mada University (UGM), and the Bandung Institute of Technology (ITB), which have established strong branding and are highly regarded both in Indonesia and internationally. These three universities even rank among the top in Indonesia and are included in the Webometrics 2023 list of the world's best universities (Mantelean, n.d.) This demonstrates that a positive image is a valuable asset that must be nurtured and enhanced for the university's progress.

The branding of these three prestigious universities has become deeply ingrained, resulting in an exceptional reputation and a strong appeal to prospective students in Indonesia. Some examples of the branding values held by these three universities include the following: UI is recognized as the top university in Indonesia, excelling in various fields and offering high-quality education, ITB has a reputation as the best engineering school in Indonesia, renowned for its innovative study programs and focus on technology, and UGM, as the oldest and most well-known university in Indonesia, boasts a rich history and strong academic traditions. The combination of high-quality education and strong branding values has cultivated a positive image for these universities, making them prime destinations for prospective students. The high enthusiasm among applicants for these institutions necessitates a rigorous selection process to identify the most promising candidates (Munisamy et al., 2014).

On the other hand, some universities have made genuine branding efforts but have still been unable to maintain their reputation. This suggests that branding actions raise the question of whether branding is not enough to guarantee a university's long-term success, particularly in terms of maintaining its reputation or building a positive public image. Therefore, more specific branding efforts are needed to achieve the desired reputation (Saavedra, 2016). One case study of suboptimal branding outcomes can be seen in the case of the oldest Islamic university in South Sumatra.

Despite having an established reputation in the region, actively building a positive image, and engaging in branding activities, the university has faced challenges in maintaining its reputation. These efforts have been materialized through various public relations activities, such as an informative and engaging website, social media, regular news and press releases, press conferences and media gatherings, branding activities, communication strategy development, workshops and training, and regular public relations work evaluations. Their commitment to good public relations demonstrates their determination to achieve a positive image and enhance their reputation in the eyes of the public.

However, despite their active public relations efforts, there have been instances of negative publicity that have tarnished the university's image by irresponsible parties. The public relations efforts of this Islamic state university have not been fully effective in addressing the negative publicity that has circulated. The Islamic state university in South Sumatra still needs to take additional steps to increase control over university-related publicity.

In 2022, a violent incident at an Islamic state university in South Sumatra went viral on social media. The case was reported by (Ervizal, 2023) and resulted in the arrest of suspects in January 2023. This coverage further tarnished the image of the Islamic university. In 2023, a video clip of a video production project by communication science students at an Islamic state university in South Sumatra went viral. The video contained snippets of performances by the students, who are also talented, performing K-Pop dances. The caption on the video clip steered opinion towards the Islamic state university in South Sumatra, suggesting that it is not in line with Islamic values. This sparked a heated debate on various social media platforms regarding the pros and cons of the video. Those against the video argued that Korean dance does not align with Islamic values and is inappropriate for performance in a religious-based university, particularly one based on Islam. On the other hand, those who support the video argue that Korean dance does not contain elements that contradict Islam and is a form of art and culture that should be appreciated.

In the same year, another video circulated widely on social media showing students from the same Islamic university performing a K-pop dance without wearing hijabs (Arsika, 2023). The video sparked various comments and opinions, with many criticizing the university for not reflecting Islamic values. However, the performers in the video were not students of the university but rather guests invited from South Korea for a cultural event. Some articles, such as https://der-artikel.de/, even suggested that Islamic values and hijab culture had eroded at the Islamic state university. This led to the Islamic state university being attacked and criticized for allowing performances that were deemed not in line with Islamic norms.

These controversies highlight the complexities involved in building a positive university image. On one hand, universities must portray themselves as moderate Islamic institutions open to different cultures. On the other hand, the Islamic state university in South Sumatra must uphold Islamic values and societal norms. These cases serve as valuable lessons for the university, emphasizing the need for greater caution in handling sensitive issues and enhanced communication with various stakeholders, including students, faculty, and the broader community. The negative publicity surrounding these incidents has made it increasingly challenging for the Islamic state university in

South Sumatra to maintain a positive image. Despite the university's genuine efforts to combat discrimination, promote moderation, and foster understanding of diversity, these efforts have been misinterpreted by irresponsible individuals as preventive measures rather than genuine attempts to uphold Islamic values.

This Islamic state university in South Sumatra is among the many faith-based institutions that frequently fall prey to media and social media attacks. Disinformation and wild opinions spread by irresponsible parties have tarnished the university's reputation. The university has established a complaint service and a public relations team to filter social media attacks. However, this team has yet to effectively mitigate the onslaught of media attacks. Therefore, this Islamic university needs to conduct a study to determine the appropriate steps to minimize media attacks and maintain its reputation as a moderate Islamic institution. This study should involve communication, media, and public relations experts to formulate an effective strategy for the university. The goal of this study is to identify the university's specific needs to minimize media attacks and preserve its reputation.

Universities face challenges in effectively communicating their brand identity and value proposition to various stakeholders. This is crucial for Islamic higher education institutions in Indonesia to operate in a dynamic and competitive landscape. Therefore, the author formulates the following research questions: What is the desired brand identity for Islamic higher education institutions in Indonesia? What are the goals that Islamic higher education institutions in Indonesia aim to achieve through branding strategies? What are the key factors that contribute to the implementation of branding strategies for Islamic higher education institutions in Indonesia? What are the follow-up actions for implementing branding strategies for Islamic higher education institutions in Indonesia?

2. LITERATURE REVIEW

This study employs the G.A.P. theory, a formula that Islamic State University Raden Fatah Palembang should adopt for its branding efforts. The G.A.P. theory's formula can effectively analyze what the university has and has not done in its branding endeavors. Developed by James Dillard, this theory proposes three formulas: goals, actions, and plans. According to Dillard's model, branding can be viewed as a cognitive process that examines how messages are crafted to achieve specific objectives. In this model, Dillard distinguishes between primary goals, which represent the desire for accuracy, and secondary goals, which influence strategy makers in achieving accuracy. The model assumes that individuals create messages with a certain level of awareness (Littlejohn & Foss, 2009).

The G.A.P. theory has two broad categories of goals (goals): Primary goals: These are the main communication objectives, such as persuading someone to change their opinion or behavior, informing them about a topic, or simply maintaining a relationship. Secondary goals: These are additional goals that may influence communication, such as preserving self-esteem, appearing credible, or avoiding conflict. Planning (plans) in this theory is a continuation of the planned goals. Plans involve selecting strategies and tactics for crafting messages. Some key factors that influence plan development in this theory are: Importance of the goal: The more important the goal, the more effort individuals or groups will put into planning the message. Clarity of the goal: The clearer the goal, the easier it is to develop a plan. Understanding individual characteristics: Individual factors such as communication skills, knowledge of the topic, and experience with persuasion will also influence plan development. Actions in the G.A.P. theory is the final stage where individuals or groups execute the plan and deliver the message. Specific actions will vary depending on the situation and may include verbal communication, written communication, and nonverbal communication.

The G.A.P. theory is influenced by several factors in its implementation process: Individual characteristics: These factors include an individual's communication skills, knowledge of the topic, and experience with persuasion, both individually and as part of a group. Context: The social and cultural context of communication also plays a role in influencing the G.A.P. Theory. Target characteristics: This factor considers the characteristics of the audience, such as their attitudes, beliefs, and values, which are crucial to consider when developing plans. In the context of the case study of Islamic higher education institutions in Indonesia, the researcher believes that the G.A.P. theory can be applied to analyze the university's branding goals in the following ways: Understand the specific goals and aspirations that the university aims to achieve through its branding efforts. Evaluate branding strategies by assessing the effectiveness of the university's branding initiatives in alignment with its goals and considering the target audience. Examine branding planning by evaluating the university's branding planning process, including goals, strategy development, and implementation.

3. METHODOLOGY

To understand the G.A.P. theory's workflow in university branding at one of the Islamic higher education institutions in Indonesia, the researcher employs a qualitative descriptive research method. This research aims to describe and understand a phenomenon in depth, focusing on individual meanings and experiences. The data used in this research are interview data, literature reviews, and documentation (Sugiyono, 2018). Interviews are used as a data collection method to explain how the public relations team at one of the Islamic higher education institutions in Indonesia carries out branding actions based on what they consider to be appropriate or inappropriate goals, actions, and planning. It is important to note that the research method uses an interview instrument because interviews are considered an effective way to collect in-depth and reliable data (Nasution, 2006).

In this method, the interviewer and informant interact directly through questions and answers to explore various information related to the research topic (Sugiyono, 2018). The effectiveness of this method is considered evident.Informants consist of public relations officers, students, and prospective students who follow the university's social media, news, and website. This is because qualitative research fundamentally relies on information from informants to understand the phenomenon under study (Nasution, 2006). Interview results will be analyzed using the data triangulation method in the form of data triangulation and source triangulation. This allows the author to construct a theory based on the interview results. Additionally, the author can analyze the interview results systematically using content analysis techniques. This can help the author identify keywords, phrases, and key concepts from the conducted interviews (Sugiyono, 2018).

4.RESULT AND DISCUSSION

In the increasingly competitive Indonesian higher education landscape, Islamic universities face the challenge of attracting top students and building a global reputation. Strong branding is key to differentiating themselves from other universities and achieving strategic goals (Sujchaphong et al., 2017). Effective branding for Islamic universities must reflect their unique Islamic identity, emphasize academic excellence, and create an inclusive and supportive environment for students from diverse backgrounds. Active engagement in the community and opportunities to make a positive impact on the world are also attractive value propositions. Consistency in branding across all platforms, regular measurement to evaluate effectiveness, and collaboration with external stakeholders such as alumni and donors are crucial elements in building a strong and sustainable brand (Kuoppakangas et al., 2020). With the right branding strategies, Islamic universities in Indonesia can enhance their appeal to prospective students, strengthen their global reputation, and achieve long-term success in the dynamic higher education landscape. This research indicates that there are several steps already being taken by one Islamic university in Indonesia to gain wider acceptance within society.

Despite having a public relations team, Islamic universities still face misunderstandings due to negative news coverage. This is caused by factors such as ineffective communication, unclear messaging, lack of social media activity, low transparency and accountability, and inadequate crisis management expertise. To address these challenges, Islamic universities need to: Build open communication: Foster open and transparent communication with stakeholders, including students, faculty, staff, alumni, and the general public, Craft clear messages: Develop clear, consistent, and compelling messaging that accurately represents the university's values, mission, and achievements, Become active on social media: Engage actively on social media platforms to connect with audiences, share positive stories, and address concerns promptly, Enhance transparency and accountability: Implement measures to increase transparency and accountability, such as publishing regular reports and financial statements, Develop crisis management expertise: Train staff and leadership on crisis management strategies to effectively handle negative news and reputational threats, Prepare for crises: Develop a comprehensive crisis management plan that outlines clear procedures for responding to various crisis scenarios. By implementing these strategies, Islamic universities can build a strong and resilient reputation, minimize the risk of misunderstandings, and effectively manage negative news coverage.

Higher education is now entering a new era where branding has become an essential tool for competition and achieving strategic goals (Buono & Fortezza, 2017). Universities, once distinct from the business world, are increasingly adopting branding strategies to enhance institutional identity, attract students, and strengthen global reputation (Boffo, 2002). While the implementation of branding in universities raises concerns among some, many view it as an opportunity to improve efficiency and effectiveness. Similarly, an Islamic university in Indonesia has implemented a branding strategy combined with clear communication to enhance its value in the eyes of stakeholders such as students, faculty, and employers. However, the university's branding efforts have not been sufficient to maintain a consistently positive image in the media and public perception, as evidenced by the frequent negative news coverage that attempts to discredit the institution, even if such reports are inaccurate or merely opinion-driven. The university recognizes that the key to successful university branding lies in its proper and judicious implementation. While adhering to the core values of education, the university can leverage branding to establish a strong identity and achieve its strategic goals in an increasingly competitive landscape. However, this has not yet been effective in minimizing the negative news that constantly plagues the university. A positive university image can increase attractiveness to prospective students, enhance student satisfaction, and strengthen the university's reputation.

This Islamic university has essentially followed the recommended branding procedures, including setting goals, actions, and planning, which are executed by the public relations team. Public relations plays a crucial role in branding activities (Rohman, 2006). According to an interview with a public relations officer at the university, they have clear (goals) and aspire to become a leading Islamic university that upholds the values of moderation. This implies that despite its Islamic foundation, the university embraces and applies moderation principles in all aspects of campus life. Moderation in this context refers to a balanced and open approach, avoiding extremism and radicalism, while promoting tolerance and respect for diversity (Indah Sari et al., 2023). Furthermore, the university aims to dispel the notion that Islamic educational institutions are inherently discriminatory.

Instead, it is committed to fostering an inclusive and welcoming environment for all, regardless of their religious, ethnic, or cultural backgrounds. In doing so, the university strives to be a tangible example of how Islam and moderation can coexist harmoniously, and how Islamic-based universities can serve as conducive spaces for holistic intellectual and personal development for all students.

Identity is not merely a visual element; it encompasses a comprehensive strategy that includes internal and external communication. Effectively managing and evolving an identity in response to changing environments can provide a competitive advantage (Melewar et al., 2006). The university's identity has essentially evolved to become more general and acceptable to a wider audience, even beyond the religious context.

The branding efforts undertaken by the Islamic State University (UIN) to reinforce public trust in its strong commitment to tolerance have undoubtedly transformed it into the only sought-after public Islamic university in the southern Sumatra region. Among the achievements in realizing its goals are the establishment of a university identity that is increasingly open to diversity, fostering a sense of comfort and collaboration among individuals from various religious, ethnic, and cultural backgrounds, and providing opportunities for students to develop their competencies beyond the confines of Islamic organizations. These initiatives have also served as an effective overall marketing campaign for the university.

According to a public relations officer at the Islamic State University (UIN), the university has undertaken branding planning efforts, as evidenced by its establishment of several critical information dissemination channels, including a website and various social media platforms that provide comprehensive and easily accessible information about academic programs, faculties, and student activities to the general public. Branding has become increasingly important even in developing countries like Indonesia (Maunze et al., 2020).

The public relations officer has conducted analyses prior to information dissemination and branding activities. These analyses include PESTLE analysis (Political, Economic, Social, Technological, Legal, and Environmental factors). The public relations team regularly holds meetings with the university leadership to discuss branding strategies and adhere to legal regulations related to the university's identity in society. They also consider the utilization of evolving technology, socioeconomic factors, and both internal and external stakeholders. However, a challenge lies in the lack of documented analysis to support the measurability, relevance, and time-bound nature of branding activities. Planning remains somewhat ad hoc, while achieving high-quality information dissemination requires a clear and time-bound schedule for public relations activities.

Every piece of information disseminated aims to enhance public trust in the university itself (Clark et al., 2020). Therefore, this Islamic university consistently provides information related to student achievements, scholarships, academic programs, and various religious or general discussions. This includes content related to student learning outcomes, all adhering to applicable policies implemented by the central government or the university itself. A public relations officer at the Islamic university emphasizes that to achieve high-quality information, the public relations team consistently develops clear and easy-to-understand narratives in every piece of information. These narratives emphasize the university's commitment to improving the quality of education, nurturing a generation of high-achieving and virtuous young people, and contributing to national progress. Unfortunately, some individuals intentionally create false narratives from snippets of information to fuel negative public opinion about the university.

On the other hand, the public relations team currently relies on only one social media platform, despite the university's presence on various platforms such as Facebook, Twitter, TikTok, and others. Additionally, efforts to build relationships with influencers have not been fully maximized. Utilizing social media effectively can significantly enhance public understanding of the Islamic university (Desai & Han, 2019). Social media is considered crucial due to its vast data potential, particularly for branding purposes (Maresova et al., 2020).

Both current and prospective students acknowledge that the university rarely involves influencers

in its branding efforts. However, influencers with large and loyal social media followings can significantly impact branding efforts (Carter, 2016; Khan, 2023). Collaborating with influencers could enable the Islamic university to reach a wider audience, including prospective students, parents, and the general public. Influencers can encourage their audience to like, comment on, and share positive information about the university on social media (Iqbal et al., 2023). Conversely, the university has already established a mature approach to utilizing mass media. They allocate funds to media outlets to disseminate information about the Islamic university. According (Negara & Nurrahmawati, 2019), leveraging mass media for branding purposes can shape a positive mental picture of the Islamic university in the public eye.

In terms of the "Actions" indicator, the Islamic university appears to lack a sufficient team to classify potential issues. While the public relations officer believes that branding efforts have been successful, prospective students and the general public perceive that the university still has some shortcomings in its branding strategy. One source noted that while their website is easy to navigate, it lacks essential features that could enhance user experience. According to articles by (Martini et al., 2022; Wee & Wee, 2014), websites with comprehensive information make it easier for users to absorb both general and branding-related information. Websites are also platforms that can be accessed easily at any time (Maulana & Adiwijaya, 2023). Although the Islamic university is considered active on social media, some platforms are not always updated with the latest information, and their content is deemed less appealing to prospective students. Additionally, the integration of information across faculties is inadequate, confusing users. These shortcomings indicate that the Islamic university needs to enhance its branding efforts to achieve its goals.

Despite the positive outcomes of the Islamic university's branding efforts, various challenges remain. There are still aspects that do not align with the university's overall goals. Some ongoing and evolving efforts include the modernization of social media platforms, incorporating a modern design that aligns with the university's colors and logo. The social media content reflects the university's openness to change and adaptation to technological advancements. It also demonstrates a sense of tolerance by embracing sensitive topics related to religious differences and avoiding bias and discrimination in religious education. This transformation has changed the university's image from a stagnant religious institution to an educational institution offering a broad and general range of knowledge. Notably, this knowledge is taught with a foundation in responsible Islamic values.

This Islamic state university faces a significant challenge in overcoming the public perception that religiously based universities solely focus on religious education. While (Franken, 2021) emphasizes the positive role of religious elements in fostering good values during the learning process (Sinclair, 2022), the general public tends to perceive Islamic universities as having a limited scope, confined to religious knowledge. However, achieving a well-rounded education for Muslim students requires the integration of general knowledge as well. Consequently, disseminating information, particularly regarding sensitive content such as showcasing student creativity in various fields, including art and choreography, or content that may not directly align with religious teachings but is considered positive from a general knowledge perspective, can backfire on the university.

The research findings indicate that while some individuals are proud of this Islamic university for demonstrating tolerance and human rights, others perceive the content it displays as offensive to religion and unforgivable. However, as discussed in the article (Wright, 2022), religious education should foster a broad, critical, and reflective perspective among knowledgeable individuals who respect and embrace diversity. Islamic universities play a crucial role in disseminating the values of Islam rahmatan lil 'alamin (mercy for all creation). However, numerous media outlets attempted to intervene in the operations of this Islamic university, deeming it inconsistent with its original goals. This intervention stems from the conservative attitudes of some Indonesian individuals. The loss of

public trust and the disruption of efforts to promote religious moderation are undeniable consequences of irresponsible media attacks. Trust is paramount in building public loyalty towards the Islamic university (Ningrum et al., 2020).

To overcome current challenges, the Islamic university needs to adopt a multi-pronged approach. This includes enhancing the quality of education through updated curricula, innovative teaching methods, and attracting qualified faculty. Additionally, developing study programs relevant to modern needs is crucial, ensuring students graduate with the skills and knowledge demanded by the current job market. Furthermore, building effective communication with the public is essential. This can be achieved through open dialogue with stakeholders, utilizing various communication channels, and promptly addressing public concerns. Finally, the university must demonstrate its openness to diverse perspectives, as emphasized by (Wright, 2022). This means promoting interfaith dialogue, embracing multiculturalism, and fostering critical thinking among students. By implementing these strategies, the Islamic university can establish a positive image, regain public trust, and reclaim its position as a respected educational institution.

To rebuild public trust, the state Islamic University basically needs to take strategic steps, the first being Open and Transparent Communication, such as conducting open dialogue with students, parents, and the general public to understand their concerns and perceptions, explain openly and transparently the objectives and the reasons behind the regulations and policies implemented, using various communication platforms, such as social media, websites, and seminars, to convey accurate and up-to-date information and not ignoring any of them. Second, showing a friendly and tolerant Islam which the campus always shows. both from various information, activities, and learning systems, as stated (Ng, 2019) language elements, and values, which are packaged significantly will provide strong meaning and affection, so that in its efforts the Islamic University can carry out activities and programs that promote Islamic values such as compassion, tolerance, and inclusiveness, involving universities in social and community activities that benefit the wider community, providing space for students to express themselves and their thoughts freely and responsibly and the third is building collaboration: by collaborate with various parties, such as other Islamic educational institutions, civil society organizations, and the government, to promote religious moderation, carry out active participation in the dialogue between religious communities to build mutual understanding and tolerance and support the government's efforts to combat radicalism and extremism.

According to one of the interviewees, a public relations staff member at the Islamic university, regaining public trust requires time, commitment, and patience. The university must demonstrate consistency in implementing these strategic steps to regain its position as a role model for Muslims and contribute positively to society. With the right steps and strong commitment, the Islamic university can rebuild public trust and once again play a leading role in disseminating moderate and tolerant Islamic values.

5.CONCLUSION

To achieve effective and efficient goals, actions, and planning, one Islamic university in Indonesia has implemented a PESTLE analysis. This involves considering external factors that could influence their activities and information dissemination, such as political, economic, social, technological, legal, and environmental factors. The university has also identified stakeholders with potential interests in the GPA (Goal, Action, and Planning) framework. While the university has taken steps to analyze goals, actions, and planning, its approach falls short of creating truly SMART goals. Their actions are not specific, clearly measurable, relevant, or time-bound.

Additionally, their gap analysis has not significantly aided in shaping effective university branding. The university's public relations team lacks a thorough feasibility analysis when implementing its

actions. This has resulted in unexpected negative news coverage, partly due to a lack of clear and detailed priorities for their activities within specific periods. As a result of these shortcomings, the Islamic university faces challenges in building a positive image. The stigma associated with racism, stereotypes of religion-based universities, and negative news circulating on social media can tarnish the university's reputation. The study concludes that building a positive university image requires extra effort. The university needs to research to determine the most effective steps to minimize media attacks and maintain its reputation as a moderate institution.

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STAKEHOLDERS ANALYSIS IN NON-PHYSICAL PLANNING OF THE BATUTULIS TOURISM AREA IN BOGOR CITY

Fitria Herawati, Bambang Hengky Rainanto, Charles Parnauli Saragi

Department of Tourism, Faculty of Tourism and Informatics,
Institut Bisnis dan Informatika Kesatuan, Bogor, Indonesia

Corresponding author: fitriaheraqati18@gmail.com

Abstract

The city of Bogor is one of the oldest cities in Indonesia so it has unique culture as well as interesting historical heritage and stories in it, such as the Batutulis area. The Batutulis area is one of the areas that has rich traces of the history of the Sundanese Kingdom in Bogor City. With its rich historical and cultural heritage, the Batutulis area has been developed into a historical and cultural tourism area in the city of Bogor. Developing an area to become a tourism area requires good cooperation between the stakeholders involved, but in this case there are problems caused by a lack of communication and cooperation, resulting in misunderstandings between stakeholders. Therefore, appropriate strategies are needed in non-physical planning of the Batutulis Tourism Area, such as the role of stakeholders, tourism product development plans, and tourism marketing so that tourism development plans can be made carefully. The research was carried out with the aim of identifying, classifying and describing the relationships between stakeholders involved in the development of the Batutulis Tourism Area, Bogor City. The method used in this research is descriptive qualitative with stakeholder analysis and SWOT analysis. Data collection techniques were carried out using observation, interviews and documentation. Interviews were conducted with stakeholders included in Petahelix Strategy. The success of developing the Batutulis Tourism Area in Bogor City is determined by strategy and collaboration between the stakeholders involved so that they must synergize in every coordination, communication and cooperation between stakeholders.

Keyword: *Stakeholders, Pentahelix Strategy, Non-Physical Planning, Tourism Area Development, Historical and Cultural Tourism*

1.INTRODUCTION

In Indonesia, tourism is one of the country's main sources of foreign exchange, because with its natural wealth, there are various types of tourism in Indonesia, both natural, social and cultural tourism spread from Sabang to Merauke. Apart from having millions of natural tourist attractions, Indonesia is also known for cultural tourism, including many historical sites and various arts and culture of local communities which attract domestic and foreign tourists. Thanks to cultural diversity and abundant natural wealth, Indonesia has become a tourist destination because of its enormous tourism potential (Muniroh et al., 2020).

Regarding the diversity of wealth that Indonesia has, one of the things that most attracts tourist visits and has enormous tourism potential is the uniqueness and diversity of its tribes and local culture. Indonesia, with its cultural diversity, must take advantage of this opportunity to develop a tourism industry based on local wisdom (Pribadi et al., 2021). With the potential of local wisdom, a tourist destination will have more value in the eyes of tourists who will visit. Apart from that, Indonesia is an archipelagic country that is very rich in cultural potential and great heritage

tourism. The heritage in question is in the form of material and intangible cultural heritage that is inherited and practiced from generation to generation in society in an environment (Kusumawidjaya et al., 2023). This heritage tourism can be in the form of cultural tourism and historical tourism which really attracts visiting tourists. One place that has abundant historical and cultural tourism is the city of Bogor.

In the Batutulis City Tourism Strategic Area Plan Preparation report (2023), it is explained that the city of Bogor has riches in the form of natural beauty, unique culture, as well as interesting historical heritage and stories in it because Bogor is one of the oldest cities in Indonesia. When Indonesia was colonized by the Dutch, Bogor was given the name Buitenzorg, which in Dutch means without worry. Bogor is the center of the economy, science, tourist and cultural attractions as well as a mountain resort. The interesting thing is that Bogor was once the capital of the Ancient Sunda Kingdom called Pakuan Pajajaran. This is reinforced by the existence of recorded evidence regarding the city of Pakuan which was lost and only rediscovered by a Dutch expedition in 1687 led by Scipio and Riebeeck where they conducted research on the Batutulis inscription and other sites and then concluded that the city of Bogor was once the center of government of the Kingdom. Pajajaran.

The city of Bogor also has various tourism potentials, so that areas that have the potential to attract tourist visits will be developed into Strategic Tourism Areas in the City of Bogor. Referring to Law of the Republic of Indonesia Number 10 of 2009 concerning tourism, what is meant by Tourism Strategic Area has the meaning of an area that has the potential for tourism development which has an important impact on one or several aspects, such as social and cultural, economic growth, sustainability. environment, increasing natural resources, defense and security. As explained in the Bogor City RIPPARDA Review (2022), the direction of planning for the Strategic Tourism Area in Bogor City is divided into two, including:

1. The main strategy for developing destinations includes the Bogor Botanical Gardens and Bogor Palace, the Tajur and Katulampa shopping and tourism areas, the Pajajaran shopping tourism area, and the jungle tourism area.
2. Secondary destination development strategies include:
    a. The development of the Central Bogor Strategic Tourism Area and its surroundings includes educational tourism areas around the Botanical Gardens, the Suryakencana Historical Center and the Taman Kencana Culinary Area.
    b. Development of the East Bogor Strategic Tourism Area includes the Culinary Area of Jalan Padjadjaran, Sukasari and Binamarga.
    c. Development of the North Bogor Strategic Tourism Area and its surroundings includes the Culinary Tourism Area from Jalan Bambalung to Panduraya and the Bantar Jati Historical Tourism Area.
    d. Development of the South Bogor Strategic Tourism Area and its surroundings includes the Batutulis Historical and Cultural Area and the Empang Historical and Cultural Area.
    e. Development of the Strategic Tourism Area of Tanah Sareal and its surroundings includes the Pajajaran Sports Hall Area, Jalan Ahmad Yani and Soleh Iskandar Culinary Areas.
    f. Development of the West Bogor Tourism Strategic Area (Lake Situgede) (Ripparda, 2022).

The Batutulis area and its surroundings have rich historical traces of the civilization of the Sunda

Kingdom. Therefore, in the Batutulis area, the Ageung Batutulis Pajajaran Earth Museum is being built as the main tourist attraction, a historical and cultural tourist attraction in Bogor City, which aims to protect the natural and cultural resources of the Sundanese tribe by paying attention to the environmental carrying capacity of the tourist attraction, preserving The local wisdom of the people around tourist attractions can also restore the identity of Bogor City as a Tourist City, Historical City and Cultural City. Judging from the historical and cultural heritage found and the results of the Bogor City RIPPARDA Review (2022), the Batutulis area and its surroundings have been designated as a City Tourism Strategic Area located in South Bogor District, Bogor City.

In the development plan for the Batutulis area as a strategic tourism area in South Bogor District, Bogor City certainly requires management with a structured and planned tourism development pattern in such a way that the existing potential can be maximized or utilized optimally. In efforts to develop, manage and develop tourism, stakeholders are an important element. This is the main factor in maintaining the dynamics and development of the tourism market. Stakeholders can be communities, organizations, socio-economic groups, governments or institutions from various dimensions at any level of society at any level (Masrurun & Nastiti, 2023).

In the construction of the Ageung Batutulis Pajajaran Earth Museum in the Batutulis Tourism Area, there were several obstacles caused by a lack of communication and cooperation between the stakeholders involved. This can be seen from the action of rejection from the people who care about Bumi Ageung Batutulis and the cultural community regarding the design of the construction of the Batutulis Museum which is deemed not to be in accordance with the identity of Sundanese culture which is synonymous with the Pajajaran Kingdom and not in accordance with the Regional Regulations which have just been passed by the Bogor City Local People's Representative Council and not in accordance with Law no. 5 of 2017 concerning cultural progress (Dwi, 2023). So the Bogor City Government changed the architectural design of the Ageung Batutulis Pajajaran Earth Development Museum from several slightly different shapes, ornaments and layouts (Susanti, 2023). The Head of the Bogor City Tourism and Culture Office revealed that the Ageung Batutulis Pajajaran Earth Museum will become a Sundanese historical and cultural site which is part of the Bogor City Government's efforts to provide education to the public regarding the close history of the Pajajaran Kingdom. Batutulis Museum inside is a museum or gallery filled with replicas of heirloom objects from the Pajajaran Kingdom, apart from that there are also dioramas and historical storylines of Bogor (Zakaria & Yulianto, 2023). Referring to the background and phenomena in the form of obstacles that occur due to the lack of close collaboration between stakeholders involved in planning the Batutulis Tourism Area, Bogor City, the author is interested in conducting research with the title "Stakeholder Analysis in Non-Physical Planning of the Batutulis Tourism Area, Bogor City" so that it is hoped that this can be achieved. help resolve these problems so that the planning process for the Batutulis Tourism Area in Bogor City can run well and achieve its goals.

2.LITERATURE REVIEW

2.1 Tourism Planning

Tourism planning is the process of determining the most appropriate resources, programs and activities by considering the needs of the individual or group planning a tourist trip (Murdana et al., 2023). Tourism planning is very important because it is used as a guide for tourism actors, as a means of anticipating the possibility of an unexpected event and as a means of directing tourism implementation so that alternative solutions and goals can be achieved. This aim is as a tool to measure tourism success, as a monitoring or evaluation tool to ensure the effectiveness and efficiency of tourism implementation and to provide feedback for future tourism implementation (Barambae et al., 2019).

2.2 Tourism Strategic Area

A tourism area is a geographic area or certain area which has tourist attractions, facilities and activities developed to attract the attention of tourists to visit the tourism area. The tourism area here is an area visited by many people or tourists because this area has interesting tourist attractions. The aim is to attract and meet the needs of tourists while supporting the economy of local communities (Barambae et al., 2019). Based on Law of the Republic of Indonesia Number 10 of 2009 concerning tourism Chapter I Article 1, what is meant by Tourism Strategic Area or abbreviated as Tourism Strategic Area is an area that has the potential for tourism development which has an important influence in one or more aspects, such as economic, social and economic growth. culture, empowerment of natural resources, environmental carrying capacity, as well as defense and security. Tourism strategic areas consist of National Tourism Strategic Areas (KSPN), Provincial Tourism Strategic Areas (KSPP) and Regency or City Strategic Areas (KSPK).

2.3 Historical and Cultural Tourism

Historical tourism is a type of tourism that emphasizes visits to historical places, cultural heritage sites and historical monuments. Preserving and revitalizing historical areas is one of the conditions for developing urban tourism as a valuable heritage of the past and part of the identity of local communities that leads to sustainable tourism. Tourist interest in visiting historical places is quite high, so the preservation and revitalization of historical areas has an impact on the economy and sustainable income (Khavari et al., 2023). Meanwhile, Cultural tourism is a tourism product that utilizes the diversity of a region's cultural heritage to become a tourist attraction (Pribadi et al., 2021). Cultural tourism is a trip undertaken by someone based on their own wishes with the aim of broadening their outlook on life by visiting or inspecting places to find out about the condition of the people in an area by looking at their way of life, customs or customs, as well as studying their arts and culture (Utama, 2017).

2.4 Tourism Stakeholders

In efforts to develop, manage and develop tourism, stakeholders are an important element. Stakeholders are key actors or players who can be involved either directly or indirectly. Stakeholders can be communities, organizations, socio-economic groups, governments or institutions from various dimensions at any level of society at any level (Masrurun & Nastiti, 2023). The successful development of a tourism destination requires an analysis of the characteristics of the relevant stakeholders. Tourism development must also provide benefits for the stakeholders involved. As an effort to develop potential in tourist attractions, cooperation between stakeholders is needed because it aims to help and support the entire process in developing tourism potential in an area. Effective communication and good collaboration between stakeholders are important to realize their role in tourism development (Heslinga et al., 2019).

To carry out actor mapping, it is done using the pentahelix strategy. The pentahelix strategy is expected to accelerate the development of tourism potential in tourist destinations. In the pentahelix strategy, there is collaboration and cooperation between stakeholders who will be involved in the tourism development process, with the following explanation (Hakim, 2022).

1. Academics

   Academics are stakeholders from universities who are experts in their field. Academics' role is to create or carry out an activity by looking at existing theories and providing knowledge about the latest relevant concepts and theories that can also be developed and applied to gain an advantage over competitors on an ongoing basis. In tourism planning, academics act as drafters or create tourism planning concepts that refer to theory and use methods or knowledge available in various materials.

2. Businesses

   Entrepreneurs or businesses are parties who help tourist attractions to create memories for visiting tourists. This is done by creating a product that becomes an icon at the tourist attraction, resulting in its own uniqueness that is different from other tourist attractions. Business actors are expected to be able to create added value for a tourist attraction and maintain sustainable growth. In the pentahelix model, entrepreneurs or businesses act as actors who have high creativity so that they can help provide added value and help the development and growth of a tourist attraction.

3. Community

   The community contains people who are interested and have the goal of developing and developing an area. The community here plays a role as an accelerator as well as an intermediary or liaison in helping plan the development of the area. One of the communities that plays an important role in planning the development of tourist attractions is the tourism awareness group or pokdarwis. The task of the Pokdarwis in planning is to help develop tourism potential in an area.

4. Government

   The government has a role as the party that makes regulations and monitors and has the right to make regulations that have the responsibility to develop the tourism potential of an area. The government is involved in all activities related to planning, licensing, program creation, implementation, monitoring, control, promotion, financial allocation, etc. In this case, the government also plays a role in coordinating with other stakeholders in carrying out planning. One of the local government's efforts in planning the development and development of tourist attractions is to provide training for the public and communities to help develop these tourist attractions.

5. Media

   Publication media has a role as an expander or party that provides support in the form of publications, helps with promotions and creates a brand image for a tourist spot by disseminating various information to promote the tourist spot so that it is known to the general public and aims to attract the attention of tourists to come visit. The media does not have a policy in planning or developing tourist attractions, but only disseminates information regarding situations, activities and tourist objects that are interesting and can be visited, information about tourism from various stakeholders, conducting interviews with related parties with the aim of providing information that is in accordance with the facts in the field.

3.METODHOLOGY

This research uses descriptive research with a qualitative approach supported by SWOT analysis and stakeholder analysis according (Reed et al., 2009). Descriptive research methods with a qualitative approach are used to conduct research in natural places, the research does not produce treatment, in this research the researcher collects emic data which is not the researcher's view but is based on the views of the data source (Sugiyono, 2019). In the research that will be carried out, the research object is stakeholders in the nonphysical planning for the development of the Batutulis Tourism Area. The subjects or informants in this research are related people, theories, phenomena, which refers to sources which means all human resources in the Batutulis area and its surroundings. In this research, the data obtained came from the results of in-depth interviews with various sources or informants as well as agencies related to the research object. In this research, data sources were obtained from primary data and secondary data. Primary data was obtained through observations at the research site and in-depth interviews with informants or sources as well as agencies related to planning the development of the Batutulis Tourism Area, while secondary data was obtained from

various documents such as the 2022 Ripparda Review, the City Tourism Strategic Area Batutulis Terms of Reference, books, websites, journals and previous research, and other media sources. Data collection methods in this research include observation, interviews and documentation.

Table 1: List of Research Informants

No	Keypersorns	Remarks	Number
1	Head of Tourism and Culture Department Bogor City	Interview	1
2	Head of South Bogor District	Interview	1
3	Head of Batutulis Subdistrict	Interview	1
4	Head of Lawanggintung Subdistrict	Interview	1
5	Founder of Bogor Historia Community	Interview	1
6	Founder of Bogor Historical Walk Community	Interview	1
7	Head of Department of Tourism IBI Kesatuan	Interview	1
8	Communications Lecturer Djuanda University	Interview	1
9	Local Communities	Interview	1
10	Owner of Media Bogor 24 Update	Interview	1
11	Co-Founder Ekotifa	Interview	1
		Total	11

Source: author, 2024

4. RESULT AND DISCUSSION STAKEHOLDER ANALYSIS

4.1 Identify Stakeholders

Identification of stakeholders is carried out by looking at the role of each stakeholder involved in planning the development of the Batutulis Tourism Area. Identification of stakeholders in this research was carried out using the pentahelix strategy, namely by mapping the actors from the stakeholders involved in planning the development of the Batutulis Tourism Area. Based on the results of stakeholder identification using the pentahelix strategy, actor mapping of the stakeholders involved included academics, business, community, government and media with the following description.

Table 2: Identification of Stakeholders in the Batutulis Tourism Area

Classification	Stakeholders	Role
Government	Regional Planning Agency	Advisor and supervisor of regional policies and regulations.
	Tourism and Culture Department	Planner, builder, developer and supervisor of tourism elements in the Batutulis Tourism Area.
	Education Department	Accelerator of historical and educational tourism programs for students and historical narrative developers in the Batutulis Tourism Area.
	Cooperatives Department	Manager and coach of MSMEs and tourism businesses in the Batutulis Tourism Area.
	Environmental Department	Garbage and waste handling planner in the Batutulis Tourism Area.
	Parks and City Forests Department	Providing information facilities and tourism support facilities for tourists in the Batutulis Tourism Area.
	Public Health Department	Procurement or creation of a security, safety and health guarantee system for tourists in the Batutulis Tourism Area.
	Indonesian Red Cross	Collaborate with the Health Service in procuring or creating a security, safety and health guarantee system for tourists in the Batutulis Tourism Area.
	Regional Disaster Management Agency	Collaborate with the Health Service in procuring or creating a security, safety and health guarantee system for tourists in the Batutulis Tourism Area.
	Cultural Heritage Expert	Planner for in-depth historical data, manager and supervisor of Cultural Heritage elements in the Batutulis Tourism Area.
	District	Regional supervisor and manager in the Batutulis Tourism Area.
	Sub-district	Regional supervisor and manager in the Batutulis Tourism Area.
Academics	IBI Kesatuan	Research and training as well as tourism services to the community
	Elementary-high school	Carrying out learning programs and making visits to tourist attractions
Community	ASITA	Tourism market accelerator and integrator to develop and connect tourism services in the Batutulis Tourism Area.
	IHRA	Tourism market accelerator and integrator to develop and connect tourism services in the Batutulis Tourism Area.
	ITGA	Collaborating with the Department of Tourism and Culture as organizer of tour guide training in the Batutulis Tourism Area.
	Reka Community	Partners in developing the attractiveness of the creative economy sector
	Tourism Driving Community	Motivators and motivators of society towards tourist attractions
	Local Communities	Tourism human resources in the Batutulis Tourism Area.

Classification	Stakeholders	Role
	Bogor Historia	Validation of historical data and promotion of the Batutulis Tourism Area.
	Bogor Historical Walk	Validation of historical data and promotion of the Batutulis Tourism Area.
	Mojang Jajaka	Promotor and *content creator*
Business	Hotel	Provider of accommodation services, promoters and tour packages
	BUMN	CSR Program
	BUMD	CSR Program
	Rumah 30 Restaurant	Collaborate on tour packages
	UMKM around KSPK	Supporting heritage tourism
Media	Influencer	Promotion
	Historical segmentation media	Data validation and promotion to target markets

Source: author, 2024

Based on table 2 above regarding stakeholder identification, it can be seen that tourism stakeholders in the Batutulis Tourism Area are divided into five classifications based on the pentahelix strategy, including academics, business, community, government and media. Academic stakeholders include IBI Kesatuan, elementary-high school schools. Business stakeholders include hotels, BUMN, BUMD, Rumah 30 Restaurant and surrounding MSMEs. Community stakeholders include ASITA, IHRA, ITGA, Reka, Tourism Driving Community, Local Communities, Bogor Historia, Bogor Historical Walk and Mojang Jajaka. Government stakeholders include the Regional Planning Agency, Bogor City Tourism and Culture Service, Education Service, Cooperative and MSME Service, Environment Service, City Parks and Forest Service, Health Service, Indonesian Red Cross, Regional Disaster Management Agency, Cultural Heritage Experts, District, Ward. Media stakeholders include influencers and historical segmentation media. A classification was carried out on the stakeholders involved in planning the development of the Batutulis Tourism Area. Stakeholder classification is carried out by analyzing stakeholder involvement which is classified as: a. Making and determining tourism policy

b. Providing funding support
c. Carrying out research or advocacy
d. Facilities in the form of education or technology
e. Tourism product development.

Table 3: Identification of Stakeholders in the Batutulis Tourism Area

Pentahelix	Stakeholders	Tourism Policy	Funding Support	Study /Advocacy	Technology Facilitation /Training	Tourism Product Development
		Influence			Interest	
Pemerintah	Regional Planning Agency	4	3	4	1	2
	Tourism and Culture Department	4	4	4	4	4
	Education Department	1	1	4	2	1
	Cooperatives Department	1	2	1	1	4
	Environmental Department	3	3	1	1	1
	Parks and City Forests Department	1	2	1	1	2
	Public Health Department	1	1	1	1	1
	Indonesian Red Cross	1	1	1	1	1
	Regional Disaster Management Agency	1	1	1	2	1
	Cultural Heritage Expert	3	2	1	1	4
	District	1	1	1	1	1
	Sub-district	1	1	1	1	1
Academics	IBI Kesatuan	1	1	4	3	3
	Elementary-high school	1	1	1	1	1
Community	ASITA	1	1	1	2	3
	IHRA	1	1	1	2	3
	ITGA	1	1	1	2	1
	Reka Community	1	1	1	1	3
	Tourism Driving Community	2	1	2	1	4
	Local Communities	1	1	1	1	3
	Bogor Historia	1	1	2	1	4
	Bogor Historical Walk	1	1	2	1	4
	Mojang Jajaka	1	1	1	2	3
Business	Hotel	1	1	1	2	1
	BUMN	1	2	2	1	1
	BUMD	1	2	2	1	1
	Rumah 30 Restaurant	1	1	1	1	1
	UMKM around KSPK	1	1	1	1	3

Media	Influencer	1	1	1	1	1
	Historical segmentation media	1	1	2	1	1

Information:
4 = Very Involed
3 = Involved
2 = Slightly Involved
1 = Not Involved

High Engagement
Medium Engagement
Low Engagement
Not Involved

Source: author, 2024

Based on table 3 above, it can be seen the role of stakeholders in planning the development of the Batutulis Tourism Area. The stakeholder whose involvement is very high is the Bogor City Tourism and Culture Office. This is obtained from data obtained and seen from the main tasks and functions of the Bogor City Tourism and Culture Office which plays a role in almost every strategy design, policy direction and program implementation related to the development of the Batutulis Tourism Area, including making Tourism Policies and Regulations, Development of Tourism Destinations, Development of Tourist Attractions, Community Involvement in Tourism Development, Development of Tourism Investment, and Controlling the Impact of Tourism Development. Apart from that, there are also the Education Service, IBI Kesatuan, Regional Development Planning Agency, Cultural Heritage Experts and the Environment Service. Meanwhile, stakeholders whose involvement is relatively low in the development of the Batutulis Tourism Area include the Health Service, Indonesian Red Cross, District, Village, Elementary and High School, Rumah 30 Restaurant, Influencers. Based on the identification of stakeholder influences and interests, stakeholders involved in developing the Batutulis Tourism Area must have a strong commitment to efforts to develop and develop the area.

4.2 Classification of Stakeholders

Stakeholder classification is carried out by interpreting the matrix of influence and interests of stakeholders in planning the development of the Batutulis Tourism Area. The stakeholder classification is divided into key player, subject, context setter and crowd (Brison, 2015) with the following description:

1. Key players, namely stakeholders who act as actors who have the greatest role and involvement in tourism management. This can be assessed from the role of stakeholders in tourism planning, implementation, management, and utilization of the tourism system.
2. Subject, namely stakeholders who act as actors who have great interests but have little influence on tourism implementation because these stakeholders have small capacity in tourism planning, implementation, management, and utilization of the tourism system so they must collaborate with other stakeholders in order to have greater influence.
3. Context setter, namely a stakeholder who acts as an actor who has a small interest but can have a big influence on tourism.
4. Crowd, namely stakeholders who act as actors who have little interest and influence on tourism.

The following are the results of stakeholder classification in the non-physical planning of the Batutulis Tourism Area in the form of quadrants presented in the following image.

Figure 1. Classification of Stakeholders in the Batutulis Tourism Area Source: author, 2024

1. Key Player

Based on the stakeholder mapping categorization analysis above, it can be seen that there is one key player or key stakeholder in quadrant II in the development of the Batutulis Tourism Area, namely the Bogor City Tourism and Culture Office. In this research, it shows that the Bogor City Tourism and Culture Office has a high influence and interest in the development of the Batutulis Tourism Area. This is because the Bogor City Tourism and Culture Office has the authority to formulate tourism policies that can accommodate all stakeholder interests in developing the Batutulis Tourism Area.sw

2. Subject

Based on the stakeholder mapping categorization analysis, there are two stakeholders included in quadrant I subject, namely the Education Service and IBI Kesatuan. This classification has high importance but has low influence in the development of the Batutulis Tourism Area. In this case, the Education Department has a high interest in deepening the material for the narrative of each Cultural Heritage site. Meanwhile, the IBI unit plays a role in carrying out research, creating and planning programs and tour packages in the Batutulis Tourism Area.

3. Context setter

Based on the categorization analysis of the stakeholder mapping results, there are three

stakeholders in quadrant III Context setter, namely the Regional Development Planning Agency, the Environmental Service and Cultural Heritage Experts. All stakeholders included in the context setter have a high influence but their interest and involvement is low in the development of the Batutulis Tourism Area. The Regional Development Planning Agency's role is to review tourism policies and regulations related to the development of the Batutulis Tourism Area by creating a monitoring and evaluation system program for its implementation. Meanwhile, the Environmental Service is helping to create policies regarding cleanliness and management of rubbish and waste in the Batutulis Tourism Area. And Cultural Heritage Experts assist in the process of deepening material for the narrative of each cultural heritage site in the Batutulis Tourism Area, apart from that they are also tasked with establishing a social or institutional system for managing the Batutulis Tourism Area and also developing cooperation related to management and fostering related cooperation management of historical and tourism assets in the Batutulis Tourism Area. The Context Setter group needs encouragement to continue to increase mutual involvement between stakeholders. 4. Crowd

Based on the stakeholder mapping categorization analysis above, there are stakeholders with a role as a crowd in quadrant IV, namely the Bogor Historia Community, Tourism Observer Community, Bogor Historical Walk Community, ASITA, IHRA, ITGA Mojang Jajaka, Department of Cooperatives and MSMEs, surrounding MSMEs, elementary and high school, community, Reka community, Hotel, ITGA, BPBD, BUMD, BUMN, City Parks and Forest Service, Rumah 30 Restaurant, Influencer, Health Service, District, Village, Indonesian Red Cross. Stakeholders with the role of crowd in quadrant IV are the stakeholders with the least interest and influence on the desired results, whether in funding support, tourism policy, research or advocacy, technology facilitation or training or tourism product development. However, even though the stakeholders in the crowd group provide influence and interests that are not yet optimal, the stakeholders in this group are also part of the stakeholders in the development of the Batutulis Tourism Area.

4.3 Stakeholder Relations

In the development of the Batutulis Tourism Area, there is a division of actors based on the Pentahelix strategy, namely academics, business, community, government and media. From the academic stakeholders, there are IBI Kesatuan, elementary-high school/equivalent. From the business stakeholders side there are hotels, BUMN, BUMD Rumah 30 and other MSMEs around the Batutulis Tourism Area. From the community stakeholders, including ASITA, IHRA, ITGA, Reka, Tourism Driving Community, community, Bogor Historia, Bogor Historical Walk, Mojang Jajaka. From the government stakeholders, including the Bogor City Tourism and Culture Service, Education Service, Cooperative and MSME Service, Transportation Service, City Parks and Forest Service, Health Service, Indonesian Red Cross, Regional Disaster Management Agency, Cultural Heritage Experts, Subdistricts and Villages. From the media stakeholders, including influencers and historical segmentation media. From the classification of stakeholders based on the pentahelix strategy, the following is data on the relationships between stakeholders involved in developing the Batutulis Tourism Area.

Table 4: Relations between stakeholders in the Batutulis Tourism Area

No	Strategy	Program	Main Stakeholders	Cooperation
1	Making Tourism Policies and Regulations	Implementation monitoring and evaluation system	Development Planning Agency at Sub-National Level	Tourism and Cuture Department
2	Tourism Destination Development	1. Marketing analysis and planning and development of branding materials 2. Preparing an analysis of the tourism market potential around KSPK Batutulis. 3. Development of promotional and information materials	Dinas Pariwisata dan Kebudayaan Kota Bogor	ASITA, IHRA, Dinas Koperasi dan UMKM
3	Development of Tourist Attractions	1. Local tour guide training and traditional arts workshops 2. Research and Curatorial Planning and Collaboration with Local History and Culture Experts to increase narrative depth 3. Preparing historical education programs, preparing integrated tourist routes and planning special interest tourism programs	Tourism and Cuture Department	Education Department, TACB, Academics, ASITA, IHRA
4	Community involvement in tourism development	1. Formation of a Management Team in the Batutulis Tourism Area and Institutional Training 2. Organizational management training and preparation of institutional strategic plans 3. Creation of joint planning forums and participatory planning training 4. Planning and Preparing Training Curriculum	Tourism and Cuture Department	TACB, Local Communities, ITGA
5	Tourism Investment Development	1.Collaboration with various stakeholders and establishing business partnerships 2.Tourism business workshop sessions and mentorship programs in preparing business plans 3. Planning and preparing plans for empowering Micro, Small and Medium Enterprises	Tourism and Cuture Department	TACB, Local Communities,

6	Controlling the Impact of Tourism Development	1. Crisis mitigation planning at tourist locations 2. Creation of evacuation routes	Tourism and Cuture Department	Education Department, BPBD dan PMI

Based on table 4 above, each stakeholder from academics, business, community, government and media has a relationship with each other with different interests. In table 4 no. 1 it can be seen that the Regional Development Planning Agency collaborates with the Bogor City Tourism and Culture Office in making Tourism Policies and Regulations. This collaboration resulted in an implementation monitoring and evaluation system program, which aims to create a monitoring and evaluation system for the implementation of tourism programs as well as creating a regular frequency for evaluation sessions related to the development process of the Batutulis Tourism Area.

In table 4 no. 2 Bogor City Tourism and Culture Department collaborates with ASITA, IHRA, Cooperatives and MSMEs Department for Tourism Destination Development. From this collaboration, a marketing analysis and planning program was produced as well as the development of branding materials with the aim of realizing longterm marketing strategy planning and community involvement in marketing through collaborative activities. The next program is preparing an analysis of the tourism market potential around the Batutulis Tourism Area with the aim of preparing potential market segment profiles and implementing marketing plans for each market segment. Another program is the development of promotional materials and information to strengthen the image of tourism in the Batutulis Tourism Area by producing quality multimedia content and being active in managing social media, collaborating with local and national media and collaborating with influencers.

In table 4 no. 3 Bogor City Tourism and Culture Department collaborates with the Education Department, TACB, Academics, ASITA in developing tourist attractions. This collaboration resulted in a local tourist guide training program and traditional arts workshops to create tourist guides at City Tourism Strategic Area Batutulis and the provision of workshops as one of the tourist activities. The next collaboration is research and curatorial planning as well as collaboration with local historical and cultural experts to increase the depth of the narrative so that collaboration with local historians and cultural experts as well as researchers can be created to create more in-depth material. Other collaborations include preparing historical education programs, preparing integrated tourist routes and planning special interest tourism programs by preparing integrated tour packages and tourist routes involving several cultural heritage sites such as historical and archaeological tours.

In table 4 no. 4 The Bogor City Tourism and Culture Office collaborates with TACB, community groups and ITGA in strategies for community involvement in tourism development. This collaboration resulted in several programs including a program for forming a management team in the Batutulis Tourism Area and holding institutional training with the aim of realizing management of the management team in the Batutulis Tourism Area as well as determining the organizational structure and responsibilities of each team member. The next program is organizational management training and the preparation of institutional strategic plans by involving members and staff in organizational management training and evaluation of improvements in skills and knowledge after training. Other programs are creating joint planning forums and participatory planning training by creating integrated planning teams involving various institutional organizations and social institutions. Then the planning program and preparation of the training curriculum includes the preparation of a vocational training curriculum for historical tourism

guiding and the active participation of tour guides in the training.

In table 4 no. 5 The Bogor City Tourism and Culture Department collaborates with TACB, community groups, the Cooperatives Service and MSMEs in developing tourism investment. This collaboration resulted in several programs including collaboration with various stakeholders and the formation of business partnerships by forming cooperation agreements or MOUs with various business partnership stakeholders in tourism marketing in the Batutulis Tourism Area. Other programs include tourism business workshop sessions and mentorship programs in preparing business plans so that stakeholders can participate actively and improve the completeness and quality of business plans. Other collaborations include planning and preparing MSME empowerment plans by creating documents regarding analysis of MSME needs, business and management training for MSMEs as well as establishing a digital platform to facilitate MSME networks and provide financial access.
In table no. 6 Bogor City Tourism and Culture Department collaborates with the Health Service, BPBD and PMI in Controlling the Impact of Tourism Development. This collaboration resulted in several programs including crisis mitigation planning at tourist locations so that clear guidance documents regarding preparedness and mitigation, emergency response, recovery and normalization as well as involvement and integration of media channels for various stakeholders were formed. Another collaboration is the creation of evacuation routes by implementing the creation of evacuation routes and holding educational sessions about evacuation routes.

4.4 SWOT Analysis

This SWOT analysis systematically identifies various factors to develop strategies to face threats and challenges. Have strengths, weaknesses, opportunities or threats (Rainanto et al., 2023) of stakeholders in planning the Batutulis Tourism Area, South Bogor District, Bogor City. The following are the results of the SWOT analysis:

Strength

1. It has many historical sites that can be used as tourist attractions in the Batutulis Tourism Area.
2. Has community sociology as support.
3. Fully supported by the Bogor City Government and related Regional Apparatus Organizations.
4. Many tourism industry businesses are developing around the Batutulis Tourism Area.

Weakness

1. There are no special tourist attractions in the Batutulis Tourism Area.
2. Information from historical sites is still incomplete.
3. Human Resources who are still not certified.
4. Local communities do not have special characteristics and culture.
5. There are people who are not yet aware of tourism.

Opportunity

1. Development of tour packages for the Batutulis Tourism Area.
2. Collaborating with investors to develop tourism products in the Batutulis Tourism Area.
3. Creating new jobs.

4. The local economy is improving.
5. Many visitors come to the Batutulis Tourism Area and get to know the cultural sites in Batutulis.
6. Material about the history of the Batutulis Tourism Area is included in the educational curriculum in schools.
7. Has the opportunity to become a leading historical and cultural tourist attraction in the city of Bogor.

Threat

1. There are differences of opinion between the community, the cultural community and the government regarding the development of the Batutulis Tourism Area.
2. There are still many sites that have not been verified according to government policy.
3. There is still a lack of funding support for further development of the Batutulis Tourism Area.

4.5 Matrix SWOT

Internal / External	**Strength (S)**	**Weakness (W)**
	1. Has many historical sites that can be used as tourist attractions in the Batutulis Tourism Area 2. Have community sociology as support. 3. Fully supported by the Bogor City Government and related Regional Apparatus Organizations. 4. Many tourism industry businesses are developing around the Batutulis Tourism Area.	1. There are no special tourist attractions in the Batutulis Tourism Area. 2. Information from historical sites is still incomplete. 3. Tourism Human Resources that are still not certified. 4. Local communities do not have special characteristics and culture. 5. There are people who are not aware of tourism.
Opportunity (O)	**Strength-Opportunity**	**Weakness-Opportunity**
1. Development of tour packages for the Batutulis Tourism Area. 2. Collaborate with investors to develop tourism products in the Batutulis Tourism Area.	1. Has many historical sites so that tour packages can be made. 2. The large number of tourism businesses developing around the Batutulis Tourism Area	1. Complete information from historical sites in the Batutulis Tourism Area so that it can be included in the education curriculum in schools.

3. Create new jobs. 4. The local community's economy increases. 5. Many visitors come to the Batutulis Tourism Area and get to know the cultural sites in Batutulis. 6. Material about the history of the Batutulis Tourism Area is included in the education curriculum in schools. 7. Has the opportunity to become a leading historical and cultural tourist attraction in the city of Bogor.	can attract investors to work together in developing the Batutulis Tourism Area. 3. By developing the Batutulis Tourism Area, it can create new job opportunities thereby improving the economy of the local community. 4. By developing the Batutulis Tourism Area, it can increase tourist visits to the Batutulis Tourism Area. 5. The many historical sites in the Batutulis Tourism Area make Batutulis a superior historical and cultural tourist attraction.	2. Provide training and professional certification to the community to create quality human resources to manage the Batutulis Tourism Area. 3. Reinforce the existing culture in the community so that it can attract tourist visits to the Batutulis Tourism Area. 4. Increase public tourism awareness so that many visitors come back to the Batutulis Tourism Area. 5. Complete historical information on sites in the Batutulis Tourism Area so that they can become superior historical and cultural tourism in Bogor City.
Threat (T)	**Strength-Threat**	**Weakness-Threat**
1. There are differences in opinion among cultural observers or outside communities. 2. There are still many sites that have not been verified according to government policy. 3. Limited funding budget for further development of the Batutulis Tourism Area.	1. The government can increase public and community involvement in planning the development of the Batutulis Tourism Area. 2. The government immediately makes a policy and verifies the cultural sites in the Batutulis Tourism Area so that the sites are protected and maintained. 3. The government is collaborating with investors to support funding in developing the Batutulis Tourism Area. 4. The tourism business that develops around the Batutulis Tourism Area can attract investors to support funding in the development of the Batutulis Tourism Area.	1. The history of the sites in the Batutulis Tourism Area must be completed immediately so that they can be immediately verified and protected by government policy so that they can be protected. 2. Increase awareness of tourism among the public so that it is not influenced by differences in opinion from outside communities. 3. Create special tourist attractions in the Batutulis Tourism Area so that it can attract many tourists and help increase funding for the development of the Batutulis Tourism Area.

Source: author, 2024

The SWOT Matrix in table 5 above is the conclusion of the non-physical planning strategy formulation for the Batutulis Tourism Area which is outlined in a table based on data obtained in accordance with the logical conditions of internal factors, namely strengths and weaknesses and external factors, namely opportunities and threats that exist in the area. Batutulis Tourism. The results of the SWOT matrix are obtained through various data collection processes including observation, interviews and documentation. Apart from collecting data, information is also collected which is then combined so that decisions can be made. Thus, the SWOT matrix formulation can be used as a basic reference for consideration in making policies, work programs and can be used as further evaluation material for non-physical planning of the Batutulis Tourism Area so that it can run smoothly.

5.CONCLUSION

Based on the results of this research, several conclusions can be drawn, including:

1. The research was carried out as an effort to support the development of the Batutulis Tourism Area which will be used as a Strategic Tourism Area in South Bogor District, Bogor City through analysis of the roles, involvement and relationships between stakeholders involved in the process of developing the Batutulis Tourism Area. It is hoped that the results of this research can increase cooperation and collaboration between stakeholders to jointly develop the Batutulis Tourism Area into a superior historical and cultural tourism area in the City of Bogor.
2. Development of the Batutulis Tourism Area requires a lot of support from various stakeholders. Based on the pentahelix strategy, stakeholders are divided into academics, business, community, government and media. From the results of the classification of stakeholders based on their level of influence and importance, stakeholders are divided into:
   a. Key Player: Bogor City Tourism and Culture Office
   b. Subject: Department of Education and IBI unit
   c. Context setter: Regional Development Planning Agency, Environmental Service and Cultural Heritage Experts
   d. Crowd: Bogor Historical Community, Tourism Observer Community, Bogor Historical Walk Community, ASITA, IHRA, Mojang Jajaka, Department of Cooperatives and UMKM, surrounding MSMEs, elementary and high school schools, community, Reka community, Hotel, ITGA, BPBD, BUMD, BUMN, City Parks and Forest Service, Rumah 30 Restaurant, Influencer, Health Service, District, Village, Indonesian Red Cross.
3. Based on the results of the analysis of relationships between stakeholders, there are six strategies for collaboration between stakeholders, including making tourism policies and regulations, developing tourism destinations, developing tourist attractions, involving the community in developing tourism, developing tourism investment, controlling the impact of tourism development.
4. The Batutulis Tourism Area has the opportunity to become a leading historical and cultural tourism area in the city of Bogor. This can be achieved by optimizing the existence of various historical sites and other diverse tourism potential in the Batutulis Tourism Area. Efforts to support the development of the Batutulis Tourism Area can be done by improving the quality of human resources, tourism products and services. This can be done by providing training and professional certification to local communities and area managers, creating attractive tour packages to attract lots of tourists so that the local community's economy can improve, collaborating with investors to support the development of the Batutulis Tourism Area.

Acknowledgement

This journal article was written by Fitria Herawati, Bambang Hengky Rainanto, and Charles Parnauli Saragi based on the results of research on the Stakeholders Analysis in Non-Physical Planning of The Batutulis Tourism Area in Bogor City which was funded by the Bogor City Tourism and Culture Department through the Batutulis City Planning Strategic Area collaborates with the Tourism Study Program, Faculty of Informatics and Tourism, Institut Bisnis dan Informatika Kesatuan. The content is the sole responsibility of the author.

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THE INFLUENCE OF SERVICE QUALITY AND THE IMPORTANCE OF TRAVEL COMPONENTS ON CONSUMER SATISFACTION IN OVERLAND-BASED TRAVEL COMPANIES USING BUSES

Fransisca Givanya Pamela*, Bambang Hengky Rainanto, Charles Parnauli Saragi

Institut Bisnis dan Informatika Kesatuan, Indonesia

Corresponding Author: fransiscagivanya@gmail.com

Abstract

This research is explanatory, it means research that aims to examine various relationships of hypothetical variables. The variables used in this study are Service Quality and Travel Components. This study aims to analyze the simultaneously and partial effect on Service Quality and Travel Components on Consumer Satisfaction in Overland-based Travel Companies using Buses. The method used is Important Performance Analysis (IPA) with descriptive analysis. Data testing is done by using software Ms. Excel. The results of this study are indicated that: 1) Service Quality (X1) has a significant effect on Consumer Satisfaction. 2) Travel Components (X2) have a significant effect on Consumer Satisfaction. 3) Service Quality and Travel Components simultaneous effect on Consumer Satisfaction.

Keywords : *Tourism, Service Quality, Travel Components, Consumer Satisfaction.*

1. INTRODUCTION

Etymologically, tourism consists of the word 'tourism' which means traveling, the word tourist is a person who travels (traveler), and the word tourism as an activity or everything related to tourism. Everyone will travel with the aim of meeting their individual needs and everyone has different goals in doing the tour. Tourism can also be defined on more specific technical attributes and seen from the side of one reason for traveling, both for fun reasons and for business reasons. With the times, tourism is now one of the growing businesses. This is growing simultaneously with the economy that crawls up from year to year and tourism is excellent to be built and developed even throughout the world. Each country has its own tourism potential. The difference in tourism potential in each country and accompanied by lifestyle changes in this era finally makes the need for many people to travel increasing. This finally opens up opportunities for entrepreneurs in the travel agent service sector, especially in tour and travel services.

The first modern travel agency was formed by Thomas Cook who created a travel agency in London. This travel agency uses trains and steamships as its means of transportation. In that case, Thomas finally got a commission from the Railway and Steamship Company for selling tickets. Thomas also makes tour packages and arranges group trips for people interested in traveling. Ward G. Foster founded America's first travel agency. He also built a hotel in Florida which then grew rapidly, after which he opened a gift shop and provided it to people who traveled. Based on data, the United National World Tourism Organization (UNWTO) stated that the number of trips in 2019 was recorded at up to 1.5 billion international tourist arrivals. The number of international tourist arrivals increased in all regions in 2019.

After a survey on Phinemo's social media which was followed by more than 150 respondents, it can

be concluded that 98% of travel agent users are millennial travelers (birth year 1981-2000) and the rest are generation x (birth year 1961-1980) and generation z (birth year 2001-present). This survey also found that 80% of travelers who claimed to use travel agents for practical reasons, some claimed to be because of their credibility. One of the travel agents who is a travel service provider that was established and has been active since 2019. This travel provides tour packages tailored to the wants and needs of consumers, such as; Study Tour, Field Trip, Industrial Visit, Family Gathering, Open Trip and Personal Trip. In addition, this travel also provides tour car rental services that are ready to be used to deliver consumers according to the destination to be addressed. Since the beginning of this travel company, the company has been considered successful in carrying out more than 20 tourist trips on a fairly large scale, as evidenced by customer satisfaction with the services provided. Customer satisfaction for the Company is a long term investment and is one of the supporting factors for the company to grow. Therefore, customer satisfaction is highly expected by the company. While consumer satisfaction will be achieved if the service provider is able to provide quality services is also influenced by several travel components such as transportation, accommodation, restaurants and tourist destinations. Even so, there are still many consumers who say that they will feel more comfortable if travel agent service owners always maintain their quality when taking consumers on tourist trips. Based on this description, the author is interested in conducting this research.

2. LITERATURE REVIEW

The World Tourism Organization (UNWTO) defines tourism as the activity of people who travel and stay outside their place of residence for a period of not more than one year for recreational, business, and other purposes that are not related to the income of activities carried out in the place visited. According to UNESCO, tourism is a human journey and travel-related activities that involve visits to various natural and cultural heritage sites that contain historical, cultural, scientific, or social value. Then a tourism expert, Peter Tarlow (2021) defines tourism as an economic, social and cultural phenomenon in which it involves the movement of humans from one place to another to get unique experiences. According to Lewis & Booms (2022), service is a quality-of-service work provided to consumers and is used as a benchmark to meet expectations or expectations from consumers. In principle, the service will strive to meet all consumer expectations with the aim of gaining consumer trust which will be used as a guarantee for the sustainability of a company's life. In general, services can be tangible, intangible, and services. Service goods or services are types of services that always exist in business, but have fundamental differences. At the time of travel will involve several components that contribute to providing an experience to tourists during the trip. Consumer satisfaction is something that describes a feeling of either pleasure or disappointment from a person that comes from a comparison between impressions of performance and expectations. The previous research can be seen in the table:

Table 1: Previous Research

Article/source	Area of study	Related Issues
I Gede Benny Subawa, Eka Sulistyawati (2020). Research on service quality that has an influence on customer loyalty with customer satisfaction is used as a mediating variable in Travel.	Journal of Management	Service quality and customer satisfaction have a positive and significant influence on customer loyalty, then customer satisfaction is able to mediate the influence of service quality on customer loyalty.
Dini Puspita (2019). Research on service quality that affects customer satisfaction in Travel in Banjarmasin City.	Scientific Journal of Business Economics	On the quality of service; Tangible, reliability, responsiveness, assurance, and empathy have a significant influence simultaneously on customer satisfaction.
Sanjay Dhingra, Shelly Gupta, Ruchi Bhatt (2020). Research on the relationship between service quality, E-commerce websites, consumer satisfaction and purchase intensity.	International Journal of E-business Research	The result of this study is that many people do not have time to visit stores so that the tendency to buy products online is increasing and online businesses can be categorized as Business to Business (B2B) and Business to Customer (B2C)
Sergio Dominique Lopes and Xuequn Wang (2020). Research on the effect of artificial intelligence and the quality of service provided by employees on customer satisfaction and loyalty.	International Journal of Hospitality & Management Marketing	This research contains a discussion of artificial intelligence as a commercial service and it can be concluded that AI and the quality of service provided by employees can both build customer satisfaction and loyalty.
Nidya Amalia Putri, Tik Tik Dewi Sartika, Sri Utami, Machmud Syahrizal (2022). Research on the quality of tour leader services that affect consumer loyalty in Travel in Balaraja.	Journal of Tourism	The results obtained after this research is a positive influence with a low level of significance obtained from the results of the coefficient of determination test as much as 12% between the quality of tour leader services and consumer loyalty in Travel.
Bestoon Abdulmaged Othman, Arman Aaron, Nuno	International Journal of Islamic Marketing	This research provides results that the marketing mix has

Marques De Almeida, Zana Majed Sadq (2020). Research on the effect of customer satisfaction and loyalty by integrating marketing communications into the traditional marketing mix of Umrah Travel services in Malaysia.		significant and positive results on direct and indirect consumer satisfaction and loyalty and can build longterm relationships with consumers.
Shalini Talwar, Amandeep Dhir, Puneet Kaur, Matti Mantymaki (2020). Research on the reasons why many people choose to buy travel products from online travel agents.	International Journal of Hospitality Management	This study resulted that the proposed values had a positive relationship with purchase intent, then the highest association was found in the value of benefit quality, followed by the value of preference in online travel agent services.
Lilis Cahyaningrum (2021). Research on the quality of online services that affect customer satisfaction at Traveloka travel agents.	Journal of Management	There is a positive influence between the quality of online services and customer satisfaction known from the coefficient of determination
Pinar Ozkan, Seda Suer, Istem Koymen Keser, Ipek Deveci Kocakoc (2020). Research on the effects of service quality and customer satisfaction on customer loyalty: focuses on service values, company image and company reputation.	International Journal of Bank Marketing	The results obtained after the research are surveys indicated that the company's image and company reputation can be in line with marketing, the company's image and reputation are obtained from the results of consumer satisfaction and loyalty

3. METHODOLOGY

Research method is a procedure or method that is often used in conducting research so that it can provide answers to problem formulations and research objectives. Data processing methods in which contain elements of importance and quality of service and travel components. Evaluation of service quality can utilize the Importance Performance Analysis (IPA) method. Martilla &; James (2019) stated that the Importance Performance Analysis (IPA) method is a multi-property model that can be used to find and obtain performance figures in a company. The Importance Performance Analysis (IPA) method is also used to measure the satisfaction received by consumers. Information that has been obtained from the results of data processing will be processed using Microsoft Excel software and will be depicted on an Importance Performance Analysis (IPA) diagram that shows the level of satisfaction and the level of importance adjusted to consumer expectations. Furthermore, the diagram will be divided into 4 quadrants that can present the results of customer satisfaction for analysis and can provide suggestions for strategies that can be chosen and done easily, consisting of quadrant I, quadrant II, quadrant III, and quadrant IV. Each quadrant acts as an assessed merit. According to Nugraha, Harsono, and Adianto (2020) in the Importance

Performance Analysis (IPA) method, a level of suitability will be measured in order to see the perception of consumer satisfaction with the company's performance, and how much the company is able to understand consumer desires for the services offered. This method is considered very suitable to be applied to this research, because it has a simple but clear technique in the elaboration process. For the division of quadrants can be seen in the following diagram:

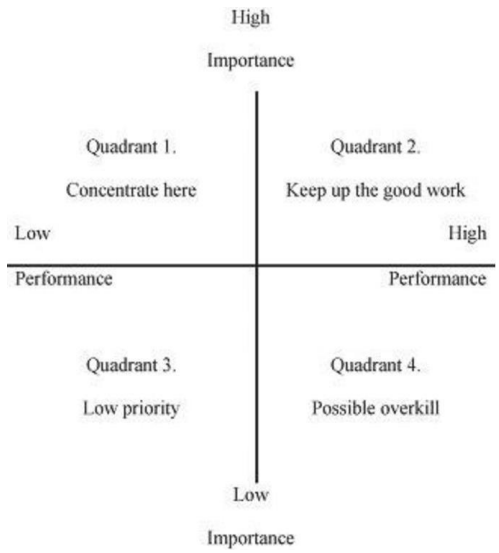


Figure 1: Diagram Importance Performance Analysis

The advantage of the Importance Performance Analysis (IPA) method compared to other strategies is that the company can make fast and appropriate steps in the face of consumer disappointment with the quality of service provided. So that it can further provide services that can meet consumer expectations. In addition, this method is fundamental and not difficult to use but it is feasible to know customer satisfaction figures and also need to know the quality of service in order to know and improve things that need to be improved. In this case, the author conducts a validity and reliability test to validate a series of data that has been collected whether it is feasible or not. There is an Average Variance Extracted (AVE) value that will be known in the validity test, while in the reliability test it can use Composite Reliability (CR) and Cronbach alpha (CA).
Validity tests are used to prove the accuracy of question items in research instruments and measure the clarity of the framework in a study. The instrument to be used in the study must have been declared valid. The Reliability Test aims to determine how much consistency the questionnaire has as an indicator of predetermined variables. The reliability measurement in this study used the Cronbach Alpha formula.

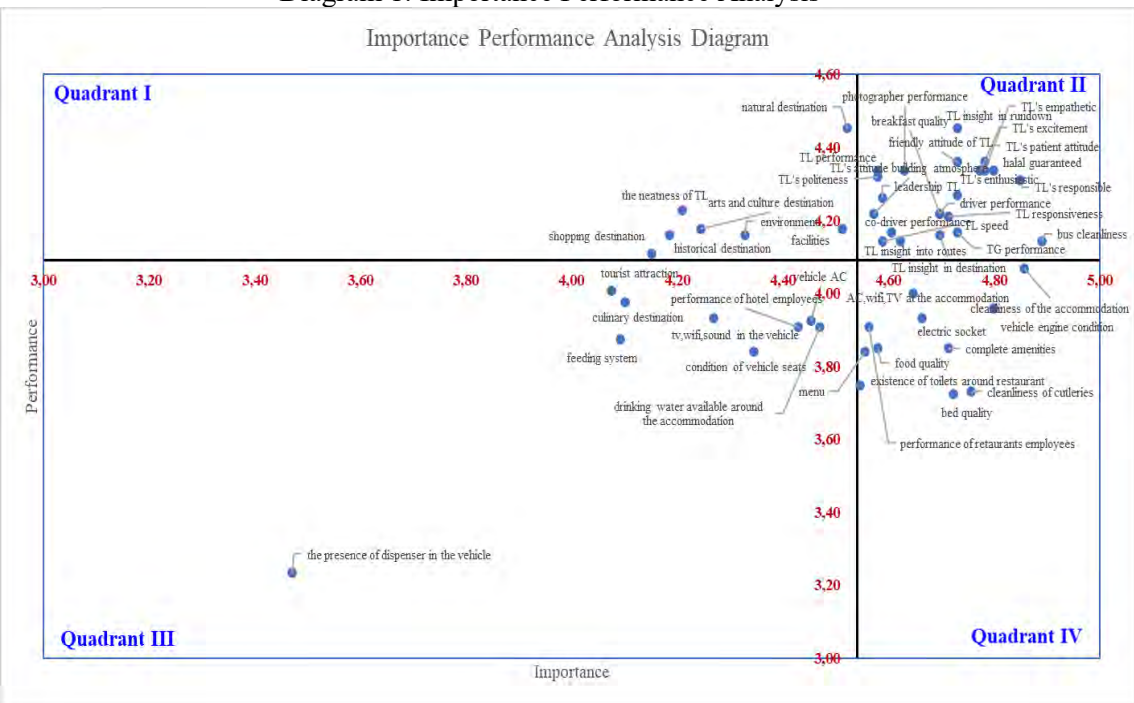
4. RESULT AND DISCUSSION

The results of research in this thesis are the influence of service quality and the importance of the travel component which is an independent variable and on the dependent variable, namely consumer satisfaction on travel. In this study, the author uses travel consumers as a research sample on the effect of service quality and the importance of travel components on consumer satisfaction by distributing questionnaires through Google Form. The results of the questionnaire distributed through Google Form were filled in by 119 respondents and were quite representative.
The following is the result of an overview of the respondent's profile, the information is obtained from the respondent's answers to the questionnaire through Google Form. Respondents who have filled out the questionnaire are female and male are 35 people. So it can be concluded that the highest number of questionnaire fillers is female. Respondents aged 10-15 years amounted to 19

people, aged 16-20 years amounted to 91 people, aged 21-25 years amounted to 5 people and aged 26 years and over amounted to 4 people. So it can be concluded that the respondents with the most questionnaire fillers are 91 vulnerable people aged between 16 to 20 years. Respondents by occupation were divided into 3 categories. Student respondents were 103 people with a percentage of 87%, student respondents were 11 people with a percentage of 9% and respondents as employees were 5 people with a percentage of 4%. Then it was concluded that the Student category became the identity of the most respondents based on the work in this study.

4.1 Data Processing Results
The data from the analysis can be seen in the following diagram:

Diagram 1: Importance Performance Analysis



4.1.1 The Importance Performance Analysis
Depicted on the diagram divides the indicator into 4 quadrants. The description of the indicators on each chart is as follows:
Quadrant I (First priorities to be aware of):
1. Shopping destinations
2. Historical tourist destinations
3. Neatness of the tour leader
4. Cultural arts tourism destinations
5. Natural tourist destinations
6. Surroundings of the inn 7. Facilities in tourist destinations.

Quadrant II (Keep Achievement):
1. Tour leader politeness in language
2. Tour leader performance
3. Performance co-driver

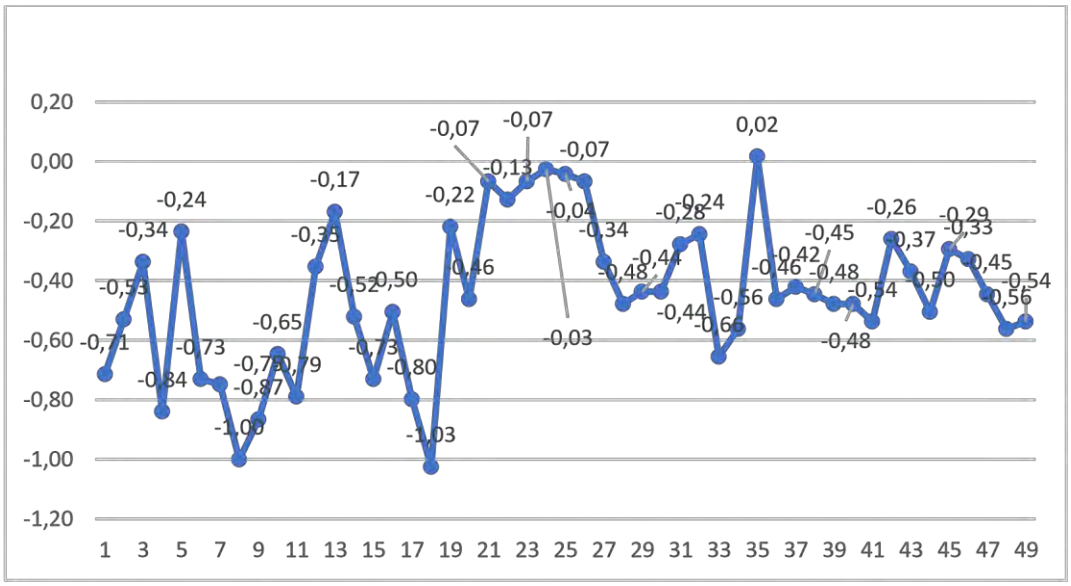
4. Tour leader insights into routes and travel times
5. Tour leader insights in understanding tourist destinations
6. Leadership tour leader
7. Photographer performance
8. Tour leader insights in understanding event rundowns
9. Tour leader's attitude in building a gym during the trip
10. Tour leader's friendliness attitude
11. Driver performance
12. Tour leader's speed in decision making
13. Tour guide performance
14. Bus cleanliness
15. Tour leader's quick response attitude in solving problems (problem solving)
16. Tour leader's excitement attitude
17. Tour leader's familiarity
18. The attitude of responsibility of the tour leader
19. Halal food guarantee
20. Breakfast quality
21. Tour Leader’s attitude of empatethic
22. Tour Leader’s attitude of excitement
23. Tour leader's attitude of patience.

Quadrant III (Low Priority):
1. Tourist attractions
2. Culinary tourism destinations
3. Feeding intake system
4. TV, wifi and sound system on the vehicle
5. Vehicle seat condition
6. Hotel employee performance
7. Air conditioning, vehicles, drinking water available around the inn; 8. The presence of a dispenser in the vehicle.

Quadrant IV (Excessive):
1. Restaurant employee performance
2. Menu options at the restaurant
3. The existence of toilets around the restaurant
4. Food quality
5. Completeness of amenities in the bathroom of the inn
6. Vehicle engine condition
7. AC, wifi, TV on site
8. Accommodation cleanliness
9. Bed Quality
10. Cutlery hygiene
11. Stop Contact

4.1.2 Gap Analysis Results
Gap analysis (GAP) is a comparison of actual performance with potential or expected performance. In this case, the average weight difference is -0.45. The numbers in each attribute can be seen in the following graph:

Graph 1: GAP Analysis



GAP Analysis

4.1.3 Customer Satisfaction Index

Customer Satisfaction Index (CSI)

Based on the calculation results, a customer satisfaction index value of 81.96 or 82 percent was obtained. This value is found in the range of 81.00 – 100.00 based on the range of customer satisfaction index. This shows that the customer satisfaction index is on the criteria of very satisfied. The calculation of Visitor Satisfaction Index can be seen in the table

Table 2: Formula for determining the Customer Satisfaction Index

Description of the formula	
MIS (Mean Importance Score)	Average Importance (Level of Interest)
MSS (Mean Satisfaction Score)	Average Performance (Satisfaction Level)
WF (Weight Factor)	$\frac{MIS}{\sum MIS} x\ 100$
WS (Weight Score)	WF x MSS
WT (Weight Total)	$\sum WS$
CSI (Customer Satisfaction Index)	$\frac{WT}{\max skala\ likert}$
GAP	(average of score Performance) - (average o score Number)

Table 3: Customer Satisfaction Index Criteria

Index Value	**Criteria Customer Satisfaction Indeks (CSI)**
81,00 - 100,00	Very satisfied
66,00 - 80,99	Satisfied
51,00 - 65,99	Quite Satisfied
35,00 - 50,99	Less Satisfied
0,00 - 34,99	Not Satisfied

4.2 Discussion

4.2.1 Quadrant Discussion

Quadrant I (Top Priority). The attributes contained in this quadrant have a high level of importance according to respondents but their performance is still low. The implication is that the attributes contained in this quadrant include shopping tourism destinations, historical tourist destinations, neatness of tour leaders, cultural arts tourism destinations, natural tourism destinations, the environment around lodging, facilities in tourist destinations. This is expected because based on experience on trips or trips that have been carried out, usually the Travel Companies chooses destinations that are more in urban areas and more to game tours for fun, also do not prioritize shopping destinations, this is also due to the dense rundown of events every day with all other tourist destinations. Then the neatness of the tour leader also still has a low performance value, it is because the uniforms used by the tour leaders are unofficial and more of a relaxed theme. Furthermore, the environment around the inn also received a low performance value due to several trips that have been carried out, using hotels that are in the middle of a crowded city and tend to be crowded.

Quadrant II (Maintain Achievement). The attributes contained in this quadrant have a high level of importance and their performance is also rated well by respondents. The attributes contained in this quadrant are the strength or superiority of the company in the eyes of respondents. Companies need to maintain quality and maintain the performance of these attributes. The attributes contained in this quadrant include the politeness of the tour leader in language, the performance of the tour leader, the performance of the co-driver, the insight of the tour leader into the route and travel time, the insight of the tour leader in understanding tourist destinations, the quality of breakfast, the attitude of the leadership tour leader, the performance of the photographer, the insight of the tour leader in understanding the rundown of the event, the friendliness attitude of the tour leader, natural tourism destinations, driver performance, tour leader speed in decision making, tour guide performance, bus cleanliness, tour leader responsiveness in solving problems (problem solving), tour leader excitement attitude, tour leader responsibility attitude, halal food guarantee, tour leader patience attitude, tour leader empathy attitude, tour leader patience attitude. This is because during the trip the Tour Leader can build a good atmosphere, so that consumers who run the trip feel comfortable with the existence of the Tour Leader. In addition, drivers and co-drivers also always provide their best performance so that the trip using the bus still feels comfortable. Then in tourist destinations, consumers also meet tour guides who are fun and can provide useful knowledge and exciting experiences. Therefore, almost all components that support tourist travel are considered successful in satisfying consumers so that the elements in this quadrant become the most. This is also related to the value of the customer satisfaction index obtained.

Quadrant III (Low Priority). The attributes contained in this quadrant have a low level of importance and their performance is also rated less well by respondents. Companies need to make performance improvements to these attributes to prevent these attributes from shifting to quadrant I. The attributes contained in this quadrant include tourist attractions, culinary tourism destinations, dining intake systems, TV, wifi and sound systems on vehicles, vehicle seat conditions, hotel employee performance, vehicle air conditioning, drinking water available around the inn, the presence of dispensers in the vehicle. Based on experience, the elements in this quadrant are indeed considered not too important by consumers, estimated because consumers see more importance in other components. So it does not affect the results of consumer dissatisfaction.

Quadrant IV (Excessive). The attributes contained in this quadrant have a low level of importance according to respondents but have good performance so that they are considered excessive by respondents. Improved performance on these attributes will only lead to wastage of resources. The attributes contained in this quadrant include the performance of restaurant employees, menu choices at the restaurant, the presence of toilets around the restaurant, food quality, completeness of amenities in the lodging bathroom, vehicle engine condition, air conditioning, wifi, TV at the inn, cleanliness of the inn, quality of mattresses, cleanliness of cutlery. This has an impact on the value of consumer satisfaction, because in this quadrant, consumers consider these components important but in reality consumers do not get a reality that matches their expectations. This should be the company's priority in improving its services to achieve a perfect satisfaction score.

4.2.2 Gap analysis

Based on the results of the gap analysis, it can be seen that the performance of all attributes offered by the travel is still below the expectations of respondents. Some attributes that are below the average value of the difference in weight are attributes that need to be prioritized for improvement. Attributes that are below this number include the condition of vehicle seats, vehicle AC conditions, vehicle engine conditions, the presence of sockets, vehicle cleanliness, quality and number of mattresses, bathrooms and amenities, air conditioning conditions, Wifi and television, lodging cleanliness, available drinking water, food quality at restaurants, menu variations, available toilets, cleanliness of tableware, halal food guarantees, Driver performance, hotel employee performance, restaurant employee performance, tour leader attitude in building atmosphere during the trip, tour leader insight in understanding route and travel time, tour leader insight in understanding event rundown, tour leader responsiveness in providing service, tour leader attitude in problem solving, tour leader responsibility attitude.

4.2.3 Customer Satisfaction Index

Overall, consumers are very satisfied with the performance of the components contained in the travel tour package selected and used by travel companies. To date, the travel companies has succeeded in more than 20 trips and satisfied its customers by 82 percent. However, the travel companies must continue to try to improve its performance until consumers feel more satisfied and the visitor satisfaction index value is almost close to 100 percent.

5. CONCLUSION

Based on the results of the study, it can be proven that the influence of Service Quality and the Importance of Travel Components on Consumer Satisfaction in Travel Companies can be concluded that:

1. Service quality has a positive influence on customer satisfaction in travel companies. Evidenced by the elements of service provided by tour leaders, tour guides, drivers, and co-drivers, photographer performance is in quadrant II which means the top priority that has been in accordance with the expectations and reality received by consumers

2. The travel component has a positive influence on consumer satisfaction in travel companies. Evidenced by the elements of travel components selected and used by travel companies in tourist trips, many are in quadrants II and III, namely tourist attractions, culinary tourism destinations, dining intake systems, TV, wifi and sound systems on vehicles, vehicle seat conditions, vehicle air conditioning, drinking water available around the inn, the presence of dispensers in the vehicle, bus cleanliness. This means that the components used are in accordance with consumer expectations and reality and even something that is considered not too important by consumers is able to provide better reality
3. The quality of service and travel components have a positive and significant influence on consumer satisfaction in travel companies. This is evidenced by the value of the customer satisfaction index which is already at the stage of being very satisfied with a percentage of 82 percent
4. Things that must be considered or that must be prioritized by the company are components that are in quadrant IV, because these components are highly expected by consumers but in reality it turns out that consumers do not get a satisfactory reality. This then also affects the value of the customer satisfaction index so that it cannot get a perfect number. It is expected that the changes that will be made by the company can make the customer satisfaction index value perfect and at 100 percent.

Acknowledgement

The authors are grateful for the comments from Bambang Hengky Rainanto, S.Pi, M.M., Ph.D.,CSM, CHRP, CIIQA and Charles Parnauli Saragi, S.I.Kom., M.I.Kom. on earlier versions of this paper

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ADVANCING SUSTAINABLE SOCIAL ENTERPRISE IN INDONESIA: INNOVATION, DIGITALIZATION, AND STRATEGIC IMPLICATIONS

Yuni Lestari Br Sitepu[1]*, Azhar Maksum[1], Munawarah[1], Fauziah Kumalasari[1], Zuraidah Mohd Sanusi[2], Nur Aima Shafie[2]

[1] Study Program of Accounting, Faculty Economics and Business, Universitas Sumatera Utara, Medan, Indonesia

[2] Accounting Research Institute Universiti Teknologi MARA 40450 Shah Alam, Selangor, Malaysia

**Corresponding author: yunilestarisitepu@usu.ac.id*

Abstract

This study explores how innovation underpins the endurance of Social Enterprises (SE) in Indonesia, providing a detailed review of their standards, regulatory environments, and growth. It delves into the Resource-Based View (RBV) theory's crucial role in amplifying the innovation capabilities essential for the flourishing of these organizations. Furthermore, the paper scrutinizes the melding of innovation with digital technologies within these enterprises, pinpointing the hurdles and merits of such mergers. Through comprehensive case studies, a unique framework for gauging the innovation levels of social enterprises is introduced, marking a significant advancement in assessing their innovative capacity. This framework critically aids in quantifying the extent of innovation. The document concludes by considering the extensive effects of innovation on social enterprises, offering significant insights into sustainable business operations. By examining the integration of innovation and digitalization, this research underscores their importance in driving the sustainable progress and success of Indonesian social enterprises, contributing valuable perspectives to the sustainable business practices arena.

Keywords: *Sustainable Social Enterprise, Innovation, Digitalization, Strategic Implications*

1.INTRODUCTION

This section comprehensively overviews Indonesia's current standards and regulatory landscape governing social enterprises. It discusses the evolution of these entities, emphasizing the importance of innovation in their development and sustainability. This initiative paves the way for an in-depth exploration of how innovative practices can help social enterprises achieve better economic and social outcomes. The results of this article add to a fuller knowledge of how innovation plays a critical role in guaranteeing the sustainability and success of social companies in Indonesia (Domanski et al., 2019).

Social enterprises in Indonesia have gained traction in recent years, with a sudden rise in growth since 2012. The leaders of almost 50% of these enterprises are aged between 25 and 34, reflecting the motivation of many young people in Indonesia to contribute to positive change in society (Iskandar et al., 2023). These entities work at the nexus of commercial activity and public interest, addressing pivotal issues such as environmental stewardship and healthcare accessibility, thereby reinforcing grassroots economies and fortifying community welfare (Lindblad, 2008). Despite their substantial economic and social impact, these enterprises contend with an ill-fitting regulatory

framework that does not specifically cater to their distinctive operational model, which seeks to harmonize profit-making with social objectives, impeding their operational and financial stability (Jongbloed et al., 2008).
Indonesia's dynamic social entrepreneurship sector has substantially transitioned, with approximately 340,000 entities by 2023. This rise indicates a significant shift in the nation's socioeconomic foundation. The country's social businesses are working hard to bridge the gap between economic activity and social welfare, playing vital roles in tackling environmental and health issues. Their efforts are critical in boosting local communities' economic vibrancy and well-being, contributing to the country's overall growth (Bento et al., 2018).
The struggle of Indonesian social companies for recognition within an insufficient regulatory framework is apparent. A fundamental difficulty comes from an evident absence of concessions for their dual-purpose mission within the legal context which includes legal compliance, financial stability, and obtaining help from appropriate institutions (OJK, 2021). This disparity between the regulatory framework and the operational procedures of social businesses needs a detailed examination and comprehension of the governing rules. There is a critical need for policy innovation that reformulates present legislation to reflect the unique character of social businesses better. Such reforms are required to fully realize the potential of these businesses, allowing them to grow without losing sight of their social responsibilities.

Theoretical Foundations: RBV Theory, Innovation, and Capability in Social Enterprises
The discourse on sustainable business models reveals a fusion of theories that guide current practices and insights among scholars and practitioners. Notably, the stakeholder and triple bottom line theories stand as dominant frameworks that businesses regularly refer to when navigating complex operational environments. The stakeholder concept, as it has become known more recently, emphasizes the importance of addressing the concerns and interests of various stakeholder groups, including but not limited to employees, customers, and shareholders, which include but are not limited to employees, customers, and shareholders. This approach stresses value co-creation through relationships and aligns with the notion that serving a higher purpose coexists with the necessity of profit generation. Nonetheless, critics highlight its potential limitations, arguing that stakeholders' priorities may shift under certain conditions, such as financial distress, where a firm's survival may demand prioritizing shareholders' interests, possibly at the expense of other stakeholders (Aziz et al., 2015). Moreover, institutional contexts sometimes mandate a hierarchy of stakeholder interests, as seen in labor laws that can require a business to place employee interests above those of shareholders.

Complementarily, the triple bottom line theory presents a holistic view, advocating for equal emphasis on economic viability, social responsibility, and environmental stewardship. Businesses should aspire to optimize these three dimensions to achieve sustainability. However, this theory may face practical constraints. For instance, organizations grappling with immediate financial crises may need to de-emphasize social and environmental goals to regain stability temporarily. Similarly, startups in their nascent stage might prioritize establishing financial footing, which could restrict their capacity to invest in broader social and environmental initiatives.
In Indonesia, the landscape for creative enterprises adds a layer of cultural and regulatory context to these theoretical approaches. The government of Indonesia defines creative industries as intellectual property originating from indigenous culture and technology, including a wide range of subsectors (Siswanto & Santoso, 2017). This local framework is informed by the understanding that creative enterprises play a significant role in the informal economy, yet it diverges from other countries' definitions, such as the UK's.

Recognizing the creative sector's potential, the Indonesian government instituted the Ministry of Tourism and Creative Industry in 2015. Alongside government efforts, international organizations

support fostering a conducive environment for creative and social enterprises to thrive. Despite these efforts, more formal legal recognition of social enterprise models still needs to be made in Indonesia's legal framework.

Social entrepreneurship intertwines the innovative spirit of traditional business with a steadfast commitment to societal improvement. As posited by scholars, the theory of social entrepreneurship defines it as a practice not only centered on economic gains but also deeply invested in creating social value (Seelos & Mair, 2005). Social entrepreneurs stand out for their unique mix of entrepreneurship and virtuosity, navigating complex moral landscapes with a unified goal to further social missions (Mort et al., 2003). They leverage entrepreneurially virtuous behavior that manifests through innovativeness, proactiveness, and a disposition to embrace risks. Successful social enterprises' core is the ability to recognize and capitalize on opportunities that traditional markets and institutions overlook, particularly those that address fundamental human needs (Seelos & Mair, 2005). Another principle of the resource-based view that social enterprises follow is the novel business model. New business models are designed to serve better the needs of the most vulnerable and marginalized people. New business models provide the necessary knowledge, skills, and innovative capacity that these organizations must showcase to meet their social mandate. In addition, the central relationship between innovation and capability is essential. Technological progress determines the relationship between product and process innovation; thus, enhancing organizational learning is another critical dynamic capability that enables sustained improvement and adaptation (Guritno et.al, 2019). These elements are indispensable as they allow social enterprises to evolve, sustain their impact, and foster growth, even as they navigate the complex challenges of their respective sectors.

To sum up, social entrepreneurship fuses the invention of traditional entrepreneurship with a dedication to societal advancement. It leverages organizational capabilities and innovations, supported by RBV theory, to secure economic survival and enact meaningful societal change. These enterprises drive innovation while fostering social responsibility, with technology orientation playing a vital role in enhancing their performance (Seelos & Mair, 2005; Mort et al., 2003).

The Digitalization Imperative: Integrating Innovation in Social Enterprises

The Resource-Based View (RBV) theory provides a compelling framework for understanding social enterprises' strategic management, particularly in innovation and capability enhancement. This theory posits that social enterprises' distinct resources and capabilities are pivotal in driving their long-term success and sustainability. By identifying and exploiting these unique assets, such as specialized knowledge, networks, and social capital, social enterprises can develop a competitive advantage that is difficult to replicate. The emphasis on innovation within this context is crucial, enabling these organizations to continually adapt and improve their offerings to meet social needs more effectively. Thus, the RBV theory underscores the significance of internal resources and innovation as foundational elements for the sustainable growth of social enterprises.

Further exploration into this theory reveals various approaches social enterprises can adopt to bolster their innovation capabilities. Strategies such as fostering a culture of continuous learning, investing in research and development, and engaging in strategic partnerships are instrumental in enhancing the innovative capacity of these organizations. Through such means, social enterprises are not only able to refine and expand their existing services but also to pioneer novel solutions to pressing social challenges. These strategies align with the RBV theory's emphasis on leveraging internal strengths to secure a competitive edge in the market. Consequently, applying the RBV framework within social enterprises illuminates the pathway toward achieving sustainable success through judicious management of resources and cultivating innovation.

Navigating the Terrain: Challenges and Benefits of Innovation in Social Enterprises
Digitalization significantly impacts social businesses' innovation strategies, profoundly changing how these organizations function and achieve their social goals. Using digital technology, social companies may enhance operational efficiency, attract a larger audience, and increase their societal effect. Digital tools allow these organizations to expedite procedures, improve communication with stakeholders, and provide new solutions to societal problems. Furthermore, the agility given by digitization enables social businesses to respond more quickly to their communities' continually changing needs, ensuring that their missions stay relevant and successful.

The movement toward digitization among social companies has been especially notable in Indonesia, providing unique insights into its transformational potential in emerging economies. The use of digital technology in Indonesia exemplifies how social entrepreneurs are addressing the difficulties and possibilities of the digital era. This has ramifications for both operational procedures and the strategic vision of the region's social businesses. Digitalization enables Indonesian social businesses to use new technology to better service delivery, data management, and community engagement, cementing their position as essential drivers of social innovation and change. This trend emphasizes the vital role of digitization in helping social companies achieve their aims more effectively and marks a fundamental shift.

Measuring Innovation: Developing an Innovation Index for Social Enterprises
This portion of the analysis critically examines the dual nature of incorporating innovative strategies within social enterprises, drawing upon real-world case studies to elucidate the complex interplay between the challenges and benefits such strategies introduce. The case studies serve as practical examples, shedding light on the tangible impacts of innovation on these organizations. They reveal that while innovation can introduce obstacles—such as the need for new skills, resistance to change, and resource constraints—it simultaneously offers substantial rewards. These include enhanced service delivery, improved efficiency, and effectively reaching underserved populations. Thus, exploring these cases provides a multifaceted perspective on innovation within social enterprises, demonstrating its potential to drive significant social impact despite the hurdles that may arise.
Moreover, the discussion extends to uncover the critical best practices and insights gleaned from the experiences of these social enterprises in navigating the innovation landscape. It emphasizes the importance of strategic planning, stakeholder participation, and developing a climate change adaptation culture in implementing innovation. The case studies highlight how overcoming the challenges associated with innovation strengthens the operational capabilities of social enterprises and amplifies their societal contributions. Consequently, this analysis presents a balanced viewpoint, acknowledging the complexities of innovation in the social enterprise sector while affirming its role as a catalyst for sustainable development and positive change. This holistic approach to discussing innovation underscores the value of learning from real-world applications and strategically navigating its benefits and obstacles.

The Ripple Effect: Assessing the Impact of Innovation on Social Enterprises
The manuscript introduces an innovative framework for assessing the innovation capabilities of social enterprises, drawing extensively on academic research to ensure its applicability across diverse contexts. This model, grounded in a comprehensive array of metrics and indicators, aims to quantitatively measure the innovation output of social enterprises. Its development is a response to the growing need for a systematic approach to evaluate the innovative potential within the social enterprise sector. The framework's significance lies in its utility for a broad spectrum of stakeholders, including practitioners and policymakers, who are keen to foster innovation in this domain.

In the further discourse of the paper, the practical applications of the innovation index are explored, emphasizing its role in facilitating a deeper, data-driven understanding of innovation processes in social enterprises. By providing a quantitative measure of innovation, the index enables comparative analysis across organizations and sectors, thereby uncovering innovation trends and benchmarks. This analytical tool allows stakeholders to identify strengths and opportunities for improvement, creating a conducive environment for strategic innovation initiatives. The index's diagnostic capability is highlighted, showcasing its potential to guide decision-making and resource allocation toward maximizing innovation performance.
Moreover, the adoption of this innovation assessment model is posited to have profound implications for policy formulation and strategic support of social enterprises. It offers empirical insights into the innovation landscape within the sector, aiding policymakers and supporting organizations in designing targeted interventions and programs. This targeted approach ensures efficient resource allocation, enhancing the innovation capacity and overall social impact of these enterprises. The development and application of this model represent a significant advancement in the field, promising to improve our understanding and support of innovation within social enterprises.

Scholarly works such as those by Goldstein et al. (2010), Carayannis et al. (2021), Alegre and Berbegal-Mirabent (2016), and João-Roland and Granados (2023) provide a solid foundation for the framework proposed in the manuscript. These studies contribute to a deeper understanding of the dynamics of social innovation and business model innovation within social enterprises, offering theoretical and practical insights that underpin the manuscript's approach to innovation assessment. Together, they affirm the necessity of a comprehensive, theory-informed model for evaluating innovation in social enterprises, underscoring the relevance of such an assessment for enhancing the sector's social and economic impact.

Innovation and Digitalization

Social enterprises in Indonesia have emerged as a dynamic force, skilfully blending innovative business strategies with a commitment to social and environmental causes. The rapid growth and evolution of the sector is largely driven by two important forces: innovation and digitalization. These factors are not only instrumental to SEs' operational excellence and longterm viability but are also critical to strengthening their social impact. Innovation is recognized for its potential to introduce new products, services, and models that are adept at meeting social needs (Dees et al.;1998 and Mulgan; 2006).
At the same time, the advent of digital technologies has revolutionized the way SEs work. Digitalization opens up new pathways for engagement, improves operational efficiency and facilitates scaling-up efforts (Nambisan et al., 2017). Together, innovation and digitalization form the backbone of the social enterprise sector in Indonesia, enabling these entities to face challenges and seize opportunities in their quest to fulfill their missions. Brand-introducing digital marketing such as Eunike Gratia as a TikToker has had an impact in enhancing the growth and operational capabilities of small and medium-sized enterprises (SMEs) in the social sector in Indonesia as it increases purchase intent (Suryani et al., 2021), enables greater reach and more efficient engagement with stakeholders (Nirmala et al., 2024). Digital marketing contributes significantly to the market reach and revenue growth of these organizations, demonstrating the critical role of innovation in digitalization for the sustainability of the sector. Social enterprises in Indonesia are using digital marketing to come up with new ideas and expand their businesses are shown in Table 3.1.

Table 3.1. Social Enterprise Innovation in Indonesia Through Digital Marketing

No	Companies	Established	Focus	Innovation
1	Greeneration Foundation (Jakarta)	2014	waste management	creative media in the principles of sustainable consumption and production https://greeneration.org
2	Waste4Change (Bekasi, West Java)	2014	waste problems: consulting, campaigning, collecting, and creating	the principles of behavior change and responsible management web: https://waste4change.com ig: waste4change.
3	Du Anyam (East Flores, Nusa Tenggara Timur)	2014	women's empowerment and community welfare improvement	digital revolution for Indonesian creative SMEs called Krealogi web : https://duanyam.com/
4	Pandawa Agri Indonesia (Banyuwangi, East Java)	2017	innovation in the development of pesticide reduction products (Pesticide Reductant)	Provide information through web https://pandawaid.com
5	Sirtanio Organik Indonesia (Banyuwangi, East Java)	2011	organic rice cultivation. Organic food products are products whose cultivation and post-harvest processes are carried out under organic standards.	By LinkedIn : PT Sirtanio Organik Indonesia Instagram : @sirtanio.id
6	Sukkha Citta (Jakarta)	2016	Fashion with environmentally friendly materials, upcycle to reuse through the community of self-reliant artisans and farmers across Indonesia	Information and marketing through an attractive web https://www.sukkhacitta.com/
7	Kendal Agro Atsiri (Kendal, Central Java)	2013	engaged in the production of essential oils such as clove leaf oil and patchouli oil and sells them as raw materials for industrial purposes such as pharmaceutical products, cosmetics, medicines and also in the food industry	Innovation by Instagram: @kaa_essentialoil

8	Smash or short for Sistem Online Manajemen Sampah	2015	waste management in Indonesia.	Through this mobile application, Smash helps facilitate and increase active participation among consumers and communities to become more conscious about waste by connecting Bank Sampah across Indonesia, as well as connecting customers with their nearest Bank Sampah to work with the government as a Smart City module for waste management in the area.

web: https://www.smash.id

Challenges and benefits in innovation of SE

Social enterprises need help accessing financial resources for innovation and expansion. This is exacerbated by competition and high production costs, and they need help in bridging the digital divide and acquiring the necessary management skills. Innovating within social enterprises (SEs) in Indonesia presents a unique blend of opportunities and hurdles, with recent academic research shedding light on the specifics of these dynamics. Integrating digital technologies and the strategic application of the Resource-Based View (RBV) theory is at the forefront of advancing SEs. However, they encounter a landscape marked by significant challenges.

One of the primary challenges is the digital divide, which affects SEs' ability to harness digitalization's benefits fully. For instance, a study by Rame et al. (2023) on adopting Industry 5.0 technologies highlights Indonesian enterprises' infrastructural and skill-related challenges in integrating advanced digital technologies such as AI and IoT into their operations. These challenges underscore the need for targeted training and policy support to bridge the technological gap.

Innovation in Indonesian social enterprises faces hurdles in digital adoption and infrastructure yet offers significant advantages such as expanded market reach and operational efficiency. Overcoming these challenges necessitates joint government and private sector initiatives to furnish infrastructure, training, and policy backing. Conversely, the benefits of innovation, mainly through digitalization, offer a silver lining. For example, applying ecommerce and digital marketing strategies has proven to significantly enhance the reach and efficiency of SEs in Indonesia, as outlined by Triandini et al. (2013) in their conceptual model for e-commerce adoption among SMEs. This model emphasizes the potential for digital tools to improve business performance and competitiveness in the digital era.

Case studies from Indonesia illustrate tangible examples of how SEs navigate these challenges and capitalize on opportunities. A notable instance is the development of eco-friendly fashion brands that leverage Indonesia's rich biodiversity and traditional craftsmanship to produce sustainable garments. These enterprises integrate digital platforms for marketing and sales, showcasing a successful blend of innovation, sustainability, and cultural preservation. Additionally, the emergence of fintech startups to provide microfinance services to underserved communities represents another example of innovative SEs in Indonesia.

These startups utilize digital platforms to offer financial services, empowering local entrepreneurs and facilitating economic inclusion. Addressing the challenges and maximizing the benefits of innovation in SEs necessitates a multifaceted approach involving policy support, access to finance, and capacity-building initiatives. The Indonesian government's role is pivotal in creating an enabling environment for SEs through supportive regulations, financial incentives, and infrastructure development. Equally important is cultivating a robust ecosystem that encourages knowledge sharing, collaboration, and innovation among SEs and other stakeholders.

While financial constraints, competition, and the digital divide pose significant hurdles, the potential benefits of digital transformation and social capital offer a pathway to overcoming these barriers. Through strategic support and collaborative efforts, Indonesian SEs can harness innovation to drive sustainable development and social impact. As evidenced by case studies and academic research, a supportive ecosystem that fosters innovation is crucial for the growth and success of social enterprises in Indonesia (Irjayanti & Azis, 2012; Uula & Surbakti, 2023; Rame et al., 2023; Maming & Festijo, 2023).

Model of innovation index or score

The concept of an innovation index or score within social enterprises (SEs) represents a critical tool for assessing and enhancing these organizations' innovative capabilities and impact. This model integrates various factors, including social, technological, organizational, and environmental elements, to measure the extent and effectiveness of innovation within SEs. Drawing from recent academic studies, this explanation delves into the formulation of such models and their relevance in fostering sustainable social entrepreneurship.

According to Primantoro (2005), three types of social enterprise projects exist in Indonesia. Firstly, the entrepreneurship model is created in target groups with a strong focus on helping the community. Therefore, preliminary research on the social problems in the target society is essential. This helps develop products or services that meet the needs and characteristics of society. Secondly, social entrepreneurship is in synergy with target groups. This entrepreneurship approach combines with target groups to develop business products suitable for the community. Therefore, there is a synergy between entrepreneurship and society for both benefits. Thirdly, social entrepreneurship grows from a target group, a model of entrepreneurship growing from a relevant group. This is usually due to people's protests regarding various social issues related to the environment. This led him to launch a business model that could solve environmental and social problems.

Goldstein et al. (2010) introduce a complex science-based model for social innovation, emphasizing the nonlinear dynamics of social innovation evolution within SEs. This model highlights the interplay between opportunity tension and informational differences, proposing that innovation emerges from the bifurcation of existing social practices into novel, more effective solutions. This perspective is instrumental in understanding how SEs navigate complex social issues through innovative approaches.

Unceta et al. (2016) further contribute to this discussion by developing the Regional Social Innovation Index (RESINDEX), which assesses social innovation at both organizational and regional levels. RESINDEX offers a nuanced view of how SEs can harness and contribute to social innovation within their ecosystems by focusing on the absorptive capacity of knowledge across different stakeholders. This model underscores the significance of knowledge exchange and collaboration in driving social innovation.

Carayannis et al. (2021) propose a quadruple/quintuple helix-based ecosystem approach for social business model innovation (BMI), emphasizing the role of civil society, political structures, and sustainability in promoting social innovation. This framework suggests that integrating diverse perspectives and stakeholders is crucial for developing and implementing innovative business models that effectively address social and environmental challenges.

Tykkyläinen and Ritala (2020) examine BMI in SEs from an activity system perspective, identifying patterns of activity that enable the simultaneous pursuit of social and financial goals. Their findings highlight the importance of hybrid logic and the strategic framing of business models in navigating the tensions inherent in social entrepreneurship. This approach provides valuable insights into how SEs can innovate their business models to balance social impact and economic sustainability. Moreover, integrating environmental sustainability into the innovation strategies of Indonesian SEs, demonstrates a commitment to addressing critical issues such as deforestation and waste management through innovative solutions.

Impact of innovation of SEs

The impact of innovation within Social Enterprises (SEs) in Indonesia presents a compelling narrative of transformative change, driving both economic growth and social progress. This exploration is grounded in an analysis of recent academic studies that shed light on the multifaceted nature of innovation impacts in SEs, focusing mainly on the Indonesian context.

In the Indonesian context, the practical application of these theoretical insights is evident in several case studies. For instance, SMEs' adoption of digital technologies in Indonesia has significantly enhanced their operational efficiency and market reach. Tykkyläinen and Ritala (2020) highlight the importance of aligning social and financial objectives through innovative business models, a strategy Indonesian SEs have successfully implemented by leveraging digital platforms to expand their social impact and economic sustainability.

The impact of innovation on the performance of SEs in Indonesia is further illustrated by Wang et al. (2020), who explore the relationship between business model innovation, legitimacy, and performance in the context of Chinese social enterprises. Although focused on China, their findings offer valuable insights for Indonesian SEs, suggesting that innovation can enhance performance by improving legitimacy among stakeholders. This is particularly relevant in Indonesia, where SEs often operate in sectors characterized by high social and environmental stakes.

Additionally, the role of knowledge exchange and collaboration in driving social innovation, as captured by the RESINDEX model, resonates with the Indonesian experience. SEs in Indonesia have benefited from engaging in collaborative projects with universities, technology centers, and other SEs, fostering an environment conducive to innovation and learning.

The impact of innovation within SEs in Indonesia is profound, driving significant advancements in both social welfare and economic development. By drawing on the insights from recent academic studies and applying them within the Indonesian context, SEs can navigate the challenges and opportunities of social entrepreneurship more effectively. These studies underscore the importance of adopting a holistic approach to innovation that integrates social, technological, organizational, and environmental considerations, thereby ensuring the sustainable growth and impact of SEs in Indonesia.

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CONCLUSION

In conclusion, this paper examined the essential roles of innovation and digitalization in promoting

social enterprise sustainability in Indonesia. The SE sector could use digital technologies and exploit its capabilities and distinctive resources to gain competitive advantages and create more impact to achieve sustainable development. However, the results also highlight the importance of the legal and policy support systems to promote innovations and digitalization in the SE sector. The research could expand by conducting longitudinal follow-up to observe these innovations and digitalizations' long-term impacts on SE sustainability and impact.

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EMPOWERING ETHICAL LEADERS: REVITALIZING JUSTICE VALUES IN ISLAMIC RELIGIOUS EDUCATION AND MORAL CHARACTER LEARNING

Dodi Ilham*, Baderiah, Salmilah, Amrul Aysar Ahsan, Andi Husni A. Zainuddin, Nilasari, Erwatul Efendi

State Islamic Institut of Palopo, Indonesia

**Corresponding author: baderiah@iainpalopo.ac.id*

Abstract

This study evaluates the implementation and effectiveness of character education focusing on justice values within the Islamic Religious Education and Character Education curricula in Palopo City's primary educational units, responding to Indonesia's Presidential Regulation No. 87 of 2017. The regulation advocates for character education to develop students' potential comprehensively. A mixed-method approach, encompassing qualitative and quantitative research techniques, was applied, involving observations, interviews with educators from 27 schools, and questionnaires administered to 100 fifth-grade Muslim students. Findings underscore the importance of integrating anti-corruption and anti-radicalism values into educational content, highlighting the curriculum's role in promoting social awareness and fairness aligned with Pancasila values. The research revealed that most educators focus on fair treatment among students, with approximately 65% demonstrating a good understanding of the taught justice values. It reflects the effectiveness of the teaching content and methods employed. However, 17% of students categorized as Below Average and Very Below Average indicate a need for educational refinement, suggesting opportunities for enhancing teaching strategies and character education approaches. The study concludes with a call for ongoing educator efforts to ensure all students fully comprehend and internalize justice values, aiming to nurture a generation of principled, resilient individuals capable of contributing to a more ethical, harmonious society.

Keywords: *Ethical Leader, Justice Values, Islamic Religious Education and Moral Character Learning*

1.INTRODUCTION

The Presidential Regulation of the Republic of Indonesia Number 87 of 2017 underscores the importance of strengthening character education as a strategic effort in education aimed at developing students' potential holistically through the harmonization of heart, mind, soul, and body (Indonesia, 2017). This initiative, integrated into the National Movement of Mental Revolution (GNRM), aims to shape positive attitudes and behaviours among students, preparing them to become ethical, cultured individuals with strong character. Within this framework, the active role of teachers as educators and role models, as well as close cooperation between educational units, families, and communities, is critical to achieving the goals of character education.

Referring to Presidential Regulation 87 of 2017, educational units are mandated as the primary environment for instilling character values, integrating these values into the curriculum and teaching practices and creating a conducive learning environment (Indonesia, 2017). Emphasis on anti-corruption and anti-radicalism values becomes part of the shared moral responsibility between parents and educational units, supporting collective efforts in instilling good character values in students.

Furthermore, the Curriculum for Independent Learning philosophy places students at the centre of the learning process, leading to more meaningful learning and responsiveness to each student's unique needs and potential (Yunaini et al., 2022). In the context of Islamic religious education and character education, this approach gives students an active role in shaping a generation that is not only globally competent but also behaves following the values of Pancasila as aspirational Pancasila learners.

The role of teachers and parents in supporting the strengthening of character values through Islamic religious education and character education emphasizes the importance of collaboration in shaping positive student character (Alimron et al., 2023; Komalasari & Yakubu, 2023; Taufik, 2020). Integrating character values into the learning content is expected to produce individuals who are not only of good character but also can make positive contributions to society (Jannah, 2023; Komariah & Nihayah, 2023). This approach also strengthens the understanding of anti-radicalism and anti-corruption culture from an early age, in line with the principles of Pancasila and moderate religious life.

In the multicultural landscape of Palopo City, with the dominance of the majority of Muslims and the presence of minorities from other religions, challenges arise in maintaining social cohesion amid potential conflicts. Incidents of injustice and discrimination, including violence against children, juvenile delinquency, and discriminatory practices in the workplace, indicate the need to strengthen the value of justice in the educational and social structures (A. Dinda Prasta Rahmadani, 2019; Nurlaini Rahmad, 2019). This research explores the implementation and effectiveness of character education, especially the value of justice, in Islamic religious education and character education in primary educational units in Palopo City, contributing to efforts to build an ethical leader and a more just and harmonious society.

2.LITERATURE REVIEW

Justice Value

Understanding and implementing the value of justice in everyday life is one of the crucial pillars in shaping a harmonious and fair society (Komariah & Nihayah, 2023; Yustisianto et al., 2022). Fairness is not only about applying existing rules and laws but is also closely related to the values of Pancasila, which serve as the philosophical foundation for all Indonesian citizens (Wahyudin et al., 2019). The value of social justice for all Indonesian people is the primary reference in every action and policy, both at the individual and societal levels. Justice in this context implies equality, where everyone has the same rights and obligations without discrimination.

On the other hand, justice is closely related to human rights, which demand that every individual's fundamental rights be respected and protected. Failures in applying justice often correlate with corrupt behavior, stemming from dissatisfaction with basic needs and a desire to gain more than what is rightfully due. Research by Bauhr & Nasiritousi, later cited by Riwukore et al. (2020), indicates that corruption arises due to greed and the desire to maximize personal gains, even by violating norms and laws. This phenomenon underscores the importance of internalizing the value of justice early on to prevent actions that could disrupt social order.

A constructive and inclusive approach is necessary to instill the value of justice, especially in primary school children. Parents and teachers are crucial in setting good examples and promoting empathy towards others. This approach can be implemented through various means, such as ensuring fair treatment for all children, teaching empathy, using real-life situations as learning materials, encouraging discussions about the value of justice, and providing choices that enable each child to act justly.

Implementing the value of justice in children's education helps them understand the concept of

justice itself and teaches them to apply it in everyday life. It is essential for shaping children's characters to be objective and proportional in their actions but also compassionate and impartial (Kamal & Arifin, 2019; Riwukore et al., 2020). By adhering to these principles, the education of justice values has excellent potential to reduce corrupt behaviour in the future and shape a fairer and more prosperous society.

Ultimately, instilling the value of justice early, mainly through anti-corruption education, is critical to shaping a younger generation with high integrity. Through a profound understanding of justice values encompassing objectivity, proportionality, impartiality, non-discrimination, and equal compassion, it is hoped to inspire fair and responsible behaviour. Thus, justice values remain theoretical concepts and become life principles practised in every aspect of life, positively impacting the development of society and the nation.

Learning Islamic Religious Education and Moral Character

In Indonesian education, government regulations have established a clear framework regarding the objectives and functions of religious and moral education, as outlined in Government Regulation 55 of 2007. According to this regulation, religious education is not only aimed at providing religious knowledge to students but also at shaping their attitudes, personalities, and skills in practising their religious teachings (*PP No. 55 Tahun 2007 Tentang Pendidikan Agama Dan Pendidikan Keagamaan [JDIH BPK RI]*, 2023). It is expected to create individuals who are not only faithful and devout to the One Almighty God but also possess noble character and are capable of maintaining peace and harmony among people of different. It emphasizes the importance of religious education in creating holistic Indonesian individuals (Muslim & Firdausia, 2021; Umar & Ismail, 2020).

The concept of moral character, which is at the core of character formation in religious and moral education, has deep roots in the language and culture of Indonesia. Moral character includes consciousness, understanding, intelligence, morals, temperament, and good behaviour, which are reflections of the harmony between reason and emotion (Lewis & Holloway, 2019; Suryanto et al., 2021). Developing good moral character is one of the main goals of religious education, as evidenced by literature describing moral character as the embodiment of moral values and virtues in everyday life.

Character education, often aligned with moral and ethical education, aims to develop excellent and righteous character and behaviour in individuals. Three educational concepts have the same substance in shaping individuals of quality, noble character, and noble moral character (Muzakki, 2022). It reflects a consensus in the literature that religious education and moral character significantly shape students' values and behaviours.

Policies and curricula for religious and moral education issued by the Education Standards, Curriculum, and Assessment Agency emphasize holistic and progressive learning to develop tendencies towards goodness, permissive attitudes, noble morals, and compassion towards the universe. It is realized through learning content that includes elements of Quran-Hadith scholarship, Creed, Morality, Jurisprudence, and History of Islamic Civilization, all designed to strengthen students' faith, morals, and understanding of religion and its application in daily life (Khaidir & Suud, 2020; Wijaya et al., 2021).

In practice, religious and moral education requires a pedagogical approach that is flexible and responsive to students' needs and characteristics. Teachers must develop learning experiences that align with competency standards and curriculum and adapt to students' socio-cultural contexts (Komariah & Nihayah, 2023). It requires creativity and innovation in delivering content and interacting with students, as well as collaboration with parents to support the development of

students' character beyond the classroom (Aningsih et al., 2022; Hayati et al., 2020). Therefore, effective implementation of religious and moral education results from cooperation between teachers, students, parents, and the community, all contributing to shaping a younger generation with noble morals and character.

Ethical Leader

Ethical leadership refers to leading based on strong moral and ethical principles, where every decision and action is grounded in these principles (Moore et al., 2019). It is about doing what is right and setting a good example, promoting a fair and transparent work environment, and encouraging ethical growth and development for all organization members (Kuenzi et al., 2020). In this context, ethical leaders act based on values of integrity, honesty, responsibility, justice, and respect for others. Ethical leadership is focused on short-term results or achievements and the long-term impact of decisions made on individuals, organizations, society, and the environment.

Ethical leadership is crucial in building a culture of trust and integrity that is the foundation for long-term success (Khaidir & Suud, 2020). Ethical leaders set high standards for their behaviour and that of their team members, enhancing morale, loyalty, and employee performance (Sarwar et al., 2020). The trust built through ethical leadership enables organizations to face challenges more effectively and create stronger working relationships with stakeholders, including customers, suppliers, and the wider community.

On a societal scale, ethical leadership plays a crucial role in promoting social justice, equality, and the protection of individual rights (Arar & Saiti, 2022). Ethical leaders in the public and private sectors can influence policies and practices that support sustainable development, equal opportunities, and respect for the law and human rights (Kaltenborn et al., 2020; Sarwar et al., 2020). Islam places a strong emphasis on justice, integrity, and responsible leadership. In Islam, ethical leadership is closely tied to the values of justice, one of the fundamental principles in Islamic teachings. Leaders are expected to act with fairness, transparency, and consideration for the common good over personal or specific group interests (Haron et al., 2020; Moore et al., 2019; Mutalib et al., 2022).

Overall, leadership in Islam is about directing, managing, and serving those who are led, reflecting the principle of 'Khilafah' (leadership as a trust or responsibility). It demands that leaders apply justice in every decision, ensure equality, avoid discrimination, and protect the rights of individuals and society. These principles are relevant in religious contexts and can be applied in contemporary organizational and social environments to promote more ethical and fair leadership.

3.METHODOLOGY

Research Design

A systematic methodology is required to ensure high-quality results, obtain accurate data, and facilitate the research process in the field. The research methodology used is a mixed-method approach, which combines quantitative and qualitative research methods (Creswell. J.W., 1999). Combining these two research methods is considered suitable for complementing each other's data (Doyle et al., 2009), which is necessary for this study. Please refer to the flowchart below for a clearer understanding of the research stages.

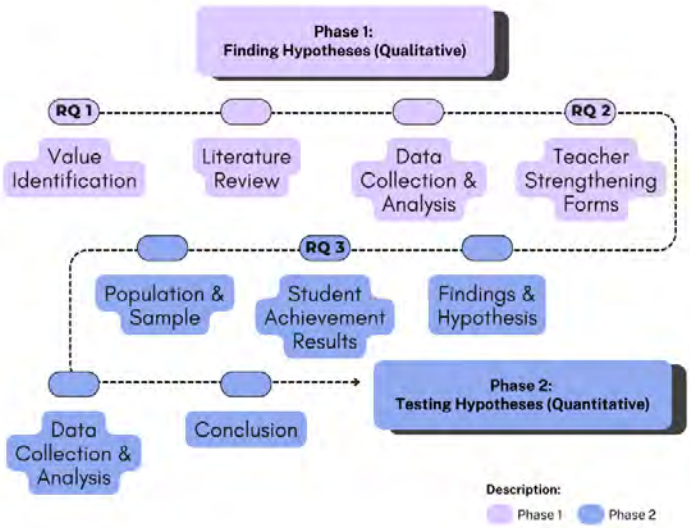

Figure 1. Research flow using sequential exploratory research design (Adapted from Creswell in Malini H, 2020)

Research Setting and Participant

This investigation is situated in Palopo City, South Sulawesi, encompassing nine districts that host 81 primary educational institutions, including secular elementary schools (SD) and Islamic elementary schools (MI). The collective student body across these institutions numbers 17,647 (Dapodikdasmen, n.d.-a, n.d.-b). Utilizing the Slovin formula, a sample comprising 27 educators was meticulously selected for this study. The methodology for selecting educator participants involved a non-probability and purposive sampling strategy anchored on rigorously defined criteria tailored to align with the study's thematic focus on Islamic Religious Education and Character Education. These criteria stipulate, firstly, that the schools from which samples are drawn must predominantly comprise teachers and students practising Islam, reflecting the study's concentration on Islamic pedagogical content. Secondly, the educators selected for the sample must actively deliver the Islamic Religious Education and Character Education curricula, embodying the studied values' transmission. Lastly, the student participants are specified to be Muslims in the fifth grade, ensuring that the sample demographic is aptly suited to the educational content's intended audience by age and academic stage. This targeted sampling approach strategically narrows the research focus to a demographic cohort optimally positioned to yield insights into the instructional impact of Islamic Religious Education and Character Education on students' comprehension of justice values. Concurrently, from the entire student demographic across all primary educational settings in Palopo City, 100 fifth-grade Muslim students were selected using the Slovin formula, aiming for a representative cross-section of the student population to further substantiate the study's findings.

Research Instrument

The research team engaged in observation activities, directly witnessing the processes of Islamic religious education and character education in 27 selected primary education institutions (SD/MI) in Palopo City, which were predetermined as samples. Subsequently, the research team conducted the interview phase with 27 educators/teachers specializing in Islamic religious education and character education, chosen as informants based on the previous sampling of schools. The questions and responses during the interviews were meticulously recorded using appropriate devices to facilitate accurate transcription of the interview results for subsequent analysis. The distribution of the questionnaire, containing a series of statements devised by the research team,

took place during two separate sessions at different times. The research team evaluated each response received using the Guttman scale. A score of 1 was assigned to each affirmative statement item if the respondent agreed and a score of 0 if not. Conversely, for each negative statement item, a score of 1 was given if the respondent disagreed and a score of 0 if in agreement.

Data Collection Technique

The data collection process in this study comprises two distinct phases: qualitative and quantitative. During the qualitative phase, an examination is carried out on the congruity of content within Islamic religious education and character education textbooks with values opposing radicalism and corruption. The findings from this examination are utilized to identify pertinent indicators and sub-indicators, serving as the foundation for crafting interview guidelines for teachers and questionnaires for students. The research team conducts observations and interviews with 27 public and private elementary school educators. A validated questionnaire instrument is employed in the subsequent quantitative phase and distributed to the sampled students after elucidating the questionnaire completion process.

4.RESULT AND DISCUSSION

Identifying Justice Values by Teachers through the Content of Islamic Religious Education and Character Education Learning

In the context of Islamic religious education and character development, integrating anti-corruption values is essential to foster social awareness among individuals. This process involves introducing individuals to the prevalent social injustices and initiatives to address these issues fairly and with empathy towards those less fortunate. In Islamic teachings, the principle of justice is elevated as a fundamental pillar. Primary Islamic sources, namely the Quran and the Hadith of Prophet Muhammad, explicitly emphasize the importance of being just and implementing justice towards all individuals. Thus, the Islamic religious education curriculum specifically includes materials to reinforce students' understanding of justice values in various dimensions of life. On the other hand, character education in Islam extends beyond the development of individual morality to the cultivation of a just character. Through character education, learners are taught the importance of treating others fairly, respecting their rights, and avoiding discrimination. The educational materials presented in this context are designed to reflect alignment with indicators validated by experts, as outlined in the following concept map:

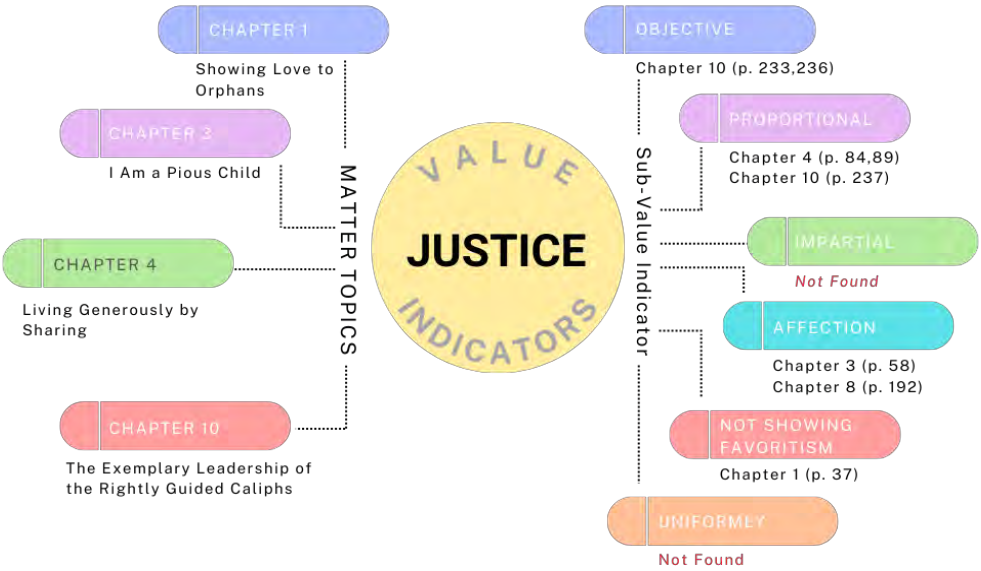

Figure 2. Concept Map of Indicator Alignment of Justice Values in Islamic Religious Education and Character Education Books for Grade V

Thus, Islamic religious education and character education, particularly in integrating anti-corruption values, play a significant role in shaping awareness and fair character among learners, which is in line with the justice values emphasized in Islam. The findings underscore the pivotal role that Islamic religious education and character education play in cultivating an understanding of justice values among learners (Oktio Frenki Biantoro, 2019). Integrating justice values within these educational frameworks is crucial for fostering social consciousness and ethical leadership among students (Sarid, 2021). This educational approach not only introduces learners to social injustices and the imperative of equitable treatment but also deeply roots the principle of justice as a fundamental Islamic tenet, as evidenced by the core Islamic texts—the Quran and the Hadith of Prophet Muhammad.

The curriculum's explicit emphasis on justice demonstrated through various dimensions of life and thematic educational materials, facilitates a comprehensive understanding of justice values. For instance, the curriculum incorporates discussions on treating others fairly, respecting rights, and eliminating discrimination, which are critical in shaping learners' moral compass and character development. The analyzed educational content, including chapters on showing love to orphans, living generously by sharing, and the exemplary leadership of the Rightly Guided Caliphs, aligns with expert-validated justice indicators, such as objectivity, proportionality, impartiality, and avoiding favouritism. However, it is notable that some aspects, like impartiality and uniformity, are not adequately covered or found within the curriculum, indicating areas for potential enhancement.

This educational initiative's significance lies in its ability to mould individuals aware of societal injustices and equipped with the moral virtues to address these challenges. By instilling justice values from an early age, Islamic religious education and moral character learning contribute significantly to the development of future ethical leaders (Ezzani et al., 2023; Isroani & Huda, 2022; Saputri et al., 2022). These leaders are expected to exhibit fairness, empathy, and a commitment to equitable treatment in all aspects of life, reflecting the core values of Islam and promoting a more just society.

Therefore, the study highlights the necessity of continuous curriculum evaluation and development to ensure that all facets of justice are comprehensively taught and internalized by students. Enhancing the coverage of underrepresented justice values could further strengthen the ethical foundation of learners, equipping them with a more holistic understanding and application of justice in their lives. Through this focused educational approach, there is a promising pathway toward cultivating a generation of ethical leaders capable of initiating positive change and upholding justice in their communities and beyond.

Forms of Reinforcement of Justice Values Conducted by Teachers through the Curriculum of Islamic Religious Education and Moral Character Education

The results of field research interviews with informants (Islamic religious education and moral character teachers) are presented. The interviews were processed using N-Vivo 12 Plus software. Strengthening the value of justice carried out by teachers in primary education units in Palopo City, as presented in the following chart below:

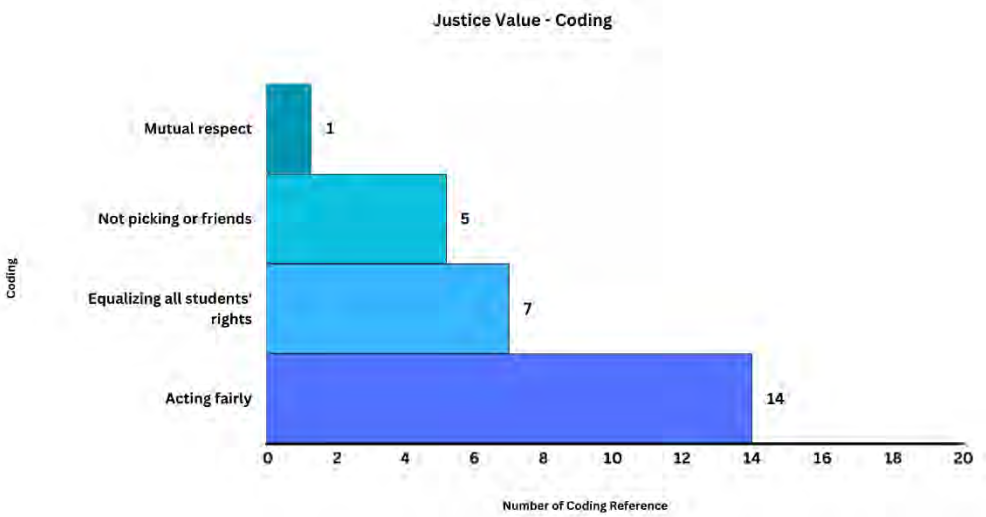

Figure 3. Code of Reference for the Value of Justice

Based on the interview results involving 27 teachers, after being processed and analyzed using the reference coding feature, various efforts have been revealed to strengthen the understanding and application of the values of justice in teaching Islamic Religious Education and Moral Character Education in elementary schools in Palopo City.

These efforts include acting fairly (performed by fourteen informants), equalizing all students' rights (performed by seven informants), not choosing friends (performed by five informants), and mutual respect (performed by one informant). Thus, it can be concluded that the dominant efforts to strengthen the values of justice are treating all students fairly in elementary schools in Palopo City. This finding indicates alignment between the efforts made in the context of learning with the emphasized components in the courage indicator with 5 out of 6 sub-indicators, namely "objective," "proportional," "impartial," "not showing favouritism," and "uniformly."

The findings reveal a concerted effort among educators to promote fairness, equality of rights, impartiality, and mutual respect among students. Specifically, most teachers (14 informants) focused on acting fairly, ensuring that all students are treated equitably within the educational

setting. This approach is closely followed by efforts to equalize rights among students (7 informants), discourage the formation of exclusive cliques (5 informants), and foster a culture of mutual respect (1 informant). These practices collectively underscore the importance of justice as a core component of character education, aiming to embed ethical principles deeply within the learners' psyche (Bates, 2019; Zaim et al., 2021).

This methodical emphasis on fairness and equitable treatment aligns with the broader educational goals of cultivating objective, proportional, impartial, and non-favouritism attitudes among students. However, the findings also suggest that while most justice sub-indicators are actively addressed, there remains room for enhancing the uniform application of these values across all student interactions and learning experiences. By systematically integrating justice values into the educational discourse, teachers in Palopo City are laying the groundwork for the development of ethical leaders who are knowledgeable about Islamic teachings and moral virtues and are prepared to apply these principles in real-world contexts. This pedagogical focus on justice reinforces the aim of Islamic Religious Education and Moral Character Education to prepare students for the complexities of societal interactions, ensuring they grow into individuals capable of making fair and principled decisions.

In conclusion, the research highlights educators' pivotal role in moulding students' moral character, explicitly focusing on justice. As these efforts continue to evolve and expand, they promise to significantly contribute to revitalizing justice values within educational settings, ultimately empowering a new generation of ethical leaders who embody the principles of fairness, equity, and mutual respect in their personal and professional lives.

Students Understanding of Justice Values through Islamic Religious Education and Moral Character Education Content

In this study, the validity of the questionnaire instrument given to one hundred respondents was tested using the Pearson Product Moment method. The criteria for determining item validity are as follows: an item is considered valid if the r-value is greater than the critical r-value (r-table) or the Significance value (Sig.) is less than α (0.05). Conversely, an item is considered invalid if the r-value is smaller than the critical r-value or the Sig. Value is more significant than α (0.05). The r-value and Sig. were obtained through analysis using SPSS software, while the critical r-value was obtained from the Pearson product-moment distribution table, with the criteria for the critical r-value determined based on a significance level of 5% and degrees of freedom (df) equal to N−2. In the context of this research, with N=100, df is calculated as 98, resulting in a critical r-value of 0.196. The analysis of the validity of the questionnaire instrument on understanding fairness values using the Pearson Product Moment method indicates that all questionnaire items are declared valid because each item has an r-value exceeding the critical r-value.

Furthermore, the score distribution on the fairness value questionnaire shows variations in the mastery of the material among respondents. Specifically, 34 respondents answered all items (8 items) correctly, obtaining a maximum score of 100. Thirty respondents made one mistake, resulting in a score of 87.5. 19 respondents made two mistakes (score of 75). 13 respondents made three mistakes (score of 62.5). Two respondents made four mistakes (score of 50), one respondent made six mistakes (score of 25), and one respondent did not answer any item correctly (score of 0). This score analysis provides insights into respondents' understanding and acceptance of fairness value concepts.

Total number of students = **100 students**

Total score =

34 × 100 = 3400

30 × 87,5 = 2625

19 × 75 = 1425

13 × 62,5 = 812,5

2 × 50 = 100

1 × 25 = 25

1 × 0 = 0

Total overall score =

3400 + 2625 + 1425 + 812,5 + 100 + 25 + 0 = 8387,5

Mean Score:

$$\frac{\text{Total overall score}}{Total\ number\ of\ students} = \frac{7{,}390.63}{100}$$

Based on the analysis of average scores, the criteria for success in understanding the value of justice among students through the curriculum content of Religious Education and Character Education at the Elementary Education Unit in Palopo City are established as follows:

Very Good : Score ≥ 90

Good : Score 80 - 89.9

Fair : Score 70 - 79.9

Below Average : Score 60 - 69.9

Very Below Average: Score < 60

Furthermore, based on these criteria, a comparative analysis was conducted on the previously obtained dataset, resulting in the cumulative distribution of scores achieved by the students as follows:

Very Good : 34 students (35%)

Good : 30 students (30%)

Fair : 19 students (19%)

Below Average : 13 students (13%)

Very Below Average: 4 students (4%)

Based on the available data analysis, it can be concluded that the educators' initiative in integrating principles of justice into the Religious Education and Character Education curriculum in Palopo City has yielded significant results. Most students demonstrate good to very good levels of understanding of the anti-corruption principles taught, with approximately 65% of the total students falling into the Very Good and Good categories. These findings indicate that the adopted learning content and pedagogical strategies successfully communicate the concept of justice to learners. A profound understanding of these justice principles is a critical aspect, especially in the current context where issues of injustice often take centre stage in public discourse and social environments.

However, a group of students, comprising 17% of the total, still require special attention, particularly those categorized as Below Average and Very Below Average. It suggests opportunities to enhance the learning process through adjustments in content delivery, teaching strategies, and character education approaches. Teachers are expected to conduct internal evaluations, revise teaching content, and implement more interactive and engaging teaching methodologies so that students can internalize the conveyed material more effectively. Although initial findings indicate positive progress, there needs to be sustained commitment from educators to ensure comprehensive understanding and internalization of justice values by all students. Through quality and continuous education, it is hoped that the younger generation in Palopo City can develop into individuals with integrity, principles, and resilience against practices of injustice.

The findings highlight the effectiveness of curriculum content in fostering an understanding of justice values among students. Through the meticulous application of the Pearson Product Moment method, the study validated the questionnaire instrument provided to a hundred respondents, ensuring the reliability of the data collected on students' comprehension of fairness values. This methodological rigour and the statistical analysis performed using SPSS software established a solid foundation for evaluating the curriculum's impact.

The distribution of scores among the students presents a nuanced understanding of their mastery of the material related to justice values. With most students scoring within the Very Good to Good range, the results affirm the successful integration of justice principles into the curriculum and teaching strategies. This positive outcome suggests that the educational initiatives significantly convey the intended concepts, facilitating a deep understanding of justice among students (Komalasari & Yakubu, 2023; Muzakki, 2022). However, a segment of students scoring Below Average to Very Below Average indicates a disparity in the assimilation of these values, pointing towards areas for improvement in educational delivery and methodology. This variance underscores the necessity for ongoing pedagogical assessment and adaptation to comprehensively meet all students' learning needs (Alimron et al., 2023; Komariah & Nihayah, 2023).

The findings thus emphasize the critical role of Islamic Religious Education and Moral Character Education in cultivating a generation equipped with a solid moral compass (Fajrussalam et al., 2020). By instilling principles of fairness, equity, and justice from an early age, the educational system in Palopo City is poised to develop future leaders who are not only academically proficient but also morally upright and socially responsible. Moreover, the study calls for a sustained commitment from educators to revisit and enhance teaching content and methodologies. By

fostering a more interactive and engaging learning environment, educators can ensure that justice values are taught and internalized by students, paving the way for their application in real-world scenarios (Abulibdeh et al., 2024; Yunaini et al., 2022).

In conclusion, the research underscores the significant strides made in embedding justice values within the educational framework while also highlighting the need for continuous improvement to achieve a comprehensive understanding and internalization of these values. Through dedicated efforts towards refining educational practices, there is a promising opportunity to empower ethical leaders capable of navigating the complexities of contemporary society with integrity and a strong sense of justice.

5.CONCLUSION

The research underscores the essential role of Islamic Religious Education and Moral Character Education in fostering a deep understanding of justice among students, which is crucial for nurturing future ethical leaders. While the curriculum content and teacher-led initiatives have shown to be effective in imparting these values, there remains a need for ongoing pedagogical evaluation and innovation to ensure that all students can internalize and apply justice principles effectively. Enhancing the coverage of underrepresented justice values and adopting more interactive teaching methodologies are recommended to bridge the comprehension gap among students. By prioritizing the cultivation of justice values through education, the study advocates for a concerted effort among educators to develop academically accomplished individuals with a strong moral compass. The goal is to empower a generation capable of contributing positively to a just and equitable society, embodying the principles of fairness, empathy, and integrity in their personal and professional lives. Through dedicated educational practices, Palopo City has the potential to emerge as a community where ethical leadership flourishes, driven by the foundational values of Islamic education and moral character development.

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FINANCIAL PERFORMANCE ANALYSIS BEFORE AND AFTER MERGERS AND ACQUISITIONS ON MANUFACTURING COMPANIES ON THE INDONESIAN STOCK EXCHANGE

Jan Horas Veryady Purba[1*], Firdha Suryana Az Zahra[1]

[1]Institut Bisnis dan Informatika Kesatuan

[*]*Corresponding author: janhorasvpurba@gmail.com*

Abstract

Business competition in the manufacturing industry is getting tighter and more competitive day by day. This requires companies to be responsive and able to serve their consumers with appropriate strategies. One of the company's strategies to be able to compete and lead the market is a merger and acquisition strategy.This research aims to analyze the effect of mergers and acquisitions on the performance of manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2021 period, namely PT Garudafood and PT Indorama Synthetic. In this research, the data used is secondary data, in the form of financial reports from the two companies carrying out the merger. The financial performance analyzed before and after the merger includes liquidity ratios, solvency ratios, activity ratios, profitability ratios, and market ratios. The analytical method used is the statistical difference test or t-test.The research results show that the majority of financial performance has a positive difference test, namely current ratio, cash ratio, debt to total asset ratio, long-term debt to equity ratio, total assets turnover, inventory turnover, receivable turnover, fixed asset turnover, gross profit margin, return on equity, dividend yield and price-earnings ratio. The results of hypothesis testing produced the majority of significant difference tests. This shows that the merger and acquisition strategy is a good strategy, where the company's financial performance becomes better after carrying out the merger and acquisition. The research results also show that some financial ratios are not significant, including capital adequacy ratio, net profit margin, dividend yield, and market book value. This shows that the impact of financial performance after mergers and acquisitions also requires relatively more adequate time so that good financial performance is obtained as expected.

Keywords: *financial performance, mergers, acquisitions*

1.INTRODUCTION

Every company aims to use its business resources efficiently to gain an advantage in business competition and be able to survive in it for years. The strongest factor in ensuring that a company can survive in today's rapidly developing competitive world is the company's growth strategy and the results obtained from implementing this strategy. Increasing competition between companies increases the importance of scale in business. Therefore, company performance is no longer just a company goal, but is a necessity for the company.

Good company performance shows satisfactory results, so it can be used as a basis for further business development. On the other hand, poor company performance will make it increasingly difficult for the company to maintain its existence. For this reason, it is important to pay attention to company performance so that the company can maintain its continuity and develop, especially in manufacturing companies. Manufacturing companies are the largest companies compared to other

types of companies listed on the Indonesia Stock Exchange (BEI). From data from the Jakarta Stock Exchange in 2019, the number of manufacturing issuers was 139 companies, while the number of all types of companies listed on the Indonesia Stock Exchange (BEI) in 2009 was 414 companies. This means that around 33.57% of companies listed on the Indonesia Stock Exchange (BEI) are manufacturing companies. With the largest number on the Indonesian Stock Exchange, manufacturing companies have a significant influence on the dynamics of stock trading on the Indonesian Stock Exchange (BEI).

Based on initial research observations, the ROA of manufacturing companies listed on the IDX experienced unstable increases and decreases. So the better the profitability ratio, the better the company's performance. The growth performance of the manufacturing industry weakened in the first quarter of 2020 by 2.01% compared to the previous year's period of 4.8%. However, the manufacturing industry contributes the largest GDP at around 19.98%. The perception of the manufacturing industry was 27.5 points in February and was the lowest on record. But in June it had improved by 39.1 points.

The profitability value of manufacturing companies fluctuates, where the company profitability value in 2018 decreased by 29.34% compared to 2014. However, if you look at the debt value of the Manufacturing Index, it can be seen that the debt value continues to increase every year. In fact, the company's debt in 2018 increased by 85.30% compared to 2014. This means that the company's performance has not been able to increase significantly.

Based on the above phenomenon, manufacturing companies can develop their company performance through growth both internal and external to the company. The form of business expansion from outside the company that is often implemented is mergers and acquisitions. A merger is defined as the affiliation of two or more organizations to become one larger organization, while an acquisition is the purchase of one organization by another (Drimawan, *et al*., 2021). When mergers and acquisitions occur, the acquiring company may not always be in an advantageous position, this has an impact on the acquirer's liquidity, profitability, operations and managerial efficiency (Gupta, 2012).

Various previous studies have been conducted regarding changes in company performance after mergers and acquisitions. Mergers or acquisitions have a significant effect on company performance. This is because M&A actions have succeeded in increasing management efficiency by combining resources from both companies, which can save operational and non-operational costs, thereby simultaneously increasing income and shareholder value (Richard, 2020).

This research aims to test whether financial performance will be better after mergers and acquisitions. The subjects of this research are manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2021 period.

2.LITERATURE REVIEW

Mergers And Acquisitions

A merger is a business combination, where a company takes over one or more other companies, then the companies taken over are liquidated (Payamta and Setiawan, 2004). In a business context, a merger is a transaction that combines several economic units into one new economic unit. Meanwhile, an acquisition is the takeover of all or most of a company's shares or assets by another company, and the two companies continue to run their companies as separate legal entities. In most literature, mergers and acquisitions are often interpreted as the same thing.

Financial Accounting Standards Guidelines Number 22 concerning Accounting for Business Mergers defines: "Business Combination is the unification of two or more separate companies into an economic entity because one company merges with another company or gains control over the assets and operations of another company". Based on the above, merger is a general term that is often used to express business combinations.

From a microeconomic perspective, implementing a merger and acquisition strategy can have a positive impact, and can also have a negative impact, in the form of disappointment, conflict, and even failure of the process itself. At the macroeconomic level, currently the merger and acquisition strategy has not had a major positive impact.

In this case two or more companies merge, one of the companies is legally dissolved and the other company still exists to continue business. The company that was dissolved transferred its assets and liabilities to the company that took over so that the company that took over experienced an increase in assets. Acquisition is the act of buying or taking over a company of another company. In general, acquisition decisions are directed at achieving synergy value, namely the resulting synergy that cannot be achieved if carried out by the two merged companies individually. Business expansion or expansion is needed by a company to achieve efficiency, become more competitive, and to increase company profits. One way is to carry out mergers and acquisitions (Moin, 2004).

Mergers and acquisitions have various types, including:

a. Horizontal Merger

It is a merger of two or more companies operating in the same industry with the aim of reducing competition or increasing efficiency through combining production, marketing, distribution, research and development activities and administrative facilities. The impact of horizontal mergers is that the market structure in the industry becomes increasingly concentrated. For example: the merger between Bank of Tokyo and Mitsubishi Bank.

b. Vertical Merger

Occurs when a company buys upstream companies, such as supplier companies, and/or downstream companies, such as distribution companies that directly sell their products to customers. Thus, a vertical merger is a combination or integration of two stages of production or distribution. The advantages of this type of merger are guaranteed supply of raw materials, reduced transaction costs, created better coordination, and made it difficult for new competing companies to enter. Example: merger between PT Gudang Garam and PT Surya Pamenang as a paper company.

c. Conglomerate Merger

Is a merger of two or more companies each operating in related industries. A conglomerate merger occurs when a company diversifies its business field by entering a business field that is completely different from its original business. If conglomerate mergers are carried out continuously by companies, a conglomerate is formed. Example: merger between Viks Richardson (pharmaceuticals) and Procter and Gamble (Consumer Goods).

d. Market Extension Mergers

Is a merger of two or more companies to expand the market area. The main goal is to strengthen the marketing network for each company's products. Usually, market extension mergers are carried out by cross-border companies, to expand and penetrate the market and to overcome export limitations due to a lack of flexibility in providing products to foreign consumers. Example: merger between Daimler Benz (Germany) and Chrysler (United States).

e. Product Extension Mergers

It is a merger of two or more similar companies or in the same industry but which do not produce the same products or have no supplier links. This business merger was carried out to expand the product lines of each company. After the merger, the companies will offer more types and product lines so they can reach a wider range of consumers. This product extension merger was carried out by utilizing the strengths of each research and development department to obtain synergy through research effectiveness so that it is more productive in innovation. Example: merger between the pharmaceutical company Upjohn (United States) and Pharmacia (Sweden).

Brigham and Houston (2009) stated that the motives for a merger by a company are:

a. Synergy. Synergy is a condition where the value of the whole is greater than the sum of its parts. The main motivation in some mergers is to increase the value of the merging companies.

b. Tax considerations. Mergers can be selected to minimize taxes and use excess cash and reduce taxable profits.

c. Purchase of assets below their replacement value. The company was taken over because the replacement value of its assets was much higher than the market value of the company itself.

d. Diversification. Sometimes diversification is the reason for a merger because it helps stabilize the company's profits so that it is beneficial for the owners.

e. Gaining control over a larger company.

From the information above, it can be concluded that a merger is an absorption by one company towards another company. If two companies X and Y merge, then there will only be one company, namely company after the merger activity occurs, it is called a Merged Firm.

Apart from mergers, another external business development is through acquisitions. Acquisition comes from the words acquisitio (Latin) and acquisition (English). An acquisition is the taking over of ownership or control in the form of assets of another company, but the company still exists as a separate legal entity. In Government Regulation No. 27 of 1998 concerning mergers, consolidations and takeovers of Limited Liability Companies, it is defined that an acquisition is a legal act carried out by a legal entity or individual to take over all or most of the company's shares which can result in a transfer of control of the company.

Meanwhile, acquisition in business terminology is defined as the takeover of ownership or control of shares or assets of a company by another company, and in the event that either the acquiring company or the one being taken over continues to exist as a separate legal entity. Meanwhile, an acquisition according to Hitt (2001) is a strategy through which a company purchases the right to control or 100 percent ownership of another company with the aim of using the company's core competencies effectively, by making the acquired company part of the business in the company's portfolio. the acquirer.

The acquisition process for issuers or public companies is carried out in two ways, namely through a tender offer and through the conversion of debt into shares. Several issuers acquired through tender offers were PT Medco Energy International Tbk and PT Sumalindo Lestari Jaya Tbk. Meanwhile, public companies acquired through the process of converting debt into shares include, PT Adindo Forestra Indonesia Tbk which was acquired by PT Traffon Investment Private Ltd and Bazehill International Ltd, PT Citatah Tbk, PT Sekar Laut Tbk and PT Japfa Comfeed which were acquired by a syndicate of their creditors. Apart from that, there are several issuers or public companies that have acquired other companies. In 2002, several issuers/public companies that

made acquisitions of other companies, namely PT Tirta Mahakam Plywood Industry Tbk and PT Sigmantara Alfindo Tbk, made acquisitions of PT Alfa Retailindo Tbk. The acquisitions carried out by the two companies were acquisitions of parties that previously had no affiliate relationship.

Mergers and Acquisitions (M&As) are external strategies used by companies to increase company value. The success of the M&As strategy carried out by the company is very dependent on the performance carried out by management in implementing this strategy and optimizing resources will be the driving factor for the success of the company's M&As strategy. Before and after each M&As implementation, information will be provided to investors and the target company. Information available in the capital market has an important role in influencing all kinds of trading transactions in the capital market. This is because players in the capital market will carry out further analysis of every announcement or information submitted to the stock exchange. Information or announcements published by issuers will influence investors.

According to Jogiyanto (2000), capital market players will evaluate every announcement issued by the issuer so that this will cause several changes in stock trading transactions, for example changes in stock trading volume, changes in stock prices, bid/ask spread, and proportion of ownership. , and others. This also indicates that announcements entering the market contain information, so they are reacted by players in the capital market. An announcement contains information if when a trading transaction occurs, there are changes, especially changes in share prices. Basically, every investment made by investors aims to obtain income or return on investment. The income or return on the investment can be in the form of cash receipts and/or an increase in the investment value. Cash receipts for shares are in the form of cash dividends, while the increase in investment value is reflected in an increase in share prices, that is, the higher the share price means the greater the value of shareholder wealth. Apart from that, the increase in investment value can also be seen from the increase in stock trading volume, which can be used by potential investors in making decisions about choosing an efficient investment portfolio.

The objectives of mergers and acquisitions include:

1. Increasing economies of scale

2. Reduce the level of competition and increase the entity's market share and distribution.

3. Increase efficiency

4. Prevent takeovers (avoidance of takeovers)

5. Acquisition of intangible assets.

Meanwhile, the reasons that support an active acquisition strategy expressed by Hitt (2001) are:

1. Increase market power. Acquisitions are carried out to achieve greater market power.

2. Overcoming barriers to market entry. Entering new markets often experiences difficulties, so acquisitions are often used to overcome them.

3. Cost savings on new products. Acquisitions are another way that companies gain access to new and desired products.

4. Increase the speed of entering the market. Compared with internal product development, acquisitions more rapidly increase speed of market entry.

5. Lower risk compared to new product development. There is a riskier internal product development process, and managers see acquisitions as a way to lower the level of risk because they are easy to predict.

6. Increase diversification. It is usually easier for companies to introduce new products in markets that the company has recently served, and conversely it is more difficult for companies to develop products for markets that they have less control over.

7. Reshape the company's competitive reach. To reduce the negative impact of high levels of competition on financial performance, companies can use acquisitions as a way to limit their dependence on a few or single market products.

In carrying out mergers and acquisitions, there are several benefits obtained, according to David (2009), including:

1. Increase efficiency through synergies created between companies being merged or acquired.

2. Expanding the portfolio of services offered which will result in increasing sources of income for the company.

3. Strengthen the company's competitiveness, and so on.

Apart from that, Payamta (2004) found that the positive impacts of mergers and acquisitions are:

a. It is possible to exchange cash flow reserves internally between merging companies, so that the merged company can manage liquidity risks more flexibly.

b. Obtained an increase in company capital and an advantage in managing costs due to increasing business scale. Company efficiency can be further improved.

c. Achieving market power superiority over competition.

However, apart from the benefits, David (2009) also revealed that there are possible risks that arise and need attention in carrying out mergers and acquisitions, including:

1. All obligations of each company will be borne by the company resulting from the merger or acquisition, including obligations for payment and delivery of products to vendors that are still owed.

2. Operational expenses, especially in the short term, will increase as a result of the business merger process.

3. Differences in culture (corporate culture), systems and procedures implemented in each company so far will require adjustments over a relatively long time, and so on.

The business merger is intended, among other things, to give the company a wider marketing area and a larger sales volume; to develop a stronger organization and better production as well as good/talented management; reduce costs through savings and efficiency on a larger production scale; improved market control and competitive position; diversification of product lines; improved position in relation to procurement of raw material sources, and increased emphasis on capital for growth as a lower cost of borrowing (Drebin 2005).

Motivation for carrying out mergers and acquisitions consists of economic motivation and non-economic motivation (Kusumaningsih, 2010).

a. Economic Motivation. The target companies have competitive advantages, which are expected to result in synergies after the merger. In the long term, this synergy will be able to increase the company's sales volume and profits.

b. Non-Economic Motivation. For example, because the company is already weak in terms of capital and management skills, the desire to become the largest group in the world, even though there is a possibility that the business combination being carried out will not be profitable; because it was taken over by the bank.

Advantages and Disadvantages of Mergers and Acquisitions

The company's aim in carrying out mergers and acquisitions is definitely because there are more benefits to be obtained which will later benefit the company, but this assumption is not all proven. The advantages of mergers and acquisitions according to Moin (2004) are:

1. Advantages of Mergers

Takeovers through mergers are simpler and more economical than other takeovers.

2. Disadvantages of Mergers

Mergers have the disadvantage that there must be approval from the shareholders of each company so it takes a long time.

3. Advantages of Acquisition

The advantages of acquiring shares and assets include:

a. Share acquisition does not require a shareholder meeting and shareholder vote so that if shareholders do not like the Bidding firm's offer, they can hold their shares and not sell to the Bidding firm.

b. In Share Acquisition, the buying company can deal directly with the shareholders of the purchased company by making a tender offer so that company management approval is not required.

c. Because it does not require approval from the company's management and commissioners, share acquisition can be used for hostile takeovers.

d. Asset acquisitions require shareholder votes but do not require a majority of shareholder votes as in share acquisitions so there are no obstacles for minority shareholders if they do not approve the acquisition.

4. Lack of Acquisition

The disadvantages of acquisitions in companies in acquiring assets and shares are as follows:

a. If enough minority shareholders do not approve of the takeover, the acquisition will be canceled. In general, a company's articles of association require at least a two-thirds (approximately 67%) vote in favor of an acquisition for the acquisition to occur.

b. If the company takes over all the shares purchased, a merger occurs.

3.METHODOLOGY

Object of research

The objects of this research are several financial performance ratios in publicly traded manufacturing companies listed on the IDX 2018-2021, namely (1) liquidity ratios consisting of current ratio, and cash ratio; (2) solvency or leverage ratio (debt) consisting of debt to equity ratio, debt to total asset ratio, long term debt to equity ratio, time interest earned, and capital adequacy ratio (CAR); (3) activity ratios include total assets turnover (TATO), inventory turnover ratio (INTO), receivable turnover (ARTO), and fixed asset turnover (FATO); (4) profitability ratios include operating profit margin, net profit margin, gross profit margin, and return on equity; (5) market ratios include dividend yield, price-earnings ratio (PER), and market book value (MBV).

Research methods

Based on research needs, the research method used is quantitative descriptive. This method is used to solve current problems.

Sampling Method

The sampling method is purposive sampling, using the following criteria.

a. Listed on the Indonesian Stock Exchange during 2018-2021.

b. The company has a consolidation and safekeeping date recorded on the KPPU authority website.

c. Given are the total fiscal reports that have been reviewed for 2 consecutive years before the consolidation and acquisition and 2 years after the consolidation and acquisition with the period ending on December 31.

With these criteria, the sample in this research is purposively the following companies.

Table 1. Research Sampel Manufacturing Companies

No	Company	Target Company acquired and merged	M&A Date
1.	PT Garudafood Putra Putri Jaya Tbk	PT Mulia Boga Raya Tbk	12 November 2020
2.	PT Indo-Rama Synthetics Tbk	PT Cikondang Kancana Prima	3 December 2020

4.RESULT AND DISCUSSION

Result

PT Garudafood Putra Putri Jaya Tbk

PT. Garudafood Putra Putri Jaya Tbk (GOOD) operates in the snack food industry, especially products from nuts, chocolate, and biscuits as well as milk processing. Currently, the Company's activities are in the snack and beverage industry. The company started its commercial business activities in 1994.

PT. Garudafood Putra Putri Jaya Tbk (GOOD) is located at Wisma GarudaFood Jl. Bintaro Raya No. 10A South Jakarta DKI Jakarta 12240. The listing date on the Indonesian Stock Exchange is 1994-08-24 / 2018-10-10, with an IPO date of 10 October 2018. Subsidiaries and affiliates of PT. Garudafood Putra Putri Jaya Tbk (BAIK) is as follows: Golden Bird Pacific Trading Pte Ltd (100%), PT. Mulia Boga Raya Tbk (66.07%) and PT. Sinarniaga Sejahtera (54.95%).

On October 14 2020, PT Garudafood Putra Putri Jaya Tbk (GOOD) made an acquisition by completing the purchase of 825 million shares belonging to PT Mulia Boga Raya Tbk (KEJU). This amount is equivalent to 55% of all shares issued by cheese producer Prochiz. The takeover price for these 825 million shares is IDR 1,156 per share. With a total acquisition value reaching IDR 953.7 billion. With the completion of this takeover transaction, Garudafood will become the new controlling shareholder of Mulia Boga Raya.

PT Indo-Rama Synthetics Tbk

PT. Indo-Rama Synthetics Tbk (INDR) is engaged in the manufacture of spun and mixed yarns, polyester filament yarns (including microfilament yarns), polyester staple fibers, pet resins, textile grade chips, and polyester fabrics (grey and finished). The company began commercial operations in 1976. PT. Indo-Rama Synthetics Tbk (INDR) is located at Graha Irama, 17th Floor Jl. H.R. Rasuna Said Block X-1 Kav. 1-2 South Jakarta DKI Jakarta 12950. The listing date on the Indonesian Stock Exchange is 1974-04-03 / 1990-08-03, with 3 August 1990. The list of subsidiaries and affiliates of PT. Indo-Rama Synthetics Tbk (INDR) can be seen in the following table.

Table 2. Subsidiaries and Affiliates of PT. Indo-Rama Synthetics Tbk

Company name	Percentage
FE, Indorama Kokand Textile JSC	100%
Indorama Industry Pte Ltd	100%
Indorama IPLIK Sanayi ve Ticaret A.S.	100%
IRS Global Pte Ltd	100%
IRS Investments Pte Ltd	100%
IRS Universal Pte Ltd	100%
PT. Cikondang Kencana Prima	80%
PT. Indorama Trade and Development Services	99.97%

The financial performance analyzed includes 18 financial ratios. The findings of this research show the following results.

Table 3. Financial performance before and after mergers and acquisitions

		Before M&A	After M&A	Difference	Impact
Liquidity	Current Ratio	1.198	1.201	0.003	Positive
	Cash Ratio	0.182	0.368	0.186	Positive
Solvency	Debt to Equity Ratio	0.430	0.382	-0.048	Negative
	Debt to Total Asset Ratio	0.210	0.640	0.429	Positive
	Long-Term Debt to Equity Ratio	0.245	0.472	0.227	Positive
	Time Interest Earned	0.210	0.640	0.429	Positive
	Capital Adequacy Ratio	9.576	11.442	1.866	Positive
Activity	Total Assets Turnover	1.409	3.169	1.759	Positive
	Inventory Turnover	1.783	1.495	-0.288	Negative
	Receivable Turnover	11.800	10.506	-1.294	Negative
	Fixed Asset Turnover	1.409	3.169	1.759	Positive
Profitability	Operating Profit Margin	0.666	0.353	-0.313	Negative
	Net Profit Margin	2.894	3.168	0.274	Positive
	Gross Profit Margin	2.179	5.149	2.971	Positive
	Return On Equity	0.116	0.239	0.123	Positive
Market	Dividend Yield	0.021	0.023	0.002	Positive
	Price Earnings Ratio	178.138	267.438	89.300	Positive
	Market Book Value	0.475	0.520	0.045	Positive

From the results of the descriptive test on average financial performance above, it can be seen that there are differences in financial ratios before and after mergers and acquisitions. Some financial ratios have positive differences, where financial performance is greater after mergers and acquisitions, while some financial ratios have smaller or negative ratios).

Liquidity

The company's liquidity looks better after M&A, where the current ratio increased from 1.198 to 1.210, and cash ratio increased from 0.182 to 0.368. These two ratios show that in terms of liquidity, mergers and acquisitions have a positive impact on the company

Solvency

Debt to equity ratio decreased by 0.048 from 0.430 to 0.382, debt to total asset ratio increased quite significantly by 0.429 from 0.210 to 0.640, long-term debt to equity ratio increased by 0.227 from 0.245 to 0.472, time interest earned increased by 0.429 from 0.210 to 0.640, and capital adequacy ratio increased by 1.866 from 9.576 to 11.442. The financial ratios above show that most of them have positive changes, where financial performance improves after M&A. Meanwhile, the debt to equity ratio (DER) has a negative sign, or is lower than before the M&A, because the company has to resolve a larger debt burden after the merger. The results of this research show that M&A has greater benefits for companies in the long term, meaning the company is able to handle its long term obligations well.

From the data above, apart from the DER financial ratio, it can be seen that in terms of liquidity,

the company's financial performance is better after M&A.

Activity

In the activity financial ratios, there are 2 financial ratios that have positive changes, namely total assets turnover increased by 1.759 from 1.409 to 3.169 and fixed asset turnover increased by 1.759 from 1.409 to 3.169, Besides that there are two financial ratios that have negative changes, namely inventory turnover decreased by 0.288 from 1.783 to 1.495, and receivable turnover decreased by -1.294 from 11.800 to 10.506. Inventory Turnover is an indicator to measure how quickly a company is able to sell inventory and how to analyze the comparison with the industry average. Meanwhile, Receivable Turnover is a ratio related to receivables turnover or reflects the extent of the company's effectiveness in collecting receivables. In the short term, after this merger and acquisition, the company must make adjustments in terms of Inventory Turnover and Receivable Turnover.

Probability

Operating profit margin has negative changes, decreasing by -0.313 from 0.666 to 0.353; net profit margin has positive changes, increasing by 0.274 from 2.894 to 3.168; gross profit margin has positive change increasing by 2.971 from 2.179 to 5.149; return on equity have positive change increased by 0.123 from 0.116 to 0.239.

Mergers and acquisitions that have only been running for two years, the company has had to incur increasingly higher operational costs, so that the operating profit margin decreased, but has succeeded in increasing sales, and has had implications for increasing gross profit margin and also net profit margin. This shows that the company's operational management has improved after mergers and acquisitions. ROE is the return generated by the company for shareholders. This is determined by the company's ability to generate profit margins, asset productivity to generate income, and optimal debt management used by the company. Mergers and acquisitions have an impact on increasing return on equity. The higher the return on equity ratio, the higher the company value, this of course is an attraction for investors to invest their capital in the company. From the data above, apart from the operating profit margin financial ratio, it can be seen that in terms of profitability, the company's financial performance after M&A is better.

Market Ratio

Price-earnings ratio (PER) is the profit or profit generated by the company. The existence of mergers and acquisitions has a positive impact on the price-earnings ratio (PER), so it can be interpreted that the company can increase profits or profits after carrying out mergers and acquisitions.

Hypothetical test

The results of hypothesis testing are presented in the table below

Table 4. Hypothesis testing of financial performance before and after mergers and acquisitions

financial performance	Difference	Hypothesis	Finding	Level of significance[1)]			
Current Ratio	0.003	positive	accepted	***			
Cash Ratio	0.186	positive	accepted	***			
Debt to Equity Ratio (DER)	-0.048	positive	rejected			*	
Debt to Total Asset Ratio	0.429	positive	accepted		**		
Long Term DER	0.227	positive	accepted	***			
Time Interest Earned	0.429	positive	accepted		**		
Capital Adequacy Ratio	1.866	positive	accepted				Ns
Total Assets Turnover	1.759	positive	accepted		**		
Inventory Turnover	-0.288	positive	rejected	***			
Receivable Turnover	-1.294	positive	rejected	***			
Fixed Asset Turnover	1.759	positive	accepted		**		
Operating Profit Margin	-0.313	positive	rejected	***			
Net Profit Margin	0.274	positive	accepted				Ns
Gross Profit Margin	2.971	positive	accepted	***			
Return On Equity	0.123	positive	accepted	***			
Dividend Yield	0.002	positive	accepted				ns
Price Earnings Ratio	89.300	positive	accepted	***			
Market Book Value	0.045	positive	accepted				ns

[1)]Level of significance: ***=1%; **=5%; *=10%; ns. = not significant

Financial performance will improve after mergers and acquisitions. This is the basis for formulating the hypothesis, that financial performance will have positive changes. By conducting a t-test, the findings in this research were that most of the financial ratios increased well after the merger. From the results of the t-test above, it can be seen that four financial ratios are not in accordance with the hypothesis that was developed, namely debt to equity ratio, inventory turnover, receivable turnover, and operating profit margin, where these four financial ratios have a negative difference, or not. better after mergers and acquisitions. Apart from that, from the t-test, four variables were obtained that were not significant, namely: capital adequacy ratio, net profit margin, dividend yield, and market book value. However, the t-test results show that the changes are appropriate and that the performance of these four financial ratios has improved, but is not significantly different from zero or not significant. In hypothesis testing, this situation is called true negative (TN). This shows that the Company needs more time to improve its financial performance which cannot be achieved within two years after the M&A. Adjustments after M&A require a sufficient time process, so that financial performance can provide profitable benefits for the Company in the long term.

5.CONCLUSION

M&A has a positive and significant impact in increasing company liquidity. The results of the research show that the current ratio and cash ratio have improved and have a significant impact

Solvency financial ratios, which describe a company's ability to settle its obligations, can be seen from the financial ratios debt to equity ratio, debt to asset ratio, long term DER, time interest earned and capital adequacy ratio, which have a significant impact. However, the DER financial ratio has a different hypothesis, where the DER value is smaller after M&A. This is caused by the Company's obligations becoming smaller to complete the Company's obligations after the merger. From all the tests above, there are four financial solvency ratios that are positive and significant, which means that, in the long term, the company will have greater ability to settle the company's long-term debt obligations.

The financial activity ratio shows that total assets turnover and fixed asset turnover have a positive impact after M&A, meaning that the company's condition is better after the merger. However, not all of the ongoing problems can be resolved immediately, especially regarding inventory turnover and receivable turnover. Company activities also require sufficient adjustment time, so that these two financial ratios provide positive benefits after mergers and acquisitions. From the significant test, it can be seen that this financial performance produces a significant t-test.

In general, company profitability improves after M&A. This is one of the company's economic motives for carrying out a merger. The research results show that Return on Equity (ROE) has a positive and significant impact. ROE is one of the main indicators in measuring profitability. And research results prove that ROE increases after M&A. In the t-test above, the net profit margin (NPM) is not significant. However, this shows that in the process, an adjustment process is needed which takes time so that the financial performance of profitability produces satisfactory results, especially the operating profit margin which decreases in the short term after M&A.

Market ratios show positive changes after M&A, both dividend yield, price earnings ratio and market book value. Of the three financial ratios, the price earnings ratio has a significant impact.

Acknowledgement

The author would like to express his gratitude to the Research and Community Service Institute of the Institute of Business and Informatics Kesatuan (IBIK) in Bogor, Indonesia, for the support provided in conducting this research, as well as being able to take part in this international conference. Also thank you to all parties who have helped and contributed, so that this research can run well

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CAN EARNING MANAGEMENT DURING THE COVID-19 PANDEMIC LOWER VALUE RELEVANCE?

Siudi Rustandi[1], David HM Hasibuan [1], Doni Cahyo Wibowo[1] , Amrie Firmansyah [2]

[1] Institute Business and Informatics Kesatuan, Bogor

[2] Universitas Pembangunan Nasional "Veteran",Jakarta

Corresponding author: davidhasibuan@ibik.ac.id

Abstract

This study aims to test earning management during the COVID-19 pandemic against relevant marks. This study approach uses quantitative and *cross-sectional* data. It uses secondary data from 51 sector companies, including *Consumer Non-Cyclical,* on the Main Board of the Indonesia Stock Exchange in 2020 and 2021. Secondary data This was obtained from the site www.idx.co.id and the official website of each company The sampling technique in this research used purposive sampling. This study concludes that earning management is not influential in determining the relevance of mark profit or mark book equity. The results of this test show that managers are not taking advantage of pandemic conditions to carry out earnings management for certain motives. Besides, investors do not react to earning management made by managers because investors focus on supportive policies for the company's sustainability in the future.

Keywords: COVID-19, equity, quality profit, usefulness information, relevance mark

1.INTRODUCTION

The COVID-19 pandemic, which has hit worldwide since the beginning of 2020, has previously presented challenges for the global economy. The pandemic is considered the biggest crisis in the world's health, economy, and society in the century. Crisis health influences aspects of health society and impacts sector economics in various ways, including *non-cyclical consumer*s (Barai & Dhar, 2021).

The pandemic creates a landscape full of business uncertainty, and some economics and management theories can give an outlook on how companies in the *non-cyclical consumer sector* can respond to the challenge. For example, the theory of adaptation organization (R. et al., 1983) describes the ability organization to change and adapt to environment. During the pandemic, many companies faced various obstacles that became vital for management. To show their best performance, they. It matters because quality performance will impact the market value of the company and influence investors' interest in investing in them (Azizah, 2021). Investors are interested in investing in a capable company that can sustainably produce a profit. Profit is an indicator of the performance of an operational company and success in reaching goals that have been set. If the profit target has been achieved, determined by management, and is unsuccessful, it may be an encouragement. To manipulate report finance to create more profitable pictures of the company's performance (Azizah, 2017). Manipulating report finances for a profit company, seen as tall, is a method management uses to absorb investor interest. Practice earning management is used by businesses to avoid reporting loss or adapting to the prevailing economy.Earning Management is defined as efforts made by the company to guard its position and advantage, manipulate the financial data presented to the party third (Wang & Campbell, 2012).

Several studies have previously tested the impact of a crisis on quality profit, especially in measurement of quality accrual. Research by (Iatridis, 2015) and (Filip and Raffournier, 2014) shows that quality accrual experiences enhancement during a crisis economy. Along with the pandemic, research on quality accrual during the crisis has also been done (Lassoued & Khanchel, 2021). Research results show that the pandemic has resulted in a decline in reliability reports, reflected in the decline in quality profit due to action management. (Aljawaheri dkk., 2021) Do research that tests the related impacts of the pandemic policy *lockdown* on the Iraqi stock exchange in sectors mainly affected by the crisis economy caused by the pandemic. Findings show that the company samples manipulate profit to maintain profit during a crisis to get an optimistic perception of investor-related company finances. The substantial information profit in explaining variance from shares increased shows that relevance marks information the more tall (Francis et al., 2004)

Several scholars have delved into investigations concerning the influence of crisis severity on quantified earnings with pertinent significance (Persakis & Iatridis, 2015). Furthermore, (Adwan et al., 2020) discovered that during crises, the global financial sector tends to diminish the relevance marker through the utilization of a pricing model. Additionally, various researchers, including Febriyanti (2020), Gormsen & Koijen (2020), Ramadhani (2021), and Yahya et al. (2021), have explored the ramifications of pandemics on stock markets. Their findings suggest that stock markets react swiftly at the onset of a crisis, spurred by informational accounting detailing a company's standing based on widely accepted market values, thus marking them as relevant. A study focusing on the relevance of accounting markers has been developed to encompass all facets of financial reports, such as balance sheets, income statements, and cash flow statements (Ohlson, 1995).

Two primary approaches are employed in discussing the relevance marker: regression based on price levels (price model) and returns (return model); the latter offers diverse insights into the same inquiry (Almagtome & Abbas, 2020). The pricing model adeptly incorporates pertinent data during assessment, encompassing cultural and market variables. Precise market estimations can yield accurate pricing patterns. The valuation of a company can be represented as a linear equation involving accounting markers, earnings, and other relevant data (Shamki & Rahman, 2013). The relevance marker for pricing can be gauged by declining earnings per share (EPS) and book value of equity (BVE) as independent variables against share prices (P) as the dependent variable (Ohlson, 1995).

This study aims to investigate the influence of earning management during the pandemic against relevance value. The Financial data used in the study are from the company sector's *non-cyclical consumers* in Indonesia between 2020 and 2021, namely the two years covering the period intensity impact of the pandemic. EPS and BVE are relevant in measuring relevance value, whereas management integrated profit lower relevance mark from EPS and BVE (Subekti, 2010). *The non-cyclical consumer* sector, which includes products of food, drink, health care, and products, has characteristics that possibly influence the impact of the pandemic compared to the sector. This matter happened because uncertainty about the future consequences of pandemic caused stock market investors worldwide to panic and withdraw their funds. Investor reaction to information profit also becomes sentiment in deciding to invest. Where report-published financial companies become the base for internal investors, performance companies are evaluated based on the quality of profit generated (Mandiri & Sebrina, 2023). Thus, research contributes to understanding the impact of the pandemic. This context sector is very relevant to *non-cyclical consumer*s In the Indonesian economy. Through analysis, this is expected to reveal the extent to which the company in the sector of *non-cyclical consumers* in Indonesia can afford to adapt and overcome challenges

faced during the pandemic. This research result can also give a valuable outlook for practitioners, taker policies, and interested investors in the context sector.

2.LITERATURE REVIEW

Efficient capital market (ECM) theory predicts that prices /returns of securities traded on a capital market at any time reasonably reflect all known information in a way that is public-related to securities prices, including information from size accountancy (Beaver, 1998). ECM theory hypothesizes that the market will respond quickly and precisely to something announcement information new or specific specific events. The response is reflected in the change in prices shared during the period of incident announcement information, which is new.

Valuation theory predicts a linear relationship between behavior securities prices /returns with numbers reporting finances at a specific time (Ohlson, 1995). The temporary PME theory suggests that prices or returns within a capital market accurately incorporate all pertinent public information, including numerical accounting data, at any given moment (Scott, 2015). PME theory hypothesizes that the stock market will respond quickly and precisely to something announcement information new or specific events, and the response is reflected in change/movement prices share during the period of incident publication.

In theory, agency described by (M. et al., 1976) explained that a manager is a working agent. For the owner (principal), the contractual relationship between the owner and manager is a connection agency. Contract work the same is the agreement that the management company must work optimally to give maximum satisfaction, like high income, to the owner quality profit is influenced by the theory of agency, which states that individuals tend to maximize their utility. In asymmetric information, management owns lots of information about the company and can take appropriate action with interest and behave opportunistically. It is caused by the reality that the owner can supervise, in a way, direct action against them. Possible management actions, including present information finances, do not reflect the condition, showing high or low profits (Mandiri & Sebrina, 2023). Kind of action this can become more striking when a company faces problems in finance, like the current pandemic. Pressure financial experience experienced by the company can push management. To manage profit, the company can finally influence quality profit (Persakis & Iatridis, 2015). This matter is done to guard corporate and engage users attention in reporting finance.

Putra et al. (2013) show that relevant information accountancy can be explained through the extent of the information available in report finance, which is capable of a reliable explanation of something company. The relevance mark aims to identify the incompatibility between empirical and stock market values. Information applicable to accounting for user report finance is essential in helping them project desired value based on level returns and rates risk from securities (Eksandy & Abbas, 2020).

Earning management during a pandemic can be different from crises because the pandemic has not happened before. First, the pandemic impacts health, economics, and society. Second, the pandemic has influenced almost all countries, and more than half experienced *lockdown*s with serious action (Eksandy & Abbas, 2020).

Empirical evidence about earning management during the pandemic is still very little. Until This, Xi, 2021) investigated the connection between the emergence of pandemic and the practices of management profit companies registered in China. They find that companies in China, especially those operating in the most affected areas, manage profits through accrual rather than actual

activity. As well as (Aljawaheri et al., 2021) tested the impact of pandemic lockdown on the manipulation of profit in a sample of 87 companies listed on the Stock Exchange Iraq For the period 2018 to 2020. Research results this shows that the company manipulates profit to guard the stability of income in one period.

Quality profit can explain the connection between relevant market information accounting and management profit (Subekti, 2010). (Whelan & McNamara, 2011) show that earning management impacts the relevance mark. Apart from that, management profit through the accrual discretionary period impacts relevant EPS and BVE values more than management profit through the accrual discretionary period short. BVE reflects the intrinsic company in its report finances and assumptions that mark intrinsic importance in the uncertainty facing the economy during the pandemic. A base theoretical view (Miller & Modigliani, 1961) describes a positive correlation between the company's mark and its equity, which provides a strong base for considering BVE in analysis. Then, EPS measures the company's profitability. In the non-cyclical consumer sector context, EPS is relevant because performance finance companies directly impact investors' perceptions of share companies. (M. Jensen, 2001) shows that investors tend to evaluate higher shares, producing companies more earnings per share . Lastly, *Earnings Management* (EM) is considered a variable. For understanding the method, companies manage profit during situations when the economy is not stable, as it happens during a pandemic. Practice earning management can influence report finances and, therefore, can become an indicator of potential. For analysis methods, companies face uncertainty and change in performance finance. Besides theoretical relevance, practical earning management has become a focused study (Healy & Wahlen, 1999), highlighting the impact on the report finance company.

Reporting a loss of profit is not simply gathering numbers; instead, it is playing the key that gives a view to the potency of an abnormal profit company and the opportunity for future abnormal profits (Barth et al., 1998). However, relevance marks depend on the report and the loss of profit. Several accounts are considered relevant if they can be connected with equity market value (Amir et al., 1993) and (Beaver, 1998). In series interpretation construct relevance value, information in report finance can influence price share (Francis & Schipper, 1999).

H_1: Earnings Management (EM) have an effect negative to relevance mark

3.METHODOLOGY

Study Quantitative, *Cross-Sectional* this is done using secondary data from 51 sector companies, including *Consumer Non-Cyclical,* on the Main Board of the Indonesia Stock Exchange in 2020 and 2021. Secondary data This was obtained from the site www.idx.co.id and the official sites of each company. Retrieval technique samples in research This uses purposive sampling, where 120 companies *go public* in the sector *cyclical consumer* only. Data was taken from 51 companies on the board main, and what has been released report finance in 2021.

In the study, the Modified Jones model served as a tool for gauging earning management. Unlike the Jones Model, the Modified Jones Model differs in how it calculates non-discretionary accruals, incorporating changes in accounts receivable for this purpose. This particular model was selected for accounting research due to its efficacy in detecting earning management and generating robust findings. Its error standard is notably smaller compared to alternative models (Sulistiyanto, 2008). Jones (1991) proposed the division of total accruals into discretionary and non-discretionary categories, aiding in the assessment of managerial profit. Initially, total accruals are used to evaluate managerial profit, with subsequent emphasis on discretionary accruals as indicators thereof. Model validation involved employing multiple linear regression with SmartPLS, using relevance marks as dependent variables for analysis. Relevance marks' pricing was assessed

through the incorporation of declining EPS and BVE as independent variables and share price (P) as the dependent variable, following Ohlson's framework (1995). Notably, earning management was introduced as an additional moderator variable in the research.

$$P_{t+1} = \beta_0 + \beta_1 BVE_t + \beta_2 EPS_t + \beta_3 EM_t + \beta_4 BVE^* EM_t + \beta_5 EPS^* EM_t + \varepsilon_t \quad (1)$$

Where:
P_{t+1} = Share price at time announcement report finances in period t+1.
BVE_t = Book Value of Equity at the end period t
EPS_t = Earnings Per Share at the end period t
$E.M._t$ = Earnings Management at the end period t
ε_t = Error or impact from other factors not identified in the valuation share.

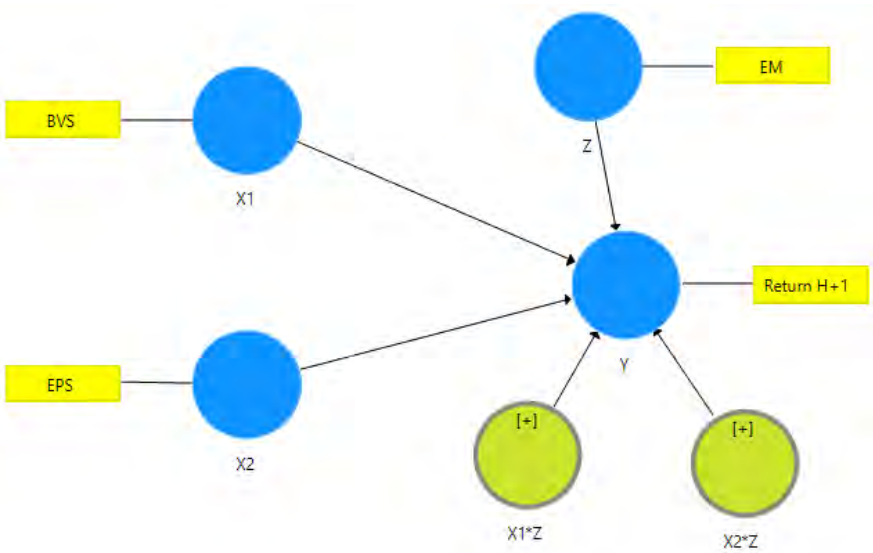

Figure 1. Research Design

On the interaction between BVE, EPS, and earning management , factor earning management role is vital in moderating the influence of BVE or EPS on price share. In more context, value relevance becomes the focus in explaining equity market value cross-sectorally (Saraswati, 2007). Relevance information accountancy to the market (Suyono et al., 2021), as highlighted by to influence How to mark company assessed.

4. RESULTS AND DISCUSSION

Study This processed and analyzed data from 2 periods, 2020 and 2021. The following are descriptive statistics shown in Table 1.

Table 1 Statistics Descriptive from Variable Study

Description	Price	EPS	BVE	E.M
Min	-0.069	-1062	-318.5586192	-0.185785357
Max	0.066	591.41	1396.53104	0.140714226
Median	0.002	16	28.64282613	-0.031282286
Mean	-0.000745098	22.47001564	100.2774538	-0.030223319
Obs	51	51	51	51

Table 1 shows that the average price share sector *consumer non-cyclical* change in 2020 and 2021 is Rp. 0.000745, with a change price minimum share of Rp. -0.069. During this period, the lowest EPS value reached Rp. -1,062, and the highest is Rp. 591.41, with an average value of Rp. 22.47001564. In this period, the number of observed companies was as many as 51.

After descriptive statistics, reliability and validity tests were conducted, including the *Outer Loading and Construct Reliability and Validity* and the *Fornell-Larcker Criterion Test.*

Table 2 Outer Loading Test

	BVS	BVS*EM	E.M.	EPS	EPS*EM	Return H+1
BVS	**1,000**					
BVS * EM		**0.671**				
E.M.			**1,000**			
EPS				**1,000**		
EPS * EM					**0.794**	
Return H+1 (%)						**1,000**

Table 3 Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
BVS	**1,000**	**1,000**	**1,000**	**1,000**
BVS*EM	**1,000**	**1,000**	**1,000**	**1,000**
E.M.	**1,000**	**1,000**	**1,000**	**1,000**
EPS	**1,000**	**1,000**	**1,000**	**1,000**
EPS*EM	**1,000**	**1,000**	**1,000**	**1,000**
Return H+1	**1,000**	**1,000**	**1,000**	**1,000**

Table 4 Fornell-Larcker Criterion Test

	BVS	BVS*EM	E.M.	EPS	EPS*EM	Return H+1
BVS	**1,000**					
BVS*EM	-0.071	**1,000**				
E.M	0.066	-0.125	**1,000**			
EPS	0.142	-0.385	-0.239	**1,000**		
EPS*EM	-0.326	0.264	0.160	0.134	**1,000**	
Return H+1	0.118	0.090	0.176	0.071	-0.097	**1,000**

Table 3 shows the validity test, showing the entire AVE value variable >0.5 (1,000), indicating that the tested variables are already convergent. Then, in Table 4, the validity test, Forner Lacker's discriminant, shows respective correlations variable with variable That Alone, which has a higher value (1,000) compared with each variable with the other variable. For reliability testing, every variable is also valid; it can be seen from Table 3 Construct Reliability and Validity that Cronbach's Alpha value has a value >0.7 (1,000) for every measured variable.

After reliability and reliability tests were carried out, A research model test was carried out, which included *Predictive Relevance* and *Model Fit.*

Table 5 Predictive Relevance

	SSO	SSE	Q^2 (=1-SSE/SSO)
BVS	51,000	51,000	
BVS*EM	51,000	51,000	
E.M.	51,000	51,000	
EPS	51,000	51,000	
EPS*EM	51,000	51,000	
Return H+1	51,000	50,785	0.004

Table 6 Model Fit

	Saturated Model	Estimated Model
SRMR	0,000	0.025
d_ULS	0,000	0.006
d_G	0,000	0.002
Chi-Square	0,000	0.461
NFI	1,000	0.936

Table 5 shows the Q^2 value test obtained value > 0, which indicates the test model is Already Good Enough. Then, Table 6 shows that the model tested also has an NFI value of 0.936, which means the tested model is 93.6% compliant. After conducting research model testing, the next step is hypothesis testing, which includes *Path Coefficient T Statistics* and P values.

Table 7 *Path Coefficient T* statistics and P values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
BVS -> Return H+1	-0.021	0.074	0.179	0.115	**0.909**
BVS*EM -> Return H+1	0.494	0.439	0.335	1,477	**0.146**
EM -> Return H+1	0.342	0.342	0.227	1,505	**0.139**
EPS -> Return H+1	0.322	0.320	0.207	1,558	**0.125**
EPS*EM -> Return H+1	-0.364	-0.276	0.368	0.991	**0.327**

Table 8 *R Square*

	R Square	R Square Adjusted
Return H+1	0.138	0.042

The test results above show that management profit does not influence the relevance of mark profit or mark book equity.

5.CONCLUSION

In deciding to invest in the capital market during the pandemic, earnings management is not information that can reduce the relevance of earnings or equity values. This finding indicated that investors do not need to consider information impact profits related to EPS and BVE. Neither information management nor profit can become significant in evaluating a company's performance and potential to produce profit for investors. In crisis situations, such as the Covid19 pandemic, investors also do not need to be able to consider earnings management. Crisis often influences capital market dynamics significantly, yet managers do not utilize conditions in a company to manage profit for specific objectives. Therefore,investors can use information on profit and equity to evaluate the company's performance. This information can help investors or potential internal investors evaluate the condition of the finance company. Thus, the findings can become valuable guides for internal investors to understand the role of information finance in a complex capital market context, especially when faced with a situation in which the economy is not particular.

This study has several limitations. First, the retrieval sample is limited to *non-cyclical* sectors, which can limit generalization findings to other sectors in the capital market. Limitations This appears Because focus research on the sector specificity and relevance mark price share can influenced by the characteristics of different sectors. Second, the data used in the study is limited to 2020 and 2021, namely when the pandemic occurred. This relatively short observation period may not reflect long-term trends in the stock price value relevance of corporate information. In addition, the economic and capital market situation during that period may also have special characteristics. Finally, this research highlights that there are many other factors that can influence the relevance of the share price value of company information

For more comprehensive and informative research, some necessary suggestions are considered. For future research, research can expand its coverage with companies from various sectors and expand year observation. With this method, it will be more possible to make more solid generalizations and probe if the relevant mark price share differs between different sectors or if a trend period length can be identified. Second, it is vital to consider other factors that can play a role in a company's price share. For example, enter condition macroeconomics and microeconomics as influencing variables relevant to mark price share. It can give more context and help understand capital market dynamics more. With these suggestions, research can give deeper insight into relevant market price share from information companies.

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THE ROLE OF ATTITUDE IN LINKING VALUES TO LOCAL FOOD DESTINATION IMAGE

Budi Setiawan[1*], Veronica Angelica, Neni Nurisnaini, Yudin Taqyudin, Soei Khim

Department of Management, Faculty of Business, Institut Bisnis dan Informatika Kesatuan – Bogor, Indonesia

[*]*Corresponding author: budi@ibik.ac.id*

Abstract

Tourism plays a significant role in Indonesia's economy, with rich culinary tourism potential reflecting cultural diversity. This study aims to analyze the role of attitudes towards local food in mediating the relationship between emotional and prestige values and the image of local food destinations. The study is a survey method, with respondents selected using a purposive sampling technique. Surya Kencana Destination in Bogor City, Indonesia, is the specific case for this study. The findings indicate that attitudes significantly mediate the relationship between emotional and prestige values and the image of local food destinations. These findings underscore the importance of attitudes in shaping consumer perceptions of local food destinations. The practical implications of this research emphasize the importance of considering consumer attitudes in developing and marketing local food destinations. By understanding the role of attitudes, stakeholders in the tourism industry can devise more effective strategies to enhance the image of local food destinations and boost culinary tourism appeal in Indonesia.

Keywords: *Consumers' attitude, Consumers' values, Culinary tourism, Local food destination image, Indonesian local food*

1.INTRODUCTION

Tourism is indispensable in bolstering a nation's economy, driving economic expansion, employment generation, and cross-cultural interaction. Beyond facilitating leisure activities, tourism significantly contributes to a country's gross domestic product (GDP) and foreign exchange reserves (Thommandru, A., et al., 2023). This multifaceted sector stimulates investments in vital infrastructure development and fosters a deeper socio-cultural appreciation and commitment to environmental preservation. Tourism is a linchpin of economic development, underpinning GDP growth, employment opportunities, and international trade. Tourism supports an extensive network of so many jobs worldwide (Sharma, G. D., Thomas, A., & Paul, J., 2021). Its resilience is underscored by its ability to withstand economic downturns and geopolitical uncertainties, serving as a reliable revenue stream even during turbulent times. Moreover, tourism is pivotal in promoting regional development by channeling investments towards critical infrastructure projects such as transportation networks, accommodation facilities, and recreational amenities. The positive spillover effects of tourism expenditure extend far beyond the tourism sector, bolstering ancillary industries such as agriculture, retail, and entertainment. Furthermore, tourism is a powerful catalyst for fostering cultural exchange and mutual understanding among nations. Tourism promotes cross-cultural dialogue, tolerance, and respect by facilitating interactions between travelers and local communities, thereby contributing to global peace and cooperation (Erwin, J., & Sturm, T., 2022). In essence, the tourism sector serves as a vital engine of economic growth, social development, and

cultural enrichment on both national and global scales. Its multifaceted contributions underscore its importance in driving sustainable development and fostering a more interconnected and harmonious world.

Culinary tourism stands as a cornerstone of a nation's tourism potential, driving economic growth and cultural exchange. In recent years, culinary tourism has emerged as a powerful force, attracting travelers from across the globe eager to explore the rich tapestry of flavors and traditions each destination offers. This burgeoning trend not only tantalizes the taste buds but also stimulates local economies, fosters community development, and promotes cultural preservation. The allure of culinary tourism lies in its ability to offer immersive experiences that engage all the senses. From savoring street food delicacies in bustling markets to indulging in haute cuisine at five-starred restaurants, culinary travelers embark on gastronomic journeys that reveal the soul of a destination. Food gives them insights into a place's history, customs, and traditions, forging connections with local communities and leaving unforgettable memories. From an economic perspective, culinary tourism holds tremendous potential for generating revenue and creating employment opportunities. Restaurants, food vendors, farmers, and artisans all stand to benefit from the influx of visitors seeking authentic culinary experiences. Moreover, culinary tourism fosters entrepreneurship and innovation, inspiring chefs and food entrepreneurs to showcase their creativity and talents globally. In addition to its economic benefits, culinary tourism plays a crucial role in preserving culinary heritage and promoting cultural exchange. By celebrating traditional recipes, cooking techniques, and food rituals, culinary tourism helps safeguard intangible cultural assets from the threat of globalization and homogenization. Furthermore, it fosters cross-cultural understanding and appreciation as travelers engage in meaningful interactions with locals and gain insights into different culinary traditions.

Indonesia, an archipelago rich in diverse cultures and stunning natural landscapes, captivates visitors with unparalleled hospitality and warmth. The genuine friendliness displayed by the Indonesian people leaves a lasting impression on tourists, making them feel welcomed and deeply connected to the country's abundant natural beauty and profound cultural heritage. The dawn of global transformation and technological advancements has ushered in a new era of consumer behavior, particularly in culinary preferences. There is a noticeable surge in the appreciation for food diversity and local cuisine, reflecting a growing trend towards embracing cultural authenticity. This culinary renaissance is palpable across Indonesia's myriad regions, villages, and tourist hubs, each boasting a treasure trove of traditional culinary delights passed down through generations. Bogor City shines as a beacon of culinary excellence and cultural diversity among these culinary havens. Aptly dubbed the "Rain City," Bogor enchants visitors with its rich tapestry of cultural heritage, spanning from its colonial past to its vibrant local traditions. The city's bustling streets are a feast for the senses, offering a tempting array of culinary delights that showcase Indonesia's culinary prowess and rich heritage. As travelers traverse Bogor's historic streets, they are greeted by the aromas of sizzling street food stalls and the vibrant colors of bustling markets, each offering a glimpse into the city's culinary soul. From savory rendang to sweet "klepon", Bogor's culinary landscape is as diverse as delectable, promising an unforgettable gastronomic journey for all who venture here. Bogor City is a testament to Indonesia's rich cultural tapestry and culinary heritage, offering travelers a taste of the country's vibrant spirit and timeless traditions. With its wealth of cultural charm and diverse cuisine, Bogor holds immense potential as an enchanting tourist destination, beckoning travelers from far and wide to explore its culinary wonders and immerse themselves in its rich cultural tapestry.

Surya Kencana is one of Bogor's areas famous as "Culinary Heaven" for tourists. Surya Kencana, nestled in the heart of Bogor city, stands as a beacon of culinary delight, beckoning food enthusiasts from far and wide. Renowned for its vibrant culinary scene, Surya Kencana boasts a

kaleidoscope of flavors, aromas, and textures that tantalize the senses and leave a lasting impression on all who visit. From humble street food stalls to upscale dining establishments, Surya Kencana offers a gastronomic adventure like no other. Visitors are treated to a cornucopia of traditional Indonesian delicacies, each dish meticulously crafted with the finest ingredients and infused with centuries-old recipes passed down through generations. Whether it's the savory richness of Soto Betawi, the fiery heat of Rendang, or the delicate sweetness of Klepon, there's something to suit every palate and preference. But Surya Kencana is more than just a culinary destination; it's a cultural melting pot where locals and travelers celebrate Indonesian cuisine's diverse flavors and traditions. The bustling atmosphere, filled with the sound of sizzling pans and the chatter of diners, reflects the vibrant spirit of Bogor City itself.

Stone, M. J., Migacz, S., & Sthapit, E. (2022) contend that there needs to be more research concerning tourists' experiences with local cuisine throughout various stages of their travel to tourist destinations. Given that tourists' culinary backgrounds heavily influence perceptions of food, it becomes imperative to delve into the impact of tourists' values on local food consumption, considering their cultural diversities (Yu, L., et al., 2024). Hence, the primary objective of this study is to address this research gap by delving into the intricate role of consumer attitudes in bridging the gap between values and the perception of local culinary tourism destinations, with a specific focus on the vibrant Surya Kancana area within Bogor City. Through an in-depth exploration of the interplay between consumer attitudes, ingrained values, and the portrayal of local culinary tourism destinations, this research endeavors to furnish a more exhaustive understanding of the factors that mold consumer perceptions toward local culinary hotspots. Beyond its practical implications in steering the development and marketing strategies of local culinary tourism destinations by providing valuable guidance to local authorities and other stakeholders, this study lays the groundwork for further inquiry into consumer psychology and culinary tourism marketing. Consequently, this research endeavor is poised to make a substantial contribution toward the advancement of both theoretical frameworks and practical strategies within the domains of the tourism and culinary industries.

2.LITERATURE REVIEW

Emotional Value

Emotional value encompasses the feelings or sensations evoked in response to a service or product, eliciting affective states or sentiments within individuals (Lai, I. K. W., Liu, Y., & Lu, D., 2021). This emotional resonance shapes consumers' perceptions of products and significantly influences their evaluations, particularly within the tourism and hospitality sectors. A notable observation highlighted by Choe, J. Y. J., & Kim, S. S. (2018) underscores that consumers attribute higher emotional value to products or services from which they derive greater pleasure. Delving deeper into the dynamics of emotional value within the culinary domain, Lai, I. K. W., Liu, Y., & Lu, D. (2021) conducted a study elucidating that consumers who reported experiencing emotional responses such as joy, happiness, enjoyment, or relaxation upon partaking in ethnic cuisine exhibited higher levels of satisfaction and demonstrated a propensity to revisit ethnic restaurants. This suggests that the emotional connection forged through the consumption experience is pivotal in shaping consumer behavior and satisfaction levels within the culinary landscape. Hence, it becomes evident that emotional value is a critical determinant in consumer decision-making processes, particularly within the tourism and hospitality industries. By understanding and leveraging the emotional resonance elicited by products or services, businesses can effectively cultivate deeper connections with consumers, foster loyalty, and enhance overall satisfaction levels, fortifying their competitive positioning within the market landscape. Overall, emotional value adds

an extra dimension to the perceived utility of a product or service, beyond its functional attributes or economic value. It reflects the emotional impact and significance that a particular offering holds for an individual, shaping their overall perception.

Tourists driven by emotional value are inclined to opt for choices that promise to evoke the desired sentiments, as elucidated by Wang, J., Ding, X., & Wang, K. (2023). Choe, J. Y. J., & Kim, S. S. (2018) delve further into the multifaceted nature of emotional value, encompassing a spectrum of emotions ranging from safety and comfort to joy, fear, love, and guilt. This broad perspective underscores the intricate interplay between emotional responses and consumer decision-making. Moreover, the seminal contributions of scholars have played a pivotal role in highlighting the experiential dimensions of consumption, thereby catalyzing researchers' exploration of intangible assets within the realm of consumer behavior. Their pioneering work laid the groundwork for advancements in marketing research within the tourism domain and shed light on the hedonistic and emotional facets inherent in tourism experiences. In essence, the insights gleaned from scholars' research underscore the paramount importance of acknowledging and catering to tourism's emotional and hedonistic aspects. By recognizing the significance of these intangible dimensions, marketers can craft more compelling and immersive experiences that resonate deeply with travelers, ultimately enhancing their satisfaction levels and fostering long-term loyalty.

Prestige Value

Prestige value in culinary tourism refers to the perceived status, esteem, or social recognition associated with partaking in culinary experiences in particular destinations (Widjaja, D. C., Thio, S., & Jokom, R., 2022). It encompasses the notion that dining at renowned restaurants or indulging in local delicacies in iconic food destinations enhances one's social standing or cultural cachet. In culinary tourism, individuals may seek out dining experiences not only for their culinary merits but also for the prestige associated with being able to boast about having sampled exotic or renowned dishes from different regions or cultures. Dining at exclusive restaurants or trying unique dishes can signal sophistication, cultural awareness, and worldly experiences to others. Additionally, the prestige value of culinary tourism extends beyond the mere act of dining to encompass the social status derived from sharing these experiences with others. Sharing stories or photographs of memorable dining experiences can further enhance one's social standing by reinforcing the perception of being well-traveled, culturally savvy, or gastronomically adventurous.

Prestige value is an expression of evaluative judgment that conveys high or low status, which depends on life experiences, knowledge, and awareness of consumers toward product (Chepchirchir & Leting, 2015). This explanation concludes that the prestige value of a product refers to how the product has a higher status, which is influenced by lifestyle, life experience, and luxury associations associated with the product. Prestige value holds significant sway within hospitality and tourism, as underscored by studies conducted by Stone, M. J., & Zou, S. (2023). Sharing a meal with friends in a specific destination transcends mere culinary indulgence; it is a potent symbol of social status affirmation. Tourists who partake in such experiences bolster their sense of cultural competence and signal their elevated status as individuals who have traversed the globe and immersed themselves in diverse culinary traditions (Martin, C. A., Izquierdo, C. C., & Laguna-Garcia, M., 2021). This act of dining becomes imbued with layers of prestige and cultural significance, further enhancing the allure of culinary tourism experiences for travelers seeking to enrich their social capital and affirm their cosmopolitan identities.

In the dynamic landscape of the hospitality and tourism industry, prestige value emerges as a pivotal determinant (Soltani, M., et al., 2021). This intrinsic concept of prestige, or social value, crystallizes when the perceived utility of a service or product becomes intertwined with the

recognition or approval of one or more social groups (Stone, M. J., & Zou, S., 2023). This intersection between utility and social validation forms the cornerstone of prestige value, shaping consumer perceptions and behaviors within the tourism domain. Moreover, the seminal insights provided by Stone, M. J., & Zou, S. (2023) shed light on the association between cultural capital and tourists who have traversed foreign lands and indulged in diverse culinary experiences. These travelers, often celebrated for having 'been there' and 'eaten foreign food,' possess elevated cultural competence and social capital levels. This acknowledgment of cultural prowess further accentuates the significance of social values in shaping tourists' attitudes and behaviors (Gupta, V., Galati, A., & Sharma, S., 2023) expounded. Within this framework, local cuisine emerges as a potent catalyst for cultivating status and prestige among travelers. By immersing themselves in a destination's culinary customs and traditions, tourists enhance their gastronomic repertoire and signify their cultural understanding and sophistication. Dining as the locals do, exploring unfamiliar cuisines, and sampling exotic delicacies not readily available in their home environments becomes a means of acquiring social cachet and affirming one's status within social circles. Pursuing status and prestige through culinary exploration reflects the intricate interplay between social values and gastronomic experiences within the tourism domain. By understanding and leveraging the allure of local cuisine as a conduit for social validation, stakeholders in the hospitality and tourism industry can craft immersive experiences that resonate deeply with travelers, fostering a sense of belonging, cultural enrichment, and social distinction.

Tourist Attitude

Tourist attitude in the context of culinary tourism encompasses tourists' beliefs, perceptions, preferences, and behaviors towards culinary experiences and food-related activities during their travels (Stone, M. J., Migacz, S., & Sthapit, E., 2022). It involves how tourists perceive and engage with local cuisines, dining establishments, food markets, cooking classes, and other culinary offerings at their destination. Understanding tourist attitudes in culinary tourism requires consideration of several key dimensions. Firstly, there's the cultural dimension, where attitudes are shaped by tourists' curiosity and appreciation for diverse culinary traditions, flavors, and ingredients. Tourists may seek authentic culinary experiences that allow them to explore and immerse themselves in the local food culture, enhancing their overall travel experience (Soltani, M., et al., 2021).

Secondly, there's the experiential dimension, where attitudes are influenced by tourists' desire for unique and memorable dining experiences. Tourists may seek out renowned restaurants, street food vendors, food festivals, or culinary tours to satisfy their culinary curiosity and create lasting memories. Positive dining experiences can lead to favorable attitudes towards a destination and encourage repeat visits. Additionally, there's the social dimension, where social interactions and peer recommendations influence attitudes. Tourists may rely on reviews, recommendations from friends or influencers, and social media posts to guide their culinary experiences. Social interactions with local chefs, food vendors, and fellow diners can enhance tourists' enjoyment and perception of a destination's culinary offerings (Kaushal, V., & Yadav, R., 2021).

Moreover, there's the sustainability dimension, where attitudes encompass tourists' concerns about food sourcing, environmental impacts, and ethical food practices. Tourists may prefer to support local food producers, farmers' markets, and sustainable dining establishments that prioritize eco-friendly practices and support the local community. Understanding tourist attitudes toward culinary tourism is essential for destination marketing organizations, food businesses, and tourism operators. By catering to tourists' culinary preferences and desires, destinations can create unique and authentic food experiences that appeal to a diverse range of visitors. Furthermore, promoting culinary tourism can stimulate economic growth, preserve culinary heritage, and encourage cultural

exchange between tourists and local communities. Ultimately, a nuanced understanding of tourist attitudes in culinary tourism can lead to the development of sustainable and enriching food tourism experiences that benefit both tourists and destination communities (Recuero-Virto, N., & Arróspide, C. V., 2024).

Food Destination Image

Food destination image in the context of culinary tourism refers to a destination's overall perception, reputation, and identity as a culinary hotspot or food-centric destination (Sio, K. P., Fraser, B., & Fredline, L., 2024). It encompasses the collective beliefs, impressions, and associations tourists hold regarding a particular destination's culinary offerings, dining experiences, and food culture. Understanding the food destination image involves considering several key factors. Firstly, there's the culinary diversity and authenticity of the destination, which includes the variety of cuisines, flavors, ingredients, and cooking techniques available. A destination known for its diverse culinary landscape and authentic local dishes; it is likely to have a strong food destination image that attracts culinary enthusiasts (Hashemi, S., et al., 2023). Secondly, there's the quality and reputation of the dining establishments, food markets, street food vendors, and culinary events within the destination. Positive reviews, accolades, and recommendations from food critics, travel bloggers, and previous visitors contribute to building a favorable food destination image.

Destinations with rich culinary histories and iconic dishes often enjoy a positive food destination image that draws tourists seeking to explore and experience the region's culinary traditions. Moreover, the experiential aspect of dining in the destination encompasses the ambiance, atmosphere, service quality, and overall dining experience. Memorable dining experiences at restaurants, cafes, food tours, or cooking classes shape tourists' perceptions and memories of the destination as a food destination. Understanding the food destination image is crucial for destination marketing organizations, tourism stakeholders, and food businesses. By cultivating a positive food destination image, destinations can attract culinary tourists, boost visitor numbers, and stimulate economic growth within the local food and hospitality sectors. Furthermore, promoting a destination's unique culinary identity and experiences can differentiate it from competitors, enhance its global appeal, and position it as a must-visit destination for food enthusiasts. Ultimately, a vital food destination image not only showcases the culinary delights of a destination but also celebrates its cultural heritage, fosters culinary tourism development, and promotes cross-cultural exchange between visitors and local communities (Gündüz, C., et al., 2024).

The concept of destination image encompasses a multifaceted representation of all objective knowledge, preconceptions, imaginative constructs, and emotional responses that individuals or groups harbor towards a particular location (Hashemi, S., et al., 2023). This comprehensive image encapsulates the entirety of beliefs, ideas, and impressions that individuals hold in their minds regarding the destination. In essence, destination image serves as a holistic depiction of one's perception of a place, drawing upon a myriad of factors such as knowledge, experiences, and emotional connections (Gündüz, C., et al., 2024). Tourism destinations comprise not only tangible elements like people, landscapes, and industries but also intangible aspects that contribute to the overall visitor experience, including local nuances and cultural attributes (Hashemi, S., et al., 2023). It's important to note that perceptions of a destination extend beyond rational assessment and factual understanding, encompassing emotional elements and subjective experiences that influence individuals' views and interactions with the destination.

3.METHODOLOGY

This study was conducted at the designated research site, chosen to align with the researcher's objectives. Specifically, the study will focus on consumers who have patronized Surya Kencana and sampled the local cuisine in Bogor, West Java, Indonesia. Given the infinite population, determining the sample size is imperative to adequately represent population characteristics, which is accomplished using the Cochran formula. With a confidence level of 95% and a 10% margin of error, the calculated minimum sample size required for this study is 100 respondents. This study employs the purposive sampling method, wherein the researcher deliberately selects participants based on specific criteria deemed relevant to the research objectives. Unlike random sampling methods that aim for the representativeness of the population, purposive sampling focuses on selecting individuals or cases with characteristics or experiences relevant to the research topic. In this case, the sample criteria consist of culinary tourists who have visited and dined at culinary establishments mentioned in the questionnaire, such as "Soto Bogor, Cungkring, Laksa Bogor," and sampled Fried "Toge" at Surya Kencana Bogor, at least once.

The data collection method in this study utilized Google Forms and was distributed through social media platforms such as Facebook, Twitter, WhatsApp, and Instagram. This study employed a closed questionnaire method as the primary data collection tool. This method involves presenting respondents with a predefined set of questions, often with fixed response options, which they are asked to answer. Unlike open-ended questions allowing free-form responses, closed questionnaires provide structured data that can be easily quantified and analyzed. This method is beneficial for gathering specific information on predefined variables or constructs, allowing researchers to systematically assess attitudes, behaviors, or opinions within a given population. Additionally, the closed-ended questionnaire method ensures consistency in data collection and minimizes respondent ambiguity, thereby enhancing the reliability and validity of the research findings. The questionnaire incorporates Likert scale questions, a widely used method for measuring attitudes, opinions, and perceptions. The Likert scale presents respondents with a series of statements or questions to which they are asked to indicate their level of agreement or disagreement. In this case, the Likert scale ranges from 1 to 5, with each numerical value corresponding to a specific level of agreement or disagreement. A score of 1 represents "strongly disagree," while a score of 5 signifies "strongly agree," with intermediate values indicating varying degrees of agreement or disagreement. Using the Likert scale, researchers can quantitatively assess the respondents' perceptions or attitudes toward the subject matter, providing valuable insights into their opinions and preferences. Used statistical data analysis was descriptive statistics.

Table 1. Measurement

No	Variable	Items
1	Emotional value	Enjoyment level
		Satisfaction with local food
		Positive mood
		Level of excitement
2	Prestige value	Social status level
		Level of opportunity to share experience
		Increased prestige level

		Desire to show off
3	Tourist attitude	Local food value
		Love for local food
		Level of desire to taste local food
		Emotional feelings when eating local food
4	Food destination image	Cultural wealth
		Traditional values
		Uniqueness level
		Diversity of food types
		Delicious food

4.RESULT AND DISCUSSION Respondent profiles

The respondents in this research are reviewed based on gender, age, and profession or occupation. The data presented in Table 2 offers a comprehensive overview of the respondents' profiles across gender, age, and profession categories. Analysis reveals that most respondents are female, constituting 66% of the total, while male respondents comprise 34%. This gender distribution indicates a higher participation rate among females in the study. Regarding age distribution, the data shows a predominant presence of younger respondents, particularly those between 17 and 25 years old, comprising 40% of the total. As the age range increases, the proportion of respondents gradually decreases, with only 7% representing individuals older than 55. Furthermore, the profession category highlights various occupations among the respondents. The largest groups are students and private employees, representing 33% and 39% of the total, respectively. Other professions, such as entrepreneurs, homemakers, teachers/lecturers, civil service employees, retirees, and even food bloggers, contribute to the respondent pool, albeit in smaller proportions. This professional diversity underscores the broad spectrum of backgrounds and experiences in the respondent sample. Overall, the data provides valuable insights into the demographic and professional composition of the respondents, which is crucial for understanding the characteristics and perspectives of the study participants.

Table 2. Respondent profiles

Category	**Frequency**	**Percentage**
Gender		
Male	34	34%
Female	66	66%
Age		
17 - 25 years old	40	40%
26 - 35 years old	21	21%
36 - 45 years old	15	15%
46 - 55 years old	17	17%
> 55 years old	7	7%
Profession		
Student	33	33%

Private employee	39	39%
Civil service	2	2%
Teacher/Lecturer	4	4%
Entrepreneur	9	9%
Housewife	10	10%
Retiree	1	1%
Food Blogger	1	1%

Table 3 illustrates the traveling characteristics of the respondents, categorized into several key aspects. Regarding the type of travel, the data reveals that most respondents prefer to travel with their families, constituting 51% of the total, followed by those traveling with friends at 37%, and solo travelers at 12%. This distribution suggests a strong inclination towards family-oriented travel among the respondents. Regarding budget allocation for each trip to Surya Kencana, the majority of respondents, accounting for 53%, allocate a budget ranging from IDR 100,000 to IDR 300,000, indicating a moderate spending range. Meanwhile, 36% of respondents allocated less than IDR 100,000, while 11% allocated more than IDR 300,000 for their trips. The data also highlights the frequency of visits to Surya Kencana within one month. A significant portion of respondents, representing 49%, visit the destination more than eight times a month, suggesting a high-frequency level. Additionally, 31% visit 2 to 4 times a month, while 18% visit 5 to 7 times within the same period. However, only a small proportion, at 2%, visit the destination once a month. Overall, the data provides valuable insights into the traveling patterns, budget preferences, and visit frequency of the respondents to Surya Kencana, offering a comprehensive understanding of their travel behavior.

Table 3. Travelling characteristic

Category	**Frequency**	**Percentage**
Travelling type		
Solo travel	12	12%
With friends	37	37%
With family	51	51%
The average budget for each trip to *Surya Kencana*		
< IDR 100,000	36	36%
IDR 100,000 – 300,000	53	53%
> IDR 300,000	11	11%
The frequency of visits to Surya Kencana within one month		
1 time	2	2%
2 – 4 times	31	31%
5 -7 times	18	18%
> 8 times	49	49%

Respondents emotional value

The data in Table 4 pertains to the emotional values associated with culinary tourism, mainly focusing on the local food offerings along Surya Kencana Street in Bogor, West Java. The high mean scores across various emotional indicators such as enjoyment level, satisfaction with local

food, positive mood, and excitement suggest that respondents generally perceive their experiences with local culinary offerings positively. Specifically, the high mean score for enjoyment level indicates that respondents derive significant pleasure from their culinary tourism activities, possibly due to the diverse and flavorful local cuisines available along Surya Kencana Street. The favorable perception of satisfaction with local food further reinforces the idea that respondents find the culinary offerings in this area appealing and satisfying. Additionally, the positive mood and high level of excitement reported by respondents suggest that exploring the culinary delights of Surya Kencana Street contributes to a vibrant and enjoyable experience imbued with excitement and positivity. Therefore, the data underscores the significance of local food experiences along Surya Kencana Street in Bogor as a critical driver of positive emotional outcomes for culinary tourists, enhancing their overall enjoyment and satisfaction during their visit.

Table 4. Emotional value

Item	**Frequency**					**Mean**
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	
Enjoyment level	0	3	14	42	41	4.21
Satisfaction with local food	8	7	11	23	51	4.02
Positive mood	0	4	20	37	39	4.11
Level of excitement	9	4	11	25	51	4.05
Mean score of emotional value						4.09

Prestige value

Table 5 presents the prestige values associated with culinary tourism experiences, mainly focusing on the local food scene along Surya Kencana Street in Bogor. The data reveals varying perceptions among respondents across different items related to prestige value. The mean score of prestige value across all items is 2.98, indicating a moderate level of perceived prestige associated with culinary tourism activities in this context. Specifically, the item "Social status level" received a mean score of 2.76, suggesting that respondents are relatively neutral regarding the influence of culinary experiences on their social status. This may indicate that while culinary tourism along Surya Kencana Street offers enjoyable experiences, respondents do not necessarily associate it strongly with social status enhancement. Similarly, "Increased prestige level" received a mean score of 2.63, indicating a relatively lower perception of increased prestige resulting from culinary tourism activities. However, the item "Desire to show off" received a notably higher mean score of 3.46, suggesting that respondents desire to showcase their culinary experiences, possibly indicating a sense of pride in the local culinary offerings and a desire to share these experiences with others. Therefore, while the data indicates a moderate level of perceived prestige associated with culinary tourism on Surya Kencana Street, there is a notable desire among respondents to share their experiences, reflecting a potential for the local culinary scene to contribute positively to social interactions and community engagement.

Table 5. Prestige value

Item	**Frequency**					**Mean**
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	
Social status level	19	19	38	15	9	2.76
Level of opportunity to share experience	15	17	33	16	19	3.07
Increased prestige level	25	15	38	16	6	2.63
Desire to show off	9	14	23	30	24	3.46
Mean score of prestige value						2.98

Tourist attitude

Table 6 illustrates tourists' attitudes towards local food, mainly focusing on the culinary experiences along Surya Kencana Street in Bogor. The data reflects overwhelmingly positive attitudes among respondents across various aspects related to local food. The mean score of tourist attitude, at 4.16, indicates a robust positive inclination towards local culinary offerings. Specifically, respondents express high appreciation for the value of local food, as evidenced by the mean score of 4.23 for the item "Local food value." This suggests that tourists highly regard the authenticity and quality of the local cuisines on Surya Kencana Street. Additionally, respondents report a significant love for local food, as indicated by the mean score of 3.99 for the item "Love for local food." This underscores the emotional attachment and fondness tourists have toward the culinary experiences in the area. Moreover, respondents have a notable desire to taste local food, with a mean score of 4.22 for the item "Level of desire to taste local food," indicating a strong eagerness to explore and indulge in the diverse flavors the local food scene offers. Furthermore, respondents report experiencing positive emotional feelings when eating local food, as reflected by the mean score of 4.19 for the item "Emotional feelings when eating local food," suggesting that culinary experiences on Surya Kencana Street evoke satisfaction, enjoyment, and emotional fulfillment. Overall, the data highlights tourists' overwhelmingly positive attitudes towards local food experiences along Surya Kencana Street, underscoring the area's appeal as a culinary destination rich in authentic and enjoyable culinary offerings.

Table 6. Tourist Attitude

Item	**Frequency**					**Mean**
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	
Local food value	1	0	17	39	43	4,23
Love for local food	4	2	18	43	33	3,99
Level of desire to	1	0	14	46	39	4,22

taste local food						
Emotional feelings when eating local food	3	0	15	39	43	4,19
Mean score of tourist attitude						4,16

Food destination image

Table 7 presents the image of the food destination associated with culinary tourism experiences on Surya Kencana Street in Bogor. The data reflects highly positive perceptions among respondents across various aspects of the food destination image. The mean score of the food destination image, at 4.23, indicates a solid overall positive perception of Surya Kencana Street as a culinary destination. Specifically, respondents perceive the area as culturally rich, with a mean score of 4.04 for "Cultural wealth." This suggests that tourists value the cultural significance and heritage embedded in the culinary experiences on Surya Kencana Street. Moreover, respondents highly regard the traditional values associated with the local food scene, as indicated by the mean score of 4.33 for the item "Traditional values." This underscores the authenticity and preservation of traditional culinary practices and values, contributing to the area's appeal as a cultural and culinary destination. Additionally, respondents perceive Surya Kencana Street as unique, with a mean score of 3.99 for the item "Uniqueness level," suggesting that tourists appreciate the distinctiveness and individuality of the culinary experiences offered in the area. Furthermore, respondents value the diversity of food types available on Surya Kencana Street, as reflected by the mean score of 4.43 for the item "Diversity of food types," indicating a wide range of culinary offerings catering to diverse tastes and preferences. Moreover, respondents rate the food on Surya Kencana Street as delicious, with a mean score of 4.35 for the item "Delicious food," highlighting the quality and palatability of the culinary offerings in the area. Overall, the data underscores Surya Kencana Street as a highly favorable food destination image characterized by cultural richness, traditional values, uniqueness, diversity of food types, and delicious culinary offerings. This contributes to its appeal as a premier culinary destination in Bogor.

Table 7. Food destination image

Item	**Frequency**					**Mean**
	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**	
Cultural wealth	6	12	8	20	54	4,04
Traditional values	0	3	11	36	50	4,33
Uniqueness level	7	11	10	20	52	3,99
Diversity of food types	0	0	9	39	52	4,43
Delicious food	0	1	14	34	51	4,35
Mean score of food destination image						4,23

Discussion

The thorough analysis of the data offers comprehensive insights into the myriad facets of culinary tourism experiences along Surya Kencana Street in Bogor, Indonesia. Initially focusing on emotional values, it becomes evident that respondents harbor notably positive perceptions across various dimensions, including enjoyment level, satisfaction with local food, positive mood, and level of excitement. These elevated mean scores imply that tourists derive substantial pleasure and contentment from their culinary escapades, underscoring the diverse and delectable local cuisines that grace the area's gastronomic landscape. Such findings underscore local food encounters' pivotal role as catalysts for fostering positive emotional outcomes among culinary tourists, enriching their overall sojourn with heightened gratification and delight.

Transitioning to the exploration of prestige values, although the mean score suggests a moderate level of perceived prestige linked with culinary tourism endeavors, respondents have a conspicuous inclination to flaunt their culinary exploits. This inclination possibly betokens a deep-seated sense of pride in the offerings of the local culinary scene and an eagerness to share these experiences with others, notwithstanding a relatively neutral stance regarding the augmentation of social status or prestige stemming from culinary tourism engagements. Consequently, while the data evinces a middling level of perceived prestige, it hints at the potential of the local culinary milieu to positively foster social interactions and community engagement, thereby enriching the fabric of communal interconnectedness.

Transitioning to exploring tourist attitudes towards local fare, the overwhelmingly affirmative sentiments among respondents underscore their robust appreciation for the authenticity, caliber, and diverse flavor profiles intrinsic to the local culinary tapestry of Surya Kencana Street. The elevated mean scores across various parameters such as "Local food value," "Love for local food," "Level of desire to taste local food," and "Emotional feelings when eating local food" eloquently affirm tourists' resounding endorsement of local gastronomic encounters, thereby amplifying the area's allure as a preeminent epicurean haven.

Lastly, portraying the food destination image associated with culinary tourism escapades on Surya Kencana Street unveils resoundingly positive perceptions among respondents. The locale emerges as a veritable bastion of cultural richness, steeped in traditions and offering a one-of-a-kind culinary odyssey. The kaleidoscopic array of food genres and the perceived gastronomic excellence further enhance the locale's cachet as a culinary sanctuary, characterized by its cultural opulence, genuineness, singularity, and extensive culinary offerings.

Overall, the data casts a luminous spotlight on Surya Kencana Street as an exceedingly auspicious culinary destination, proffering tourists an immersive and gratifying epicurean voyage marked by affirmative emotional values, a moderate semblance of perceived prestige, robust tourist adulation for local fare, and an exceedingly favorable food destination image.

5.CONCLUSION

The results of the data analysis provide a comprehensive understanding of the culinary tourism experiences along Surya Kencana Street in Bogor, Indonesia. The study of traveling characteristics reveals a strong preference for family-oriented travel among respondents, a moderate spending range, and a high frequency of visits to the destination within one month. Regarding emotional values, respondents exhibit notably positive perceptions, indicating significant pleasure and satisfaction derived from local culinary offerings, contributing to an overall enjoyable experience. Despite a moderate level of perceived prestige associated with culinary tourism activities, respondents have a notable desire to showcase their culinary experiences, potentially fostering social interactions and community engagement. Tourists' overwhelmingly positive attitudes towards local food underscore their robust appreciation for the authenticity and quality of culinary

experiences. In contrast, the portrayal of the food destination image highlights Surya Kencana Street as a highly favorable culinary destination characterized by cultural richness, authenticity, and diverse culinary offerings. Overall, the data emphasizes Surya Kencana Street as an auspicious culinary destination, offering tourists an immersive and gratifying epicurean journey enriched with affirmative emotional values, moderate perceived prestige, and a highly favorable food destination image.

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A SYSTEMATIC REVIEW OF EVALUATING THE INFLUENCE OF SOCIAL NETWORKING SITES ON THE HIRING PROCESS USING THE PRISMA MODEL

Meutia Wanni Putinagari[1], Natalie Margareta[2], Deden Witarsyah[3] 1

wanniputinagari@student.telkomuniversity.ac.id 2
nataliemargareta@student.telkomuniversity.ac.id 3
dedenw@telkomuniversity.ac.id

Abstract

The integration of social networking sites (SNSs) into the hiring process has emerged as a prominent phenomenon, raising questions about its effectiveness and ethical implications. This comprehensive research paper presents a systematic literature review, with the primary objective of addressing three key questions central to this discourse. Firstly, it investigates the effectiveness of social media screening in identifying suitable candidates for employment compared to traditional methods. Secondly, the paper explores the different phases of recruiting employees through social media. Thirdly, it explores the ethical considerations arising from the use of SNSs in recruitment processes, particularly concerning privacy and bias. To address these aspects, the paper contributes to the existing literature by providing insights into the evolving landscape of employee recruitment in the digital age and underscores the need for organizations to carefully consider the consequences of their social media usage in the hiring process. By shedding light on these critical aspects, it emphasizes the imperative for organizations to conscientiously evaluate the ramifications of their social media utilization within the hiring process.

Keywords:*social networking, hiring process, employee recruitment, organization, social media platforms*

1.INTRODUCTION

Social Networking Sites (SNSs) nowadays are considered the most popular Web Sites on the Internet [1]. As a result, the importance of utilizing these platforms to identify experts and enhance human social networks within companies has grown. Recent technological advancements have enabled the digital replication of human social networks [2]. For instance, employers increasingly use social networking sites like Facebook to gather extra information on candidates. This practice, cost-effective and accessible even to small businesses, offers insights into the accuracy of resume details like education and work experience [3]. In addition, personal information from applicant profiles on professional networking sites like LinkedIn is less contentious, since it prioritizes professional qualifications over personal interests, offering a focused source of relevant information during the hiring process [4]. LinkedIn differs from other social media sites by having user profiles resemble cover letters and resumes rather than focusing on hobbies or interests, reinforcing its value as a focused source of professional information for employers during hiring [5].

It seems apparent that employers are increasingly relying on social networking sites (SNSs) as staffing tools, primarily for screening applicants and gathering selection information. SNS monitoring plays a crucial role in employee screening, with a significant uptick in the percentage of hiring managers utilizing SNSs for this purpose—from 11% in 2007 to 22% in 2009 [6]. In addition to that, a notable 40% of managers who were not previously screening SNSs intended to start doing so in 2010. This trend highlights a significant issue wherein employers screen applicants by accessing all available information about them online, particularly on social media platforms. The practice raises concerns regarding privacy, fairness, and potential biases in the hiring process [7]. It was found that participants with heightened concerns about the disclosure of their personal information to others also perceived online testing as unfair [8]. Users are naturally interested in the use of SNSs as a social interaction through self-presentations [9]. However, this accessibility blurs boundaries between public work and private life, raising concerns about privacy and the integration of professional and personal identities. A survey conducted by Stoughton et al. [10], suggests that applicants who perceive their privacy as violated may be inclined to take legal action against the organization, which can result in significant costs irrespective of the validity of the complaint. Another finding suggests that while some individuals find it acceptable for employers to review social networks, they have concerns about potential biases that could affect their perceptions of a candidate before the employer and candidate have the chance to meet [11]. Therefore, organizations should carefully consider the potential repercussions of applicant legal action when implementing social network screening practices.

The present paper employs the systematic literature review methodology, which involves reviewing and identifying relevant journals related to the impact of social networking sites on the hiring process. This research seeks to conduct a comprehensive review of the influences of social networking sites on the hiring process. Specifically, it aims to address the following questions:

1. How effective is social media screening in identifying suitable candidates for employment compared to traditional methods?
2. What are the stages of recruiting employees through social media?
3. What ethical considerations arise from the use of SNS in recruitment processes, particularly concerning privacy and bias?

2. Literature Review

Social Networks are websites or apps that allow users and organizations to connect, communicate, share information, and form relationships. People can connect with others in the same area, families, friends, and those with the same interests. Social Networks are one of the most important uses of the internet today. Some examples of Social Networking sites such as Facebook, Twitter, Instagram and more[11].

The term social networking entails having connections in both the real and the digital worlds. Online social networking depends on technology and internet connectivity]. Meanwhile, Kaplan and Haenlei defined that “Social media includes a different kind of Internet-based applications which build the ideological and technological foundations of Web 2.0, and allow user to create the content and exchange that with other people through the Internet”. Bobbi K. Lewis, an associate professor in the School of Media & Strategic Communications, described more precisely. She noted that social media simply serves as a “label for digital technologies that allow individuals to connect, communicate, create and distribute content”[12]. These concepts limit social media to digital technologies that emphasize content and engagement created by users. In 2010, Michael L. Kent, a professor of Public Relations at University of New South Wales, offered another definition of social media. He described social media as “any interactive communication medium that enables two-way interaction and feedback”, and social media is also characterized by real-time interaction

capacity, decreased privacy, a sense of propinquity, quick reaction times, and the ability to 'time shift,' or engage the social network whenever necessary for each individual member [13]. This definition partially distinguishes social media from traditional media. More complex definitions of social media have been given. David M. Scott, an American online marketing strategist, said that "Social media offers the way individuals exchange ideas, content, thoughts, and relationships online. Social media varies from mass media in that anyone can build, comment on, and contribute to content on social media. Text, audio, video, pictures, and communities may take the form of social media"[14]. Joseph Thornley, CEO and co-founder of the Thornley Fallis Communications Inc., identified that "Social media is online communication in which we move between the position of viewer and creator instantly and easily without having to know how to code. We do this through social software that includes functions such as publishing, posting, friendship, commenting, linking and tagging". Social media is generally a category of Internet-based applications that draw on Web 2.0's ideological and technological. Social media provides the ability for its users to communicate, create, edit, and share online contents. These contents can be text, photo, video, sound, or a mixture of all. Besides, we need to clarify two similar terms: social media and social networking. According to Scott, Social media "is the superset of how we refer to the different media that people use to socially connect online", social networking "is a subset of social media which refers to how individuals interact on websites such as Facebook, Twitter, LinkedIn, or similar". Social media is now a networking medium used mostly to send data to a large audience. Thus, it is important to consider the differences between social media and mass media[15]

Screening candidates for recruitment with the help of Web 2.0 applications has allowed employers and hiring managers to connect and have real-time communication with thousands of high achieving applicants. In a survey by Jobvite, it was found that 89% of human resources and recruiting professionals used LinkedIn to hire job applicants. According to a survey it was found that Facebook is the top social network for teens and LinkedIn is more popular than Twitter among adults. However, it also holds the risk of introducing various biases to the screening process. For instance, possible bias via Facebook occurs when hiring managers reject suitable applicants just by looking at their profile picture, which they think is a representation of their personality[16].

According to Career Builder, employers usually reject candidates in the screening process if: applicants have inappropriate photographs on their SNS profiles; they have posted drugs or alcohol-related information; they have bad-mouthed their previous employer/colleague/friend or relative; they have poor communication skills; they have posted discriminatory comments regarding religion/gender/race; they have written incorrect qualifications; they have shared any 29 confidential information of previous employer; and if they have linkages to criminal behavior or have an unprofessional screen name. Whereas, the same survey explains that employers' reasons to accept applicants in the screening process via SNSs include: a good fit with the company's culture; right fit of applicants' background information with their professional qualifications; a professional image as represented on the SNS profile; relevant interests; excellent communication skills; praise and awards; good references; interaction with employers' SNS accounts; and number of followers or subscribers[17].

NO	TITLE	AUTHOR/YEARS	METHODS	LITERATURE REVIEW
1	Social networking web sites in job search	I. Nikolaou, "Social networking web sites in job search," Int. J. Sel. Assess., vol. 22, no. 2, pp. 179–189, 2014.	Concept, value and strategies	This journal explains about how social networking connect in job search websites
2	Functions of Social Networking Services	A. Richter and M. Koch, "Functions of Social Networking Services," Proc. Eighth Int. Conf. Des. Coop. Syst. (COOP 08), no. May, pp. 87–98, 2008, [Online]. Available: http://www.kooperationssysteme.de/wordpress/wp-content/uploads/coop08_richterkoch_functions_of_social_networking_services_final.pdf	Concept, value and strategies	This journal explains about the functions of social networking
3	The Writing on the (Facebook) Wall: The Use of Social Networking Sites in Hiring Decisions	V. R. Brown and E. D. Vaughn, "The Writing on the (Facebook) Wall: The Use of Social Networking Sites in Hiring Decisions," J. Bus. Psychol., vol. 26, no. 2, pp. 219–225, 2011, doi: 10.1007/s10869-011-9221-x.	Concept, value and strategies	This journal explains about the use of social networking in hire decisions
4	Scanning Social Networking Sites As Part of a Hiring Process	K. M. Fowler, "Scanning Social Networking Sites As Part of a Hiring Process," no. August, 2013.	Concept, value and strategies	This journal explains about scanning social networking in social networking sites
5	Use of Social Networking Sites for Recruiting and Selecting in the Hiring Process	M. Villeda and R. McCamey, "Use of Social Networking Sites for Recruiting and Selecting in the Hiring Process," Int. Bus. Res., vol. 12, no. 3, p. 66, 2019, doi: 10.5539/ibr.v12n3p66	Concept, value and strategies	This journal explain about the use of social networking sites for recruiting in hiring procces
6	Social Networking, Management	S. L. Thomas, P. C. Rothschild, and C. Donegan, "Social Networking, Management Responsibilities, and Employee Rights: The Evolving Role of Social Networking in Employment	Concept, value and strategies	This journal explain about Social Networking, Management Responsibilities, and Employee Rights: The Evolving Role of Social

	and Employee Rights: The Evolving Role of Social Networking in Employment Decisions	J., vol. 27, no. 4, pp. 307–323, 2015, doi: 10.1007/s10672-014-9250-5.		
7	Using social media content for screening in recruitment and selection: pros and cons	D. Jeske and K. S. Shultz, "Using social media content for screening in recruitment and selection: pros and cons," Work. Employ. Soc., vol. 30, no. 3, pp. 535–546, 2016, doi: 10.1177/0950017015613746.	Concept, value and strategies	This journal explain about Using social media content for screening in recruitment and selection: pros and cons
8	Using social networking websites as a selection tool: The role of selection process fairness and job pursuit intentions	J. M. Madera, "Using social networking websites as a selection tool: The role of selection process fairness and job pursuit intentions," Int. J. Hosp. Manag., vol. 31, no. 4, pp. 1276–1282, 2012, doi: 10.1016/j.ijhm.2012.03.008.	Concept, value and strategies	This journal explain about Using social networking websites as a selection tool: The role of selection process fairness and job pursuit intentions
9	Social networking sites, self-presentation, and impression formation in the hiring process	J. C. Pike, P. J. Bateman, and B. S. Butler, "You saw THAT?: Social networking sites, self-presentation, and impression formation in the hiring process," 18th Am. Conf. Inf. Syst. 2012, AMCIS 2012, vol. 3, pp. 1962–1969, 2012.	Concept, value and strategies	This journal explain about Social networking sites, self-presentation, and impression formation in the hiring process
10	Examining	J. W. Stoughton, L. F. Thompson, and A. W.	Concept, value	This journal explain about

11	MEASURING ATTITUDES ABOUT VIEWING SOCIAL NETWORK PROFILES DURING THE HIRING PROCESS	C. A. MacKenzie, "MEASURING ATTITUDES ABOUT VIEWING SOCIAL NETWORK PROFILES DURING THE HIRING PROCESS".	Concept, value and strategies	This journal explains about how social networking connect in job search websites
12	E-recruitment: A Social Media Perspective	M. S. Hosain, A. H. M. M. Arefin, and M. A. Hossin, "E-recruitment: A Social Media Perspective," Asian J. Econ. Bus. Account., vol. 16, no. 4, pp. 51–62, 2020, doi: 10.9734/ajeba/2020/v16i430248.	Concept, value and strategies	This journal explain about E-recruitment: A Social Media Perspective
13	Employer's use of social networking sites: A socially irresponsible practice	L. A. Clark and S. J. Roberts, "Employer's use of social networking sites: A socially irresponsible practice," J. Bus. Ethics, vol. 95, no. 4, pp. 507–525, 2010, doi: 10.1007/s10551-010-0436-y.	Concept, value and strategies	This journal about Employer's use of social networking sites: A socially irresponsible practice
14	Social media impact on the recruitment and selection process in the information technology industry	D. Pramod and S. V. Bharathi, "Social media impact on the recruitment and selection process in the information technology industry," Int. J. Hum. Cap. Inf. Technol. Prof., vol. 7, no. 2, pp. 36–52, 2016, doi: 10.4018/IJHCITP.2016040103.	Concept, value and strategies	This journal explain about Social media impact on the recruitment and selection process in the information technology industry
15	The role communication, informativeness, and social presence play in the social media	K. Si, T. Jalees, S. I. Zaman, S. H. A. Kazmi, and S. Khan, "The role communication, informativeness, and social presence play in the social media recruitment context of an emerging economy," Cogent Bus.	Concept, value and strategies	This journal explain about The role communication, informativeness, and social presence play in the social media recruitment context of an emerging economy

16	The Effect of Information Technology on the Recruitment Process in Healthcare Organization in Makkah City	Z. Khadija and A. Omar, "The Effect of Information Technology on the Recruitment Process in Healthcare Organization in Makkah City," Glob. J. Health Sci., vol. 11, no. 2, p. 123, 2019, doi: 10.5539/gjhs.v11n2p123.	Concept, value and strategies	This journal explain about The Effect of Information Technology on the Recruitment Process
17	human judgments in hiring decisions based on online social network profiles	Y. Bachrach, "Human judgments in hiring decisions based on online social network profiles," Proc. 2015 IEEE Int. Conf. Data Sci. Adv. Anal. DSAA 2015, pp. 1–10, 2015, doi: 10.1109/DSAA.2015.7344842.	Concept, value and strategies	This journal explain about Human judgments in hiring decisions based on online social network profiles
18	Effective use of social media recruiting	A. Khullar and P. Pandey, "Effective use of social media recruiting," Int. J. Intercult. Inf. Manag., vol. 4, no. 4, p. 216, 2014, doi: 10.1504/ijiim.2014.067934.	Concept, value and strategies	This journal explain about Effective use of social media recruiting
19	Recruitment Strategies: A power of E-Recruiting and Social Media	N. Sharma, "Recruitment Strategies: A power of E-Recruiting and Social Media," Int. J. Core Eng. Manag., vol. 1, no. 5, pp. 15–35, 2014.	Concept, value and strategies	This journal explain about Recruitment Strategies: A power of E-Recruiting and Social Media
20	Ethical Issues in Online Social Networking	A. Khan, "Ethical Issues in Online Social Networking," no. October, pp. 0–10, 2015, doi: 10.13140/RG.2.1.4289.6080.	Concept, value and strategies	This journal explain about Ethical Issues in Online Social Networking
21	The use of Social Networking Sites as a tool for employers in screening job	V. Tecassala, "The use of Social Networking Sites as a tool for employers in screening job candidates during the recruiting process : The ethical dilemma. Irish	Concept, value and strategies	This journal explain about The use of Social Networking Sites as a tool for employers in screening job candidates during the recruiting process

22	Employers' Use of Social Networking Sites in the Selection Process	A. F. J. Stephanie L. Black, "Employers' Use of Social Networking Sites in the Selection Process," Ann. Emerg. Med., vol. 19, no. 2, p. 210, 1990, doi: 10.1016/S0196-0644(05)81812-8.	Concept, value and strategies	This journal explain about Employers' Use of Social Networking Sites in the Selection Process
23	Social networks in personnel selection: Profile features analyzed and issues faced by hiring professionals	N. Melão and J. Reis, "Social networks in personnel selection: Profile features analyzed and issues faced by hiring professionals," Procedia Comput. Sci., vol. 181, no. 2019, pp. 42–50, 2021, doi: 10.1016/j.procs.2021.01.097.	Concept, value and strategies	This journal explain about Social networks in personnel selection: Profile features analyzed and issues faced by hiring professionals

Table 1 Literature Review

3. Methods

The methodology employed in this study encompassed an in-depth literature review to gather insights and data from various electronic sources. Researchers heavily depended on digital libraries, online databases, and academic search engines like Google Scholar to access a diverse range of scholarly articles, research papers, and pertinent publications. The initial step involved clearly defining the scope and objectives of the literature review, specifically focusing on evaluating the impact of social networking sites in the hiring process. Precisely formulated research questions ensured the collection of relevant and meaningful information from the literature[18].

To systematically conduct the literature review, researchers developed a search strategy that incorporated relevant keywords and search terms related to the topic. Utilizing filters and inclusion criteria refined search results, emphasizing the most relevant and reliable sources. Employing a combination of specific keywords and Boolean operators allowed for a targeted search, identifying articles deemed most suitable for inclusion[19]. Subsequent to the identification of pertinent literature, researchers engaged in a meticulous critical analysis and synthesis of the selected articles. Each article underwent careful examination, assessing the quality of research, the methodology employed, and the validity of findings. The information and key insights from the selected articles were then synthesized to present a comprehensive overview of the topic.

In addition to the comprehensive literature review, researchers incorporated a systematic review using the PRISMA model. This structured approach ensured transparency and replicability throughout the literature search, screening, and inclusion processes, particularly focusing on evaluating the influence of social networking sites in the hiring process.

Therefore, the methodology employed in this study combined a systematic literature review and a PRISMA-guided evaluation, with a primary focus on assessing the influence of social networking sites in the hiring process.

Extraction

One important step in conducting a systematic review is to extract the most relevant articles from the databases to arrive at the desired objectives of the review. The study here followed a two-step approach to arrive at the final articles for the study. In the first step, after the results using the above-mentioned keywords are shown, these articles are scrutinised based on their titles. The ones observed to be matching with the topic in hand would be shortlisted for the next level of scrutiny.

In the second step, the shortlisted articles would be screened based on the abstract. After the second step is over the final list of articles for the review would be ready and the review process would begin. The study includes the PRISMA method to arrive at the final list of articles and the flow chart representing the process is shown below.

Sources

The process of the review as mentioned above is inclusive of conducting an extensive review of the existing literature. The search for relevant past research is done in databases of SCOPUS that include articles from the databases of Science direct as well. The web of science database is covered under the umbrella of SCOPUS and hence technically it is the SCOPUS database that includes the search process. As the SCOPUS database consists majority of the articles from renowned journals, the inclusion of it ensures good quality rsearch. Relevant literature is identified in these databases using keywords such as "Social Media", "Marketing", "Higher", "Education" etc. The process followed for arriving at the considered research papers are mentioned in the following section.

Questions

Q1 Does social media have an effect on employee recruitment?

Q2 What is the stage of recruiting employees through social media?

Q3 What ethical considerations arise from the use of SNS in recruitment processes, particularly concerning privacy and bias?

Table 2 Research Questions for Literature Review

ID	Research Question	Motivation
RQ1	Does the study research the influence of social media on employee recruitment?	Identify the most significant journals in the media on employee recruitment on social media
RQ2	Does the study contain the stage of recruiting employees through social media?	Identify the study that contains the stages of recruiting employees through social media
RQ3	What ethical considerations arise from the use of SNS in recruitment processes, particularly concerning privacy and bias?	Identify the study that contains advantages of recruiting employees through social media

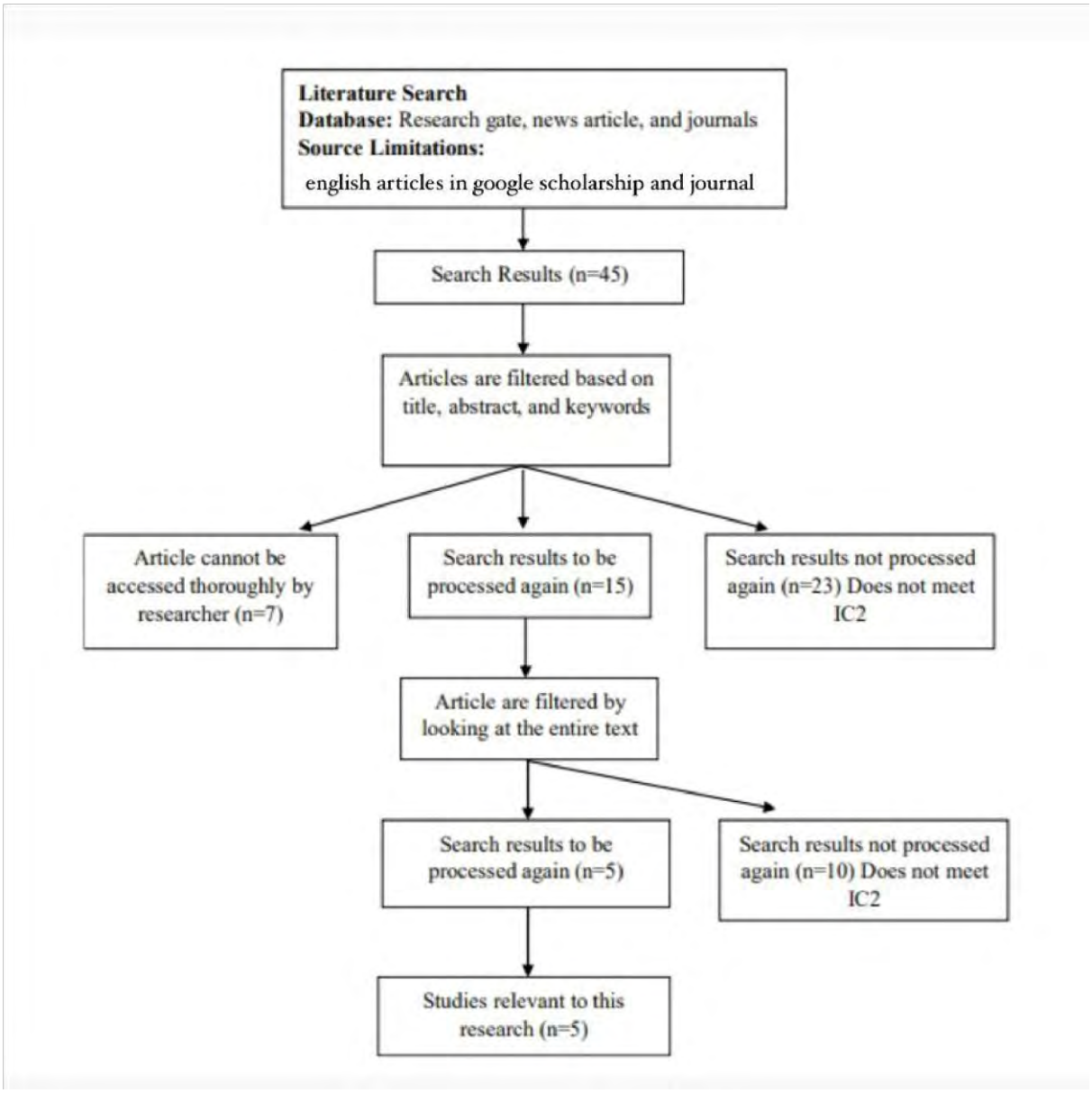

Figure 1 PRISMA MODEL

Data Extraction, Assess Quality of Primary Studies, and Data Synthesis The chosen primary study is then extracted to gather the information that aids in addressing research issues. The interpretation of the synthesis findings and the choice of the conclusions expressed can both be influenced by the evaluation of research quality. Data synthesis is used to compile information from specific studies to respond to research issues

Results and Discussion

As outlined in the preceding chapters, the integration of social media platforms into recruitment processes has become increasingly prevalent in recent years. Organizations and recruitment

agencies increasingly rely on online platforms to streamline and expedite the recruitment process. By utilizing online databases, job advertising boards, and search engines, employers can efficiently match candidates with available vacancies, significantly reducing the time required to fill positions compared to the traditional method [12]. However, questions remain regarding the effectiveness of social media in identifying suitable candidates, the specific stages involved in social media recruitment, and the ethical considerations that arise from its use.

4.1 The Impact of Social Media on Employee Recruitment

The results and discussion of this study revealed several key findings regarding the impact of social networking sites on the hiring process. Much like how the invention of the telephone revolutionized human interaction from face-to-face meetings and letter-writing to verbal communication, the Internet and wireless communication are currently undergoing a rapid transformation of social interactions, particularly within the context of hiring needs [13]. The hiring process comprises pre-recruitment and recruitment activities, with social media playing a significant role in both stages. Studies indicate that companies follow social networking sites due to the benefits they provide in recruiting [14]. Social media has a positive impact on the informativeness of organizations during recruitment, as highlighted by Kai Si et al. [15]. It is suggested that organizations should utilize social media platforms to effectively communicate crucial information such as their vision, culture, and expectations from employees. Furthermore, while social media recruitment is not new, it has seen evolving approaches since 2014, with a

significant increase in referral applicants hired through social networking sites noted by as many as 30% of organizations [16].

A survey about screening based on social network profiles was conducted by Bachrach [17] can be seen in Table I. The result shows that participants expected all criteria to have considerable influence on the rating. Skills and intelligence were deemed most influential, followed by attitude/personality and offensive content/vice-related content. Physical appearance and interests/activities were slightly less influential. Other demographic traits were considered least influential but still significant (over 10% of points).

Job-suitability criterion	Average points (overall population)	Average points (past hirers only)
Skills, education and intelligence	21.72	21.75
Offensive content or content relating to vices	19.09	20.63
Attitude and personality	18.59	19.52
Physical appearance	15.15	15.21
Interests, activities and hobbies	14.66	13.84
Age, family status, religious or political beliefs, or other demographic traits	10.79	9.06

Table 2: Perceived importance of criteria

Thus, social media's influence on employee recruitment includes not only its revolutionary function in redefining communication channels and procedures but also its importance in communicating corporate values and recruiting potential applicants.

4.2 Phases of Social Recruiting

According to Khullar and Pandey [18], the evolution of social media recruiting unfolds in several

phases, progressing from rudimentary utilization to advanced strategies aimed at maximizing effectiveness. Initially, social recruiting 1.0 involves posting jobs on public social networks, resembling traditional classified advertising, with minimal social engagement. However, it fails to address crucial questions regarding organizational web identity and differentiation. Building upon this, social recruiting 2.0 targets active job seekers, fostering engagement and continuous interactions between companies and candidates. Recruitment 3.0 marks a significant shift toward passive individuals, emphasizing the creation of engaged communities and talent pipelines. As recruitment advances to 4.0, it transforms into a profit center driven by data, networks, and gamification, seeking to reduce costs and enhance engagement. In its most advanced stage, recruitment 5.0 emphasizes personalization, self-sufficiency, and big data utilization, alongside diversifying media and embracing mobile recruiting. It emphasizes the importance of returning to basics, such as building relationships with candidates and understanding their motivators and cultural fit.

4.3 Stages of Recruiting Employees Through Social Networking Sites

The stages of the recruitment process, facilitated by SNSs, is a comprehensive approach to finding and hiring candidates for job openings. Based on Sharma's view [19], the following is a more detailed exploration of each step:

1. Identifying Requisites: The process begins with inputting key skills and requirements into the recruitment system. This step involves specifying the qualifications, experience, and other criteria essential for the vacant position. A robust system enables quick matching of these requirements with the candidates available in the organization's database. Additionally, the system automatically promotes job openings on the organization's website and selected job boards, ensuring maximum visibility to potential candidates.
2. Hunting for Candidates: Once the job requisites are defined, the system aids in the search for suitable candidates. Utilizing existing quick-matching capabilities, the system identifies potential matches from the database of candidates. Moreover, e-marketing and optimization techniques drive candidates to apply through the organization's website. This approach not only attracts new candidates but also helps in building a talent pool for future requirements. The system's intelligent background skill matching further enhances this process by suggesting new registrations that align with the job requirements.
3. Receiving Applications: As applications start flowing in, the system streamlines the process of receiving and managing them. Responses from job boards are automatically imported into the system, ensuring that all relevant data is captured efficiently. The system extracts essential information, such as skills and qualifications, from these applications, making it easier to identify suitable candidates. This automation significantly speeds up the short-listing process, allowing recruiters to focus their efforts on evaluating the most promising candidates.
4. Working with Shortlisted Candidates: Once a shortlist of candidates is generated, the system supports various interactions with them. Tasks such as contacting candidates, scheduling interviews, and sharing additional information can be managed seamlessly through the system. For example, recruiters can send letters, interview invites, or forward CVs using customized templates provided by the system. This automation not only simplifies administrative tasks but also ensures that the recruitment process maintains a personal touch, enhancing the candidate experience.

Above all, the use of SNS leverages technology to streamline each stage of the recruitment process, from identifying requisites to working with shortlisted candidates, ultimately leading to better hiring outcomes for organizations.

4.4 Ethical Considerations in Social Media Recruitment

While the study presents compelling findings on the widespread use of social networking sites in

the hiring process, it is crucial to consider the opposing argument regarding the reliance on social media content for decision-making in recruitment. Some believe there should be a clear boundary between a person's professional and private lives, and that employers accessing social media profiles infringe on the privacy rights of candidates [11]. Consequently, the use of two or more social networks as part of human resource professionals' assessment practices when recruiting employees raises ethical challenges for employers around employees' right to privacy and fairness [20]. A survey about assessing job candidates based on social media content found that 24.2% agreed it is ethical, with 4.5% strongly agreeing. In contrast, 34.8% disagreed, 27.3% strongly disagreed, and 9.1% had no opinion [21]. This indicates that a notable portion of respondents disagree on the ethicality of evaluating job candidates based on their social media content. According to Stephanie L. Black and Andrew F. Johnson [22], organizations utilizing information from social networking sites (SNS) for recruitment may encounter risks beyond standard application parameters, potentially exposing themselves to legal liabilities. This information may inadvertently reveal protected characteristics such as age, gender, ethnicity, sexual orientation, and disabilities, which could violate employment laws. another perspective offered by N. Melão and J. Reis found that selectors with higher education levels examine personal information less frequently [23], indicating reduced privacy violations and bias incorporation. Therefore, managers must be aware that accessing such data related to protected class status, evaluating qualifications, making decisions based on leisure activities, and soliciting references from friends or contacts are not permissible practices [22].

Moreover, social media has non-work-related components (e.g. photographs, personal interests, and personal information) that can influence biased decision-making regarding recruitment [12]. Disappointing findings were found by Madera [24] about the use of SNS in job hunts. His research, which was done in the hospitality sector, revealed that applicants' perceived fairness and job pursuit intentions were lower for an organization that used SNS as a selection tool than an organization that did not. To prevent these issues, it is essential to develop an ethical impact assessment and implement suitable guidelines or prescriptive rules. These measures are necessary to mitigate the risks associated with social media recruitment practices and ensure fair and lawful hiring processes. Social networks have enabled the rapid and efficient interchange of massive volumes of data, giving businesses a new tool for obtaining information. Although it is natural to desire to use social networks for several purposes, policy and research ought to regulate decision-makers' choices. Organizations that use valid data in an ethical and legal manner for recruiting, selection, and hiring will profit from not only improved selection methods but also a more competent workforce [22].

5.CONCLUSION

After conducting the discussion above, we can see the influence of social media on employee recruitment. An excellent forum for showcasing a company's culture is social media hiring. This way of hiring might provide employer access to a bigger talent pool on connecting with people may be much simpler. The higher degree of information in employer's social media the lower possibility that employees will leave that organization[23] . Gen Z and Millennials currently make up the Literature Search Database: Research gate, news article, and journals Source Limitations: English and Bahasa Indonesia articles (IC1) Search Results (n=45) Articles are filtered based on title, abstract, and keywords Search results to be processed again (n=15) Article cannot be accessed thoroughly by researcher (n=7) Search results not processed again (n=23) Does not meet IC2 Article are filtered by looking at the entire text Search results to be processed again (n=5) Studies relevant to this research (n=5) Search results not processed again (n=10) Does not meet IC2 4122 majority of the workforce, so social media recruiting may be useful for recruiters. Simply having the best social media recruiting approach is all that is necessary for everything else to fall into place. LinkedIn was the social networking platform of choice for businesses when looking for

potential applicants. Additionally, recruiters look for prospects on Facebook, Instagram, and Twitter. According to Offong that human resources should use the social media for advantage to organizations provide wiki and blogs[24]. Also, confirming with that Facebook and LinkedIn are "two most accepted sites among the hiring professionals where the first one mostly provides behavioral information and the second one provides job related information"[25]. Employers should have a well-defined recruitment strategy that is ongoing and consistent to draw candidates using various social media networking platforms. They should also develop a precise selection procedure for their hiring procedure. According to Thornthwaite[26] that social media policies is needed to protect employers. Supported with Esch and Mente stated that set a guideline to use social media as their e-recruitment process. Employers should be aware of what information to share and what to concentrate on in their recruiting and selection strategies since social media also provides information about industry trends and job seekers' concerns[27].

Quantitative studies can be carried out on particular companies utilizing SNS for recruitment. Furthermore, active utilization and presence can be classified as two different aspects of as study. Research on the kinds of tools and applications used for each particular network can also be undertaken with respect , and various cultural implications on the use of each tool can be investigated[28]. This particular study can further be utilized to conduct a more comprehensive research on the usage of social networking sites and its impact on hiring decisions particular to one social network or industry[29]. The reported results have been in a form of simple percentages on simple tabulations; an extension of this research could be the inclusion of multiple factor scale on different samples to make more direct comparisons[30].
Beyond personality and intelligence, SNWs may also contain additional information which may be useful in employment selection. Owing to the large volume of information contained in SNWs, information may also be obtained which relate to the user's writing skills, job experiences, or a variety of knowledge, skills, abilities, or other criteria which might relate to job or organizational fit in a given employment selection context. A more global assessment of performance would include a variety of information. In fact, due to the broad range of information available on SNWs and the lack of consistency in this information across individuals, the approach of assessing broad characteristics is likely to be more practical than assessing more narrow aspects of social networking profiles that may be unavailable and/or inconsistent for a large segment of the profiles[31].

Based on the large volume of personal information available on SNWs, judges' ratings of the big-five dimensions of personality, intelligence, and global performance were consistent across the 63 raters in this study, demonstrating adequate internal consistency reliability and interrater agreement. In addition, the trained raters were able to accurately distinguish between individuals who scored high and individuals who scored low on four of the big-five personality traits, intelligence, and performance, providing initial evidence that raters can accurately determine these organizationally relevant traits by viewing SNW information[32].

As stated earlier, other rated personalities have been shown to predict job performance. Considering that other methods of other-reported personality are unlikely to be viable in an employment selection context, SNW ratings of personality may be a practical approach. Owing to the theoretical and methodological differences between self-reported and other-rated personality, it is likely that ratings of personality via SNWs will provide a context for incremental prediction of job performance beyond the predominant self-report approach. In addition, the differences in context between SNWs and a job interview (i.e. socially desirable responses in the job interview as well as the unique nature of information contained in SNWs) should similarly allow for unique prediction of job performance beyond what can be evaluated through Employment selection methods 575 personality assessment in the employment interview. This approach may be particularly valuable since these assessments take only a fraction of the time involved with other

selection methods[33].

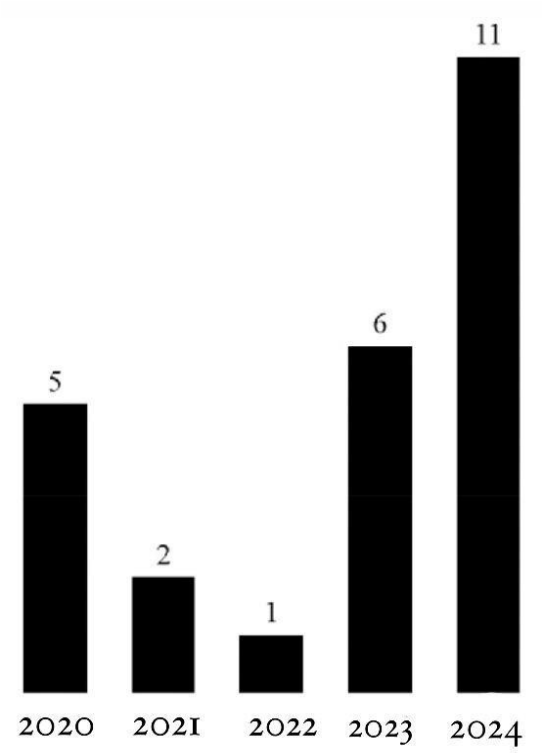

Figure 2 : The Annual Production of Research Articles

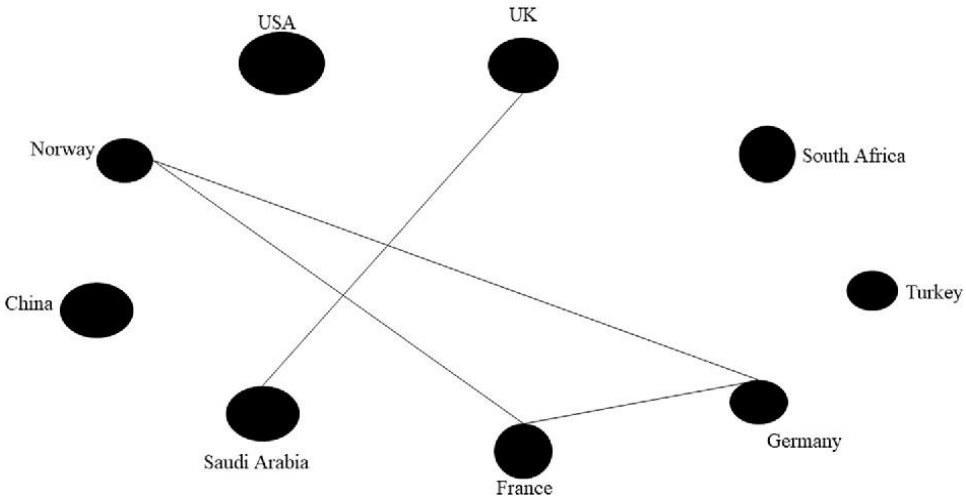

Figure 3 : Collaboration of researchers between countries **References**

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"THUMBS UP TO THIS REVIEW!" UNDERSTANDING HELPFULNESS OF REVIEWS IN THE TURKEY MARKET"

Fatih Pınarbaşı

Istanbul Medipol University, Turkiye

Abstract

Mobile applications are essential to today's consumer's digital life and are used as tools in different consumer behaviors. Evaluating and better understanding consumer comments on mobile applications is crucial in improving service quality and application features. Today's consumers can share their experiences with relevant applications with application developers and other users through application stores. Users can also share information in an information exchange environment by rating each other's comments for helpfulness. Other users' application comments influence users, and this reality is vital for marketing decision-making. Regarding this consumer reality, this study aims to contextually examine the comments shared by users with each other and the comments found helpful by other users. Following the research purpose, the "most relevant" comments of the 50 most popular applications in the Google Play application store were obtained and used as the primary stage sample of the research. In the first stage of the research, based on 17318 review data, Correlations between review length and rating score, review length and thumbs up count (review helpfulness indicator), and rating score and thumbs up count were measured. In the second stage of the research, the average thumbs-up count value for each application was obtained, and a sub-data set of 2084 reviews with thumbs-up values above the average value was reached. First, text mining was performed on the new data set to find the most used words, the most used couple words (bigrams), and the most used triple words (trigrams). Then, thematic analysis methodology is implemented, and themes in the dataset are presented. The thematic analysis concludes the following themes in the second stage sample; general like statements, functions & features, error reporting, improvement suggestions to developers, message / help to community, message to community regarding payments/money, service quality and customer services, shared content in app / audience of the app, advertisement overload, app updates, paid / premium features, application fragmentation to additional apps, incentives in the app, game mechanics, defending the application brand. Correlation analysis results and text mining results are also included in the study. The study provides insights into the communication between mobile app users through user reviews. Thus, the decision-makers in the mobile industry can employ the insights for better decision-making. From the academic perspective, evaluating the local context, like the Turkey market, can help future studies investigating the fundamental concepts in specific contexts.

Keywords: mobile applications, user reviews, customer feedback, word of mouth, turkey market

1. INTRODUCTION

Digital platforms and technology are crucial to today's consumers' lives. According to an industry report by Data.ai (2024), the average time spent on mobile devices across the top 10 markets within the research exceeds 5 hours in the year 2023. In today's world, which is integrated with technology, big data (Pinarbasi & Canbolat, 2019) has been one of the important concepts in marketing. Sharing information with other users via digital platforms has become a critical consumer behavior. Users influencing other users by sharing content has been included in marketing research as word of mouth in traditional marketing and electronic word of mouth (e-WOM) in digital marketing. In the concept known as e-WOM, users can share their opinions/experiences about products/services with other people by writing on the platforms. At the same time, they shape their decisions that will be subject to marketing with the help of the content written by other users.

Addressing the concept of e-WOM requires a multifaceted approach to the subject since several sub-contexts, such as users' reviews vs editors' reviews (Zhang et al., 2010), emotional expressions in reviews (Kim & Gupta, 2012), derived attributes of the online customer reviews (Elwalda et al., 2016), determinants of positive and negative types of e-wom (Nam et al., 2020). Review helpfulness is one of the e-WOM topics, and the evaluation of information transfer between web users can be improved by examining the topic of review helpfulness. This study selects the topic of review helpfulness as a base for understanding the information transfer between mobile application users.

Determinants of e-WOM have various topics, and culture and culture-related factors are included in them (Christodoulides et al., 2012; Fang et al., 2013; Nath et al., 2018). Differences between countries and cultures in perception, information processing, and evaluation have significant potential for understanding the market. The study aims to evaluate the e-wom concept in the Turkish context by focusing on the Turkish market context with Turkish market data from the Google Play store and online reviews of the Turkish language. The study examines the review helpfulness context in the e-wom concept and is consistent with the research aim; the research questions refer to "What are the themes included in the conversation in terms of the helpful reviews?" and "How can the themes contribute to a better understanding of the market?". For this purpose, online reviews from the Google Play Store are scraped and evaluated from a review helpfulness perspective. A combination of methodologies (correlation analysis, text mining and thematic analysis) are used consistent with the research aim. Correlation analysis is employed to test the fundamental hypotheses in the literature, while text mining is employed to understand the content at a basic level better. Finally, thematic analysis methodology is used to evaluate the content categories in the conversation. The study also includes the future research directions and managerial implications for the academic and industrial side.

2. **LITERATURE REVIEW**

2.1. Electronic Word of Mouth

Word of mouth concept defined by Westbrook (1987) as *"informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services and / or their sellers"* is one of the fundamental concepts in recent decades. This phenomenon, which is based on consumers influencing each other in the market, is essential for marketing decision-makers to understand the market and make decisions. With the spread of smart devices, technology, and social media, electronic word-of-mouth (eWOM) concepts emerge as an extension of the original WOM concept. eWOM concept uses digital platforms, websites, and social media channels to transfer information worldwide. While the traditional WOM concept focuses on the communication between social circles in face-to-face communication, the e-WOM concept extends the scope as it enables communicating with millions of other people on the web.

One of the fundamental ideas about e-wom concept is customers rely on the other people's reviews more than the commercial / marketer-generated information (Bickart & Schindler, 2001). In addition to this basic idea, some variables are influential in many different areas regarding eWOM, such as communication structure, user-related features, product/service-oriented features, and market-oriented features. E-wom research and the related components are examined in Donthu et al. (2021)' study, which evaluates the eWOM research in the literature through bibliometric analysis and systematic review study. They conclude research fronts in e-wom concept as i) determinants of eWOM, ii) eWOM in the hospitality industry, iii) cognitive aspects of eWOM, iv) service failure and recovery.

Donthu et al (2021) identify 11 clusters regarding eWOM literature by using keywords. Negative word of mouth (including 14.20% of keywords), consumer behavior and trust (12.96%), word of mouth in social networks (10.49%), online reviews and ratings (9.26%) and brand loyalty (9.26%) are the first five clusters. Online reviews and ratings are used by web users to transfer the information regarding products and services and they are used in many industries around the world. Online reviews topic has been studied in several contexts such as cinema (Duan & Whinston, 2008), tourism (Sparks & Browning, 2011; Gavilan et al., 2018), sharing economy (Cheng & Jin, 2019), mobile apps (Pınarbaşı & Canbolat, 2018; Canbolat & Pınarbaşı, 2020). The scope of the online review topic creates the potential for different research questions for marketing decision makers.

Marketing decision-makers need to investigate how consumers will behave in various contexts regarding e-wom since there are various contexts, including industries, topics, and purchase situations. Various contexts lead to different implications for the markets and consumer behavior. For example, Gavilan et al. (2018) examine the effect of sentiment in the online review and perception in their study and they conclude that in good rating scenario, the trust in rating is related to number of reviews, on the other hand, in the bad rating scenario, there is no relationship between number of reviews and trustworthiness of the rating. In the Zhang et al. (2010b)' study, which they examine the perceptions of consumers with their consumption goals, it is concluded that consumers develop positivity bias (when consumers have associate the product with positive/promotion goals) and negative bias (when consumers have prevention goals with the product). Based on this, focusing on a specific issue of the WOM effect may be beneficial for marketing research in terms of considering contextual features and discovering possible new features. This study focuses on the review helpfulness sub-topic for evaluating the online review topic in the Turkey market.

2.2. Review Helpfulness

With the popularity and intense usage of online reviews by the web audience, the websites improved the content and efficiency of the online reviews by adding additional components such as star ratings, review helpfulness vote function, image or video attachments. Mass amount of reviews

leading to information overload (Fang et al., 2016) and web users may need to use the filtering options by using variables.

Review helpfulness simply refers to the perception of other web users regarding the content of the review in terms of how it helps the other users. Users can interact with reviews by clicking the buttons/texts and voting on the helpfulness level of the reviews, which will result in a helpfulness score/rate for the reviews. This review helpfulness phenomenon is studied with different aspects since it includes both content-related elements and user-related structures. For example, Park and Nicolau (2015) focus on tourism and hospitality industry with Yelp.com data in their study, and they conclude that extreme ratings on either positive or negative side are perceived more useful and enjoyable then the moderate ratings. In another study, Malik (2020) evaluates the prediction of review helpfulness by three group of variables as review, reviewer and product. The author concludes review-type characteristics as the most effective indicators, and also hybrid combination of proposed features coming from variable groups as the best-performance result. Understanding the components/ingredients of the content about review helpfulness is a crucial concept in the literature.

Regarding online reviews, some platforms share users' comments in many different areas, and on these platforms, users can share their evaluations with other users in many different ways (text, visual, and so on). Apple and Google are intensely dominating in the mobile applications sector, which is one of the critical issues of recent years. Information about consumer opinions and the market can be obtained through reviews about applications downloaded from these application stores. Review helpfulness, one of the essential issues in understanding the consumer and the market, was evaluated in this study through the reviews written on the most popular applications on the Google Play store.

3. METHODOLOGY

Data collection stage uses Python programming language (Rossum, 1995) and "Google-Play-Scraper" (Jo, 2019) python package for retrieving the data from Google Play Store. The scraping activity takes place on 06.04.2024 and most popular 50 mobile apps for Turkey market on 01.04.2024 in Sensor Tower website (Sensor Tower, 2024) are used as sample for the study. From two filters (newest and relevant) for the reviews, relevant reviews are selected and no-filter about the ranking score is applied. Finally, 17318 reviews are collected for the study.

Research design of the study consists of two stages and three parts. The first stage refers to collection of the data and evaluating the data without filtering, while in the second stage, average thumsUpCounts (which indicates the review helpfulness) for each mobile app are calculated and reviews with more-than-average thumbUpCount values are selected for the study. Second stage of the study contains 2984 reviews. First part of the analysis refers to correlation analysis and it tests the general hypotheses about the correlation between the review length, rating score and thumbsUpCount variables. Some type of relationships are examined in the previous studies. For example, Salehan and Kim (2016) imply that helpfulness and readability of the online customer reviews are related to review length and longevity. The second part of the analysis consists of two methodologies that evaluate the sample's second stage. Firstly, text mining methodology is employed to understand the reviews with an overview approach that extracts the most used words, most used couple words (bigrams), and most used triple words (trigrams). The text mining output presents an overview; however, a more detailed approach is required that is consistent with the research aim. For this purpose, thematic analysis is employed for the study, and the review content

is evaluated.

4. RESULTS

Correlation analysis in the first part of the methodology focuses on three relationships: relationship between review length and rating score, review length and ThumbsUpcount, rating score and ThumbsUpcount. Table 1.1 includes the Employed Spearman correlation analysis results, which are also shown in Figures 1.1, 1.2, and 1.3.

Table 1.1 Correlation Analysis Results for Relationships

Relationship	**Coefficient**	**P-Value**
Review Length <> Rating Score	-0.23	$p < 0,05$
Review Length <> ThumbsUpCount	0.49	$p < 0.01$
Rating Score <> ThumbsUpCount	-0.13	$p < 0,05$

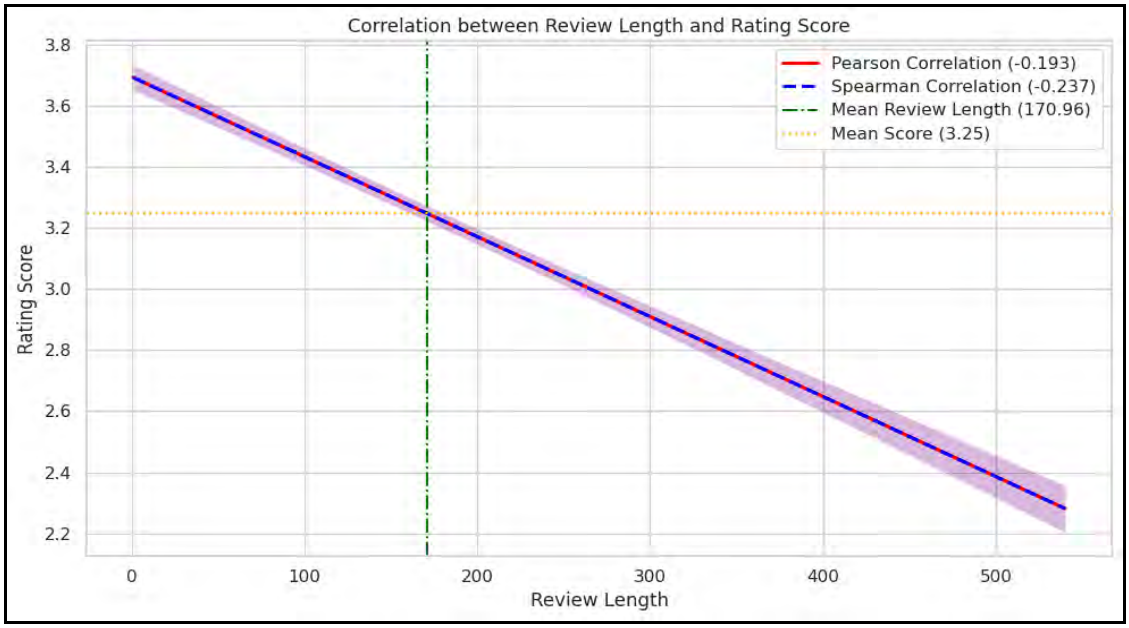

Figure 1.1. Relationship between Review Length and Rating Score

Figure 1.1 indicates that longer review lengths are associated with lower rating scores. The average rating score is 3.25, and the average review length is 170,96 characters. The analysis concludes with a weak and negative relationship. The findings indicate that users write longer reviews when they have negative opinions/experiences about the mobile app.

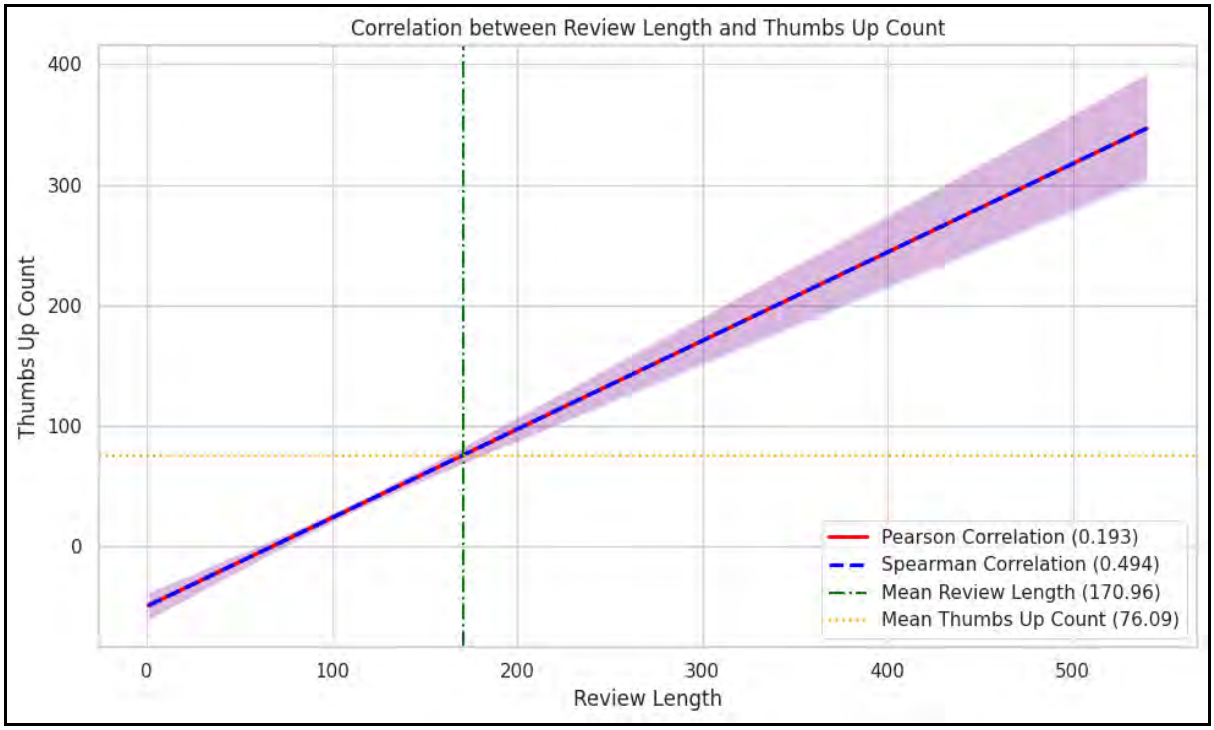

Figure 1.2. Relationship between Review Length and ThumbsUp Count

Figure 1.2 focuses on the helpfulness of the reviews. It indicates that longer review lengths are associated with higher ThumbsUp counts. A positive relationship (0,49) between the variables indicates that other users find longer reviews more helpful.

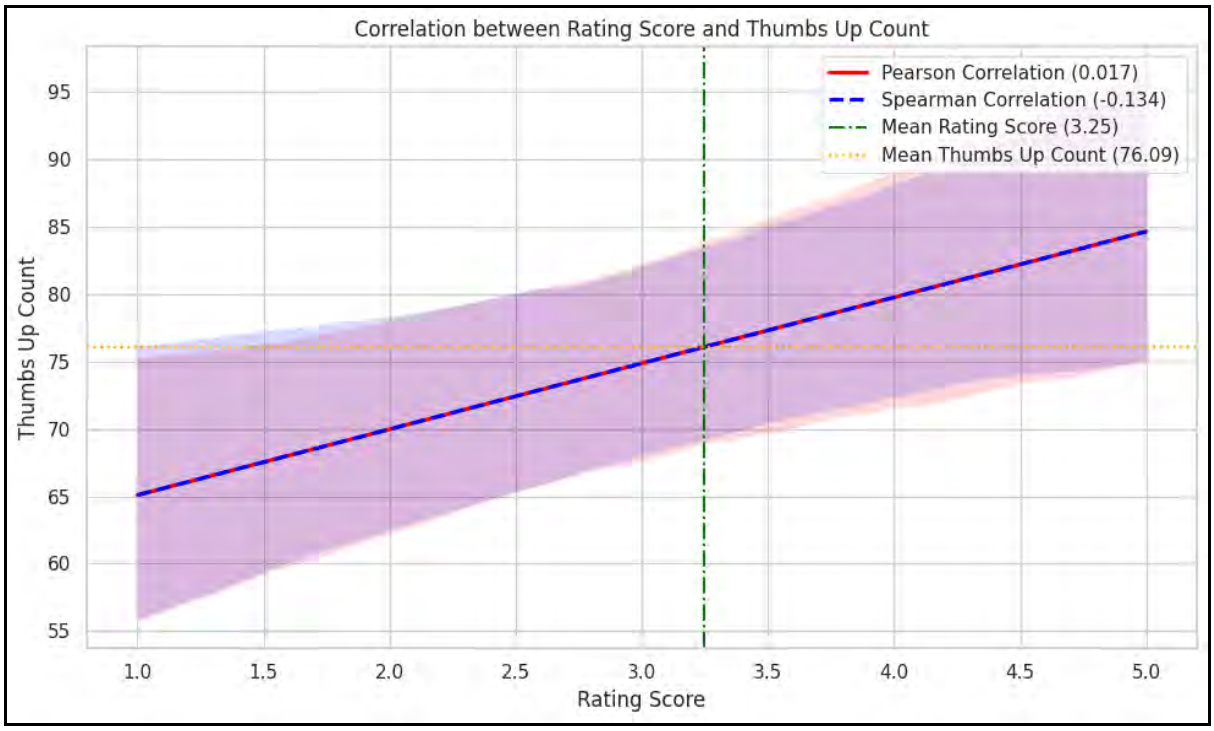

Figure 1.3. Relationship between Rating Score and and ThumbsUp Count

Figure 1.3. evaluates the relationship between Rating Score and ThumbsUp count and concludes that rating score and thumbsUp counts have a weak and negative relationship.

The second part of the analysis continue with the reviews which has more than average ThumsUp count scores. The distribution of the new dataset is shown in Figure 1.4

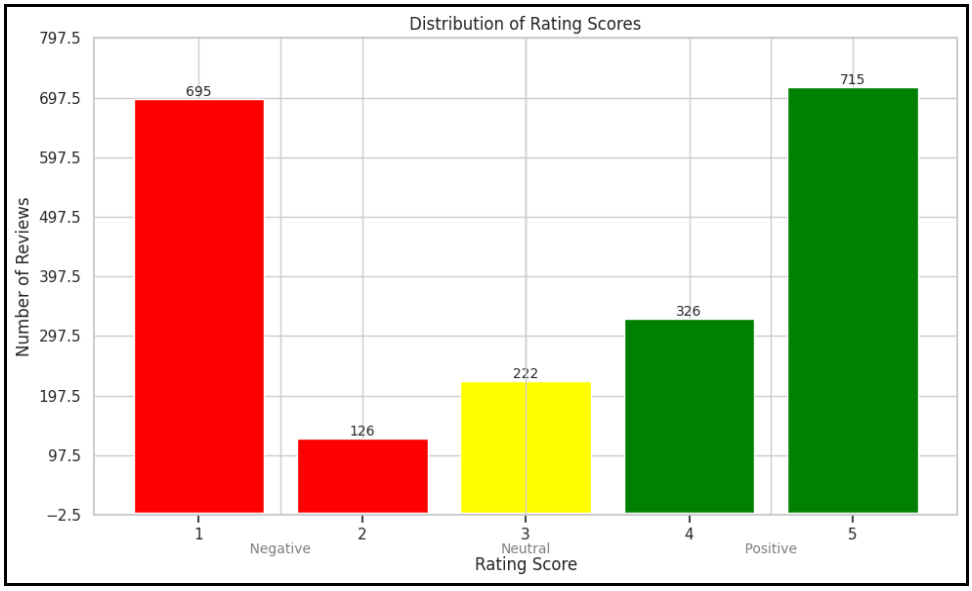

Figure 1.4. Rating Score Distribution for New Data Set

Figure 1.4 shows that most reviews have polarity extremes (715 reviews have a 5 rating score, and 695 reviews have a 1 rating score), indicating that users tend to find positive and negative polarity reviews more helpful. Text mining methodology is implemented for review content, and most used words, most used couple words (2grams), and most used triple words (3grams) are concluded in Table 1.2, 1.3, and 1.4.

Table 1.2. Most Used Words

Word	**Frequency**	**Word**	**Frequency**
bir	2282	tavsiye	293
oyun	1215	ben	292
güzel	1074	bence	288
uygulama	819	sonra	275
var	659	oyunu	263
iyi	528	kadar	262
reklam	486	ederim	259
yok	423	uygulamayı	256
i	389	fakat	239
sorun	294	değil	229

Table 1.3. Most Used Couple Words (Bigrams)

Word	**Frequency**	**Word**	**Frequency**
('bir', 'uygulama')	345	('bir', 'şekilde')	75
('bir', 'oyun')	304	('iyi', 'bir')	64
('güzel', 'bir')	285	('gayet', 'güzel')	64
('oyun', 'güzel')	245	('tavsiye', 'ediyorum')	58
('tavsiye', 'ederim')	194	('mükemmel', 'bir')	58
('onun', 'dışında')	89	('hata', 'veriyor')	50
('reklam', 'çıkıyor')	86	('uygulama', 'güzel')	48
('iyi', 'olur')	79	('sorun', 'var')	47
('herhangi', 'bir')	79	('gerçekten', 'güzel')	47
('bir', 'sorun')	76	('reklam', 'var')	47

Table 1.4. Most Used Triple Words (Trigrams)

Word	Frequency	Word	Frequency
('güzel', 'bir', 'oyun')	136	('onun', 'dışında', 'güzel')	22
('güzel', 'bir', 'uygulama')	105	('mükemmel', 'bir', 'oyun')	22
('mükemmel', 'bir', 'uygulama')	28	('harika', 'bir', 'oyun')	21
('bir', 'sorun', 'var')	25	('bir', 'süre', 'sonra')	20
('iyi', 'bir', 'uygulama')	24	('gayet', 'güzel', 'bir')	20
('oyun', 'güzel', 'fakat')	23	('iyi', 'bir', 'oyun')	20
('son', 'güncellemeden', 'sonra')	23	('gerçekten', 'güzel', 'bir')	20
('play', 'store', 'getcontact')	23	('kullanmaya', 'başladım', 'kişisel')	20
('herhangi', 'bir', 'kişisel')	23	('bir', 'an', 'önce')	19
('herhangi', 'bir', 'şekilde')	23	('sorumluluk', 'play', 'store')	19

Figure 1.4 and Table 1.2, 1.3 and 1.4 present an overview about the review helpfulness concept, however further analysis must be implemented for understanding the phenomenon better. For this purpose, thematic analysis methodology following the six-stages of Braun & Braun and Clarke (2006) is implemented. Braun and Clarke (2006) define thematic analysis as *"a method for identifying, analysing and reporting patterns (themes) within data"*. The reviews in the dataset is examined through thematic analysis and fifteen themes are detected in the conversation. The themes and descriptions are presented in Table 1.5.

Table 1.5. Themes in Conversation

Theme	Description
General like statements	Reviews containing general expressions of appreciation about the application.
Functions & features	Comments on specific features and functions of the application.
Error reporting	Reporting problems related to specific functions or operating problems within the scope of the application.
Improvement suggestions to developers	Expressions of improvements in existing functions or new function suggestions related to the application.
Message / help to community	Messages or helpful expressions for users who read application reviews.
Message to community regarding payments/money	Warning statements regarding payment or other financial issues for users who read application reviews.
Service quality and customer services	Expressions about customer service or customer quality.
Shared content in app / audience of the app	Criticisms about the content shared within the application or other users of the application.
Advertisement overload	Comments about the excessive amount of advertisements in the application.
App updates	Comments about application updates and their impact on the user.
Paid / premium features	Comments about paid features in the application or the premium version of the application.
Application fragmentation to additional apps	Comments on creating a new application which result from dividing the application into different mobile applications.
Incentives in the app	Comments about the incentives included in the application.
Game mechanics	Comments on game mechanics in game-type applications.
Defending the application brand	Comments intended to defend the application or developer company.

Table 1.5 presents the themes with descriptions, Table 1.6 shows the representative reviews in each theme category with original language and English-translated versions.

Table 1.6. Representative Reviews in Themes

Theme	English Version	Original
General like statements	The most useful application made for humanity. It is a great software that allows you to access many places from a single place. Awesome, admirable. Well done to everyone who designed, wrote and contributed. Thanks.	İnsanlık için yapılmış en faydalı uygulama. Bir çok yere tek yerden girilerek ulaşım sağlayan harika bir yazılım. Müthiş, takdire şayan. Tasarlayan, yazan ve emeği geçen herkesin ellerine sağlık. Teşekkürler.
Functions & features	The application is beyond perfect. I wish I had discovered it before. You can also delete the messages of the person you are talking to for the person you are talking to. And at the time you want! As you know, such a feature was not even available in the other application. Another feature is that the message can be edited at any time after it is sent. This is another great feature! The features of the application are endless. Download and try it. I advise. I wish you continued success.	Uygulama mükemmel ötesi. Keşke daha önce keşfetseymişim. Konuştuğunuz kişinin mesajlarını, konuştuğunuz kişi için de silebiliyorsunuz. Hem de istediğiniz zaman diliminde! Bildiğiniz üzere diğer uygulamada böyle bir özellik söz konusu bile değildi. Başka bir özellik ise mesajın gönderildikten sonra istenen zaman diliminde düzenlenebiliyor olması. Bu da başka bir mükemmel özellik! Uygulamanın özellikleri saymakla bitmez. İndirin ve deneyin. Tavsiye ederim. Başarılarınızın devamını dilerim.
Error reporting	Download this application if you want to be angry, if you want to see a really unsuccessful application, if you want to buy flights a little more expensive than the normal tariff, and to experience many similar troubles. I wonder, wouldn't the people who wrote this app at least buy a plane ticket to try it? (or do they pretend to buy it and not see the mistakes?)	Sinir olmak istiyorsanız, gerçekten başarısız uygulama görmek istiyorsanız, uçuşları normal tarifesinden biraz daha pahalı almak istiyorsanız ve bunun gibi nice sıkıntılar yaşamak için indirin bu uygulamayı. Ya şunu merak ediyorum, bu uygulamayı yazanlar en azından denemek için bir uçak bileti almazlar mı? (ya da alırmış gibi yapıp hataları görmezler mi?)
Improvement suggestions to developers	Please simplify the design of this application, it is unnecessarily cluttered and has a lot of unnecessary pop-ups/sections. It can be made simpler and more useful. In addition, the application still does not have dark theme support. When you walk around at night, everything is so white that it strains your eyes.	Şu uygulamanın tasarımını sadeleştirin lütfen, bu haliyle gereksiz kalabalık, gereksiz bir sürü pop-up/kısım var. Daha sade ve kullanışlı bir hale getirilebilir. Bunun yanında hala uygulamanın karanlık tema desteği yok. Gece gezinirken her yerin bembeyaz olması göz yoruyor fazlasıyla.
Message / help to community	The application is very nice. I use it in my spare time. But its audience consists of very toxic people. It is not an application especially suitable for young children. Some videos contain images that may set a bad example. There is another problem, it takes up 3 GB of space. That's a bad thing for people with limited storage space. That’s what i think in general.	Uygulama gayet güzel. Boş vakitlerimde kullanıyorum. Ama kitlesi çok toxic kişilerden oluşuyor. Özellikle küçük çocuklar için uygun bir uygulama değil. Bazı videolarda kötü örnek oluşturabilecek görüntüler var. Bir sıkıntısı daha var, 3 GB yer kaplıyor. Depolama alanı az olan kişiler için kötü bir şey. Genel olarak bu şekilde düşünüyorum.
Message to	11.11.2023 Buy 1 Get 1 Free Most people	11.11.2023 1 Alana 1 Bedavayı çoğu kimse

community regarding payments/money	didn't get it. Because they said the system crashed :) You wrote 500 for the buy 1, get 1 free product in other times. You buy 2 and pay 500. But the price of the product on other sites is 250 TL for one piece :) Maybe there are people who don't realize it. I thought I would warn you. That's what App Sales is like. There are really good discounts in the store. But the application is "MANTARE" :) Response to reply: I edited the comment to be more understandable.	alamadı. Çünkü Sistem çöktü diyip geçtiler :) Başka zamanlardaki 1 alana, 1 bedava ürüne 500 yazmışsınız. 2 tane alıp 500 ödüyorsunuz. Ama Zaten ürünün başka sitelerde tekinin fiyatı 250 TL :) Belki farkına varmayan vardır. Uyarayım dedim. Uygulama Satışları böyle. Mağazada gerçekten güzel indirimler oluyor. Ama uygulama MANTARE :) Gelen Cevaba Yanıt. Yorumu daha Anlaşılır şekilde düzenledim.
Service quality and customer services	It is a great application, it is easy to use and customer satisfaction is high. I chose a few products. They immediately sent back the price of the products I canceled. I re-ordered my card and they sent a discount coupon. As a permanent customer, my only address for both online and store shopping is LC WAIKIKI, thank you🙏	Harika bir uygulama kullanımı kolay ve müşteri memnuniyeti üst düzey bir üründen bir kaç tane seçmişim hemen iptal ettiğim ürünlerimin ücretini anında geri gönderdiler kartıma yeniden sipariş oluşturdum ve indirim kuponu gönderdiler daimi müşterisi olarak hem online hem mağaza alışveriş tek adresim LC WAİKİKİ teşekkürler🙏
Shared content in app / audience of the app	Tiktok is a nice application, but there are many inappropriate and insulting videos. And it lags a lot on lower model phones. People don't want to log into TikTok. So 3 points. Thanks	Tiktok güzel bir uygulama fakat çok sayıda uygunsuz ve hakaret içeren videolar bulunuyor. Ve düşük model telefonlarda çok kasıyor. İnsanın tiktok a giresi gelmiyor. O yüzden 3 puan. Teşekkürler
Advertisement overload	It is excellent in terms of downloading and video quality, but the ads are seriously annoying. While trying to download a song, multiple ads appear and even though I press the exit sign, it redirects to the ad's page. Advertisements should be reduced.	İndirme konusunda, video kalitesi anlamında mükemmel ama cidden reklamlar çok sıkıyor. Bir şarkı indirmeye çalışırken birden fazla reklam çıkıyor ve çıkış işaretine basmama rağmen reklamın sayfasına yönlendiriyor. Reklamlar azaltılmalı.
App updates	Even if one good feature appears after each update, a few bad features appear. With the latest update, the application theme has become even worse. Also, the application started to get slower. It would be nice to have the option to turn off the channel section for those who don't want it.	Her güncellemeden sonra 1 iyi özellik oluşsa buna karşı birkaç kötü özellik ortaya çıkıyor. En sonki güncellemeyle birlikte uygulama teması iyice berbat bir hal aldı. Ayrıca uygulama agirlasmaya başladı. Kanal bölümünün istemeyenler için kapatılması seçeneğinin olması güzel olurdu.
Paid / premium features	Great chat app. New features are constantly coming, it deserves more users. There is such a nonsense called Telegram premium, I hate paid applications developed for profit, a simple messaging application should not be paid.	Harika sohbet uygulaması. sürekli yeni özellikler geliyor, daha çok kullanıcıyı hak ediyor. Telegram premium diye bir saçmalık var, çıkar için geliştirilen ücretli uygulamalardan nefret ederim, basit bir mesajlaşma uygulaması ücretli olmamalı.
Application fragmentation to	There is no need to make a separate application and take up phone memory or	Ayrı bir uygulama yapıp yalandan telefon hafızasını kaplamaya, uygulama kalabalığı

additional apps	create a crowd of applications. How many more applications do I need to download to shop on Trendyol?	yaratmaya gerek yok. Trendyolda alışveriş yapabilmem için daha kaç uygulama daha indirmem gerekiyor??
Incentives in the app	I haven't been able to get normal, smooth internet from "Salla kazan" for more than a year. Either 1 GB Instagram internet or YouTube internet is coming. Completely disgraceful application. Officially the only reason to leave Turkcell. Don't you feel ashamed while doing this? You disgrace!	1 yıldan fazla bir zamandır salla kazandan hiçbir şekilde normal düz internet alamıyorum. Ya 1 GB instagram interneti geliyor ya da YouTube interneti. Tamamen rezalet uygulama. Turkcell'i bırakmak için tek sebep resmen. Hiç utanmıyormusunuz bunu yaparken ayrıca? Reziller sizi!
Game mechanics	Your adjustments to character and power balance are a disgrace. The game gets a little worse with each new character. First of all, I would like to call out to the technical team here. It is normal for some characters to have some superiority over other characters, but it is unreasonable for a single character to destroy the whole game. Let's take Edgar, he steals life, puts down a shield, his super ability recharges on his own, he is new, he has everything that can dominate the whole game on his own and However, he has a lot of health.	Karakter ve güç dengesi için yapmış olduğunuz düzenlemeler rezalet. Her yeni gelen karakter sonrası oyun biraz daha berbat bir hâl alıyor. Öncelikle burdan teknik ekibe sesleniyorum bazı karakterler diğer karakterler üzerinde bir nebze üstünlük kurması normâl fakat tek bir karakterin bütün oyunu yerle bir etmesi çok mantıksız.Edgarı ele alalım can çalıyor kalkan basıyor süper yeteneği kendi kendine doluyor yeni tek başına bütün oyunu domine edebilecek her şeyi var ve buna rağmen canı çok fazla.
Defending the application brand	THOSE WHO DOWNLOAD THE GAME SHOULD READ IT COMPLETELY, the game is great, it has a lot of ads, it's not a lie, everyone in the world is a critic, and you are angry because the game has a fun commercial section, but every game that requires internet has ads. We all know. You are listening for a fee. People make games to make money. It's not so that we can make such bad comments and break their hearts. What a great quality game they have made once in a thousand years, my friend, turn off your internet.	OYNU İNDİRENLER TAMAMEN OKUSUN, Oyun harika neymiş çok reklamlıymış yalan hiç değil dünyadaki herkes eleştirmen olmuş ayrıca oyun eğlenceli reklamı bölüm var diye kızıyorsunuz ama her İnternet gerektiren oyunda reklam olur. Hepimiz biliyoruz. Paralı dinliyorsunuz. Adamlar para kazanmak için oyun yapıyor. Biz böyle kötü yorum yapıp, onların kalbini kıralım diye değil. Ne güzel kaliteli oyun yapmışlar bin yılda bir arkadaşım internetinizi kapatın.

5. CONCLUSION

The study focuses on the topic of review helpfulness and employs correlation analysis, text mining, and thematic analysis methodologies. The findings of the study are two-fold. The first part contains a general evaluation of the subject. In this context, correlation relationships are implemented for the relationships between review length and rating score, review length and ThumbsUp count, rating score, and ThumbsUp count. Then, the secondary data set concludes that reviews with above-average ThumbsUp count values mostly had 1 and 5 rating scores. Then, the most frequently used words, couple words, and triple words are presented. In the second part of the findings, themes included in the dataset are presented.

Evaluation of the fifteen themes in the study leads to two types of themes: themes found in all categories in previous research and more specific themes related to sub-topics. Themes such as "General like statements", "Functions & features", "Error reporting" are generally included in the mobile application review context. On the other hand, topics such as "Message / help to community", "Message to community regarding payments/money" are themes that have potential in review helpfulness.

From a theoretical perspective, the study contributes to expanding the theory in the context of the Turkey market. New scopes, such as special categories of applications or games, can be starting points for future research. Methodological improvements, such as using topic modeling instead of the thematic analysis method used in the study, or additional methodologies such as sentiment analysis (Canbolat & Pinarbasi, 2022) can also be starting points for future research.

Specific themes included in the study are helpful for the managerial implications of the findings. Topics such as "Improvement suggestions to developers" and "Service quality and customer services" contain statements directly related to applications and companies so that they can play a feedback role. On the other hand, themes such as "Game mechanics" and "App updates" contain user reviews and feedback regarding the development of applications or updates. The fact that such reviews are written by users who use the applications themselves makes them a valuable resource for application developers. Businesses that evaluate the identified themes and handle feedback efficiently regarding development will be able to carry out their applications more successfully.

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ENHANCING PERSON-ORGANIZATION FIT THROUGH WORKPLACE SPIRITUALITY

Ayşe Öykü Yılmaz[*1], Bahar Divrik[2], Elif Baykal[3]

[*]*Corresponding author*

Abstract

Workplace spirituality is a concept that expresses spiritual needs and values of employees at work. On the other hand, person-organization fit refers to the harmony between the employee's individual values and the organizational culture and goals. In this study, the relationship between workplace spirituality and person-organization fit was examined. When creating the research model of this study, it is thought that employees' giving importance to moral values at work contributes to their greater commitment to the organization and their motivation for their work. Therefore, it is suggested that there can be a positive relationship between workplace spirituality, person-organization fit and job security. Hence, in this study we will discuss both of these concepts; workplace spirituality and person-organization fit and we will reveal the findings of our field study regarding our research model. Findings of the research showed that practices related to spiritual values in the workplace can increase person-organization fit and job security.

Keywords: *Spirituality, workplace spirituality, person-organization fit, job security.*

1.INTRODUCTION

In today's modern business world, employees are faced with the problem of not feeling spirituality in their workplaces, thus interest in literature for workplace spirituality has increased in the recent decade (Palframan and Lancaster, 2019). Spirituality is accepted as one of the major forces of human existence such as body, heart and mind (Fry, 2003). Workplace spirituality has been defined in terms of the 'inner life, meaningful work and community' (Ashmos and Duchon, 2000), 'interconnectedness' (Mitroff and Denton, 1999a), 'awareness of Self' (King and Nicol, 1999) which is also considered as a cultural phenomenon (Giacalone and Jurkiewicz, 2003). It has become a significant phenomenon effecting both organizational cuşture and also preferences while recruiting new personnel (Baykal, 2019).

In their study, related to recruitment in the twentieth-first century Rynes and Cable (2003) states that deliberate applicants are showing high levels of concerns about choosing the most suitable organization in addition to finding the most suitable job for them to perform. With an organizational perspective, while common selection processes were mainly focusing on analysis that are aligned with work and the resolution of sets of knowledge, Expertises, abilities needed for in-role behavior, more up to date research has aimed to look further than the job to recognize extra-role behavior. In such a manner, the focus has changed from standard frameworks which are mainly formed on "Knowledge, Skills, Abilities" for "jobs" to recruiting for organizational compatibility as displayed through a fit between a person's character, beliefs and principals and the organization's adopted culture, norms and principles (Morley, 2007). In this study, the relationship between workplace spirituality and person-organization fit is examined by focusing on the dimensions of workplace spirituality; meaningful work, sense of community, and alignment with the organization's values. In addition, this study is inspired from the person-organization fit theory

which states that the degree of satisfaction of employees is higher when they are employed in organizations where they feel attached to a value base (Milliman et al., 2003). In our study, we analyzed the relationship between the workplace spirituality and person-organization fit and sense of job security. Hence, in our research we tested the above-mentioned assumptions among white collar employees in Turkey.]

2. HYPOTHESES AND RESEARCH MODEL

[***Meaningful work dimension of workplace spirituality***

One of the main features of spirituality at work is having a "meaningful work". This dimension of workplace spirituality shows how the interactions occur between employees with their day-to-day work at the personal level. This dimension includes the assumptions that every human has inner motivations and truths and wants to be a part of activities that add a bigger meaning to the person's and others' lives (Ashmos and Duchon, 2000). The search for a purpose is not a new concept. The spirituality view is not just focusing on work being alluring or demanding but also having deeper value and meaning for a person's inner life (Ashmos and Duchon, 2000). In the same direction, Moore (1992) notes that work is a tool and way to create an existence and identification in the workplace.

H1: The meaningful work dimension of workplace spirituality has a positive effect on employees' person-organization fit.

The sense of community dimension of workplace spirituality

A crucial aspect of workplace spirituality involves establishing a deep connection with others, characterized by a sense of community (Ashmos and Duchon, 2000). This dimension of workplace spirituality operates on a collective level of human behavior, focusing on the interactions among employees. Work community emphasizes the perception of interconnectedness among individuals, where there exists a relationship between one's inner self and the inner selves of others (Maynard, 1992). Neal and Bennett (2000) argue that this level of spirituality is associated with mental, emotional, and spiritual aspects among employees working in teams or groups within organizations. Central to a sense of community is the bond between individuals, which can manifest as support, freedom of expression, and genuine care. Some organizations have developed strong organizational cultures centered around fostering a sense of community among employees. For instance, Southwest Airlines is renowned for its robust culture where employees feel like part of a larger organizational family that values care not only for fellow employees but also for their families, treating them as integral members of the organization (Milliman et al., 2003).

Being inspired from the existing literature we hypothesized that;

H2: The sense of community dimension of workplace spirituality has a positive effect on employees' person-organization fit.

Alignment with organization culture dimension of workplace spirituality

The third dimension of workplace spirituality involves the alignment of personal values with the goals and mission of the organization, emphasizing the connection between employees and the broader organizational purpose (Mitroff and Denton, 1999). This aspect underscores the belief that an individual's purpose extends beyond oneself and includes contributing positively to others or

society. It also reflects the notion that individuals perceive their organization as upholding high ethical and moral standards (Ashmos and Duchon, 2000). Similarly, research indicates that living by one's inner truth involves working within an organization characterized by integrity and a purpose that goes beyond mere profit-making to benefit others (Milliman et al., 2003).

Workplace spirituality is a structure which promotes employee' excellence through their work mechanisms, easing their commitment to the members of the organization by promoting cheer and integrity at the workplace (Jurkiewicz and Giacalone, 2004). In reality, employees who are engaged in workplace spirituality can focus better on the goals and targets of the organization and have a better balanced life. Workplace spirituality adds positively to person-organization fit as in environments where the level of spirituality is high, employees will have their attitudes, competences and demands in the same direction with values of the organization they belong to (Baykal, 2019). Therefore, employees who work in environments that have spirituality will experience higher levels of person-organization fit as their personal values are in accordance with the corporate values (Baykal, 2019). Mainly, the values of employees are in coherence with the organizational values if they are engaged in the workplace spirituality as they are more exposed to supporting practices in that area (Milliman et al., 2003). It is for sure that the workplace spirituality at an individual level is an excellent combination of spiritual beliefs and values at work (Kolodinsky et al., 2008). Therefore, person-organization fit is used to explain the workplace spirituality and its outputs both at an individual and organizational level (Cable and DeRue, 2002). States in their research that both workplace spirituality and person-organization fit constructs have a center of attention on commitment to job, performance level, job engagement, satisfaction at work and intention to quit (Baykal, 2019). Both constructs assume that employees are eager to work in organizations that boost similar values that they give importance (Kolodinsky et al., 2008). In addition, both the workplace spirituality and person-organization fit construct targets to accomplish the personnel expectations. It is an important feature that both constructs have individual, group and organizational level of analysis (Kristof-Brown et al., 2005). Lastly Baykal (2019) in her study, stated that there is a positive impact of workplace spirituality on person-organization fit and this fit perception has positive effects on both in-role and extra-role performances of employees. By being inspired from the literature, in this study it is proposed that:

H3: The alignment with organization culture dimension of workplace spirituality has a positive effect on employees' person-organization fit.

As per Rowntree (2005), job insecurity is defined as a state characterized by individuals' apprehension about losing their job, facing demotion, or encountering various threats to their working conditions, leading to reduced psychological well-being and job satisfaction. Kang et al. (2012) view job insecurity as the anxiety experienced by employees in unpleasant work environments. Brahmannanda and Dewi (2020) have highlighted the negative impact of job insecurity on job satisfaction, whereas Lim et al. (2019) have demonstrated the positive influence of person-job fit on job satisfaction. From these explanations H4 hypothesis can be formulated as follows:

H4: Employees' person-organization fit has a positive effect on job security".

3.METHODOLOGY

Sample and Data Collection

In our research, a convenience sampling method was utilized to gather survey data, employing face-to-face interviews with respondents. Exploratory factor analysis (EFA) was employed to assess the theoretical coherence of observed variables, and validity and reliability measures were examined. The hypothesis testing was conducted using the SPSS software. Respondents' feedback on the survey questionnaire was evaluated using a five-point Likert Scale. The survey was administered to companies operating in the production and service sectors within the Marmara Region of Turkey. We have 228 usable survey responses being collected.In Table 1, details regarding participant to our field research can be found..]

Table 1.

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Woman	87	38.2	38.2	38.2
Man	141	61.8	61.8	100.0
Total	228	100.0	100.0	
Age	Frequency	Percent	Valid Percent	Cumulative Percent
20-25	39	17.1	17.1	17.1
26-35	93	40.8	40.8	57.9
36-50	66	28.9	28.9	86.8
51-...	30	13.2	13.2	100.0
Total	228	100.0	100.0	
Position	Frequency	Percent	Valid Percent	Cumulative Percent
Top manager	29	12.7	12.7	12.7
Middle level manager	92	40.4	40.4	53.1
Lower level manager and experts	107	46.9	46.9	100.0
Total	228	100.0	100.0	

Validity and Reliability

In terms of statistical studies, validity and reliability values were looked into, and explanatory and confirmatory factor analyses were carried out to determine whether the variables found in the survey were loaded as theoretically predicted. Principal component analysis with Promax Rotation was utilized to conduct an exploratory factor analysis to see whether the observed variables were distributed among the expected components and whether they displayed the expected correlations. Bartlett's sphericity test and the Kaiser-Meyer-Olkin (KMO) sample adequacy test were used to determine whether the study's data were appropriate for factor analysis. The study showed that the Bartle test was significant at a significance level of 0.001 and that the KMO value of 0.938 was above the desired threshold of 0.50.

Normality Test

"A kurtosis value between ±1.0 is considered excellent for most psychometric purposes, but a value between ±2.0 is in many cases also acceptable, depending on the particular application." Mallery and George (2012)

All dimensions in our analysis had kurtosis values between ±1.0.

"Skewness: A distribution's degree of symmetry; typically, it is compared to a normal distribution. Relatively few large values and a leftward tail characterize a positively skewed distribution, whereas relatively few small values and a rightward tail characterize a negatively skewed distribution. A significantly skewed distribution is indicated by skewness values that are outside the range of -1 to +1, which warps the normal distribution. (Hair et al., 2013). In our analysis as seen in Table 2, the data has a normal distribution.

ISG	Skewness	-.546	.161
	Kurtosis	-1.037	.321
AI	Skewness	-.447	.161
	Kurtosis	-.502	.321
TD	Skewness	-.599	.161
	Kurtosis	.145	.321
COU	Skewness	-.575	.161
	Kurtosis	-.395	.321
UM	Skewness	-.540	.161
	Kurtosis	-.147	.321

An exploratory factor analysis (EFA) is useful in data reduction of a large Number of indicators and can be quite helpful in seeing if indicators are measuring more than one construct (Awanz, 2015). EFAs are typically the first step in determining if an indicator is measuring a construct. In an EFA the researcher is not denoting which indicators are measuring a construct.

When reducing the amount of data for a large number of indicators, an exploratory factor analysis (EFA) can be very effective in determining whether the indicators are measuring several constructs. Usually, the first step in figuring out whether an indicator is measuring a construct is to perform an EFA. The indications that the researcher uses to measure a construct are not specified in an EFA. Results of EFA is shown in Table 3.

Table 3. EFA Results

1	2	3	4	5	Cronbach Alfa
TD7	1.000				0.949
TD6	.885				
TD2	.854				
TD5	.853				
TD3	.815				
TD4	.799				
TD1	.730				
AI1		.943			0.939
AI5		.878			
AI3		.852			
AI4		.806			
AI2		.779			
AI6		.610			
UM3			0.988		0.918
UM2			.859		
UM1			.858		
UM4			.804		
COU5			.929		0.955
COU6			.925		
COU4			.909		
COU7			.892		
COU3			.891		
COU1			.879		
COU2			.842		
ISG2				.954	0.899
ISG3				.936	
ISG4				.927	
ISG5				.922	
ISG6				.911	
ISG1				.899	

Table 4. Correlations

	AI	TD	UM	ISG	COU
AI	1				
TD	.773**	1			
UM	.582**	.482**	1		
ISG	.606**	.513**	.631**	1	
COU	.718**	.845**	.588**	.651**	1

**. Correlation is significant at the 0.01 level (2-tailed).

And correlation values between these variables are summarized in Table 4. As seen in the table there is not multicolliniearity between dimension.

		MODAL 1			Standardized Coefficients		t	Sig.
Independent v.	Dependent v.	Adjusted r square		F	Std. Error	Beta		
		0.752		232.241	.032		18.438	.000
AI	COU				.057	.046	.820	.413
TD					.054	.702	13.498	.000
UM					.050	.222	5.477	.000
		MODAL 2			Standardized Coefficients		t	Sig.
COU	ISG	Adjusted r square		F	Std. Error	Beta		
		0.424		186.583	(Constant)		2.504	.013
					COU	.651	12.907	.000

Moreover, according to results of regression analysis workplace spirituality has a meaningful effect on person organization fit with sense of community (t:13.498 Sig:,000) and hope dimensions (t.5.447 Sig:,001) so H2 and H3 are accepted accepted. Moreover, when the effect of person-organziation fit on job security is examined, it is seen that there is a statistically significant relationship between these two dimensions. So H4 is also accepted.

5.CONCLUSION

This study, conducted in the Turkish market, discovered that white-collar workers value workplace spirituality at work. However, the effect of workplace spirituality on individual organizational fit levels varies across the three dimensions of workplace spirituality. As previously stated, workplace spirituality has three dimensions, and only the sense of community and hope dimensions have an impact on individuals' organizational fit levels, but not the sense of meaning. This could be because, while having a meaningful job affects spirituality at work, it has a greater impact on motivation and job satisfaction at the individual level. On the contrary, the sense of community and hope dimensions influence organizational commitment and improve alignment with organizational

values. Furthermore, our findings revealed that person-organization fit is a good indicator of job security. As a result, this study sheds light on the impact of workplace spirituality on better organizational fit and a sense of greater job security, which makes individuals feel more peaceful and secure in their organization, potentially increasing motivation and performance.

Actually, workplace spirituality is a factor which has a positive effect on the person-organization fit perception of the employees. Rationally, humans are accepted as spiritual beings (Mitroff and Mitroff, 2006) and therefore employees may need underlying spiritual arguments to advocate the reasons for working their organization. If the organization is promoted by the workplace spirituality which will satisfy the spiritual needs of the employees, the generation of person-organization fit will occur in several dimensions (Pattanawit, 2021). As a first dimension, the "meaningful work" aspect of the workplace spirituality accomplishes the spiritual needs of employees (Ashmos and Duchon, 2000). The research of Rego and e Cunha (2008) stated that employees search for jobs that are relevant, which fulfill their personal values and have an unified value system. Related to their preferences, that kind of employee will adapt to the values and targets of the organization they work in addition to their personal targets and values. This will motivate the employees to develop a fit to organizational culture which is made of values, goals and beliefs (Pattanawit, 2021). However in this study, there was not a direct positive impact of meaningful work in person-organziation fit levels of individuals. As a second dimension, the searches of McLeod (2007); found that "the sense of community" aspect of workplace spirituality fulfills the employees needs of belongingness to a social group.

Generally, employees are in need to establish positive and stable relationships with their co-workers in the workplace (Puyod and Charoensukmongkol, 2021b). In their research, Afsar and Rahman (2015) declared that workplace spirituality fulfills employees' communistic needs at the workplace through generating deep interconnection, identity, integrity, and empathy with other employees. According to Pattanawit (2021), workplace spirituality will generate a higher degree of person-organization fit as the need for establishing smooth relationships at work is in accordance with the organizational culture that underlines a sense of community. As a third dimension, Kolodinsky et al. (2008) declares that employees prefer to work in an organization which supports similar values. The alignment with the organizational culture aspect contributes to the needs of the employees and to adapt to the organizational culture and their colleagues (Afsar and Rehman, 2015). As mentioned in research of Baykal (2019), Pattanawit (2021), the alignment with organizational culture is positively related with person-organization fit or personal/organizational value coherence. In their research, Afsar and Rehman (2015) also stated that employees who have an alignment with organizational culture which is an aspect of workplace spirituality believe that their targets, values, needs are in the same direction and overlap with the organizational goals, values and demands and feel more secure in their organizations. To sum up, employees who work in an environment in which they can perceive workplace spirituality, will have a higher person-organization fit as their personal values will be in accordance with the organizational culture (Pattanwait, 2021) Our study both confirms this relationship and shows the positive affect of person organization fit on sense of job security.

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A BIBLIOMETRIC ANALYSIS OF THE RESEARCH ACTIVITIES OF BANGLADESH ARMY INTERNATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY (BAIUST)

Md Nurul Islam1*, Sheikh Abu Toha Md Saky saky2, Shakil Ahmad3, Mohammad Sohail Haider4, Umma Naim5, Md. Ridwanul Hoque Shourav6, Shirina Akter7

[1,6,7]International Islamic University Chittagong, Bangladesh
[2]Universitas Muhammadiyah Surakarta, Indonesia
[3]Imam Abdulrahman Bin Faisal University, Saudi Arabia
[4]Nanjing University, China
[5]Arabic Islamic University, Bangladesh

**Corresponding author: nurul.islam@iiuc.ac.bd*

Abstract

Scopus data is used to bibliometrically analysis BAIUST's research and collaborators from 2017 to 2022. It examines yearly growth, publication age, average citations per document, scientific work done each year, affiliations, trend subjects, and cooperation. Where displaying analytical findings by Tables, figure using Biblioshiny. The analyzing found that BAIUST had a 41.88 percent yearly growth rate and 2.52 percent document growth rate. Documents were 4.453 percent average citations. BAIUST prioritizes Rajshahi University, BUET and Federal University of Rio de Janeiro. The research concludes that energy efficiency and cost-effectiveness are the most widely referenced papers. Energy efficiency, cost-effectiveness, sustainable development, blockchain, distributed ledger, and hyper ledger are the most common trend topics in BAIUST and collaborator research publications. The analysis found that BAIUST had an international cooperation & collaborated with Brazil in which followed by Sweden and Australia. In this paper provide a valuable analysis, intuition about BAIUST.

Keywords: *Bibliometric analysis, Scopus, research performance &* collaborations.

1.INTRODUCTION

In 2015, the Bangladesh Army International University of Science and Technology (BAIUST) began operations. Even though it has only been operating for a short while, it has already established itself as a top center for scientific and technological research. (Anon., 2022; 2023; 2023b) A bibliometric examination of BAIUST's publications might provide useful details about the university's productivity and contributions in the field of science. Bibliometric analysis uses metrics like the quantity of publications, citations, and impact factors to evaluate the work of a research organization or a particular researcher (Academy, 2017; Agarwal et al., 2016; Anonymous, 2023a; Russell, 2023). This technique may be used to evaluate the research productivity of other universities and spot patterns in a university's research output (Byl et al., 2016; Cucari et al., 2023; Ghani et al., 2022).

It is likely that BAIUST's bibliometric study would reveal how much the institution emphasizes engineering and technology research. The university's emphasis on science and technology education. A bibliometric analysis focus on the technical and technological fields where BAIUST is most interested in studying as well as the publications and conferences where its researchers

present their work. The production of the institution as a whole, as well as the effectiveness and influence of individual BAIUST researcher, may all be examined using bibliometric analysis. This might assist us in identifying the university's top researchers and the kind of research the institution excels at (Hossain et al., 2020; Kalantari et al., 2017; Sorz et al., 2020).
Overall, a bibliometric evaluation of BAIUST's scientific output and contribution might provide us with important details regarding the institution's research output and point us in the direction of its strongest research areas. University administrators, academics, and policymakers who want to understand the institution's research output may find this sort of study useful (Brika et al., 2021; Cancino, Merigó, and Coronado, 2017; Pagell, 2014).

Objective of the study

This bibliometric study's primary objective was to provide a comprehensive overview of the research activities of BAIUST and its collaborators. Learning about research output, influence, partnerships, and hot subjects was part of this. Analysis attempted to identify research trends and potential collaborators by examining publication counts, citation counts, and institutional connections. It also made an effort to gauge how significant the study was. The data revealed the areas of study being pursued by BAIUST and its collaborators, as well as the top citing institutions and nations. This study's secondary objective was to clarify the relationship structure between BAIUST and its international collaborators. Possible future applications include collaborative research projects. Finding out how well BAIUST and its partners performed in research and providing information that may be utilized to improve future research were the primary aims of this study.

Significance of the study

We can learn a lot from this bibliometric analysis of BAIUST and its partners' research output, partnerships, and trends. The report provides insightful data on BAIUST and its partners' historical research output, influence, and patterns of cooperation. This data may be utilized to improve present research performance of BAIUST and its partners as well as to guide future research initiatives and partnerships. The survey also provides information on the key affiliations and often referenced sources for research publications produced by BAIUST and its collaborators and distributed internationally. It is possible to find prospective coworkers and research partners using this data.

The survey also offers useful data on the subjects that appear most often in research papers written by BAIUST and its colleagues. Using this data, BAIUST and its collaborators may decide where to concentrate their current study and where they might wish to conduct future research. The survey also offers useful data on the nations with which BAIUST collaborates most often as well as the frequency of such relationships. Potential research partners and colleagues in other nations may be found using this information.

Overall, this bibliometric analysis offers a thorough insight of BAIUST and its colleagues' research performance, collaborations, and trends. This data may be utilized to make future research plans and partnerships as well as assess BAIUST and its partners' research performance.

2. REVIEW OF RELATED WORKS

Bibliometric analysis is commonly used to assess research performance, partnerships, and trends. Analyzing scientific publications, citations, affiliations, and trending subjects reveals an institution's or group's research emphasis (Donthu et al., 2021; Ellegaard & Wallin, 2015; Guiling

et al., 2022; Mejia et al., 2021; Rosas et al., 2011; Szomszor et al., 2021; Zehra & Urooj, 2022).

Furthermore, Bibliometric analysis has been used to assess research performance, collaborations, and trends in engineering, medicine, and computer science (Chao, Yang, and Jen, 2007; Chiu & Ho, 2007; De Bakker, Groenewegen, and Den Hond, 2005; Fahimnia, Sarkis, and Davarzani, 2015; Heradio et al., 2016; Mora, Bolici, and Deakin 2017; Podsakoff et al., 2008; Rey-Mart, Ribeiro-Soriano, and Palacios-Marqués, 2016; Verma & Gustafsson, 2020; Xu These studies illustrate that bibliometric analysis may assist researchers and institutions understand their research production, impact, and collaboration.

Table 1: Review of the related previous work

Paper title	**Authors**	**Year**	**Citations**
"The use of bibliometric data for the measurement of university research performance"	(Moed et al. 1985)	1985	453
"Bibliometric Indicators of University Research Performance in Flanders"	(Berghe et al. 1998)	1998	47
"Bibliometric profiles for British academic institutions: An experiment to develop research output indicators"	(Carpenter et al. 1988)	2005	46
"Important factors when interpreting bibliometric rankings of world universities: an example from oncology"	(Calero-Medina et al. 2008)	2008	20
"A Bibliometric Analysis of the Research Output of Sambalpur University's Publication in ISI Web of Science during 2007-11"	(Maharana and sethi 2013)	2013	24
"Research Publication Trend of Utkal University's Researchers Indexed in Scopus during 2008 to 2012: A Bibliometric Analysis"	(Maharana and Das 2013)	2013	7
"Research growth and development at Sambalpur University during 2008-2012: a bibliometric analysis"	(Maharana 2014)	2014	3
"Scholarly Publications of Librarians in Universities in Nigeria: 2000-2012-A Bibliometric Analysis"	(Tsafe, basaka, and Mohammed 2016)	2016	7
"A Bibliometric Overview of University-Business Collaboration between 1980 and 2016"	(Olvera, Berbegal-Mirabent, and Merigó 2018)	2018	4
"Bibliometric Analysis of Publications from Web of Science Affiliated to Health Sciences University from 2017-2019"	(Umate et al. 2020)	2020	3

3.METHODOLOGY

The Scopus database was utilized to obtain data for this study's bibliometric examination of BAIUST's scientific publications, which spans the years 2017 to 2022. The data consists of details on affiliations, publications in scientific journals, citations, and popular subjects. After the data was gathered, it underwent preprocessing and cleaning to get rid of entries that were duplicates or didn't belong. The cleansed data were then examined using the Biblioshiny program. Metrics like the yearly growth rate, average publication age, average number of citations per document, and annual scientific output and citation are all included in the study. The analytical findings were then shown in Biblioshiny utilizing various tables to provide a comprehensive overview of the research conducted by BAIUST and its collaborators. The research also contains a citation analysis to find the most widely cited articles, an affiliation analysis to find the most relevant affiliations, a trend topic analysis to find the most popular trend subjects, and a cooperation analysis to provide a map of worldwide collaboration. These procedures were all utilized to assess the research performance, teamwork, and trending of BAIUST and its collaborators.

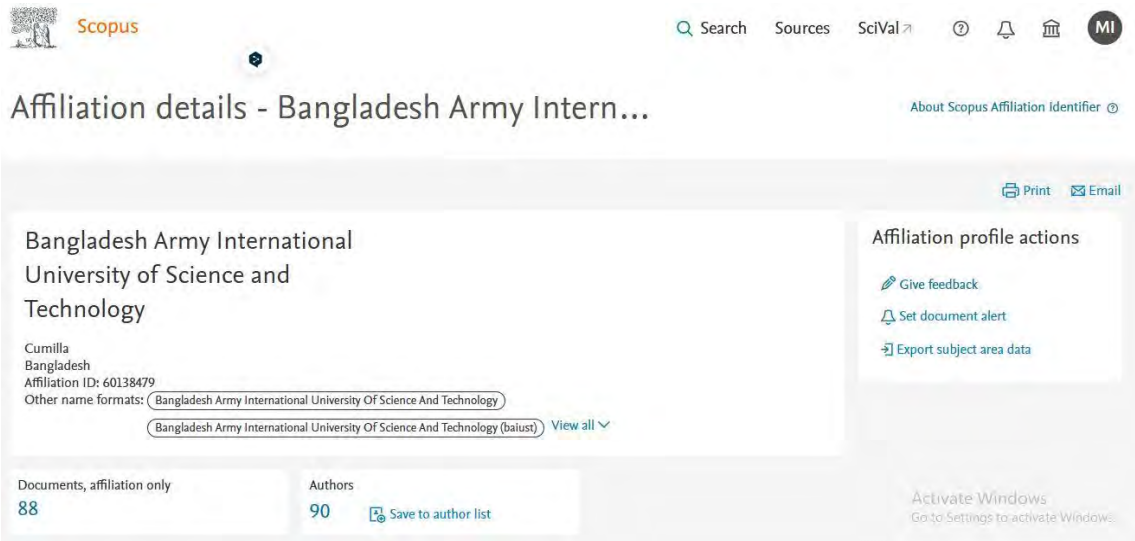

Figure 1: Overview of BAIUST Scopus database (accessed on 22 January 2023)

4. DATA ANALYSIS AND RESULT

Main Information

Description	Results
Timespan	2017:2022
Sources (Journals, Books, etc)	64
Documents	86
Annual Growth Rate %	41.88
Document Average Age	2.52
Average citations per doc	4.453
References	2856
DOCUMENT CONTENTS	

Keywords Plus (ID)	781
Author's Keywords (DE)	329
AUTHORS	
Authors	223
Authors of single-authored docs	0
AUTHORS COLLABORATION	
Single-authored docs	0
Co-Authors per Doc	4.21
International co-authorships %	22.09
DOCUMENT TYPES	
article	42
book chapter	4
conference paper	39
review	1

Table 2: Main information of BAIUST scientific production in Scopus

The Bangladesh Army International University of Science and Technology (BAIUST) has been dedicated to scientific and technological endeavors from its 2017 inception. A total of 86 publications will have been made available by the institution throughout the five-year period from 2017-2022, representing an annual growth rate of 41.88%. An average of 4.453 references have been added to these publications over the last 2.52 years. Sixty-four academic journals, books, and other publications have included BAIUST's contributions. They have 329 authors and 781 keywords in common (ID) (DE). There are a total of 223 writers on the documents from the institution; none of them are lone authors. The average number of authors per paper is 4.21, and 22.09 percent of authors on average are from outside of the country where the paper was written. 39 conference papers, 42 articles, 4 book chapters, and 1 review have all been authored by BAIUST. This shows that publishing at conferences and in journals is highly valued at BAIUST. This demonstrates the university's dedication to the scientific community and its willingness to disseminate its findings.

The bibliometric study of BAIUST's scientific output and contribution concludes that the institution has been engaged in scholarly inquiry ever since it was established. There has been a sustained increase in the university's research output, with a particular focus on technological endeavors. Its activity in the scientific world and its willingness to disseminate its findings are best reflected in the large number of conference papers and publications produced by the institution.

Annual Production Growth and Citations

Table 3: Annual publication growth and citation overview

Year	N	MeanTCperArt	MeanTCperYear	Citable Years
2017	4	11.50	1.92	6
2018	7	8.14	1.63	5
2019	9	10.44	2.61	4
2020	13	5.08	1.69	3

2021	30	3.73	1.87	2
2022	23	0.35	0.35	1

BAIUST's research publications and citations have increased during the previous five years. In 2017, the mean article and year citations were 4.54. This rose to 5.04 in 2019 and 5.19 in 2020. The mean citations per publication per year grew to 5.03 in 2021. BAIUST research output is rising. In 2022, article citations declined. The mean article and year citations dropped to 3.68. Research quality or citations may be declining. Further analysis is required.

Most Relevant Affiliation

Table 4: Most Relevant Affiliations

Bangladesh Army International University of Science and Technology	53
University Of Rajshahi	21
Bangladesh University of Engineering and Technology	18
Bangladesh Army International University of Science and Technology (Baiust)	9
Federal University of Rio De Janeiro	8
Khulna University of Engineering and Technology	6
Linköping University	5
European University of Bangladesh	4
International Islamic University Chittagong	4
University Of Chittagong	4

BAIUST's research publications and citations have increased during the previous five years. In 2017, the mean article and year citations were 4.54. This rose to 5.04 in 2019 and 5.19 in 2020. The mean citations per publication per year grew to 5.03 in 2021. BAIUST research output is rising. In 2022, article citations declined. The mean article and year citations dropped to 3.68. Research quality or citations may be declining. Further analysis is required.

Most Global Cited Documents

Table 5: Top 20 Global Cites Documents

Paper	**Total Citations**	**TC per Year**	**Normalized TC**
Case Stud Therm Eng (Rouf et al. 2020)	28	7.00	5.52
Energies (A S M Monjurul Hasan et al. 2019)	26	5.20	2.49
Energy Strateg Rev (Hasan, Hoq, and Thollander 2018)	26	4.33	3.19
Renew Energy Focus (Hasan and	23	4.60	2.20

Ammenberg 2019)			
Expert Sys Appl (Wanke et al. 2017)	22	3.14	1.91
Aip Adv (Islam et al. 2021)	19	6.33	5.09
Sustainability (A. S. M. Monjurul Hasan et al. 2019)	17	3.40	1.63
Energy (Hasan et al. 2021)	14	4.67	3.75
J Mater Res Technol (Islam and Hossain 2019)	14	2.80	1.34
Int Conf Adv Inf Commun Technol, Icaict (Rabbi et al. 2020)	13	3.25	2.56
Heliyon (Faruk, Rahman, and Hasan 2021)	12	4.00	3.21
Global Financ J (Wanke, Azad, and Emrouznejad 2018)	12	2.00	1.47
Global Bus Rev (Huq et al. 2017)	11	1.57	0.96
Optik (Hossain, Shah, and Faisal 2021)	10	3.33	2.68
Iccit - Int Conf Comput Inf Technol, Proc (Ahmed et al. 2020)	10	2.50	1.97
Habitat Int (Wanke, Chen, et al. 2018)	10	1.67	1.23
J Econ Stud (Barros et al. 2018)	9	1.50	1.11
Case Stud Transp Policy (Barros et al. 2017)	9	1.29	0.78
Proc Int Conf Intell Commun Technol Virtual Mob Networks, Icicv(Alam, Bhowmik, and Prosun 2021)	8	2.67	2.14
J Mater Sci Mater Electron (Harun-Or-Rashid et al. 2021)	8	2.67	2.14

The top 20 BAIUST articles were published during the previous five years, with the most current in 2021. The articles appeared in Case Stud Therm Eng, Energies, Energy Strategy Rev, Renew Energy Focus, Expert Sys Appl, AIP Adv, Sustainability, Energy, and Icaict, Heliyon, Global Financ J, Global Bus Rev, Optik, Iccit - Int Conf Comput Inf Technol, Proc, Habitat Int, J Econ Stud, Case Stud Transp Policy, Proc Int Conf Intell Commun Technol Virtual Mob Networks, Icicv, and J Mater Sci Mater Electron. The 2020 publication has been referenced the most, with 316 citations over five years (28). These publications average 5.03 annual citations. BAIUST research is excellent and adopted by other researchers.

Most Cited countries

Table 6: Most Cited Countries

Country	TC	Average Article Citations
BANGLADESH	186	5.17
BRAZIL	50	12.50
SWEDEN	26	26.00
AUSTRALIA	14	14.00
CHINA	10	10.00
SAUDI ARABIA	5	5.00

Bangladesh accounts for 186 of BAIUST's research paper citations, averaging 5.17 per article. Brazil follows with 50 citations and 12.50 per article. Sweden ranks third, averaging 26 citations per piece. BAIUST's research publications are read and referenced by researchers in Bangladesh, Brazil, Australia, China, and Saudi Arabia. BAIUST benefits from this since it demonstrates that its research is well-received.

Trend Topics

Table 7: Trend Topic

Item	freq	year_q1	year_med	year_q3
energy efficiency	5	2019	2019	2021
cost effectiveness	5	2019	2020	2021
bangladesh	15	2019	2021	2021
sustainable development	12	2021	2021	2021
blockchain	12	2021	2022	2022
block-chain	5	2021	2022	2022
distributed ledger	5	2021	2022	2022
hyperledg	5	2021	2022	2022

In recent years, BAIUST has researched energy efficiency, cost-effectiveness, Bangladesh, sustainable development, blockchain, distributed ledger, and hyper ledger. Bangladesh was the most common subject in 2019, 2020, 2021, and 2022, with 15 papers. Sustainable development follows with 12 2021–2022 articles. Blockchain, distributed ledger, and hyper ledger have been more popular in the previous two years, with 12 articles published in 2021 and 5 in 2022. BAIUST is devoting greater attention to these emerging technologies, which might aid university research. BAIUST studies energy efficiency, cost-effectiveness, Bangladesh, sustainable development, blockchain, distributed ledgers, and hyper ledgers. This may improve the university's research and reputation.

World Collaborations Map

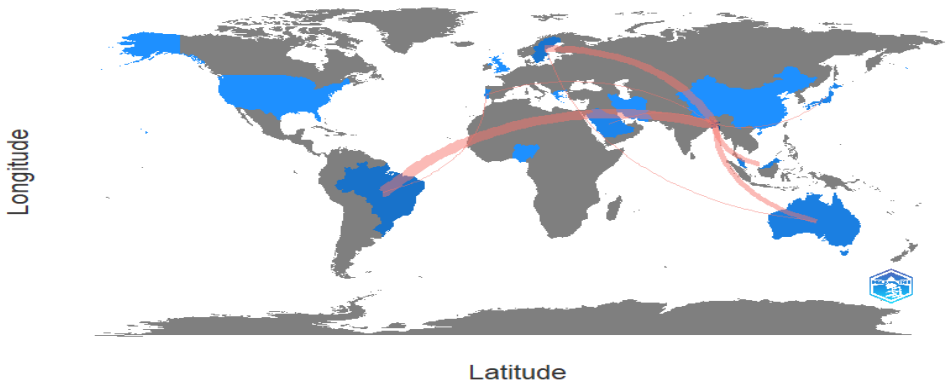

Figure 2: Map of World Collaboration

The number of articles produced by international scholars demonstrates how frequently they collaborate. Bangladesh collaborates with the most nations, according to statistics. Brazil has seven papers. Bangladesh collaborates on 1–5 articles with Australia, China, Greece, Hong Kong, Iran, Japan, Malaysia, Nepal, Nigeria, Portugal, Saudi Arabia, Sweden, the UK, and the USA. Brazil-Portugal has two papers. Brazil publishes 1-2 papers with China, Greece, Iran, Malaysia, Nigeria, the UK, and the US. Two studies include Sweden and Australia.

5.CONCLUSION

This study used Scopus data to evaluate the research activities and also networking collaborators of BAIUST employee's and partners' research by using bibliometric analysis. In this study try to find out the result of yearly research activity growth, publication age, average citations per document, scientific work done each year, affiliations, trend subjects, and global cooperation. Where BAIUST had a 41.88 percent yearly growth rate and 2.52 percent document growth rate. Documents were 4.453 percent average citations. The Bangladesh Army International University of Science and Technology, University of Rajshahi, Bangladesh University of Engineering and Technology (BUET), and Federal University of Rio de Janeiro were the top universities for national, international collaboration for research works and publication. It concludes that energy efficiency and cost-effectiveness are the most widely referenced papers. Furthermore, Energy efficiency, cost-effectiveness, sustainable development, blockchain, distributed ledger, and hyper ledger are the most common trend topics in BAIUST and collaborator research publications. The analysis found that BAIUST had an international cooperation & collaborated with Brazil in which followed by Sweden and Australia. In this paper provide a valuable analysis, intuition about BAIUST's research performance, partnerships, and trends to expanding future research task and collaborations to assess BAIUST employee's and its colleagues' research performance in future.

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A PROSPECTIVE STUDY OF ADOPTING SMART EMERGENCY ROOMS IN HOSPITALS WITHIN SULTAN HAITHAM SMART CITY

Dr. Khoula Al Harthi , Ms. Khulood Al Saadi, Engr. Yahya Al Kaabi*

Computer Science and Creative Technologies Department,

Global College of Science and Technology, Muscat, Sultanate of Oman

**Corresponding author*

Abstract

This study explores the integration and implications of smart technologies in emergency rooms as part of the development of Sultan Haitham Smart City. The research focuses on the application of Artificial Intelligence (AI) and the Internet of Things (IoT) to improve emergency healthcare services. It aims to enhance healthcare delivery by leveraging these technologies to increase operational efficiency and patient care quality. The study identifies current gaps in the existing healthcare infrastructure and proposes a model for the integration of advanced technological solutions. This includes real-time patient monitoring, data-driven decision-making, and streamlined healthcare workflows, potentially setting a benchmark for future smart healthcare systems. This paper discusses the theoretical underpinnings, reviews relevant literature, and evaluates the impact of these technologies through a mixed-methods approach, combining quantitative and qualitative data from healthcare professionals and stakeholders.

Keywords: *Smart Healthcare, Emergency Room, Artificial Intelligence, Internet of Things, Sultan Haitham Smart City***.**

I. INTRODUCTION

Smart cities enhance the fusion of conventional urban structures with information technologies, such as Internet of Things (IoT) sensors (13). The concept of the Internet of Things (IoT) typically describes situations in which objects, sensors, and ordinary items, traditionally not recognized as computers, are enabled with network connectivity and computational abilities (9). Sultan Haitham City, a forthcoming project in Oman's Wilayat of A'Seeb, aims to create a futuristic 'smart' city tailored to the needs of the country's youth. With a theme of 'Treasure the Future', it emphasizes sustainability, inclusive architectural designs, and social amenities, aspiring to become a benchmark 'smart' city. (4). The intersection of smart city development and healthcare infrastructure has garnered significant attention in numerous studies. However, a notable gap exists in exploring healthcare infrastructure, especially in smart hospitals in Oman. This study aims to bridge this gap by planning and designing efficient smart emergency room infrastructure in Sultan Haitham City hospitals, enhancing healthcare quality and efficiency.

1.1 Statement of the Problem

The worldwide many studies being done to discover the necessities of smart healthcare institutions. Smart emergency departments in Oman should be carefully designed to meet the challenges of an ever-changing technological landscape. There are some challenges though, for instance, integrating different technologies smoothly, using resources efficiently and changing the staff and the public's attitude about the transition. It is a must to achieve regulatory compliance and interdisciplinary cooperation. Besides these limitations, the benefits of applying smart emergency rooms are

considerable. It gives patient care with real-time monitoring and predictive analytics, optimizes workflow, allows data-driven decision making, and improves accessibility to healthcare services and cost-saving in the long-term. Attention to smart emergency room necessities and assessing awareness are key steps for planning and designing proper smart emergency rooms which are the initial phase of smart hospital establishment in Oman as technology advances.

1.2 Purpose

The goal of this study is to find the requirements for smart emergency rooms in hospitals within Sultan Haitham Smart City. This aim will be achieved through:

An exploration of the requirements needed to design smart emergency rooms in Sultan Haitham Smart City and evaluation of awareness level of the importance of artificial intelligence (AI) and the Internet of Things (IoT) in smart emergency rooms.

1.3 Significance of the Study

Numerous studies address healthcare infrastructure, IoT and AI in healthcare. Yet, there's a lack of data on smart emergency room infrastructure in Oman. Investigating this in smart hospitals can aid authorities in planning Sultan Haitham City's emergency room infrastructure, help decision makers to design smart emergency rooms that can be adaptable to new innovations while providing high-quality emergency healthcare, and pave the way for academic studies.

1.4 Research Question

This research is focused to answer the following question: What are the requirements of designing an efficient smart emergency room in Sultan Haitham City hospitals?

2. LITERATURE REVIEW

2.1 Introduction

Smart healthcare builds is gradually gaining much importance thanks to technological progression and increased demand for effective healthcare. In this literature review smart healthcare infrastructures, in emergency rooms (ERs), are developed and within Sultan Haitham Smart City hospital are observed. The report discusses how smart technologies can be used to improve the efficiency of the ER and the quality of patient care and resource management. The aim is to integrate existing scientific knowledge, draw the advantages, and discover possible problems, in adapting smart healthcare systems in a disruptive environment. (17).

2.2 Definitions

The literature identifies the "Smart Healthcare Infrastructure" as a system that enables integration of the technologies like the Internet of Things (IoT), edge computing and artificial intelligence to deliver better health services. Phrases such as "edge computing," "contextaware systems," and "IoT-based smart hospital" are widely used. Edge computing is the process of using data near the data source to lower latency and decrease bandwidth use. Context-aware mechanisms process and adapt to the current conditions including environmental and user context as well as numerous other factors. Implement smart hospitals through IoT technologies which connect devices and sensors to improve healthcare delivery and patient monitoring.

The literature characterizes smart health care as the incorporation of new digital technologies such as Internet of Things (IoT), artificial intelligence (AI) and big data analytics into healthcare services to achieve higher efficiency, accuracy and better patient care. Terms such as smart emergency rooms, digital health, and intelligent healthcare systems are common which reflect the move of health treatment towards a more bonded, data oriented and patient focused healthcare system.

2.3 Theories

There are several theories and models that shape the implementation of smart healthcare infrastructure. The RPN framework, introduced in the paper by Oueida et al. (2018), addresses resource preservation in ERs with edge computing as the focus (12). Another fundamental idea includes context-aware pseudonymization and authorization that will make patient data security in IoT-based smart hospitals (19). Theoretical approaches are vital in ensuring that the operational and security component of smart healthcare systems is understood.

Information and Communication Technology (ICT) Innovation in Healthcare (8) theory refers to the process of putting forward innovations in ICT for healthcare services and proposing a structured approach for defining and developing it. Smart City Frameworks for Sustainable Development (16); (14) usually target the usage of smart technologies and data analytics for addressing urban issues such as healthcare in a way that considers sustainability and enhances quality of life. Internet of Things (IoT) and Big Data in Smart Cities (7) framework suggests the convergence of IoT and big-data technology with smart cities to establish the inter-connectivity and intelligence of urban networks. System Theory focuses on the system of smart medical infrastructure, which consists of technology integration. The technology-driven care delivery in the healthcare setting replaces one part of the system with another. The Technology Acceptance Model (TAM) plays an important role in the acceptance of these technologies knowing that healthcare professionals and patients focus their attention on the usefulness and easiness of use of all the devices that offer them so many advantages. In the meantime, the versatile u-Healthcare (Wearable & mobile technologies blend) envisions a healthcare system which is always available and all place, an environment which is made possible by the system they have seamlessly integrated. With these theories in mind, the most important points are the whole outlook on the matter, user's attitude, and accessibility of smart healthcare system in emergency rooms. (6).

2.1.4 Key Concepts (grouped into themes)

2.1.4.1 Efficiency and Resource Management: Oueida et al. (2018) explored the potential benefits of edge computing for the efficiency of emergency room (ER) operations involving the shortened waiting times, improved resource utilization and decreased length of stay (12).

2.1.4.2 Security and Privacy: Zemmoudj et al. (2018) highlight secure exchange and access control as a must for smart hospitals keeping patient data and privacy protected (19).

2.1.4.3 Real-time Monitoring and Data Processing: Abdellatif highlight the importance of the adoption of edge computing technology enabling real-time patient monitoring and quick data processing resulting in prompt decision-making and better health care delivery in emergency situations. (1)

2.1.4.5 ICT and Healthcare: Contribution of ICT in propelling health care services through smart hospital services (8). The influence of digitalizing health and smart hospital project accounting (18).

2.1.4.6 Sustainable Smart City Development: Urban smart transformation and the implementation of ICT technology for sustainable smart development (14). A framework with the emphasis on sustainability in the smart city projects (16).

2.1.4.6 Smart Technologies in Urban Environments: IoT and big data utilization in creating sophisticated urban environments (7). The major difficulties encountered by organizations in smart cities, such as non-existence of or inadequate power supply, and absence of government support

(2).

2.1.4.7 Smart Devices and Technologies in Healthcare 2.1.4.7.1 Solar Energy and Smart Building Concepts: As they are brought out by Oktafiana et al. (2023), these include the utilization of smart design concepts to make health facilities green and installing renewable energy sources to enhance sustainability. Smarter buildings in healthcare have the capability to adapt to the needs of both patients and staff, thus minimizing energy demand, and ensure the right temperature condition the whole time, which supports to make it a healthier and more efficient care environment. (11).

2.1.4.7.2 People-centric Sensing Frameworks: Hussain and his colleagues (2015) point out the possibility of building healthcare systems that direct their services to without leaving those who are disabled and aged behind. Such classification systems incorporate use of sensors and IoT gadgets to monitor breathing, heartbeat, and other vital signs in real time, which are the part of an all-inclusive personalized care package specifically developed for the health profile of everyone. (6).

2.1.4.8 Examples of Smart Emergency Rooms: Digital Surveillance and Control Centers: Mishra, et al., (2022) exemplify how surveillance and ICCCs (Integrated Command and Control Centers) have been integrated in the cities as a smart city in India during the COVID-19 pandemic. In emergency rooms of the healthcare facilities, the same methods can be applied to facilitate the monitoring of patients, resource allocation, and patient delivery, making an emergency response possible and quick. (10).

2.1.4.9 Innovative Ideas and Proposals: Wide Range of Smart Healthcare Applications: Smart healthcare is the sustainability application of AI in health and smart health systems based on Rocha et al. (2019)'s systematic review. Emergency rooms are the areas where these technologies can optimize patient triage, render real-time supports to the medical cared and enhance general medical care delivery (Rocha, N., Dias, A., Santinha, G., Rodrigues, M., Queirós, A., & Rodrigues, C. (2019).

2.1.5 Gaps in the Literature

The literature extensively discusses technological advances but highlights a gap in studies on implementation challenges such as cultural, regulatory, and infrastructural barriers in Sultan Haitham Smart City. There's a specific need to further explore how patients and healthcare professionals perceive smart healthcare adoption in emergency rooms (ERs). The impact of smart city systems on ER infrastructure in Sultan Haitham has been under-researched, necessitating more empirical studies to validate research frameworks and hypotheses in actual smart city settings. Additionally, there is a focus on developing patient-oriented models that prioritize accessibility, privacy, and individual care within smart healthcare infrastructures.

There's also a notable lack of detailed studies on ERs in the Sultanate of Oman, with a need for in-depth comparative analyses between traditional and smart ERs to evaluate service quality improvements and identify any arising challenges. The perspectives of patients and clinicians on the integration of technology in emergency settings have been overlooked, indicating a significant area for further research (6).

2.1.6 Conclusion

The literature review exhibits that smart healthcare infrastructure has the potential to significantly change the emergency rooms, providing higher efficiency, better patient care, and Security data

management. Nevertheless, practical deployment involves bringing to light the holes identified, especially the ones in casespecific challenges and the perceptions of stakeholders. Further research should focus on the development of these aspects to provide the required support for the mainstreaming of smart technologies in hospitals of Sultan Haitham Smart City and beyond. The topic of smart healthcare infrastructure within Emergency departments in smart cities is moving toward more integrative, sustainable, and patient-centered models. Ahead, there are tasks of filling the gaps in empirical research, focusing more on the patient-centered healthcare, and exploring new technologies, including AI and machine learning in emergency health care services.

The usage of intelligent technologies in emergency rooms is in fact in its nascence but the same can have the tremendous effect of not only modifying the mode of healthcare delivery of smart cities but also revolutionizing the very same at a faster pace. As is evident from the literature, emergency care in the future is most likely going to be "tied up" and driven by the community needs. Nonetheless, only a comprehensive approach by research, tech upgrade, and stakeholder mobilization will help in scaling up the use of these technologies in cities like Sultan Haitham Smart City. The sub-sequent stages should call for launching pilot projects, feasibility studies, and drawing up plans for administering and overseeing smart technologies in healthcare facilities.

3.METHODOLOGY

3.1 Study Approach

This study followed the mix-methodology approach combining quantitative and qualitative methods. Quantitative design included the numerical aspects of the research such as statistics to assess awareness of the importance of IoT and AI in emergency rooms in healthcare institutions which conducted by using online surveys, whereas qualitative design included exploring the requirements of smart emergency rooms in Sultan Haitham smart city by conducting interviews.

3.2 Study Aim

This study aimed to explore and study the requirements needed for designing smart emergency rooms in Sultan Haitham smart city and assess the level of awareness of the importance of Artificial intelligence (AI) and Internet of Things (IoT) in smart emergency rooms. This aim will be achieved through the following objectives:

Assess Awareness: To statically study and quantify the level of recognition of the importance of implementing IOT and AI in healthcare sector in Oman.

Explore the requirements of smart emergency rooms: by employing qualitative research to uncover perspectives and insights related to smart emergency room facilities.

Synthesize findings and recommend the requirements of smart emergency rooms: To combine data from both qualitative and quantitative methods to provide a holistic view of the relationship between both the practical requirements and the level of awareness needed for effective smart emergency rooms in Oman and analyze these data using different tools and methods in order to provide worth recommendations on the requirements of smart emergency rooms.

3.3 Study Question

What are the requirements for planning and designing of effective smart emergency rooms within hospitals?

3.4 Study Site

The interviews will be held at Khoula hospital in emergency department and Oman College of

Health Sciences. The idea behind selecting Khoula hospital and the mentioned department is that this department is vital and a reference for many different emergency cases. Moreover, staff from Oman College of Health Sciences have health informatics knowledge which will help the researchers to gain rich information from them.

3.5 Data Collection

3.5.1 Tools and Sample

In this study, qualitative structured interviews were conducted to gather information related to smart emergency rooms. A guiding questionnaire was developed and included guiding domains for the interview. These domains were chosen after a literature review, discussion with clinicians, supervisors and advisors and were seen to fit the study requirements. The suggested sample size for this study was approximately 30 - 40 informants for the interviews and 650 participants for the online survey. Both males and females working in healthcare sector or studying health specialists from different governorates in Oman were included in this study.

Inclusion Criteria

- Different healthcare providers from emergency department in Khoula hospital.
- Staff from College of Medicine & Health Sciences of Sultan Qaboos University & Oman College of Health Sciences.
- People working in the health care sector.
- Students studying health specialties.

Exclusion Criteria

- Employees who are not working in healthcare sector
- Students who are not studying health specialties

3.5.2 Instrument:

In this study, the researchers used one instrument. They designed structured interview questions. They interviewed people working in different healthcare institutions or studying healthcare specialists. The interview questions were:

Can you describe your experience and role within emergency healthcare, and how you perceive the current challenges faced in traditional emergency room facilities?

What are your thoughts on the potential benefits of integrating smart technologies, such as AI and IoT, into emergency room operations?

How do you envision AI and IoT technologies improving patient care, efficiency, and overall outcomes within emergency healthcare settings?

In your opinion, what role should healthcare professionals play in the design and implementation of smart emergency room facilities?

How do you believe patient experiences and satisfaction levels could be enhanced through the use of smart technologies in emergency healthcare?

From your perspective, what ethical considerations should be taken into account when implementing AI and IoT technologies in emergency healthcare environments?

Can you share any specific challenges or pain points you've encountered in emergency healthcare delivery that you believe could be addressed through the integration of smart technologies?

How do you envision the collaboration between healthcare providers, technology developers, and regulatory bodies in ensuring the successful implementation and adoption of smart emergency room facilities?

Can you provide examples of innovative approaches or best practices in the design and operation of smart emergency room facilities that you have come across or been involved in?

What role do you think patient engagement and empowerment should play in the development and utilization of smart technologies within emergency healthcare settings?

What are some of the key concerns or obstacles you foresee in the implementation of smart emergency room facilities, particularly regarding technology adoption and integration?

3.5.3 Procedure and Timeframe

The timeline from the start of interviews until the end was five days and involved one interviewers. It was the interviewers' responsibility to provide a friendly, informal and private environment. For this reason, some interviews were conducted in a private rooms reserved in advance in Khoula hospital and Oman College of Health Sciences. At the start of each interview, the researchers gave a brief introduction of the study, the aim, the objective, taking written and oral consent, assuring participants on confidentiality of the data, benefits of the study and how the results will be disseminated. At the time of interview and discussion, Arabic language was used for data collection and notes and tape recording was also used to document the interview for reference purposes. At the end of the interview day, transcripts were prepared and translated to English for reporting.

The quantitative questions held as online survey for healthcare workers or students form different institutions. On the top of survey page, there was a brief explanation about the importance of this study and its aim and objectives. Also, the agreement statement was shown to the participants on the same page. Arabic language was used to collect data from the participants. The duration of data collection for quantitative survey was three weeks.

3.6 Data Analysis

Descriptive statistics will be carried out to understand the awareness regarding the importance of IoT and AI usage emergency rooms and the analysis will be carried out to identify the level of awareness of people from different educational levels from different healthcare institutions and educational institutions offering different healthcare programs. All the analysis will be carried out using Python programming language (Jupyter Notebook).

The Interview data (transcripts) and closed-ended questionnaire will be analysed either manually or through using Pandas library in Python. A coherent narrative was drawn up and included quotes from the interviewees.

Analysis took a systematic approach and started with reading and re-reading through the gathered data to be familiar with text. The text was then labeled searching for themes with broader patterns of meaning and reviewing themes to make sure they fit the data. A coherent narrative was drawn up and included quotes from the interviewees. The results were presented as a descriptive statistic.

3.7 Validity and Reliability

The richness and depth of gathered information, the knowledge and the skills that the interviewer masters, judges the quality of interviews. In addition, using supporting text (quotes) of the informant's statement increases the validity (3). Moreover, the interview questions were passed to two academic professionals (one from Global College of Engineering and Technology and one

from Oman College of Health Sciences) to check their reliability to the study topic.

3.8 Assumptions

The researchers assumed that there would be co-operation from different healthcare providers and students in healthcare disciplines. However, in some circumstances there might be several staff and students may refuse to participate and this is expected in research. In this case, researchers were prepared to deal with these issues by gathering detailed information from the participants on hand.

3.9 Data Collection Scope and limitations

3.9.1 Scope of Study

The scope of research sample was limited to healthcare workers from different healthcare institutions and from Oman College of Health Sciences and students who are studying health specialists to explore comprehensive and accurate results to assess the level of awareness of the importance of Artificial intelligence (AI) and Internet of Things (IoT) in smart emergency rooms and gain their recommendations.

3.9.2 Limitations of Study

As in academic researches, this study were identified some limitations. These limitations include the following:

The target interview participant was (30 - 40), however, due to the thier work load, many of them refused to participate or did not come to interview appointment and only 26 participants were agreed to participate.

Some healthcare professionals from departments other than the ER accepted to conduct interviews with them, but they were excluded from the target sample by the researchers.

4. RESULTS

4.1 Description of the sample

During the data collection period from online survey, the researchers recorded responses from 658 participants working in healthcare fields or studying healthcare specialties who agreed to answer survey questions. This questionnaire has been distributed to the below mentioned two groups:

- People working in the health care sector: This encompasses human resources (HR) that are busy within these health industry's working, carrying various duties. The team could include physicians, nurses, pharmacists, medical technicians, administrators and any other individuals can make contributions to patient care. Throuhes their first-price experience and view one can find out the difficulties, approaches, and perspectives or nurses, or doctors in the healthcare system

- Students currently studying a health specialty: Such type of lead workers are those who are in the know with regard to further training and education in specific medical areas. Such students could be admitted to schools of medicine, nursing, pharmacy institutions, other similar specialties of medicine, or various related fields. They provide an overview of this growth, offer a blend of academic knowledge and upcoming trends, which are highly valuable for discussion about the educational aspects of health services; future directions; and changing needs.

However, in the interview, the research team met only 4 informants (one from Oman College of Health Sciences and 3 from Khoula hospital) because the others were not come for interview appointment and some of them refused to conduct the interview. The interview data were analyzed manually.

4.2 Results of the online survey

Gender

Table 2: Gender

Gender	Percentage
Male	38%
Female	62%

The data shows a gender split in an undisclosed population with 38% male and 62% female. This distribution highlights the need for tailored programs and interventions that address the unique needs and concerns of each gender, ensuring diversity and inclusivity are effectively managed.

Employee in the Healthcare Sector or a Student

Table 3: Employee in the Healthcare Sector or a Student

Response	Percentage
An employee in the healthcare sector	47%
A student currently studying a health specialty	43%

The survey data reveals that 47% of respondents work in the healthcare sector, while 43% are health specialty students. This information underscores the need for strategic educational and human resources planning to develop suitable health programs and effectively allocate resources within the healthcare sector.

Educational Level

Table 4: Educational Level

Educational Level	Percentage
Diploma	28%
Bachelor	50%
Master	7%
Doctorate	3%
Other	12%

The chart shows that 50% of respondents have Bachelor's degrees, highlighting a strong base of undergraduate education. Diplomas account for 28%, Master's degrees for 7%, Doctorates for 3%, and other qualifications for 12%, demonstrating a diverse range of educational backgrounds. This distribution aids in understanding the educational composition of the group, guiding the development of educational programs, workforce training, and resource allocation within relevant sectors.

Awareness Level

Table 5: Awareness Level

Awareness Level	Percentage
Extremely aware	26%
Somewhat aware	57%
Not at all aware	17%

The table shows varying levels of awareness about AI in smart emergency rooms among respondents: 57% have moderate understanding, 26% are extremely aware, and 17% lack knowledge. This distribution indicates varying familiarity with AI applications across different healthcare specialties and settings. The data highlights areas where educational interventions and outreach programs are needed to enhance understanding and adoption of AI in emergency healthcare.

Belief about AI

Table 6: Belief about AI

Belief	Percentage
Always	33%
Usually	36%
Sometimes	22%
Rarely	8%
Never	1%

The chart shows diverse opinions on AI's impact on emergency healthcare efficiency and effectiveness. About one third of respondents consistently believe AI always enhances operations. Another 36% often see positive outcomes from AI, representing a common belief in its benefits. However, 22% think AI's effects are sporadic, while a smaller group remains skeptical: 8% rarely see benefits and 1% believe AI never helps. This variety of perspectives illustrates the complex understanding of AI among healthcare professionals, which is crucial for stakeholders integrating

AI into healthcare systems. Awareness of IoT Devices

Table 7: Awareness of IoT Devices

Awareness	Percentage
Yes	59%
No	41%

The table indicates that 59% of respondents understand the use of IoT devices in emergency healthcare, while 41% are unaware. This suggests a significant awareness among the majority, supportive of IoT integration for real-time monitoring and early health issue detection. This

awareness is crucial for adopting IoT technologies in emergency healthcare. To enhance understanding, it's essential for policymakers, healthcare providers, and tech developers to assess stakeholder readiness and extend educational programs and awareness campaigns, promoting IoT as a critical tool in healthcare delivery.

Familiarity Level

Table 8: Familiarity Level

Familiarity Level	Percentage
Extremely aware	23%
Somewhat aware	58%
Not at all aware	19%

The table on IoT familiarity among emergency healthcare providers shows varied levels of understanding: 23% are "Extremely aware," demonstrating a high understanding of IoT in emergencies; 58% are "Somewhat aware," indicating moderate familiarity; and 19% are "Not at all aware," showing a significant lack of exposure to IoT. This range underscores the need for comprehensive educational and awareness initiatives. Educating the broader healthcare community about IoT can enhance care quality, efficiency, and data management in critical health situations, ensuring better preparedness and adoption of IoT solutions in emergency healthcare.

Belief about Patient's Time

Table 9: Belief about Patient's Time

Belief	Percentage
Yes	66%
No	11%
Not sure	23%

The table reflects various perceptions on the impact of AI and IoT technologies in reducing patient waiting times in emergency technologies can significantly reduce or even eliminate prehospital waiting times. This trust indicates a broad recognition of AI and IoT's potential to enhance and streamline emergency healthcare operations, suggesting that these technologies could be effectively utilized across different healthcare departments to improve service delivery and patient care efficiency.

Integration of AI and IoT

Table 10: Integration of AI and IoT

Encounter	Percentage
Yes	32%
No	68%

The data indicates varied exposure to AI and IoT technologies during medical crises, with 68% of survey respondents reporting no prior encounter with information about these technologies in emergency healthcare settings. Conversely, 32% have experienced relevant discussions, reflecting a significant segment informed about AI and IoT issues. IoT Patient Outcomes and Safety

Table 11: IoT Patient Outcomes and Safety

Opinion	**Percentage**
Yes	53%
No	13%
Not sure	34%

The table shows that 53% of respondents believe IoT enhances patient outcomes and safety in emergency rooms, highlighting its potential in monitoring and real-time interventions. However, 13% are skeptical about its benefits, and 34% remain uncertain about its effectiveness.

Importance Level

Table 12: Importance Level

Importance Level	**Percentage**
Extremely important	59%
Somewhat important	37%
Not important at all	4%

Regarding AI and IoT training for healthcare professionals, 59% view it as extremely important, underscoring a strong consensus on the necessity of such education to improve patient care. Another 37% consider it somewhat important, while only 4% view it as unimportant, emphasizing widespread recognition of the need for comprehensive training. Emergency Rooms with AI and IoT

Table 13: Emergency Rooms with AI and IoT

Awareness	**Percentage**
Yes	21%
No	56%
Not sure	23%

Furthermore, the table reveals that only 21% are aware of existing emergency departments using AI and IoT, whereas 56% are uninformed, and 23% are hesitant, needing more evidence and explanation. This highlights the crucial need for enhanced communication, education, and awareness campaigns to boost understanding and involvement in integrating AI and IoT technologies in emergency healthcare.

The survey reveals a strong preference for emergency rooms equipped with advanced AI and IoT technologies, demonstrating widespread acknowledgment of their benefits in reducing risks and enhancing healthcare outcomes. However, 8% still favor traditional emergency rooms, and 23% show hesitation, needing further clarification on these technologies.

Concern Level

Table 15: Concern Level

Concern Level	Percentage
Extremely concerned	13%
Very concerned	12%
Somewhat concerned	55%
Not so concerned	13%
Not concerned at all	7%

Concerns about the security and ethical use of AI and IoT in emergency healthcare are notable, with 55% of respondents somewhat concerned about potential risks. Additionally, 13% view these risks as serious, highlighting the need for robust privacy and data security measures to address these concerns and ensure patient safety.

emergency rooms, 65% of respondents are likely to recommend these technologies, recognizing their potential to improve patient care and safety. However, 21% are undecided, and 13% are unlikely to recommend, suggesting a need for more information and assurance about the benefits and safety of these technologies.

Likelihood

Table 16: Likelihood

Likelihood	Percentage
Very likely	17%
Likely	48%
Neither likely nor unlikely	21%
Unlikely	13%
Very unlikely	1%

The table offers insights into respondents' likelihood of recommending the adoption of Artificial Intelligence (AI) and Internet of Things (IoT) technologies in emergency rooms to healthcare professionals or decision-makers. The data reflects varying degrees of enthusiasm among the surveyed population. A notable majority, comprising 65% of respondents, express a positive inclination towards recommending adoption, with 17% stating they are "Very likely" and 48% indicating they are "Likely" to make such a recommendation. This indicates a prevailing recognition of the potential benefits that AI and IoT technologies can offer in terms of enhancing patient care, safety, and outcomes within emergency healthcare settings. Additionally, 21% of respondents state that they are "Neither likely nor unlikely" to recommend adoption, suggesting a segment of the surveyed population that may require further information or deliberation before forming a recommendation. Meanwhile, 13% express reluctance, with 13% stating they are

"Unlikely" and only 1% indicating they are "Very unlikely" to recommend adoption.

Familiarity Level

Table 17: Familiarity Level

Familiarity Level	Percentage
Extremely aware	22%
Somewhat aware	55%
Not aware at all	23%

Knowledge of the regulations and policies governing AI and IoT usage in healthcare varies, with 55% somewhat aware and 22% extremely aware. Yet, 25% lack any knowledge of these regulations, indicating a critical need for targeted education and awareness campaigns to ensure healthcare professionals and stakeholders are well-informed and can use these technologies responsibly and effectively.

4.3 Results of the interviews

4.3.1 Participant role within emergency healthcare and the current challenges faced in traditional emergency room facilities

The data showed that three out of every four informants (75%) said that the traditional ERs had long wait times for the patients. Traditional emergency room informants (25%) mentioned the lack of access to care. Also, all four interviewees (100%) affirmed that the traditional emergency rooms are the major causes of distress, overcrowding, exhaustion and strain, both of the providers and facilities. In addition, the results revealed that the three informants (75%) reported inadequate resources in a typical emergency room. These results highlight the complexity of traditional emergency rooms.

4.3.2 The potential benefits of integrating smart technologies, such as AI and IoT, into emergency room operations The interviews showed the intended advantages of smart technology incorporation into ER operations. Results of the study showed that 75% (3 out of 4 informants) stressed these advantages comprising of accurate diagnosis in real time, continuous monitoring of patients, and better decision making. In particular, two informants (50%) emphasized the benefits of AI algorithms in finding patterns and forecasting adverse incidents to allow for timely intervention and proactive management of chronic illnesses. Furthermore, all the informants pointed out that smart health technologies play a critical role in patient-centered care, workflow efficiency, and quality of emergency healthcare delivery.

4.3.3 How AI and IoT technologies improving patient care, efficiency, and overall outcomes within emergency healthcare settings?

AI and IoT technologies offer opportunities to improve efficiency in emergency healthcare by automating tasks and analyzing data, leading to quicker interventions and smoother workflows. This was highlighted by all informants. They enable healthcare providers to make informed decisions, reducing errors and improving patient outcomes, as noted by all informants. IoT devices enable continuous monitoring, allowing for early detection of deteriorating conditions and proactive interventions, ultimately enhancing patient care, mentioned by one informant (25%).

However, concerns about over-reliance on technology, infrastructure costs, and data privacy issues need to be addressed, noted by one informant (25%). Integrating AI and IoT technologies promotes a patient-centered approach in emergency healthcare through tailored treatment plans and improved communication among healthcare teams, ultimately enhancing the quality of care delivered to patients, emphasized by all informants.

4.3.4 The role should healthcare professionals play in the design and implementation of smart emergency room facilities

The role of healthcare workers is paramount in designing and executing an intelligent ER. The findings of the interview showed total agreement among all the participants on the need for healthcare professionals to play a major role in the healthcare system. Participants expressed this sentiment using phrases such as: “should be key participants”, “should become active partners”, “should stand up and lead”, and “should play an active role”. This finding therefore supports the role of the healthcare professionals in ensuring that the smart ER does not only meet the standards of care but also addresses the needs of the care providers in order to improve on the effectiveness and productivity of these facilities.

4.3.5 Patient experiences and satisfaction levels enhancement through the use of smart technologies in emergency healthcare

Smart technologies in emergency healthcare have the ability to enhance patient experiences and satisfaction levels according to the consensus of all informants who were interviewed. Nevertheless, informants (4 out of 100%) identified the benefits of remote patient monitoring, efficient communication methods, remote consultations, and telehealth services which contribute to better results and high satisfaction. Another 2 informants (50%) highlighted the role of quick wait time updates as an enhancement to patient satisfaction among the key factors influencing patient satisfaction, while 1 informant (25%) mentioned the use of predictive analytics as yet another key attribute. On the other hand, the informant (25%) stated that tools like electronic health records are helpful in both empowering the patients and facilitating their satisfaction with the healthcare experience.

4.3.6 The ethical considerations when implementing AI and IoT technologies in emergency healthcare environments

According to the interview reports, 50% of the informers stressed out the need to guarantee equal opportunity for care and treatment for all patients. They emphasized the need to address the issue that some people may be unable to get the needed devices, which can further deepen healthcare disparities.

The informant who represented 25% of the respondents mentioned the necessity to not lose human supervision and responsibility during implementation of AI and IoT solutions in emergency healthcare. This witness stressed that clinicians' capability to act, review and object to decisions made by AI systems to retain ethical principles and secure patients' safety must be preserved.

In our interview findings, one informant representing 25% of the participants stressed that patient privacy, confidentiality, and data security were critically important ethical considerations for the adoption of AI and IoT technologies in emergency department.

4.3.10 The role of patient engagement and empowerment in the development and utilization of smart technologies within emergency healthcare settings

Data collection demonstrated that the biggest focus of participants was on patient involvement and empowerment. They encouraged patients to be actively engaged in managing their well-being, building a team approach to care and improving patient satisfaction. Participants believe promoting health management among patients by giving them tools for self-monitoring, personalized health information, and opportunities for virtual consultations can result in treatment adherence enhancement and patient outcomes improvement. standards as the most important obstacles during the implementation process.

V. DISCUSSION, CONCLUSION AND RECOMMENDATIONS *5.1 Discussion*

The aim of the study was to look at the needs of smart emergency rooms in Sultan Haitham Smart City hospitals, and evaluate the knowledge of the importance of AI and IoT in these environments with a combination of methods. The target was 5-10 participants, but only 4 agreed to be interviewed. The method, which is in the third section, consisted of interviews at Khoula Hospital and Oman College of Health Sciences, and an online survey with 107 participants.

In this paragraph, smart emergency room requirements and challenges are examined. Study outcomes show that conventional emergency rooms have encountered some issues such as long waiting times and inequities in healthcare accessibility, which may influence the care delivery quality. Staff resistance to change and system compatibility are among the additional issues. AI and IoT integration, on the other hand, can allow for accurate diagnostic, real-time monitoring, and decision-making, thus promoting patient-oriented care as well as reducing workflow. These technologies also automate tasks, lower the rates of errors and enhance patient care by tracking and early interventions. Intelligent hospitals utilize the IoT to decrease expenditures and enhance treatment effectivity, patient safety, and operational efficiency. The study stresses fairness in healthcare provision, maintaining human control over AI and IoT technologies, as well as patient privacy and data security as important ethical issues. Innovative tactics comprise of tracking systems in real-time for equipment and supplies, wearable devices for monitoring patients, remote consultations, and AI based predictive modeling for allocation of resources.

Healthcare professionals' involvement is crucial in designing and implementing smart emergency facilities, ensuring they meet care standards and provider needs. Successful adoption requires collaboration between healthcare providers, technology developers, and regulators. Patient engagement is also vital, with mobile apps and portals enhancing communication and shared decision-making.

The chapter connects research outcomes with implications for AI in service industries, emphasizing the need for educational campaigns and training to bridge knowledge gaps and ensure ethical and logistical concerns are addressed, promoting effective and sustainable emergency health services.

5.2 Recommendations

Based on findings and discussion, these are suggested recommendations to adapt effective smart emergency room in Sultan Haitham smart city:

- Conduct broader research on smart emergency rooms in Sultan Haitham using both quantitative and qualitative methods to explore this area thoroughly.
- Implement educational programs on IoT and AI to raise awareness, especially among the elderly.
- Develop a comprehensive awareness package in collaboration with multiple agencies, utilizing mass media and social media to highlight the benefits of IoT and AI in healthcare.
- Address staff resistance to change with targeted training and change management initiatives.

- Evaluate interoperability between smart emergency room systems and existing healthcare IT infrastructure to ensure compatibility and efficient data exchange.
- Analyze the financial aspects of smart emergency rooms, including costs and potential savings.
- Investigate barriers to patient acceptance of wearable medical devices in smart emergency rooms, considering factors like comfort and usability.
- Examine the impact of smart technologies on healthcare disparities in rural areas, focusing on access and technologydriven interventions.
- Evaluate remote monitoring systems for medical equipment in smart emergency rooms, assessing maintenance efficiency and downtime.

❖

5.3 Conclusion

This research paper provides insights into the implementation of smart emergency rooms in Sultan Haitham Smart City. It highlights the significance of leveraging IoT and AI to improve emergency healthcare and the vital role of stakeholders in successful technology adoption. Addressing issues like staff resistance, system compatibility, and ethical concerns, and enhancing patient engagement are crucial. Future research and collaboration are needed to optimize emergency healthcare effectiveness and contribute to community well-being.

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FUTURE OF AI-POWERED URBAN PLANNING

Ozge Doguc[1*], Onur Kardes[2]

[*]*Corresponding author: odoguc@medipol.edu.tr*

Abstract

The future of AI-powered urban planning offers transformation in how cities are designed, managed, and optimized for sustainability and efficiency. This paradigm shift leverages advanced artificial intelligence (AI) technologies to analyze large amounts of data, ranging from urban mobility patterns and environmental factors to citizen behavior and infrastructure usage. AI algorithms enable predictive modeling that anticipates future urban challenges, allowing planners to develop proactive solutions. Machine learning algorithms can optimize traffic flow, reduce energy consumption, and enhance public services, thereby creating smarter, more resilient cities. Additionally, AI-driven simulations provide urban planners with invaluable insights into the potential impact of proposed changes before implementation. As cities continue to grow in complexity, the integration of AI into urban planning processes offers the potential to create more sustainable, livable, and adaptable urban environments, marking a significant leap toward the realization of smart cities in the 21st century.

Keywords: Smart cities, data analytics, machine learning

1.INTRODUCTION

As urban populations continue to grow rapidly worldwide, the demand for efficient and sustainable urban planning solutions intensifies, driving the integration of AI technologies into city development. The future of AI-powered urban planning offers significant transformation in how cities are conceptualized, designed, and managed. By using large amounts of data, AI algorithms can provide insights into various aspects of urban life, from traffic flow and energy consumption to public health and environmental sustainability. Through predictive analytics and simulation models, planners can anticipate future challenges and devise strategies to optimize resource allocation and infrastructure development. (Faster Capital, 2024)

Furthermore, AI empowers planners to adopt more comprehensive decision-making processes by enabling real-time feedback mechanisms and scenario testing. By combining the collective intelligence of residents and stakeholders, cities can create solutions that better reflect the diverse needs and requirements of their communities. Ultimately, combination of AI and urban planning holds the potential to create more livable, resilient, and equitable cities that adapt to the dynamic needs of their inhabitants while mitigating the impacts of urbanization on the environment. (Alahi et al., 2023; Vetrivel & Mohanasundaram, 2024)

This paper provides an analysis of how recent data-centric AI applications can help city planners for a better urban environment. It explores the ways in which AI technologies, powered with big data, can revolutionize urban planning by optimizing resource allocation, enhancing transportation systems, improving public services, and fostering sustainable development.

2.LITERATURE REVIEW

Artificial Intelligence (AI) plays an important role in modern urban planning, leveraging machine learning models, sophisticated algorithms, and comprehensive data analysis to streamline the planning processes. In addition to data collection, AI provides methods for processing of data to

forecast, simulate, and optimize urban environments efficiently.

In the field of transportation planning, researchers have investigated the use of AI algorithms for traffic prediction, congestion management, and route optimization. By analyzing real-time traffic data from sensors and GPS devices, AI systems can generate insights to enhance the efficiency and safety of transportation networks. Moreover, the integration of AI-powered mobility solutions, such as ride-sharing platforms and autonomous vehicles, can help reduce reliance on private car ownership. (C et al., 2023)

Furthermore, AI-driven approaches have been deployed to optimize land use and urban design strategies. Through machine learning techniques, urban planners can identify optimal locations for infrastructure development, parks, and public developments that improve walkability and social relationships. Additionally, AI-enabled simulation models facilitate scenario testing and urban resilience planning, allowing cities to anticipate and mitigate the impacts of natural disasters, climate change, and population growth. (Barın & Güraksın, 2022)

In terms of sustainability and environmental planning, AI technologies offer valuable tools for monitoring and mitigating the ecological footprint of urban areas. Remote data and satellite imagery combined with machine learning algorithms enable the monitoring of air and water quality, urban heat island effects, and deforestation rates. (Alahi et al., 2023) By combining these insights, planners can formulate policies and interventions to promote environmental conservation and enhance the quality of life for urban residents.

Moreover, the role of AI in enhancing urban governance and decision-making processes has gained increasing attention in recent years. (Harshal Sabane, 2023) Digital platforms and AI-powered tools facilitate citizen engagement, collaborative planning, and data-driven policymaking, fostering greater transparency and accountability in urban governance.(Cisse, 2023) By empowering residents to contribute local knowledge and preferences, AI-enabled planning processes strive to create more inclusive and responsive urban environments that reflect the needs and hopes of diverse communities.

2.1 Benefits of AI in Urban Planning

The integration of Artificial Intelligence (AI) into urban planning processes come with numerous benefits, such as enhancing city livability, sustainability, and operational efficiency in many ways:

Enhanced Efficiency: AI optimizes the management of urban infrastructure, including public transport systems, utility services, and traffic control. Intelligent AI algorithms predict peak usage times and adjust services accordingly to prevent overuse and minimize wait times.

Improved Sustainability: By analyzing environmental data, AI helps urban planners in implementing projects that mitigate ecological impacts. For instance, AI can optimize building placements based on factors like sunlight exposure and wind patterns, thereby enhancing energy efficiency.

Increased Safety: AI applications in investigation and predictive controlling contribute significantly to public safety. By analyzing historical data, AI predicts potential crime hotspots and allocates police resources more effectively.

Economic Development: AI-driven insights simplify the identification of potential economic opportunities, such as optimal locations for new businesses or impactful infrastructural improvements.

Public Engagement: AI tools analyze public feedback from various sources such as social media and forums, offering urban planners' deeper insights into public opinion. This aids in guiding more community-focused development initiatives. (Koutra & Ioakimidis, 2022)

3.METHODOLOGY

As we step into a period marked by technological advancements, AI is reshaping various domains, including urban planning, with its unparalleled ability to process vast amounts of data. This potential revolutionizes the traditional approach to city design and management. Looking ahead, it's crucial to examine how AI-driven design tools might redefine the landscape of urban planning.

Data has always been pivotal in urban planning, serving as the foundation for decision-making. Still, recent years have witnessed an outstanding expansion in the scope and quality of available data, largely owing to the emergence of AI and big data technologies. Unlike the reliance on static and often outdated data in the past, AI now enables planners to analyze real-time data from diverse sources, offering a more comprehensive and precise understanding of urban environments. This data-driven approach informs various aspects of city management, from optimizing traffic flow to shaping city design based on demographic trends and needs. (Herath & Mittal, 2022)

The integration of AI-driven design tools into urban planning practices is quickly transitioning from theory to reality. By combining AI's capabilities, these tools offer a new era of city design, supported by deep, data-driven insights. (Peng et al., 2023) Machine learning algorithms empower these tools to uncover patterns that cannot be obtained by human analysis, facilitating the creation of city designs that better align with residents' preferences and requirements. For example, AI's analysis of social media data may unveil residents' dissatisfaction with green spaces, prompting planners to prioritize their creation in city designs. Moreover, these tools hold the promise of automating design processes, saving time and minimizing errors. (Hoang, 2024) For instance, AI could generate multiple design options based on input parameters, expediting decision-making processes.

Urban planning is interdisciplinary, using insights from various fields such as architecture, sociology, and economics. AI acts as a catalyst, developing cross-disciplinary collaboration and decision-making by providing a shared, data-based platform for stakeholders. This collaborative approach paves way for more integrated and holistic urban designs that address the diverse needs of residents.

However, alongside its transformative potential, the integration of AI in urban planning poses challenges and ethical considerations. Data privacy emerges as a primary concern, necessitating responsible data usage and the protection of privacy rights. Furthermore, the reliability and integrity of AI-generated insights hinge on the quality of the data they're trained on, emphasizing the importance of addressing biases and ensuring data accuracy. While AI holds the promise of revolutionizing urban planning, its successful integration requires careful consideration, ongoing dialogue, and a steadfast commitment to ethical best practices. By embracing AI-driven design tools, urban planners can navigate complex urban challenges more effectively, ultimately fostering the creation of smarter, more sustainable, and inclusive cities for future generations.

4.RESULT AND DISCUSSION

AI offers a wide range of applications in urban planning, revolutionizing how cities are designed, managed, and experienced. Here are some key applications of AI in urban planning:

Traffic Management and Transportation

AI algorithms analyze real-time traffic data from various sources, including GPS, sensors, and

cameras, to optimize traffic flow and reduce congestion. AI-powered traffic management systems can adjust signal timings, reroute traffic, and predict traffic patterns to improve transportation efficiency and minimize delays. Also, AI helps optimize public transportation systems by analyzing ridership data, predicting demand, and optimizing routes and schedules. This ensures that public transit services are more efficient, reliable, and tailored to the needs of commuters.

Energy Efficiency and Sustainability

AI-driven analytics optimize energy usage in buildings, street lighting, and public spaces by analyzing historical energy data, weather patterns, and occupancy information. This helps reduce energy consumption, lower costs, and minimize environmental impact, contributing to sustainability efforts in urban areas.

Predictive Analytics for Infrastructure Maintenance

AI predicts and identifies potential infrastructure failures or maintenance needs by analyzing data from sensors, IoT devices, and historical maintenance records. This allows for proactive maintenance planning, reducing downtime, and improving the reliability of critical infrastructure systems.

Emergency Response and Disaster Management

AI aids in emergency response and disaster management by analyzing real-time data from various sources, including social media, sensors, and satellite imagery. AI algorithms can predict natural disasters, identify evacuation routes, and allocate resources more effectively during emergencies.

These applications demonstrate the transformative potential of AI in urban planning, offering innovative solutions to address complex challenges and create more sustainable, resilient, and inclusive cities for residents.

5.CONCLUSION

The future of AI in urban planning is poised to reshape the landscape of cities worldwide. With the ability to analyze vast amounts of data and simulate various scenarios, AI algorithms offer urban planners unprecedented insights into optimizing infrastructure, transportation, and public services. From predicting population growth and traffic patterns to designing more sustainable buildings and green spaces, AI holds the potential to create smarter, more efficient, and resilient cities that better meet the needs of their inhabitants.

However, the integration of AI into urban planning also raises important ethical and societal considerations. Issues such as data privacy, algorithmic bias, and equitable access to technology must be carefully addressed to ensure that AI-driven urban planning benefits all members of society. Moreover, fostering collaboration between policymakers, technologists, urban planners, and community stakeholders is essential to harnessing the full potential of AI while safeguarding against unintended consequences. By navigating these challenges thoughtfully and inclusively, the future of AI in urban planning holds the promise of building cities that are more sustainable, livable, and equitable for generations to come.

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LEADERSHIP STYLE, ORGANIZATIONAL CULTURE, AND COMPENSATION AS THE TRIGGER FOR FRAUD AT XYZ LIMITED COMPANY WITH INTERNAL CONTROL AS THE INTERVENING VARIABLE

Hendrianto Pangaribuan[1*], Tetra Hidayati[2], Siti Maria[3]

[*]*Faculty of Economics and Business, Mulawarman University, Indonesia: hendrianto777@gmail.com*

Abstract

The purpose of this study is to determine the effect of leadership style, organizational culture, and compensation on fraud committed by the company public relations officers at company PT. XYZ and its relation to internal control as an intervening variable. The research design is causal quantitative research with a case study approach. The sample of this study was determined by purposive sampling technique by 50 respondents. Data collection methods used were questionnaire, interview, and documentation. Data analysis techniques using IBM SPSS Statistics version 26 software. As for the results of this study show that (1) leadership style, organizational culture, and compensation have a positive and significant effect on fraud. (2) Leadership style has a positive and significant effect on fraud. (3) The organizational culture have a positive and significant effect on fraud. (4) The compensation has a positive and significant effect on fraud.

Keywords: Fraud, Leadership style, Organizational culture, Compensation, Internal control.

1. INTRODUCTION

Fraud is a deliberate criminal act committed by one or more individuals within management or managerial responsibilities involving deception to gain significant profits. Essentially, fraud involves a series of unlawful and abnormal actions carried out by individuals both inside and outside the company, with the intention of obtaining personal benefits and causing harm to others. The Association of Certified Fraud Examiners (ACFE) defines fraud as intentional illegal acts committed for specific purposes (manipulation or providing false reports to others), carried out by individuals from within or outside the organization to gain personal or group advantages that directly or indirectly harm others. ACFE classifies fraud into various categories, commonly known as the "FraudTree," which includes Asset Misappropriation, Fraudulent Statement, and Corruption (Chandrayatna & Sari, 2019).

According to the Republic of Indonesia Law Number 20 of 2001, there are 30 types of corruption that are classified into 7 categories:

1. Actions and behaviors that harm state finances and the national economy.
2. Acts of bribery and graft.
3. Actions of embezzlement in the office.
4. Acts of extortion.
5. Fraud in the procurement process of goods and services.
6. Conflicts of interest in the procurement of goods and services.
7. Gratification.

These categories provide a framework for understanding and addressing different forms of corruption as defined by the law in Indonesia.

Fraud is an action that is premeditated to deceive, manipulate, or trick others, resulting in harm to others while the perpetrator of the fraud gains financial benefits, whether directly or indirectly (Kuntadi, 2015). There are 3 conditions that contribute to the occurrence of fraud (Kuntadi, 2015):

1. Opportunity: This refers to situations that provide opportunities for management or employees to engage in fraudulent activities.
2. Incentive/Pressure: This occurs when management or other employees feel incentives or pressure to commit fraud.
3. Rationalization/Justification: This involves attitudes, character, or a set of ethical values that allow management or employees to engage in dishonest actions or exist in an environment that exerts sufficient pressure, leading them to rationalize dishonest behavior.

One of the factors the occurrence of fraud is excessive personal closeness between leaders and employees. For employees who lack self-control, they may be tempted to see this as an opportunity to engage in actions that benefit themselves, even if it means resorting to unethical means. However, according to the fraud diamond theory, individuals must also possess the ability to recognize an open door as an opportunity and exploit it.

PT. XYZ is a company engaged in the forestry sector in Indonesia. Cases of fraud within PT. XYZ are commonly committed by employees in the community relations department. The fraudulent activities include inflating entertainment expenses, using fake or blank invoices, and fraudulent travel expense claims. Some employees who have been proven to commit fraud are not subjected to legal proceedings but are asked to resign from the company. The close relationship between the leaders and employees in the community relations department has created a negative precedent among other employees. The differential treatment by the leaders towards the employees in the community relations department has demotivated other employees, who perceive the leadership as unfair. The personal closeness between the leaders and the employees in the community relations department has also weakened the function of audit department or internal control, as the audit team does not have access to rectify the use of funds in that department. This situation has persisted for a considerable period, normalizing fraud by employees in the community relations department.

Leadership is the ability of an individual to guide and influence the behavior of others in line with the desired goals that have been set. According to Herujito, leadership style is not a talent, so it should be understood and practiced in accordance with rules and situations. On the other hand, Supardo believes that leadership style is a series of methods or techniques used by an individual to influence others in achieving a goal, task, or target, and directing entities in an acceptable or reasonable manner (Garis et al., 2021). In a company or organization, a good leader is needed to lead their employees. If an employee has a negative perception of their leader's leadership style, they are more likely to engage in actions that can harm the company. One such action is fraud. Therefore, it can be concluded that the better the leadership style of a leader, the lower the occurrence of fraud committed by their employees (Sumbayak, 2017).

Justice within an organization and the implementation of internal control systems are crucial in creating a conducive work environment. The perception of fairness experienced by employees within a company is relative to what they contribute. According to Maslow's theory, fairness is an important element and serves as the foundation of motivation for an individual. Organizational justice emphasizes how rewards, incentives, recognition, job assignments, and sanctions within an organization are allocated fairly and proportionally based on existing social and demographic characteristics. This theory is based on the assumption that individuals are motivated by the desire to be treated fairly in their work. Referring to Kasmir (2002), in order to achieve reasonable and

fair compensation aligned with the organization's goals, compensation should be designed and created based on experience, education, and workload. Providing compensation that does not align with the services rendered by employees can lead to employees feeling entitled to seek additional income that they deem appropriate for their services, including resorting to fraudulent activities in order to improve their own and their families' well-being.

According to Mulyadi and Puradiredja (1998), the Internal Control System is an effort implemented to instill trust in achieving compliance with regulations, efficiency of activities, and reliability of financial reports. Ineffective controls within an organization can create opportunities for fraudulent intentions, resulting in losses for the organization. The ineffectiveness of internal controls makes it easier for employees to engage in deviations in order to gain personal benefits. Therefore, the ineffectiveness of internal controls within an organization is crucial to be considered, especially in relation to the occurrence of fraud within the organization. According to Atmadja and Saputra (2017) in Njonjie et al. (2019), they state that the occurrence of fraud indicates the need for synergy between the internal control system and the competence of personnel in order to prevent fraud. In other words, besides the importance of personnel competence, a good internal control system is also necessary for the management of state finances.

2.LITERATURE REVIEW

Fraud (Z)

According to the research conducted by Noprianto, Rahayu, and Yudi (2022), the results show that the alignment of compensation, effectiveness of internal controls, organizational ethical culture, competence, and individual morality have a significant impact on the tendency of fraud. Based on this, the hypothesis is formulated as follows:

H1: Leadership style, organizational culture, and compensation have a positive and significant influence on fraud.

Leadership Style (X_1)

According to Siagan & Khair (2018), leadership style is the way a leader influences, directs, and controls employees to achieve good performance. According to Putri et al. (2021), leadership style is the way a leader influences others, including subordinates, to follow given directions and achieve the goals of the company. Therefore, leadership style is the ability of an individual to influence others to carry out given directions and achieve the goals of the established company or organization. Effective leadership styles can contribute to reducing the tendency for fraud to occur. Based on this, the hypothesis is formulated as follows:

H2: Leadership style has a positive and significant impact on fraud.

Organizational Culture (X_2)

Organizational culture refers to the norms, values, assumptions, beliefs, and customs practiced within an organization and accepted by all members as guidelines for conducting all activities (Robbins and Judge, 2013). A strong organizational culture is believed to minimize the occurrence of fraud because individuals within the organization adhere to the existing rules, respect the norms of employee relationships, and uphold the high values developed by the organization.

When a positive organizational culture is fostered, it encourages individuals to refrain from engaging in fraudulent behaviors. The more ingrained the organizational culture is within its members, the more effective it becomes in preventing fraud. A strong organizational culture motivates individuals to act with integrity and discourages fraudulent actions. However, it is

important to note that the propensity for fraud is influenced not only by the environment but also by internal factors within an individual (Nasruah & Wijayanti, 2019). While some studies have found that ethical organizational culture does not significantly influence the tendency for fraud, other research has shown that ethical organizational culture does indeed have an impact on fraud prevention (Bachtiar & Ela Elliyana, 2020). Based on the previous research findings, the hypothesis can be stated as follows:

H3: Organizational culture has a positive and significant impact on fraud.

Compensation (X_3)

Based on the research conducted by Karsam Sunaryo, Irma Paramita S, and Sifra Raissa (2019), it is shown that compensation suitability, partially, influences the tendency for accounting fraud.

Additionally, the study by Noprianto, Rahayu, and Yudi (2022) indicates that compensation suitability, effectiveness of internal control, ethical organizational culture, competence, and individual morality significantly influence the tendency for accounting fraud in village financial management. Therefore, based on the previous research findings, the hypothesis can be stated as follows:

H4: Compensation has a positive and significant impact on fraud.

Internal Control (Y)

Chen et al. (2020) state that internal control is a set of procedures carried out to manage and control risks, achieve objectives, and maintain and improve performance in a company. The components of internal control include control environment, risk assessment, control activities, information and communication, and monitoring. Khumaira (2021) also argues that internal control is a process designed to protect a company's assets, implemented by all members of the organization in accordance with established policies to achieve effectiveness and efficiency in the company's operations.

Internal control consists of measures taken to prevent potential risks, especially fraud, in a company. Therefore, the better the level of internal control in a company, the lower the likelihood of individuals engaging in fraudulent activities within that company. This finding is consistent with the research conducted by Kurrohman & Widyayanti (2018), Natalia & Coryanata (2019), Komala et al. (2019), Djaelani & Zainuddin (2019), and Putu et al. (2021), which show that internal control has a negative and significant impact on the tendency for fraud. This means that if internal control weakens, it will increase the likelihood of fraud, and vice versa.

3. METHODOLOGY

This research is a quantitative cause-and-effect study conducted through a case study approach. According to Sugiyono (2017), quantitative cause-and-effect research seeks to establish relationships between variables that have a cause-and-effect connection. The purpose of this study is to test the established hypotheses and examine the influence between the independent and dependent variables. In this context, the case study refers to the fraud cases carried out by employees, particularly in the community relations department, which is a topic of discussion among the employees.

The primary data collection for this research is conducted using questionnaires that are directly sent to the respondents. The respondents are given a two-week period to complete the questionnaire. The required data is obtained through a set of statements provided by the researcher and distributed

to the respondents. The respondents will answer using a five-point Likert scale, and the questionnaire should be filled out with accurate and truthful responses. The research object is one of the branch offices of PT XYZ located in Indonesia. The number of respondents for this study is calculated using the Slovin formula, resulting in a sample size of 50 out of the total population of 57 employees in PT XYZ. The research respondents are determined using purposive sampling technique, which involves selecting samples that possess certain attributes or knowledge related to the research objectives so that they can answer the questionnaire based on their knowledge. In this study, the respondents are selected based on their job positions (supervisors and above). It is expected that employees in such positions have a better understanding of the management system, administration, financial system, and even certain specific information that may not be known by all employees.

Data collected proceed to test the hypotheses using path analysis with the IBM SPSS Statistics version 26. Path analysis is a statistical method used to examine the relationships between variables and assess the direct and indirect effects of independent variables on the dependent variable.

4. RESULT AND DISCUSSION

Respondent Profile
PT XYZ has a total of 57 employees. According to the Slovin formula, the minimum sample size required is 49.89 or 50 individuals.

$$n = \frac{N}{1 + N(e)^2} = \frac{57}{1 + 57(0{,}05)^2} = 49{,}890 \sim 50\ people$$

The respondents' age is divided into three categories: below 30 years old, between 30 and 45 years old, and above 45 years old.

Table 1. **Number of respondent base on age**

	Years Old	Frequency	Percent	Cumulative Percent
Valid	< 30	0	0	0
	30 - 45	30	60	60
	> 45	20	40	100
	Total	50	100	

The survey data shows that the number of male respondents is higher compared to female respondents, with the following data:

Table 2. **Number of respondent base on gender**

	Gender	Frequency	Percent	Cumulative Percent
Valid	Male	46	92	92
	Female	4	8	100
	Total	50	100	

Based on the level of education, the respondents are categorized into three levels: High School or equivalent, Diploma, and Bachelor's degree or above.

Table 3. **Number of respondent base on formal education level**

	Education	Frequency	Percent	Cumulative Percent
Valid	High school	5	10	10
	Diploma degree	7	14	24
	Bachelor degree or above	38	76	100
	Total	50	100	

The survey is conducted among employees with positions ranging from Supervisor to Manager and above. This is done with the intention of including employees who hold these positions and are expected to have knowledge about the current management system.

Table 4. **Number of respondent base on position in the company**

	Position	Frequency	Percent	Cumulative Percent
Valid	Supervisor	20	40	40
	Superintendent	20	40	80
	Manager or above	10	20	100
	Total	50	100	

The length of employment for employees is divided into three categories: below 5 years, between 5 and 10 years, and above 10 years. The data indicates that employees with over 10 years of experience dominate, 56% of the total.

Table 5. **Number of respondent base on length of service**

	Length of service	Frequency	Percent	Cumulative Percent
Valid	< 5 years	15	30	30
	5 - 10 years	7	14	44
	> 10 years	28	56	100
	Total	50	100	

The Result of Validity Test and Reliability Test

The validity test is used to measure the appropriateness of the data used by the researcher to measure and obtain research data from the respondents. According to Pearson interpretation, the significance value of validity can be interpreted as follows:

a. If the significance value is < 0.05, then the research data is considered valid.
b. If the significance value is > 0.05, then the research data is considered invalid.

The reliability test is used to measure the consistency and reliability of the measurement instrument. According to Murniati et al. (2013), the criteria for testing the reliability of data using Cronbach's Alpha (α) are as follows:

a. If the Cronbach's Alpha (α) value is greater than 0.9, it can be said that the questionnaire has perfect reliability.

b. If the Cronbach's Alpha (α) value is between 0.7 and 0.9, it can be said that the questionnaire has high reliability.
c. If the Cronbach's Alpha (α) value is between 0.5 and 0.7, it can be said that the questionnaire has moderate reliability.
d. If the Cronbach's Alpha (α) value is less than 0.5, it can be said that the questionnaire has low reliability.

Table 6. **The result of validity and reliability test**

	Significant (2-tailed)	Cronbach's Alpha		
Leadership Style	0,000	0,573	Valid & moderate	Reliable
Organizational Culture	0,359	0,573	Invalid & moderate	Reliable
Compensation	0,000	0,573	Valid & moderate	Reliable
Internal Control	0,000	0,573	Valid & moderate	Reliable
Fraud	0,000	0,573	Valid & moderate	Reliable

The Result of Normality Test
The Kolmogorov-Smirnov normality test is part of the classical assumption test. The purpose of the normality test is to determine whether the residuals are normally distributed or not.

a. If the significance value is > 0.05, then the residuals are considered to be normally distributed.
b. If the significance value is < 0.05, then the residuals are considered to not be normally distributed.

Table 7. The result of normality test

		Unstandardized Residual
N		50
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	,23200156
Most Extreme Differences	Absolute	,265
	Positive	,265
	Negative	-,138
Test Statistic		,265
Asymp. Sig. (2-tailed)		,000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the regression analysis results mentioned above, with a significance value (test statistic) of 0.265, it can be concluded that the residuals are normally distributed. This indicates that the assumption of normality for the residuals is met.

The Result of Linearity Test
The purpose of the linearity test is to determine the form of the relationship between the independent variable and the dependent variable.

a. If the significance value of the deviation from linearity is > 0.05, it indicates a linear relationship between the independent variable and the dependent variable.
b. If the significance value of the deviation from linearity is < 0.05, it indicates a non-linear relationship between the independent variable and the dependent variable.

Table 8. **The result of linearity test**

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Z X1 *	Between Groups	(Combined)	11,724	5	2,345	16,437	,000
		Linearity	10,358	1	10,358	72,614	,000
		Deviation from Linearity	1,366	4	,341	2,393	,065
	Within Groups		6,276	44	,143		
	Total		18,000	49			

Based on the regression analysis results mentioned above, with a deviation from linearity significance value of 0.065, it can be concluded that there is a linear relationship between the independent variable and the dependent variable. This suggests that the relationship between the variables can be adequately described by a linear model.

The Result of Hypothesis Test
To test the hypothesis, the data was interpreted using path analysis. Here are the results of the statistical analysis to test the hypothesis.

1. Calculating the Path Coefficient of Model 1

The following are the results of path analysis using IBM SPSS Statistics Version 26.

Table 9. **Regression: Model summary, ANOVA, and path coefficients Model 1**

Model Summary

Mode	R	R Square	Adjusted F Square	Std. Error o the Estimate
1	.637	.405	.366	.932

a. Predictors: (Constant), Compensation, Organizational Culture, Leadership Style

ANOVA

Model		Sum o Squares	df	Mean Square	F	Sig.
1	Regression	27.243	3	9.081	10.449	.000
	Residual	39.977	46	.869		
	Total	67.220	49			

a. Dependent Variable: Internal Control
b. Predictors: (Constant), Compensation, Organizational Culture, Leadership Style

Coefficients

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	14.120	4.547		3.106	.003
	Leadership Style	.539	.185	.368	2.917	.005
	Organizational Culture	-.187	.076	-.284	-2.452	.018
	Compensation	.354	.121	.361	2.917	.005

a. Dependent Variable: Internal Control

The Path Coefficient of Model 1 :
The significance values of the three variables, $X_1 = 0.05$, $X_2 = 0.18$, and $X_3 = 0.05$, indicate that X_1 and X_3 have a significant impact on Y, as their significance values are equal to or less than 0.05. On the other hand, X_2 does not have a significant impact on Y, as its significance value is greater than 0.05.

The R-squared value of 0.405 indicates that X_1, X_2, and X_3 collectively contribute to 40.5% of the variability in Y. The remaining 59.5% is influenced by other variables not included in this study.

To find the value of ε_1 using equation: $\varepsilon_1 = \sqrt{(1 - 0{,}405)} = 0{,}771$

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon_1$$

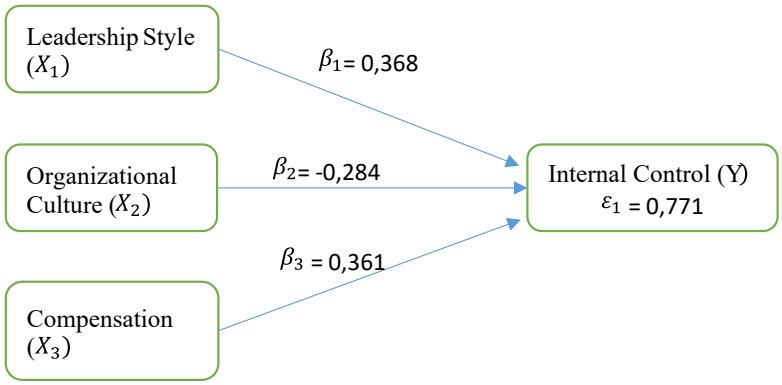

Figure 1. **Path Diagram: the influenze X_1, X_2, X_3, on Y**

2. Calculating the Path Coefficient of Model 2

The following are the results of path analysis using IBM SPSS Statistics Version 26.

Table 10. Regression: Model summary, ANOVA, and path coefficients model 2

Model Summary

Mode	R	R Square	Adjusted F Square	Std. Error o the Estimate
1	.924	.853	.840	.242

a. Predictors: (Constant), Internal Control, Organizational Culture, Compensation, Leadership Style

ANOVA[a]

Model		Sum o Squares	df	Mean Square	F	Sig.
1	Regression	15.363	4	3.841	65.530	.000
	Residual	2.637	45	.059		
	Total	18.000	49			

a. Dependent Variable: Fraud
b. Predictors: (Constant), Internal Control, Organizational Culture, Compensation, Leadership Style

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-7.188	1.299		-5.535	.000
	Leadership Style	.334	.052	.440	6.391	.000
	Organizational Culture	.034	.021	.099	1.593	.118
	Compensation	.203	.034	.400	5.911	.000
	Internal Control	.160	.038	.310	4.187	.000

a. Dependent Variable: Fraud

The Path Coefficient of Model 2 :
The significance values of the three variables, X_1 = 0.000, X_2 = 0.118, and X_3 = 0.000, indicate that X_1, X_3, and Y have a significant impact on Z, as their significance values are smaller than 0.05.

On the other hand, X_2 does not have a significant impact on Z, as its significance value is greater than 0.05.

The R-squared value of 0.853 indicates that X_1, X_3, and Y collectively contribute to 83.5% of the variability in Z. The remaining 16.5% is influenced by other variables not included in this study.

To find the value of ε_2 using equation: $\varepsilon_2 = \sqrt{(1 - 0{,}853)} = 0{,}383$

$$Z = \alpha + \beta_4 X_1 + \beta_5 X_2 + \beta_6 X_3 + \beta_7 Y + \varepsilon_2$$

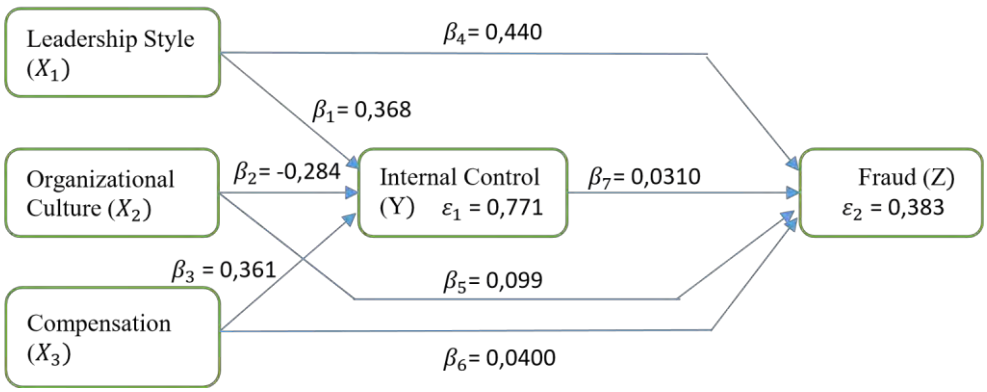

Figure 2. **Path diagram: the influenze X_1, X_2, X_3, on Z through Y**

Discussion Direct Influence
1. X_1 has a significant direct influence on Z, with a significance value of 0.000 < 0.005. Thus, it can be inferred that X_1 has a direct impact on Z.
2. X_2, on the other hand, does not have a significant direct influence on Z, with a significance value of
0.118 > 0.005. Therefore, it can be concluded that X_2 does not have a direct significant impact on

Z.

3. X_3 has a significant direct influence on Z, with a significance value of 0.000 < 0.005. Hence, it can be inferred that X_3 has a direct impact on Z.

In this conclusion, it is evident that X_1 and X_3 have significant direct influences on Z, while X_2 does not have a significant direct influence on Z.

Indirect Influence (intervening)

1. Influenze analisys X_1 on Z through Y

Based on the given information, the direct influence of X_1 on Z is calculated as $(0.440)^2 = 0.193$. Meanwhile, the indirect influence of X_1 through Y on Z is determined by multiplying the beta value of X_1 on Y by the difference between Y and Z, which results in 0.368 x 0.310 = 0.114. Therefore, the total influence of X_1 on Z is the sum of the direct and indirect effects, which is 0.193 + 0.114 = 0.308. It can be concluded that X_1 has a significant indirect impact on Z through Y.

2. Influenze analisys X_2 on Z through Y

Based on the given information, the direct influence of X_2 on Z is calculated as $(0.099)^2 = 0.010$. Meanwhile, the indirect influence of X_2 through Y on Z is determined by multiplying the beta value of X_2 on Y by the beta value of Y on Z, which results in -0.284 x 0.310 = -0.088. Therefore,

the total influence of X_2 on Z is the sum of the direct and indirect effects, which is 0.010 + (-0.088) = -0.078. It can be concluded that X_2 does not have a significant indirect impact on Z through Y.

3. Influenze analisys X_3 on Z through Y

Based on the given information, the direct influence of X_3 on Z is calculated as $(0.400)^2 = 0.160$. Meanwhile, the indirect influence of X_3 through Y on Z is determined by multiplying the beta value of X_3 on Y by the difference between Y and Z, which results in 0.361 x 0.310 = 0.112. Therefore, the total influence of X_3 on Z is the sum of the direct and indirect effects, which is 0.160 + 0.112 = 0.272. It can be concluded that X_3 has a significant indirect impact on Z through Y.

4. Influenze analisys X_1, X_2, and X_3 collectively on Z through Y

Based on the given information, the total influence of X_1 on Z is 0.308, the total influence of X_2 on

Z is -0.078, and the total influence of X_3 on Z is 0.272. Therefore, the combined influence of X_1, X_2, and X_3 through Y on Z is the sum of their total influences, which is 0.308 + (-0.078) + 0.272 = 0.502. It can be concluded that collectively, X_1, X_2, and X_3 have a significant indirect impact on Z through Y.

5.CONCLUSION

Based on the result, discussion, and hypothesis testing using path analysis on the influence of leadership style, organizational culture, and compensation as triggers for fraud, with internal controls as the mediating variable, the following conclusions can be drawn:

1. Leadership style, organizational culture, and compensation collectively have a significant indirect influence on fraud.
2. Leadership style has both a significant direct and indirect influence on fraud.
3. Compensation has both a significant direct and indirect influence on fraud.
4. Organizational culture does not have a direct or indirect influence on fraud.

Acknowledgement

This research is dedicated to understanding and analyzing the triggering factors of fraudulent actions committed by employees in a company. The goal is for the company to take wise measures in order to anticipate and minimize the occurrence of fraud in the future.

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FINANCIAL RESILIENCE STRATEGIES OF PUBLIC HOSPITALS FROM THE PERSPECTIVE OF DYNAMIC CAPABILITY

Zhang Tongtong1*, Jamaliah Said[2], Nor Balkish Zakaria[2],

Yvonne Joseph Ason[3]

[1]Faculty of Accounting, Universiti Teknologi MARA,Sabah, Malaysia

[2 3]Accounting Research Institute, Universiti Teknologi MARA, Shah Alam, Malaysia

[4] Universiti Teknologi MARA, Sabah, Malaysia

**Corresponding author: Jamaliah533 @uitm.edu.my*

Abstract

Financial resilience is the ability of an organization to anticipate, preparing, respond to changing external environment or sudden unforeseen shocks by developing appropriate economic strategies to minimize budget deficits caused by crises and maintain stability and sustainability. With uncertain future events becoming more frequent, as the backbone of the public healthcare system, financially resilient public hospitals can be ready to cope with disruptions and shortages, and to recover and improve performance in adverse situations. The purpose of this study is to analyze 205 valid questionnaires received from management and staff of public hospitals in China through an online survey based on Dynamic Capability Theory using Structural Equation Modeling Partial Least Squares (SEM-PLS) methodology to identify and evaluate the key factors of financial resilience in public hospitals. It was found that revenue diversification, flexible budgeting had a significant positive effect on public hospital resilience. Therefore, the financial resilience of public hospitals can be cultivated by improving management practices in the above areas, which enables public hospitals to adopt dynamic management strategies to prevent risks and enhance resilience in the face of sudden and uncertain event shocks.

Keywords: Financial resilience, dynamic capability theory, revenue diversity, flexibility budget, cost adjustment

1.INTRODUCTION

In 2019, the COVID-19 pandemic spread around the world, which brought economic stagnation and recession in almost all countries and various industries. The spread of the epidemic has had a severe impact on healthcare systems triggering resource shortages and operational disruptions, and a deterioration in the finances of most public health organizations' health systems(Low et al., 2017). As a pillar in the national healthcare system, public hospitals were affected by the outbreak, experiencing significant declines in operating revenue, profitability, and cash flow available(Barbash & Kahn, 2021). The capability of an organization to resist, adapt, and recover under an emergency is defined as resilience. Resilience in the face of shocks, dangers, and natural disasters is critical for public hospitals whose function is closely related to public health welfare(Barbash & Kahn, 2021). During and in the aftermath of the Covid-19 pandemic, organization operations and recovery were challenging(Khalil et al., 2022). As uncertain events become more frequent, achieving hospital operations robustness, adaptability, and flexibility to

recover from crises quickly challenges the financial and operational management of public healthcare organizations, which aroused widespread interest in academic and healthcare management practice(Shin et al., 2020). Based on the dynamic capability theory, as the combination of medical business and finance process evolves in management practice, the identification and enhancing the organization's dynamic management capabilities are considered to contribute to resilience(Akpan et al., 2022). This study investigates the critical dynamic capabilities of public hospitals that influence the financial resilience of hospitals based on the dynamic capability theory.

In this area, prior studies review the application of financial resilience in various industries such as banking, financial firms, governments, and the non-profit sector (Salignac et al., 2019; Lusardi et al., 2021; Klapper et al., 2020). However, there is limited knowledge about financial resilience in public healthcare. A group of scholars has paid attention to the resilience of the healthcare system during the crisis(Garcia-Perez et al., 2023; Low et al., 2017), but there is seldom a focus on the financial area in public hospitals. Klapper et al., (2020) proposed a set of financial ratios to explain the financial robustness of non-profit organizations. Kass Hannah et al. (2017）examined the relationship between cost structure, revenue diversification and hospital performance by time series analysis. Sahbi et al.，（2019）adopted the Delphi methodology attempt to discover the effect factors of healthcare resilience. However, it is seldom to trace the mechanism of the influence on the financial resilience of hospitals under the dynamic external context. Previous studies mostly focused on the operation outcomes of finances but lacked the observation of dynamic process factors(Chmielewska et al., 2022). Besides, many studies on the operation of public hospitals are usually based on principal-agent theory and resource dependence theory(Shin et al., 2020; Tipu et al., 2023), and research from the perspective of dynamic capability theory is still a potential study gap. The aforementioned gaps inspired the current study.

This study is based on dynamic capability theory and adopted structural equation modelling (SEM-PLS) analysis methodology, aiming to identify the key factors affecting the financial resilience of public hospitals as well as their influencing roles. The finding is expected to fill the gap in theory, methodology and knowledge in healthcare financial resilience. The rest of the study develops a discussion on this topic. Section 2 reviews the literature on dynamic capability theory and financial resilience, and the Hypothesis and research framework are proposed. In section 3, The research methodology is presented. Section 4 describes the findings and discussion while Section 5 discusses the conclusion managerial/practical implications and limitations.

2.LITERATURE REVIEW

The dynamic capability theory establishes a s framework for investigating whether dynamic managerial capabilities can be leveraged to promote organizational resilience. In the management literature, scholars have used the dynamic capability view as a theoretical lens to test all these constructs (Kazmi and Ahmed, 2022). Teece（1994）proposed a definition of dynamic capabilities that is described as "the ability of an organization to sense, seize, and reconfigure internal and external resources to respond to a rapidly changing environment". Dynamic capabilities theory proposes three main capabilities that organizations should have to drive the integration of resources to adapt to changes in the environment: sense, seize, and transform(Akpan et al, 2022). Sensing refers to the organization's ability to continuously identify risk factors in the dynamic external environment to improve its ability to anticipate and respond to uncertain events in the future(Akpan et al, 2022); Seizing refers to mobilizing resources, improving responsiveness to needs and opportunities, and gaining value from them(Akpan et al, 2022); Restructuring refers to the organization's ability to continuously update and allocate resources to strategically seize opportunities and respond to threats(Akpan et al, 2022). The Dynamic Capability theory extends

the Resource-Based View (RBV) of an organization beyond static operating assumptions(Wójcik, 2015). Based on the original organization resource, it focuses on how the organization responds to unforeseen and rapid changes in the external environment by active reconfiguring its resources (Kazmi and Ahmed, 2022).

Resilience refers to organization capability to resist, adapt and recover from crises(Akpan等, 2022). Unlike the static characteristics of performance, the concept of resilience emphasizes that organizations actively respond to changing in uncertain dynamic environments, fully mobilize resources, and reduce the risk of operational disruptions to maintain their essential basic functions and recover quickly (Li et al., 2022). The concept of resilience is consistent with dynamic capability from the connotation(Akpan et al., 2022). Studying organizational resilience from the perspective of dynamic capabilities focuses on reallocating resources and proactively adapting to changes to gain long-term sustainability advantages(Wójcik, 2015). Dynamic capabilities contribute to the development of organizational resilience (Huang et al., 2023). Previous studies have combined the whole process of financial disturbances (before, during and after the disturbance) and proposed to classify organizational resilience into three dimensions: robustness, adaptability and flexibility(Alvarenga et al, 2023).

Financial resilience has been defined as the ability to mitigate the negative effects of unexpected crises or shocks, and the ability of an organization to anticipate and prepare the necessary plans to respond appropriately to unexpected crises. Acquaah et al., (2021) consider financial resilience as an organization's ability to anticipate, prepare for, and respond to unpredictable crises and disruptions through the development of appropriate policies aimed at mitigating the threat of budgetary shortfalls to achieve survival and growth. This study adopts Hayward et al. (2021) for the definition of financial resilience, which is the ability of an organization to withstand risk and sustain access to capital as a result of decisions and actions taken to restructure financial resources to protect against the risk of recession. Distinguished from private businesses, public finances are critical to public sector development. The concept of resilience is used in public sector accounting theory and practice to elucidate the factors influencing resilience and coping mechanisms in the context of fiscal constraints and resource shortages in the context of external environmental shocks (Cepiku et al., 2015). This is likely to be achieved through the reorganization of resources under the budget constraint and the enhancement of critical managerial competencies of organizations in dynamic environments, and dynamic managerial competencies that can impact the robustness, adaptability and flexibility of the public sector under sudden event are all believed to play a key role. The application of the resilience perspective has enabled academic to not only capture the underlying processes under the normal operations of the public sector as well as crisis response (Ahrens and Ferry, 2020) but also to demonstrate the interplay of external and internal factors and their impact in coping with financial shocks and shaping vulnerability (Barbera et al., 2017, 2020). According to Table 1, management techniques that have influenced organizational financial resilience have been explored from multiple perspectives in previous studies.

Table 1 **Literature Review**

No.	Reference	The definition of financial resilience (FR)	Methodology	Dimensions
1	Zahedi, J., Salehi, M. and Moradi, M. (2022).	Organizational resilience should be translated as financial resilience when the organization faces some shocks (i.e., shocks and financial crises) that affect its financial management.	Using mixed methods and hierarchical analysis.	Consistency in production and sales, reliable supply chain, environmental adaptability, and government support are among the determining factors in financial resilience.
2	Aswathy & Sreenivasan. (2023)	Financial resilience is defined as entrepreneurs' ability to obtain capital on subsequent ventures as a result of their decisions and actions on their focal ventures.	Using TISM and MICMAC analysis, a structural hierarchy of LSS enablers.	Digital financial innovation, liquidity planning, going concern consideration, financial strategy of CFOs, and cyber application.
3	Upadhaya et al., (2019)	Financial resilience of the public sector refers to the ability to anticipate, absorb and respond to shocks and crises.	Adopted second-hand data and combines the perspectives of experts in government officials.	Preventing austerity, prudent debt management, departmental accountability, and cooperation.
4	Jabbari, A., Mohammadi, F., & Heidari, L. (2020).	Hospital financial resilience relates to the ability of hospitals to withstand economic challenges while maintaining financial stability and providing essential services.	This exploratory study using a thematic analysis approach in qualitative research, the data collected through semi-structured interviews.	Medicines and equipment, human resource redundancy, financial management, leadership, and information technology.
5	Suci et al., (2022)	The ability of the financial system to adjust its functionality before, during, or after changes and disruptions to maintain the required performance in both expected and unexpected situations.	A systematic review and text analysis were conducted through a search in four databases: MEDLINE (PubMed), Google Scholar,Scopus.	Financial allocation, budget management, and digital technology application

Table 1 **Literature Review**

No.	Reference	The definition of financial resilience (FR)	Methodology	Dimensions
1	Zahedi, J., Salehi, M. and Moradi, M. (2022).	Organizational resilience should be translated as financial resilience when the organization faces some shocks (i.e., shocks and financial crises) that affect its financial management.	Using mixed methods and hierarchical analysis.	Consistency in production and sales, reliable supply chain, environmental adaptability, and government support are among the determining factors in financial resilience.
6	Agyemang et al., (2023)	Resilience is the ability of an organization to "positively adapt" and respond to overcome adversity or challenging conditions.	Multiple case studies and secondary data were used, and textual analysis was used to assess the resilience of the case countries.	Financial/budget actions, policies formulated, and tangible and intangible resources utilized.
7	Ileana Steccolini et al., (2022)	The organization's capacity to anticipate, absorb and respond to shocks affecting its finances.	Methods of literature review and case analysis	Predictive ability, financial flexibility, adaptability, Resource reserves and organizational restructuring, and Continuity of leadership.
8	Karima Lalani et al., (2023)	The ability of financial system rapid recovery after a crisis by restructuring resources, improving management methods, improving efficiency, and saving costs.	Statistics and multivariate moderated regression.	Improving financial reserves, establishing non-operating revenue sources, and improving operational efficiency.

Resource: Author's summarize

Based on the Kruse, F.M., & Jeurissen, P.P.T. (2020), An organization's ability to recover from a crisis is more challenging than seeking growth under normal operating conditions ((Akpan et al., 2022)). Public hospitals have a social responsibility to improve the quality and efficiency of healthcare services(Chmielewska et al., 2022). With the increasing frequency of uncertain events in the future, dynamic environments will become the norm for public hospital operations (Atmojo JT et al., 2020). Lack of financial resilience will directly threaten the stability of hospital operations(Zahedi et al., 2022). The most common motivation for developing financial resilience in public hospitals is to mitigate the adverse effects of environmental unpredictability and financial constraints on organizational success and survival (Lee, S. and Chen, G, 2021). In the face of financial constraints, demand fluctuations and material shortages, public hospitals should

proactively adjust their existing financial structure and develop dynamic capabilities to cope with unpredictable risks, and access to adequate financing and liquidity is critical (Sreenivasan, A. & Suresh, M, 2023).

As shown in the table 2.0, in order to identify the influencing factors of financial resilience in public hospitals from the perspective of dynamic capabilities, this study selected the literature from 2021-2024 to summarize the measures taken by previous scholars to improve the financial resilience of organizations in different contexts. English articles were mainly from Web of Science, Emerald Insights, Science Director and Scopus. A total of 39 articles were selected, and 21 articles were selected based on the principle of the highest citation frequency after eliminating the studies that did not meet the research objectives. From these articles, the influencing factors of financial resilience in hospitals were initially distilled.

Table 2 **Identified factors in financial resilience**

No.	Factor	Finding	References
F1	Digital Financial Innovation	Digital Financial Innovation (DFI) utilizes digital technology to provide financial solutions and help businesses operate more efficiently.	Aswathy & Sreenivasan. (2023); Barney (1991); Thompson et al.，(2012);
F2	Income diversified	Diversified income helps to create new cash flows outside of business, and its positive impact outweighs the negative impact of declining income, thus improving financial health.	Karima Lalani et al., (2023); Pfeffer & Salancik., (1978);
F3	Budget redundancy	Establishing budget redundancy can ensure the flexibility of emergency allocation of epidemic prevention and control materials, such as protective equipment, ventilators, and temporary tents (Bappenas, 2021).	Bappenas. (2021);Cepiku et al., (2015）; Park&Maher. (2020）.
F4	Cost adjustment	Cost adjustment can reduce unnecessary expenses, can help allocate internal funds for more important business activities (Ahuja et al., 2021).	Sreenivasan, A & Suresh, M. (2023) ；（Pfeffer＆Salancik，1978）
F5	Leadership	The financial strategy of a leader can motivate the company to think more strategically. Leaders usually have a better understanding of competitiveness and market development in financial operate area.	J. Calandro Jr& R. Flynn. (2017);
F6	Liquidity planning	Liquidity planning is related to capital reserves and the ability to obtain loans. To make adjustments during economic downturns, the priority is to manage liquidity and cash flow.	SK Nkundabanyanga et al., (2019); N. Hlepas et al., (2021).
F7	Debt management	Debt management economic shocks often lead to financial defaults, requiring loan modifications and signing of extension agreements, careful analysis of	R. Tom. (1989).

Table 2 **Identified factors in financial resilience**

No.	Factor	Finding	References
		liabilities, and strict procedures to prevent risks.	
F8	Supply chain sustainable	The most important supplier risk in mitigating supply chain disruptions is supply chain disruptions, especially when the supplier is a single or primary source of critical components.	I.G. Sahebi et al., (2021).
F9	Network security	Financial operations in the digital age are dependent on information and communication technologies, and cyber threats will lead to uncertain impacts. Financial information technology applications should be sufficiently secure against cyber threats and operational disruptions.	J. Groenendaal& I. Hels loot. （2021）.
F10	Business continuity	The ability of a business continuity plan company to maintain operations and basic business processes during and after interruptions is called business continuity. The business continuity plan guides the company on how to continue during periods of interruption.	H. Baba et al., (2014); S.K. Nkundabanyanga et al., (2019).
F11	Management persistent	The management must review the company's ability to continue as a going concern. If the management has to disrupt or suspend transactions, then the company is no longer a persistent problem.	S.K. Nkundabanyanga et al., (2019).

Resource: Author's organization

Porcher (2016) argued that there is a correlation between organizational management capabilities and the speed of organizational crisis management and recovery. Elbanna and Abdel-Maksound (2020) observed that building financial redundancy positively affects organizational performance when there is uncertainty in the external environment. Rabia Asif and Waheed Akhter (2019) concluded that revenue diversification can improve the performance of state-owned banks, but it also depends on the size of the organization and the impact of external uncertainties to some extent. Harvey et al. Rausch, A. and Wall, F. (2015) study concluded that restructuring the budget time and increasing the flexibility of the budget helps to improve the elastic of budget spending. Hospitals in South Korea have adopted budget surpluses (including expenditure adjustments) and the establishment of contingency funds to cope with unexpected crisis events (Park and Maher, 2020). Chandra et al., (2011) analyzed cost drivers to reduce healthcare variable costs by optimizing the flow of healthcare activities and restructuring the cost structure to reduce hospital costs. Kamal Hassan, (2008) argues that financial information technology applications help to transform public health organizations in the new context. Financial redundancy, flexibility and revenue diversification are important financial management tools to reduce uncertainty for public sectors such as hospitals (Carroll et al., 2013; Li and Chen, 2021). This study draws on dynamic management capabilities under dynamic capabilities theory and integrates them into a financial resilience framework, suggesting that an integrated framework of financial management practices such as revenues diversified, flexible budgets, cost adjustment, and financial information

technology will affect the financial resilience of hospitals (Barbera et al. 2017; Stecolini et al. 2018; Li and Chen, 2021). Therefore, the following hypotheses were formulated:

H1: Revenue diversification has a positive impact on improving financial resilience of hospitals.

H2: Cost adjustment has a positive impact on improving hospital financial resilience;

H3: Flexible budgeting has a positive impact on improving hospital financial resilience;

H4: Financial information technology has a positive impact on improving the financial resilience of hospitals.

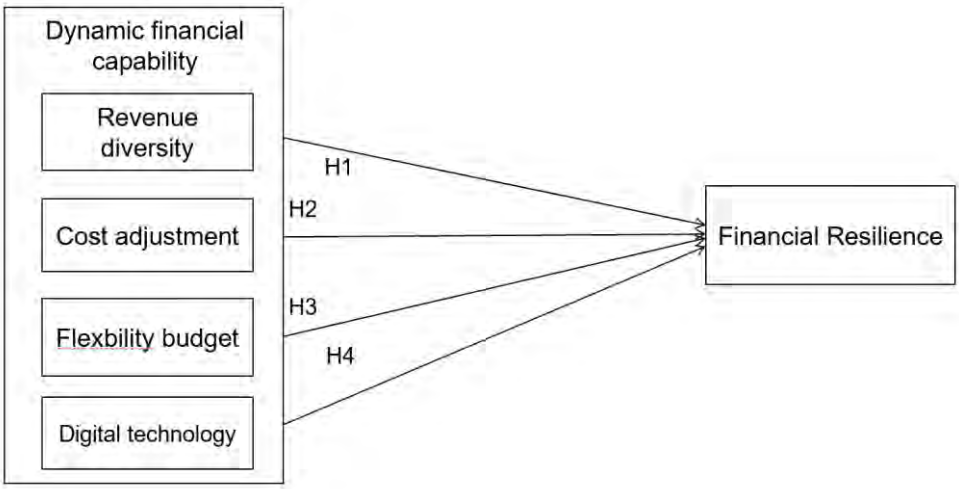

Figure 1. **The conceptual framework**

METHODOLOGY

This study utilized a cross-sectional study design, with data to be collected in a relatively short period, with a representative subset observed at a specific point in time, so errors with time were minimized. This study targeted Chinese public hospitals (including tertiary hospitals, secondary hospitals, and primary community hospitals), which were included in the study because these public healthcare organizations experienced budget shortfalls, declining revenues, and cost pressures during Covid-19 pandemic (2019-2022). During this course, they overcame the severity unpredictive public healthcare event but maintained essential public service functions, and recovered from the crisis.

This study adopted G*Power 3.1 statistical calculator to get the required minimum sample size (Faul, F., Erdfelder, E., Lang, A.G., & Buchner, A, 2007). As highlighted in Figure 2, in determining the sample size, the minimum sample size based on G*Power analysis for these studies is 85.F test being selected for the Linear Multiple Regression statistical test under the F^2 = 0.15, Probability of error, a = 0.05, Power level (1 - B) = 0.8 and number of predictors = 4 (Al-Khatib, A. W., 2023; Liu et al., 2023). In this study, with a final sample size of 205 collect from the public hospital or organization which far exceeded this minimum requirement, which enhancing the statistical power and reliability of the SEM analysis results (Faul, F., Erdfelder, E., Buchner, A., & Lang, A.G,2009).

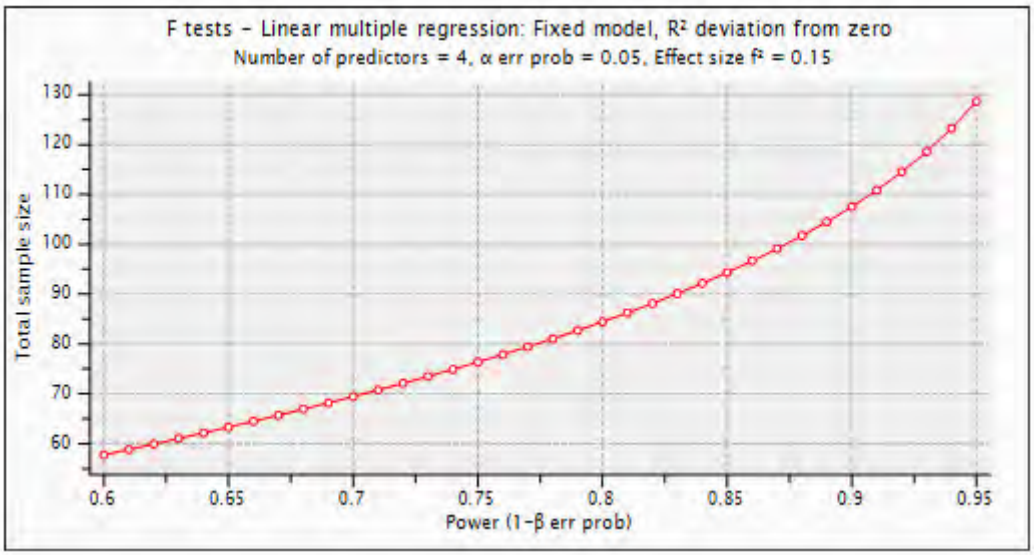

Figure 2. **F tests - Linear multiple regression: Fixed model, R2 deviation from zero**

Number of predictors =4, αerr prob = 0.05, Effect size f2 = 0.15

In this study, data were collected by designed structured questionnaire to assess four key constructs: revenue diversification, flexible budgeting, cost adjustment, and financial informatization. The questionnaire consisted of 26 items. In this study. All measures were based on a 5-point Likert scale ranging from 1-strongly disagree to 5-strongly agree. A cover letter of this questionnaire confirmed the anonymity of the respondents and the confidentiality of the study.

The questionnaire was distributed to managers and staff of public hospitals on China's online questionnaire platform（WJX.CN）, as well as in China's Public healthcare Sector Accounting Standards (PSAS) WeChat Groups (Groups 1 and 2). Anderson and Gerbing (1984) found that a sample size of 150 is usually sufficient for SEM modelling when there are three or more indicators for each factor. In this study, 280 questionnaires were planned to be collected, and 205 valid questionnaires were collected, with a recovery rate of 73.21%. Respondents were from all provinces except Gansu, Tibet and Qinghai in China. The number and distribution of respondents were higher than in previous studies in this area (Chen et al., 2022; Jiang Yong et al. 2021).

Table 3. **The description of the demographic**

Name	**N**	**Mean**	**Standard Deviation**	**Median**
1. Gender	205	1.571	0.496	2.000
2. Age	205	2.346	0.870	2.000
3. Education	205	2.780	0.738	3.000
4. Years of experience	205	2.854	0.917	3.000
5. level of your hospital	205	1.956	0.859	2.000

Table 3. **The description of the demographic**

Name	**N**	**Mean**	**Standard Deviation**	**Median**
6. location of hospital	205	1.848	0.789	2.000
7. The Number of Staff	205	2.663	1.240	3.000
8. Position	205	2.459	0.668	2.000
9. Department	205	3.083	1.286	3.000

Demographic statistic information about the respondents is shown in Table 4. Among respondents, 40.48% of the respondents were above 40 years of age, 52.19% of the respondents were in the hospital management, 60.98% of the respondents were working in public hospitals of grade secondary level or above, 85.85% respondents had a bachelor's degree or above, 28.78% respondents had more than 10 years of experience. Therefore, the respondents of this study meet the required work experience, education background and cognitive level in the research field.

Table 4. **The demographic statistic**

Item	**Option**	**Frequency**	**Percentage (%)**	**Accumulate percentage (%)**
1. Gender:	Male	88	42.93	42.93
	Female	117	57.07	100.00
2. Age	Below 30 years	33	16.10	16.10
	30 - 40 years	89	43.41	59.51
	41 - 50 years	62	30.24	89.76
	Above 50 years	21	10.24	100.00
3. Education:	Doctor	9	4.39	4.39
	Masters	56	27.32	31.71
	Bachelor	111	54.15	85.85
	Other	29	14.15	100.00
4. Years of service experience	Less than 1 year	14	6.83	6.83
	1 - 5 years	61	29.76	36.59
	5 - 10 years	71	34.63	71.22
	More than 10 years	59	28.78	100.00

Table 4. **The demographic statistic**

Item	**Option**	**Frequency**	**Percentage (%)**	**Accumulate percentage (%)**
5. Level of your hospital	The tertiary hospital	70	34.15	34.15
	The second level	84	40.98	75.12
	The primary level	41	20.00	95.12
	Other	10	4.88	100.00
6. Location of hospital(*n*=205)	North area	81	39.71	39.71
	Medium area	73	35.78	75.49
	West area	50	24.51	100.00
7. The number of staff in your hospital	Below 999	52	25.37	25.37
	Between 1000-1999	33	16.10	41.46
	Between 2000-3999	66	32.20	73.66
	Between 4000-5999	40	19.51	93.17
	Above 6000	14	6.83	100.00
8. Position:	Dean	12	5.85	5.85
	Managers	95	46.34	52.20
	staff	90	43.90	96.10
	Other	8	3.90	100.00
9. Department	Administrative Department	21	10.24	10.24
	Clinical Department	38	18.54	28.78
	Finance Department	91	44.39	73.17
	Audit Department	28	13.66	86.83
	Operations Department	15	7.32	94.15
	Information Department	9	4.39	98.54
	Other	3	1.46	100.00
Sum		205	100.0	100.0

Cronbach's α is commonly used to assessing reliability. Factor loadings, CR and AVE are commonly used to assess convergent validity (Fornell & Larcker, 1981; Hair et al., 2010). Cronbach's alpha and factor loading values of scale items should be greater than 0.70 in their

respective latent constructs (Fornell & Larcker, 1981; Hair et al., 2010). As shown in Table 5.0, The Cronbach's α value is 0.951, which is greater than 0.7, indicating a high quality of reliability in the data. Kaiser (1974) suggested that Kaiser-Meyer-Olkin (KMO) values above 0.9 are excellent. From Table 6.0, it can be seen that the KMO value is 0.929, which indicates that the data can be effectively extracted information. The Bartlett's test of Sphericity examines the null hypothesis that the correlation matrix is an identity matrix, meaning the variables are unrelated and therefore unsuitable for structure detection. The highly significant p-value ($p<0.000$) indicates that the null hypothesis can be rejected, which indicated that variables are sufficiently correlated. Based on the table 6, the KMO value and Bartlett's test of Sphericity both indicate that the data is suitable and appropriate for conducting factor analysis. The overall reliability and validity tests in this study support the next step of the analysis.

Table 5. **Cronbach reliability analysis**

Item	**Sample**	**Cronbach α coefficient**
26	205	0.951

Table 6. **KMO and Bartlett's test**

KMO-value		**0.929**
	X^2	3084.346
Bartlett Sphericity Test	*df*	325
	p-value	0.000

3.1 PLS Measurement model

Table 7.0 exhibits the results of reliability, convergent validity, and discriminant validity for all constructs. This study used Cronbach's α to test the reliability coefficients of the model, and the results of the test in table 7 reports that the reliability values of revenue diversification, flexible budgeting, expenditure adjustment, financial informatization, and financial resilience have reliability values of 0.808，0.764, 0.750, 0.838, 0.758, which respectively are in the range of 0.7-0.9. The Composite reliability (CR) values of all the constructs of the model are greater than 0.70, indicating better internal consistency and reliability of the model (Fornell & Larcker,1981). The Average Variance Extracted (AVE) values of all the constructs are more than 0.50, confirming a more satisfactory convergent validity (Fornell, C & Larcker, D.F., 1981). As Table 7.0, the SRMR value is 0.072 with a maximum value of 0.08 (Henseler et al., 2014). The value of SRMR indicated a good fit. Figure 3 shows the path model. All the indicators in RD, FB, CA and FI have values greater than 0.20 (Hair et al., 2019). Only three factors loading for FR has a value lower than 0.70 but since the value of AVE is higher than 0.5, that represent indicator reliability are still greater than 0.50, then the convergent validity met the criteria.

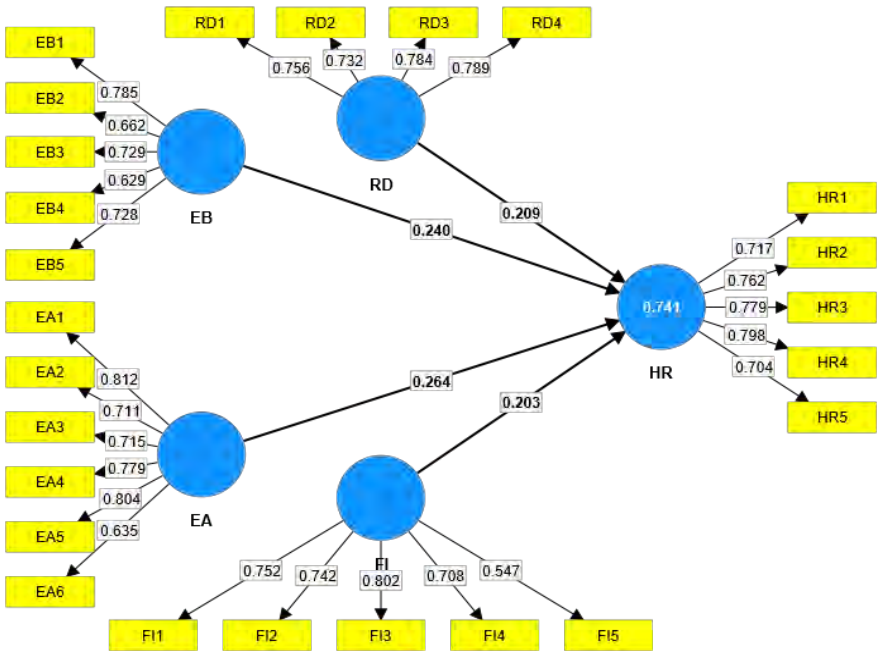

Figure 3. **The factor loading and path test of the study framework**

Table 7. **The Reliability and convergent validity of the measurement model**

	Cronbach's a	**CR**	**AVE**	**SRMR**
SD	**>0.7**	**>0.7**	**>0.5**	**<0.08**
FR	0.808	0.813	0.567	0.072
RD	0.764	0.767	0.586	
FB	0.750	0.755	0.502	
EA	0.838	0.845	0.555	
FI	0.758	0.776	0.512	

Resource: Hair Jr. et al. (2017), Henseler et al. (2015), Diamantopoulos and Siguaw (2006), Henseler et al. (2014).

Before hypothesis testing, the collinearity of exogenous latent variables should be examined. Based on the Chin(1998b), Cross-loadings can be used measure the discriminant validity. Cross-loadings are obtained by correlating the component scores of each latent variable with all other items. If the loading of each indicator is higher for its designated construct than for any of the other constructs, and each of the constructs loads highest with its items, it can be inferred that the model's constructs differ sufficiently from one another (Chin,1998b). According to Table 8.0, the cross-factor loadings in the measurement model are greater than 0.7 the cross-factor loadings are greater than the factor loadings and the difference is greater than 0.1, so the measurement model has discriminant validity. Thus, the results show that all components in the measurement model met the criteria.

Table 8. **The discriminable validity of the measurement model （Indicator loading＞cross loading）**

	EA	**EB**	**FI**	**HR**	**RD**
EA1	0.812	0.706	0.698	0.686	0.658
EA2	0.711	0.529	0.646	0.573	0.535
EA3	0.715	0.550	0.609	0.569	0.564
EA4	0.779	0.733	0.697	0.612	0.679
EA5	0.804	0.700	0.736	0.665	0.672
EA6	0.635	0.573	0.574	0.543	0.525
FB1	0.700	0.785	0.716	0.612	0.633
FB2	0.551	0.662	0.504	0.487	0.467
FB3	0.603	0.729	0.571	0.615	0.588
FB4	0.565	0.629	0.573	0.566	0.613
FB5	0.593	0.728	0.658	0.588	0.642
FI1	0.648	0.629	0.752	0.667	0.646
FI2	0.674	0.663	0.742	0.629	0.608
FI3	0.754	0.744	0.802	0.623	0.679
FI4	0.584	0.581	0.708	0.533	0.536
FI5	0.490	0.406	0.547	0.412	0.387
HR1	0.637	0.603	0.582	0.717	0.617
HR2	0.655	0.616	0.620	0.762	0.608
HR3	0.629	0.638	0.640	0.779	0.602
HR4	0.657	0.657	0.645	0.798	0.670
HR5	0.487	0.538	0.569	0.704	0.452
RD1	0.594	0.668	0.615	0.609	0.756
RD2	0.598	0.647	0.611	0.555	0.732
RD3	0.683	0.679	0.633	0.623	0.784
RD4	0.624	0.568	0.630	0.628	0.789

Table 9. **Path coefficients of the measurement model**

Relationship between variable	**Factor loading ＞0.6**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|) ＞1.96**	**P-value ＜0.05**
EA1 <- EA	0.812	0.026	31.633	0.000
EA2 <- EA	0.711	0.042	16.828	0.000
EA3 <- EA	0.715	0.048	14.802	0.000
EA4 <- EA	0.779	0.033	23.878	0.000
EA5 <- EA	0.804	0.024	34.000	0.000
EA6 <- EA	0.635	0.051	12.479	0.000
FB1 <- FB	0.785	0.031	25.515	0.000
FB2 <- FB	0.662	0.053	12.487	0.000
FB3 <- FB	0.729	0.048	15.135	0.000
FB4 <- FB	0.629	0.055	11.470	0.000
FB5 <- FB	0.728	0.040	18.385	0.000
FI1 <- FI	0.752	0.035	21.475	0.000
FI2 <- FI	0.742	0.049	15.302	0.000
FI3 <- FI	0.802	0.028	28.311	0.000
FI4 <- FI	0.708	0.043	16.380	0.000
FI5 <- FI	0.547	0.080	6.872	0.000
HR1 <- HR	0.717	0.048	14.927	0.000
HR2 <- HR	0.762	0.035	21.595	0.000
HR3 <- HR	0.779	0.032	24.537	0.000

HR4 <- HR	0.798	0.028	28.426	0.000
HR5 <- HR	0.704	0.056	12.670	0.000
RD1 <- RD	0.756	0.039	19.138	0.000
RD2 <- RD	0.732	0.040	18.355	0.000
RD3 <- RD	0.784	0.043	18.319	0.000
RD4 <- RD	0.789	0.032	24.414	0.000

3.2 The Structural measurement

The result of the structural model, as shown in Table 9. To test the hypotheses and to measure the structural (inner) model, the bootstrapping function in PLS-SEM 4.1 with 5,000 bootstrap samples was used. Based on Chin (1998b) & Ringle(2004),The examination of the model's predictive power was estimated using the coefficient of determination (R^2). Results of 0.190, 0.333, and 0.670 can be interpreted as weak, moderate, and substantial, respectively. As Table 9, The R^2 values for FR show that 0.741. Thus, the model has a moderate to substantial level of predictive accuracy (Cohen, 1988; Hair Jr. et al., 2017a, 2017b).

Based on Cohen (1988), F^2>=0.02 is small; >= 0.15 is medium;>=0.35 is large. Analogously. The effect sizes (F^2) for the structural model relationships show that show that revenue diversity, flexible budget, cost adjustment has relative strong effect on financial resilience, and financial informatization account for weak effect on financial resilience (Cohen, 1988).

Next step, this study examined the model's predictive relevance (Q^2) by using the blindfolding procedure. The Q^2 statistic is a measure of the predictive relevance of a block of manifest variables. A tested model has more predictive relevance the higher Q^2 is, and modifications to a model may be evaluated by comparing the Q values. The proposed threshold valueis Q^2>0(Stone,1974; Geisser, 1975; Fornell & Cha,1994). The predictive relevance of the model (Q^2) for FR is 0.406. As shown in Table 9.0, Since the value of Q^2 is larger than 0, the exogenous construct represents good predictive relevance of the model concerning the endogenous latent variables, the model has satisfactory predictive capacity (Evermann and Tate, 2016; Hair et al., 2017a).

Table 9 exhibited that t-values of the factor loadings for revenue diversity, cost adjustment are highly significant (t-value >2.00 (One-tailed), flexibility budget and financial informatization account for relative weak effect (Hair Jr. et al., 2017a, 2017b). Based on table 9.0, all the p-value <0 .05 that considered statistically significant (Hair Jr. et al., 2017a, 2017b).

3.3 Hypotheses testing

Table 10. gives the results of the coefficient PLS path analysis for each relationship, which support the research hypotheses. The path coefficients of Revenue Diversification (RD), Flexible Budgeting(FB), Cost Adjustment(CA) and Financial Informatization(FI) on the financial resilience of the hospitals are 0.209, 0.240, 0.264 and 0.203, respectively. The results show that each of the influencing factors has a positive impact on the financial elasticity of the hospitals, with Cost

Adjustment having the most significant impact.

Table 10. **The Structural measurement (Path correlation)**

	Original sample	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|) >1.96**	**R^2 >0.67**	**P <0.05**	**F^2 >0**	**Q^2 >0**	**5.0%**	**95.0%**
RD-> FR	0.209	0.081	2.592	0.741	0.005	0.043		0.073	0.336
FB -> FR	0.240	0.128	1.868		0.031	0.043		0.026	0.449
CA ->FR	0.264	0.091	2.907		0.002	0.046	0.406	0.121	0.416
FI -> FR	0.203	0.131	**1.554**		**0.060**	0.027		-0.011	0.419

4. RESULT AND DISCUSSION

4.1 Income Diversification and Financial Resilience

The results of the study show that there is a significant positive correlation between revenue diversification and financial resilience ($\beta = 0.209$, $t = 2.592$, $p \leq 0.001$), thus supporting H1. Interpretation of the results of the study suggests that revenues are important for hospital performance and financial redundancy, and that diversification of healthcare-related services, in addition to outpatient inpatient services, can help to reduce the risk of uncertain future shocks causing shortages and disruptions to traditional outpatient and inpatient services causing shortages and disruptions and build a higher level of financial resilience. This means that revenue diversification will make hospitals more capable of withstanding internal and external challenges, adapting to changing environments, and maintaining their stability and operations in the long term.

4.2 Flexible budgeting and financial resilience

The findings support H2 and further reveal that there is a positive relationship between flexible budgeting and financial resilience, however, this effect is not significant ($\beta= 0.240$, $t=1.868$, $p \leq 0.001$). According to the hypothesis, flexible budget time structure and budget redundancy help hospitals to better adapt to future unpredictable demand fluctuations and emergencies, thus ensuring the sustainability of healthcare services and resource provision in emergency settings. The solution not only meets the hospital's own survival and development needs, but also promotes operational resilience and sustainability. Flexible budgeting helps hospitals to recover quickly from crises, fulfill their missions sustainably and responsibly, serve public health and welfare, and cope with the impact of essential healthcare services. However, according to the findings of the study, this role is not being played significantly enough.

4.3 Cost Adjustment and Financial Resilience

Our findings indicate that cost regulation has a positive impact on financial resilience ($\beta = 0.264$, $t = 2.907$, $p \leq 0.001$), thus supporting H3. In the face of uncertain future shocks, healthcare organizations' revenues will drop sharply due to large fluctuations in demand, and high fixed costs will become the number one risk factor affecting the stability and sustainability of healthcare organizations' operations. Under the government's budgetary constraints, cost adjustment is a desirable approach on how to ensure the sustainable supply of emergency resources and services within limited funds. Hospitals adjust their variable spending structure beyond fixed expenditures

and maximize the compression of non-essential, non-emergency variable cost expenditures through process improvements. Using limited budgetary resources to focus on addressing healthcare resource and service shortages in times of crisis is an innovative way for organizations to face unpredictable shocks and challenges. The results of this study suggest that cost adjustment can positively impact the financial resilience of hospitals.

4.4 Financial Informatization and Financial Resilience

According to the results of the study, H4 is supported that there is a positive correlation between financial informatization and financial resilience, however, this correlation is not significant enough (β=0.203, t=1.554, $p \leq 0.001$). According to the hypothesis of this study, financial informatization is not only one of the most important ways to create diversified income, but also helps to improve the efficiency of services and simplify the process, such as the Internet hospital breaks through the limitations of time and space to provide uninterrupted diagnostic and treatment services and drug supply; electronic payment and health insurance settlement make it more convenient for patients to receive medical services; and the application of big data can provide data support for emergency management decision-making. However, according to the statistical results, the above factors can, to a certain extent, guarantee the sustainable operation of public healthcare organizations under crisis, enhance the redundancy and backup of healthcare services, and improve the robustness, adaptability and flexibility of hospital operations, but have a relatively limited role in improving financial resilience.

5. CONCLUSION AND POLICY IMPLICATIONS

This study adopts a quantitative research method, using structured questionnaires and purposive sampling to investigate the views of 205 managers and staffs of public hospitals on the four independent variables of the financial dynamic management ability of public hospitals: revenue diversification, flexible budgeting, cost adjustment, and financial informatization on the impact mechanism of financial resilience in public hospitals. The collected data is analyzed using Smart-PLS 4.1 software. The results of the study show that revenue diversification has a significant positive correlation with financial resilience. In other words, the stronger the ability of public hospitals to diversify their business development, the more the diversification of revenue sources will help to enhance risk resistance. Therefore, public hospitals can expand and develop other healthcare service lines and related businesses in addition to their traditional outpatient and inpatient businesses to create a resilient and sustainable operating model for healthcare. The results of the study also showed that cost reconciliation had a positive and significant impact on financial resilience. This result supports the notion that by purposefully adjusting variable cost structures, hospitals will benefit from proactive cost strategies that safeguard urgent and critical healthcare operational expenditures and prepare for an unpredictable future. Despite the assumption that flexible budgeting helps public hospitals to reduce their dependence on external financial assistance within the constraints of a limited government budget, and to prevent resource shortages and service disruptions caused by uncertain future risks through dynamic adjustments and redundancy in the budget structure; financial information technology is the future of resilience for hospitals, which enables them to adapt to changing environments and challenges, and to utilize their own resources and capabilities to make their operations in line with the principle of sustainable development. However, the statistical results show that the effect of flexible budgeting and financial informatization on financial resilience is weak in significance and the promotion of financial resilience is not obvious enough.

It is concluded that Financial dynamic management capabilities help hospitals resist, adapt and recover from adversity as quickly as possible by building robustness, adaptability and flexibility. Based on dynamic capabilities theory, integrating hospitals' inherent resources and enhancing

complex adaptive capabilities can help hospitals gain long-term sustainable value and achieve resilience. This finding provides valuable insights for building financial dynamic management capabilities and enhancing hospitals' financial resilience. This not only enriches theoretical understanding, but also provides practical guidance for public hospitals and similar organizations in complex and changing environments.

Although this study overcame some limitations of previous research. However, there are still some issues that need to be addressed and can be considered as possible directions for future research. Firstly, it is based on cross-sectional method. This study conducted a study on the factors influencing the resilience of public hospitals at the given times, and lack the consideration of changing external environment effect factors. Secondly, as an exploratory study, this study is based on the organizational level and aims to understand the internal influencing factors of financial resilience in public hospitals, lacking consideration for external factors such as political, economic, social, and legal environments. Thirdly, due to limitations in time and research scope, there has been no analysis of the differences in public hospitals of different sizes and regions. In future research, more scientific and reasonable resilience decision-making models can be developed based on these factors. Finally, although the three structures of expenditure diversification, flexible budgeting, and cost adjustment can explain the impact mechanism of public hospital resilience, but there still has potential effect factors that will expected to be identified in the future. The above will inspiration for future study.

Acknowledgement

The theoretical foundation and research framework of this study comes from my ongoing PhD thesis and I am grateful to Prof. Dr. Jamaliah and Assoc Prof.Dr. Balkish and Dr Yvonne for their guidance during my study regarding the theoretical framework, methodology and their helpful comments on the foundation of this paper. I also refer to the comments and thank for her pecient check and annotation of my friend Post Dr.Nailla. I would like to express my gratitude to all of them.

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ANALYSIS OF THE IMPACT OF FIFA WORLD CUP 2022 TO QATAR'S TOURISM SECTOR

Farhan Rafi Ramadhani, Tarida Marlin Surya Manurung*

Institut Bisnis dan Informatika Kesatuan, Indonesia

**Corresponding author: marlin1408@gmail.com*

Abstract

This study analyzed the impact of the FIFA World Cup 2022 on Qatar‟s tourism sector, focusing on the level of tourist satisfaction as a determinant of the outcome. Employing a qualitative methodology, the research draws upon a compilation of reviews from a hotel in Doha, interviews, and literature reviews as primary sources of data. In the short term, the positive effects are evident through a substantial increase in tourist arrivals to Qatar. Many tourists attended the World Cup, with a notable proportion expressing intentions to return for future tourism-related activities, attributing their decision to the memorable experiences they had in Qatar. The success of the World Cup is anticipated to garner global celebration, particularly in the GCC region, marking Qatar as the first Arab country to successfully host a major sporting event. Looking ahead to the long term, Qatar emerges as a premier destination for sports tourism, with international sports federations considering it for hosting their mega-events. This trajectory is expected to further bolster Qatar‟s tourism industry. For instance, the upcoming AFC Asian Cup slated for January to February 2024 exemplifies Qatar‟s growing stature in the sports tourism landscape. While Qatar's progress may not immediately surpass that of other GCC countries like the UAE, steady growth underscores its potential to narrow the gap in the long run. Overall, the findings affirm the success of the FIFA World Cup 2022, with high levels of tourist satisfaction indicating a promising foundation for Qatar‟s future tourism endeavors.

Keywords: *FIFA World Cup 2022, Qatar"s Tourism, Tourist Satisfaction*

1.INTRODUCTION

Qatar is a small gulf country with current population of 2.8 million. Out of that number, only a small of number of 313.000 is a native Qatari. Most of the population are immigrants coming from all developed third world countries. Qatar has now become the third-largest oil producer globally and has shown prominence in positioning itself as a crucial peace mediator amongst various groups and actors in the Middle East (Grix, et al., 2017). Qatar is one of the countries with the fastest growing economy in the world, this fact allowed Qatar to invest in building their country with little regards of money, improving the quality of lives of the residence of Qatar, while also cementing their status as a developed country in the face of the world. In 2010, Qatar was given the right to host the FIFA World Cup 2022. Although it was a controversial decision by FIFA, the country celebrated it with joy with their residence holding a parade on the streets and the government of Qatar began rushing to plan and build infrastructures that are needed. With unlimited amounts of resources, Qatar is ready to create one of the most memorable world cup in modern history, giving unimaginable memories and experiences for millions of tourist and fans that will visit the country

during the tournament.

Methods

Methodology refers to „the principles underlying particular research approaches‟, and is distinct from methods, which are „ways of collecting data‟. Methodology determines a method for researchers to produce data for analysis (Mertens & Hesse-Biber, 2017)

The research of this thesis will use the method of "Qualitative.". Because qualitative research is research that elicits participant accounts of meaning, experience or perceptions. It also produces descriptive data in the participant‟s own written or spoken words. It thus involves identifying the participant‟s beliefs and values that underlie a phenomenon. The qualitative researcher is therefore concerned with understanding rather than explanation; naturalistic observation rather than controlled measurement; and the subjective exploration of reality from the perspective of an insider as opposed to the outsider perspective that is predominant in the quantitative paradigm. As such, a qualitative study is concerned with non-statistical methods and small samples often purposively selected. qualitative research addresses the research questions concerning „how‟ and „why‟ and allows a researcher to understand the context, phenomena, and experiences. From this definition, you should understand that it is not easily possible to put the answers of „how‟ and „why‟ into numbers to understand the phenomena, context, objects, and experiences. However, getting answers to those „how‟ and „why‟ or any other questions are essential and practical because those answers can extend the current knowledge, enrich existing literature, and further develop our understanding. So, what is the method, in general, that you should adopt/apply in your thesis or research paper in answering the questions of „how‟ and „why‟ or any other questions when you found it is not possible to easily put the answers in numbers? In this regard, the answer is that you should adopt qualitative research. (Islam & Aldaihani, 2022)

Qualitative method is a compilation of method to analyse and understand more about the meaning of an individual or a group in their place as a humanity or social problem (Poth & Creswell, 2016). In this research, qualitative method is use as a way to better understand the impact of 2022 FIFA World Cup for Qatar's tourism sector. The results of the research hopefully can shed a light whether the FIFA World Cup will bring a good or bad impact. In this qualitative research, the writer will take sampling from hotel review and interview, both of which will then be analyze using Qualitative Data Analysis. Qualitative data analysis includes the interpretation, identification, and examination of patterns and themes in textual data and determines how these themes and patterns help understand an issue or phenomenon in a deeper way for answering the research questions at hand (Islam & Aldaihani, 2022) Once the writer done that, the writer will put the analysis report as a thesis result. So, the writer felt that this research is sufficient enough to be called qualitative research.

Data Collecting Method

1. Interview

Interview is a way for specific task, to try to get relevant information related to that task by communicating face to face. Interview has been used since the beginning of recorded history as a way to gain information and to improve the knowledge of mankind in general.

Questions will be asked from the interviewees regarding their experience in staying in Qatar during the FIFA World Cup 2022. The best way of interview for this research is Semistructure interview, in which the writer, as the interviewer, can openly find the problem and give unstructured questions to interviewees suited to the situation and condition present while not going out of topic and still

get the relevant information needed.

The writer will choose respondent for the interview that can give answer relevant to the researched topic. The writer will visit stadiums at the day of a match, so all the people around stadiums will come specifically to watch the match, thus can give relevant answers. The writer will also choose a respondent from the hotel the writer worked at, the writer will choose a respondent that stays for more than 3 days so he/she can have a valid answer to give.

2. Review on Email

As the writer will work in a hotel based in Doha, Qatar during the World Cup, the writer will take the opportunity to review the data based on the review that the fans give during their stay on the writer's hotel. The fans will write the review after clicking the link automatically send by the Hotel email after the fans checked out. This data is not only reliable, but accurate to a degree where it shows what the fans really feels regarding the FIFA World Cup event in Qatar and the quality of service that we provide for them.

The writer knows for a fact the primary data will be valid, as the person who will write those reviews are a tourist that came to Qatar specifically for the FIFA World Cup, as Qatari immigration only opened doors to World Cup ticket holder. Those with the tickets will have to stay in a hotel in Qatar, including the hotel the writer worked at.

Data Processing

After all the data is compiled, the data is then sorted and analyze, so that the result can be reached for this research. The processing of data will use the qualitative method that requires 3 steps:

1. Data Reduction

A process of choosing the data, main attention will he given to simplifies, abstraction, and transforming raw data that collected from the field.

2. Data Presentation

Data presentation is a bunch of data that has been processed that will be studied for the result and its conclusion. In this research, the writer use thematic analysis method

3. Conclusion

Conclusion is the result of the data that has been analysed.

Result and Discussion

The Hotel the writer worked at sent out around 1000 email to tourist that stayed with the hotel. Out of those, the writer got 200 valid reviews, that is 20% respond. The writer had filtered them. All of the 200 is valid according to the respondent criteria that the writer had set.

The tourist that participated in the review came from different nationalities, the writer counted 20 different nationality from 178 review that was able to be identified. Most came from Latin America, a continent full of football ultras. The single most country to contribute is Saudi Arabia with 30 reviews

Nationality	Review	Percentage
Saudi Arabia	30	15%
Ecuador	22	11%
Brazil	22	11%
Argentina	19	9.5%
Mexico	15	7.5%
United States	11	5.5%
England	9	4.5%
Croatia	7	3.5%
Tunisia	6	3%
India	6	3%
Israel	4	2%
Germany	4	2%
Australia	4	2%
South Korea	4	2%
Tanzania	4	2%
Singapore	3	1.5%
Poland	3	1.5%
Netherland	2	1%
Canada	2	1%
Japan	1	0.5%

Table 4.1 Nationality and Review Percentage.

Out of those 200 reviews, 189 reviews are positive, a total of 94.5%. 7 review is neutral, and 4 negative reviews. That figure shows the absolute truth, that most tourist are satisfied with the experience that they had during their stay in Qatar. The writer acknowledges the fact that 94.5% is a tremendous amount of positive review.

Positive Review	Neutral Review	Negative Review
189 Review (94.5%)	7 Review (3.5%)	4 Review (2%)

Table 4.2 Result of Review

There are no distinct differences between the long stay and short stay tourist, with almost all positive review. Tourist from South America gave a whopping 100% positive review, while European tourist were a bit more critical. With 2 neutral review each from Germany, England and Poland, and 1 neutral review from Japan. 2 bad review each from Saudi Arabia and India. From 189 positive review, 24 mentioned great and reliable transportation system, 87 mentioned that they will be back, 156 mentioned that they had memorable memories, and 187 think the World Cup was a success.

Positive Factor Mentioned	Percentage
Good Transportation	12.69%
Will return to Qatar	46.03%
Memorable Memories	82.05%
Successful World Cup	98.94%

Table 4.3 Positive Factor Mentioned in Percentage

But, looking at the table above, there is a concerning amount of people who didn‟t mention anything regarding the transportation and only 46.03% mention that they will return to Qatar. The writer was intrigued and dove deep to find the answer to why. The writer found that although Qatar transportation system is modern and free, promising to provide a comfortable and hassle-free transportation system, the writer found a few issues such as congestion and too crowded train and station. Particularly, congestion happened during a big match game, the queue in the station could stretch for half an hour long, giving a negative experience to tourist. This is evident as the writer analyse those who didn‟t write reviews regarding the transportation, most of them attended a big match game, including the final. In the final, the congestion in the Lusail station last for almost 2 hours. While those who wrote good reviews regarding the transportation were those who watched a smaller nation play. The writer thinks that despite this, from the writer‟s own experience, the transportation system in Qatar, particularly in Doha, is adequate enough for tourist and to support tourism. But, like any new development, it will take time and effort to make everything go seamless. When you put more than 1 million more people in a city occupied by half a million residents, any shortcoming is to be expected. It is in the writer personal opinion that sometimes when people had a good vacation trip, they tend to remember more about their destination and things they do there and less than how they get there.

The other one is the "Will return to Qatar" mentioned in the review, it is particularly interesting for the writer because almost all of the review are positive, so why only 46.03% mentioned that they will return to Qatar? Well, as they come for the World Cup, there is a hesitation from them to come back for solely tourism purposes. Though, 46.03% is a good number, almost half of them. If we account the 1.4 million visitors during the world cup, then there are around 644 thousand tourists, still a good number. The writer personally thinks that the number of tourists that will be back to Qatar is more than the data the writer got. It is true that there is a sentiment that this is only seasonal, but if we look at South Africa and how their tourism improves steadily since the 2010 World Cup, Qatar has a very good chance in keeping their momentum because the groundwork is already very strong. The writer has a theory regarding this, based on South Africa; the impact will immediately be felt after the World Cup, and then there will be a slight decrease, and eventually a steady rise in number of visitors for tourism per year, as Qatar successfully put itself in the world tourism map.

According to the review that the writer had thoroughly filtered, the writer can say, that the FIFA World Cup 2022 has been a great success for Qatar. Most of the tourist went home with good and unforgettable memories, while many also want to come back sometimes in the future.

What makes them so satisfied with Qatar? The writer interviewed tourist that are willing to take part, with a simple question. Their answer will be explained in detail below.

Respondent	Gender and Age	Country of Residence
Respondent 1	Male / 28	England
Respondent 2	Male / 37	England
Respondent 3	Male / 68	England
Respondent 4	Male / 25	Australia
Respondent 5	Male / 49	Germany
Respondent 6	Female / 24	Tunisia
Respondent 7	Male / 22	Pakistan
Respondent 8	Male / 29	Canada
Reapondent 9	Male / 27	Canada
Respondent 10	Female / 55	France

Table 4.4 Detail of Interviewed Respondent

First question that the writer asked was, **"Why come to Qatar? Which national team do you support?"** the motivation behind this question is to know why they come to Qatar and which particular team they support for the World Cup. The writer met respondent 1, respondent 2 and

respondent 3 before the match between England VS France in Lusail Metro Station.

Respondent 1 answered *"Because football is coming home this year! We want to watch it when it happens."*. Respondent 3 gave a more detailed answer *"We support England. We come here to just have a look around, enjoy the football, and enjoy the city as well. This is the first time we'll get to see an Arab country welcoming us this warm*.". As mentioned, the main motivation of people to visit Qatar during is to support their national team or the team they like. In respondent 1, respondent 2 and respondent 3 case, sadly, football isn‟t coming home and England was beaten by France by 2 to 1 in the Quarter Final.

The second question that was asked was, **"What do you think about Qatar so far?"** for this question, respondent 8 and respondent 9 from Canada shared their thoughts. Respondent 8 and 9 stayed at the hotel the writer worked at. The writer had the chance to interview them both during their free time. Respondent 8 answered *"Oh it's a lot better than we expected. Smooth and cheap transportation, magical hayya card, alcohol availability, nice people around.*
Beautiful city too. Exceeding my expectation.". Respondent 8 answered *"One of the best countries so far. This is the first time Canada play in the World Cup since God knows how long, so this is special for us. Qatar made it even more special with everything running smoothly and perfectly."*

The third question that was asked was, **"Do you find any difficulty during your stay so far?"** for this question, respondent 4 and respondent 6 offered their answer. Respondent 4 answered with *"Not at all! Everything went smoothly! The transportation itself is a wonder, driverless metro? Sounds like a science fiction movie haha! But the transportation system is well connected from buses to metro, getting around the city of Doha is as easy as it can get."* While respondent 6 answered with *"There is no difficulty. Everything is very well made and thought off. Wonderful job they've done."* Both of the answer intrigued the writer. Qatar spent billions of dollars to built the metro and revitalize its buses system, and it proves highly successful. The writer himself experienced the beauty of Doha public transportation, literally takes you anywhere in Doha with a cheap price or for free for Hayya Card holder (Hayya card is an access card that the tourist get when they bought a World Cup match ticket, it offers free transportation as well as a Visa to enter the country).

The fourth and final question was **"How do you rate your journey here in Qatar? Is there any chance to come back?"** for this question, respondent 5, respondent 7 and respondent 10 offered a very convincing answer. Respondent 5 said *"It's 10 out of 10, nothing to complain of whatsoever. The people are great, the city is amazing, Will definitely come back in the future."* Respondent 7 answered with "It‟s a solid 9/10, everything is great, cheap prices, lots of activities to do. I think Qatar has done a very great job. I would love to be back one day." And respondent 10 with *"It's 10/10! I've been following France in several World Cup. Compare this to Russia and South Africa, Qatar won by a lot. In Russia and South Africa, the transportation was bad, in Russia you literally had to take plane to others stadium! Here? Wow, Doha is fantastic, you can go to every stadium with metro! Easy and practical. Warm weather too, everything is perfect.*
Would definitely visit again!".

According to the data that the writer had laid out above, the writer can make out an outline for the analysis based on the theoretical framework that the writer had set. The writer will use thematic analysis as it is, according to the writer opinion, the perfect method. Thematic analysis deals with individual perception, and as the writer had set up a preconceived themes (theoretical framework) that the writer expected to find in the data, the writer will use deductive approach. The deductive approach a simply an approach that proves the writer theoretical framework to be correct or not.

The writer will first finds out the code data from the data above, code data means words that has the same meaning that comes up in each of the interview. After that, the writer will then generate themes from that code data to understand it more, generating themes will include reviewing it up to finds out whether they are a valid representation of the data.

The code and themes that the writer had identify can be find below:

Code	Themes
Warm Welcome Great Job Great Hospitality	Hospitality
Easy Practical Smooth Operation	Smooth Operation
Fantastic Will Come Back Everything is Great	Tourist Satisfaction
Easy Transportation	
Good Metro Sometimes Too Crowded	Decent Transportation System

Table 4.5 Analysis of Code and Themes

From code and themes above, the writer able to draw a conclusion. But first, the writer would like to write about the data. The writer collected the data from different sources in different places. All of the review data were collected by the writer using the writer‟s privilege as an employee in a hotel in Doha, the data can accurately set the level of satisfaction in the hospitality area. All of interview data were collected using a semi-structured interview, the writer had set the question beforehand, but the source were picked out according to the situation and condition. The writer can assure that all the data collected are reliable and from tourist that came to Qatar specifically to watch the World Cup, because all the entry point of Qatar were closed for others and only open for the World Cup.

During the analysis, the writer noticed that most of the words that were spoken by the sources during the interview were positives. The writer then picked them out according to the relevant themes to be able to correctly identify the relevancy to the topic the writer chose. The word “warm welcome” appeared during the first interview, and that is a very important indicator, when a tourist felt they were being warmly welcomed by the people in their destination, they tend to feel satisfied for the remainder of the journey.

A good hospitality a very important aspect in every kind of tourism, including sport tourism. And

an event as huge as the World Cup must set a high standard of hospitality. This is what the writer liked to understand, the standard of hospitality of the event. As the writer understands it, according to the data that the writer got, the hospitality standard met the expectation of tourist as stated by them during the interview. "great job" and "great hospitality" were mentioned quiet often and serves as a prove for the good hospitality delivered throughout the World Cup.

When an event is being held, one would wonder how smooth of an event it would be. The FIFA World Cup 2022 was a sporting mega-event, people from all over the world will be final judge of it. The question arose even before the event began. For the writer, in this thesis, the question found its answer. The word "smooth operation" appeared in at least two interview, the word "easy" appeared in almost all of the interview, the word "practical" mentioned in at least two interview.

From that, the writer concluded that the World Cup was a highly efficient event. It was an event that was smoothly run by a good planning and a great team effort from everyone involved as this thesis had found.

The writer then try to understand the level of tourist satisfaction from the tourist. In each of the interview, the writer asked whether the respondent would like to come back to Qatar or not. What the writer had found was an extraordinary number of satisfied tourists. The word "fantastic" highlighted a very high regard of satisfaction, and it appeared in at least one of the interview. The most important word, "will be back" appeared in almost all of the interviews. This is an undeniable proof of a high level of satisfaction among tourist in Qatar. Tourist satisfaction is the thing that should be achieved by any tourist destination and Qatar achieved that in style.

The result of the analysis above proved that the theoretical framework that the writer had set in the beginning of this thesis works. The writer theorises that the service quality of the FIFA World Cup 2022 will determine the customer/tourist satisfaction and directly affected the Qatar tourism sector. According to the data that the writer had analyze above, it is proven that the service quality of the FIFA World Cup 2022 was good and that resulted in a high number of customer/tourist satisfaction. It gives Qatar‟s tourism a good name globally and will improve the Qatar tourism sector positively. The only negative comment that the writer got was for the transportation that were sometimes too crowded but looking at how compact the event was, the writer think it is understandable and somewhat expected.

Out of 10 respondents, all expresses their happiness and satisfaction during their stay. Most of them praises the compactness of the World Cup, the first of its kind to be held in one city. This, proves that Qatar has been a very successful host in the eyes of the tourist.

Discussion

The result of this research revealed what the writer has been suspecting since the writer step foot on the first day in Qatar, an extraordinary quality met with awesome hospitality delivering something of a high degree of quality that seldom matched by others. What driven this result? The answer is surprisingly simple, money and compromise. Those two aspects met brilliantly and successfully delivered the wanted result. So, what are the impact to the tourism of Qatar? Will it be a negative or a positive impact? These kinds of study, as mentioned in past research, are largely based on hypotheses that can later be confirmed or disproved. As is the fact of the FIFA World Cup in South Africa in 2010, it has such a large impact for the tourism and economy in South Africa, it basically put South Africa on the tourism map. The same can be said about Qatar. The motivation behind hosting the World Cup can be none other than putting itself into the global tourism map, establishing Qatar as the main destination for sport tourism, as well as promoting itself for global tourism identification. The writer found it difficult to find past research regarding Qatar tourism sector as most research is outdated, with most research on the GCC area mostly focused on Dubai

as the most famous destination in GCC. To put it bluntly, Qatar tourism sector is mediocre at best, even among Arab countries. For instance, in 2017 Turkey recorded the highest number of tourism arrival (39.478 Million), Qatar only hosted 2.929 Million of tourist in 2017, about a third of Turkey‟s number. This figure shows that Qatar lack recognition as a tourism spot. Through the Qatar National Tourism Sector Strategy 2030, Qatar positioned its tourism sector as being key to diversifying the country‟s economy. The FIFA World Cup 2022 will not only put Qatar on the tourism map, but also as the forefront in the world of sports tourism. With the Qatar Government keep extensively building infrastructure to support the tourism sector. Millions will come for the World Cup, and Qatar had a tremendous task in giving them a place for them to remember, and experience to not be forgotten. The result can be seen in the arrivals number. In 2022, Qatar welcomed 2.6 Million of tourist, although still the lowest among the GCC, it shows significance upward trend from the previous year. In 2021, Qatar only welcomed 600 thousand tourists. As can be seen in below graph (Note that Saudi Arabia result included pilgrimage and Hajj tourist)

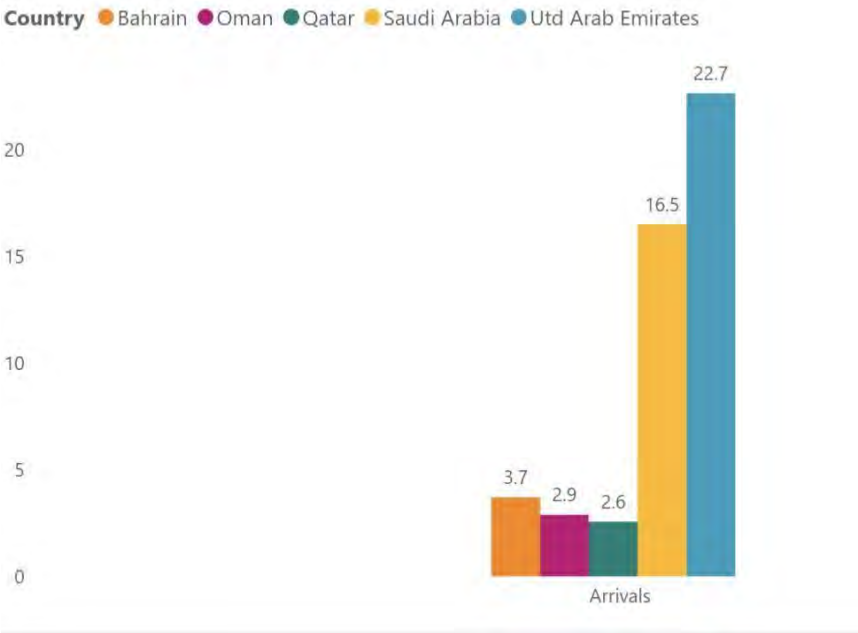

Image 4.1 Total arrivals of GCC countries in 2022

(UNWTO, 2023)

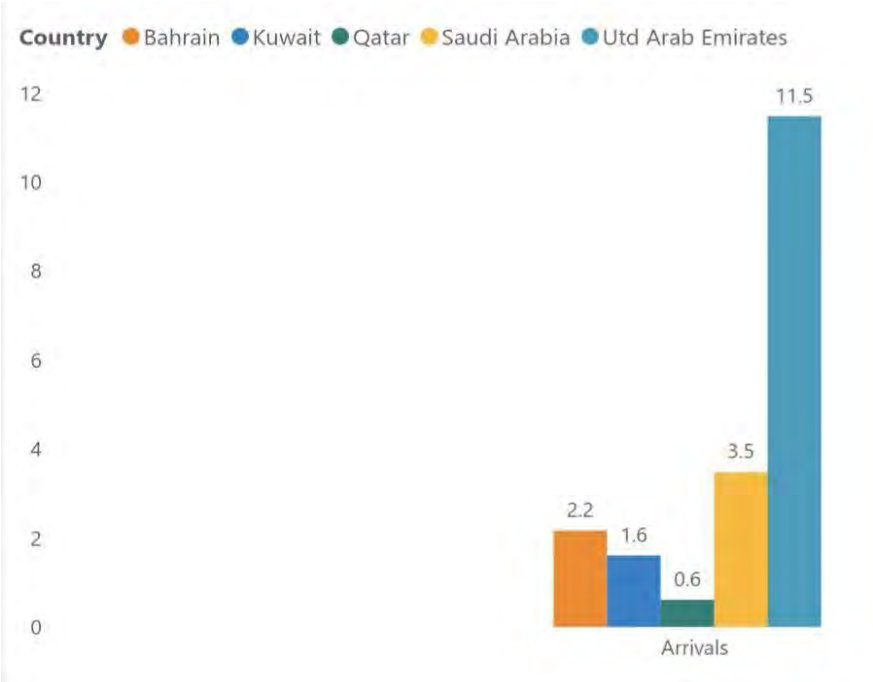

Image 4.2 Total arrivals of GCC countries in 2021

(United Nation World Tourism Organization, 2023)

An even more immediate result can be seen in the first quarter of 2023 directly after the FIFA World Cup. Qatar welcomed a total of 730,000 visitors in January and February 2023, marking a massive increase of 347 percent from the previous year. As many as 433,114 visitors arrived in March 2023 compared to 152,772 in the same month last year showing a surge of 183.5 percent. From the economical viewpoint, we can all agree that Qatar didn‟t host the World Cup for the money, they did so for the recognition and building an international name. Qatar will earn at least $6.4 Billion, an improvement from the 2018 edition in Russia, a high number but not even half of what Qatar spent. These kinds of results can only be possible because of the successful World Cup. This also proves what the writer had thought since the beginning; A successful World Cup, will lead to an increase for Qatar tourism. From now on, Qatar tourism sector can only go up from here. All the positive impact from the World Cup can still be felt for years and years to come.

5.CONCLUSION

The FIFA World Cup 2022 was significant success for Qatar, as evidenced by the overwhelmingly positive feedback from tourists. The event showcased Qatar‟s hospitality and efficient infrastructure, positioning the country as a leading destination for sport tourism.

The positive impact of the World Cup on Qatar‟s tourism sector is expected to be long lasting, with a surge in tourist arrivals already evident in the months following the event.

Qatar‟s successful hosting of the World Cup has not only enhanced its global reputation but has also laid a strong foundation for the future tourism growth.

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ADAPTIVE-INFILTRATIVE CULTURE OF TRANSNATIONAL *SALAFI* ZĀD AL-MA'ĀD PESANTREN IN PALEMBANG INDONESIA

*Munir[1], Fuad Mahbub Siraj[2], Ridwan Arif[3], Syahril Jamil[4], Muhammad Alfath Qaaf[5]

[1] Isamic studies of postgraduate, Universitas Islam Negeri Raden Fatah Palembang

[2] Philosophy and Religious Studies of Universitas Paramadina Jakarta

[3] Philosophy and Religious Studies of Universitas Paramadina Jakarta

[4] Islamic Family Law of Syariah faculty, Universitas Islam Negeri Raden fatah Palembang

[5]Arabic learning of Tarbiyah and teacher training Universitas Islam Negeri Raden fatah Palembang

**Corresponding author: munir_uin@radenfatah.ac.id*

Abstract

This research aimed to understand the characteristics of pesantren's culture, which is based on trans-national culture. It is motivated by the fact that trans-*Salafi* pesantren have developed in Indonesia nowadays. On the other hand, pesantren that existed in Indonesia for a long time are based on the local culture of the archipelago. The *Salafi*'s Islamic Boarding School, Zād al-Maʿād was chosen as the research site for that purpose. This study seeks to describe and understand the culture of trans-national *Salafi* pesantren in Palembang. The approach employed in this research is cultural anthropology with data collection tools in documentation studies, observations, and interviews. The data were analyzed holistically and comprehensively by reducing the data, presenting it, and verifying it using triangulation and contrast techniques. The finding of the study is that the pesantren has the characteristics of a transnational culture that adapts to local culture to maintain the existence of the *Salafi*'s movement in Indonesia. Based on qualitative analysis that the boarding school is also an agent of Islamic preaching in the spread of *Salafi*'s understanding and, at the same time, a center for the cadre of *Salafi*'s preachers from a young age. The *Salafi*'s network can use its program to organize various international programs.

Keywords: Culture, *Pesantren*, *Salafi*, Transnational

INTRODUCTION

The emergence of Islamic boarding schools in Indonesia has experienced rapid development (Arjiarna et al., 2021), with diverse sciences, learning systems, and distinctive educational cultures (Syafrawi, 2018), such as traditional pesantren, modern pesantren, Taḥfīẓ pesantren, tarekat pesantren, and other pesantrens (Angriani, 2019). Each of these Pesantrens highlights the characteristics of their individual Pesantren and the rise of "salafi" trans-national Pesantren in Indonesia and Palembang in particular. The establishment of "salafi" trans-national Pesantren in Palembang is a new phenomenon that requires further investigation. Its appearance in the world of Pesantrens in Palembang is steeped in local culture. Zād al-Maʿād Pesantren in Palembang is one of the trans-national Salafi Pesantrens in Palembang that has seen tremendous growth in the number of students interested in studying at the Pesantren and it is still growing.

The researchers goal to disclose the characteristics of the Zād al-Maʿād Pesantren's culture and philosophy, as well as the urgency of this pesantren in a larger context, by observing the

phenomena of the Zād al-Maʿād trans-national boarding school's quick expansion. A system of knowledge, order or law, attire, language, student behavior, and the value system used in Pesantren are all examples of culture in this context.(Fikri et al., 2021)
The Zād al-Maʿād Pesantren is viewed anthropologically as a unique cultural manifestation that is shaped by the primary person and supported by existing social structures and organizations (Huda & Ghozi, 2021). This institution will also serve as a center for the preservation and development of culture, which is held to be a source of truth and goodness (Atmaja, 2020). In an effort to preserve and develop culture, aspects of culture are very much a concern and orientation of subsequent social movements (Darmawan et al., n.d.). In an effort to preserve this culture (Chan et al., 2020), it is necessary to pay attention to the existing network (Suharto, 2018), including the patterns of relations between 'outside society' and 'inside society' of Zād al-Maʿād Pesantren. This means that,the unique of excellent, the Zād al-Maʿād Pesantren is seen as part of the 'Trans-national salafi society' in general. (Salaebing, 2019) On the other hand, the Zād al-Maʿād Islamic Pesantren is seen as a 'local salafi community' in the context of its identity as a 'local salafi community' (Kurzman & Ernst, 2012), Zād al-Maʿād Pesantren is seen as having its own authority in determining the direction of its movement and cultural change, including efforts to adapt the existing local culture. (Başmisirli, 2017). Even so, a culture is still based on a strong philosophy and has its own meaning that is understood by the people who support it, as will be described in this article.

LITERATURE REVIEW

Many experts from both inside and outside of the country have conducted research on *Pesantren*. Dhofier (2011) studied the *Pesantren's* tradition and presented the results of his research in a book in 1985. The study concentrated on the Tebu Ireng *Pesantren*, the Tegalsari *Pesantren*, the Termas *Pesantren*, and a number of other large *Pesantrens* in Java and Madura in this case. With a sociological-anthropological approach, the study explored the function of the kyai in maintaining and developing traditional Islam in Java. In this study, Zamakhsyari revealed that traditional *pesantrens* in Java have undergone a significant change as a process of responding to the social changes that were taking place, and with this process, it seems that this is the root of the resilience of traditional *pesantren* in Java.

Nurcholish Madjid (1997), in his book, *Bilik-Bilik Pesantren*, analyzed the challenges encountered by the Pesantren in general, including the necessity to reformulate Pesantren's goals, value systems, and social patterns. However, in the book, it is revealed that the book is the result of a rough analysis of the data and more of his personal experience as a travel portrait. Nurcholish's writing highlighted how *Pesantren*'s situation occurred in a "critical era" of the time, and therefore some positive efforts were required to ensure that *Pesantren* were not abandoned by the community and they could continue to play an active role in national development.

Mastuhu **(**1994**)** researched the *Pesantren* education system by taking a sample of the large Pesantrens on the island of Java, with the focus of his study on all the elements and components of Pesantren in general in the context of national education. His dissertation, which was later published as a book with the title "The Dynamics of *Pesantren* Education System," investigated the *Pesantren* education system by taking a sample of the large *Pesantrens* on the island of Java. Mastuhu concluded from his research that *Pesantrens* must immediately improve themselves in order to reorganize the education system that has been in place thus far because the concept of education developed in *Pesantren*, according to him, is less responsive to national development needs. Mastuhu employed an anthropological-sociological phenomenological-symbolic interactionist method in his study.

Munir (1999), in his thesis entitled "*Pesantren's* Education Curriculum" (a case study at the Sriwangi *Pesantren* - OKU - South Sumatra), focused on the *Pesantren's* education curriculum in terms of educational philosophy and its interaction with the *Pesantren*'s supportive community. *Pesantren's* curriculum, according to this nation, is an expression of the community's principles that sustain *Pesantren*. *Pesantren* constantly interacts intensely with the supporting community through the empowerment of its alumni, so that the community's support can be controlled by the *Pesantren,* and conversely, the support from the community may continue to monitor the *Pesantren*'s development through its alumni. As a result, the *Pesantren* and the supporting community are inextricably linked, and the *santri's* basis for this *Pesantren* could be identified.

Budi Sulistiyono et al. (2007) explored the function of big *Pesantrens* in East Java in building scientific traditions by title "*Pesantren*, Structural Linkages, and Historical Experience." This research succeeded in mapping *Pesantrens* based on the level of their involvement in the formation of the *Pesantren's* tradition in East Java, as well as their individual features. *Pesantren* have been shown to be capable of contributing to the development of Islamic traditions in the community surrounding them, and their presence is well-known in the area where the *Pesantren* is located.

Zulkifli (1999), in his study entitled "Continuity and Change in Traditional Islam in Palembang", emphasized the issue of continuity and change in traditional Islamic traditions, which can be summarized in terms of fiqh, tauḥīd, and *tasawwuf*. This study was successful in demonstrating that the three parts of Islamic teachings are still maintained, with their core in old mosques in Palembang. Zulkifli has also conducted research on Ulamāʾ, the Yellow Book, and the White Book" among South Sumatran scholars in the twentieth century. His research discovered that Muslim scholars (*'ulama'*) of South Sumatra, including *Pesantren's 'ulama'*, have kept on the tradition of book's writing.

Munir (2011) in his research entitled "The Continuity and Change of *Pesantren's* Tradition (Study of the Network of *Pesantren's Kyai* at OKU Timur, South Sumatra) analyzed the continuity and change in the tradition of *Pesantren* that emerged in South Sumatra. In this study, he focused on the students' inheritance of the Javanese *Pesantren's* tradition and the development of the South-Javanese tradition in response to local community demands. This is due to the fact that *the Pesantren* is surrounded by a Javanese transmigration community. *Pesantrens* are thus agents of Javanese-Islamic culture, which they regard as very important.

Munir (2010), in his study entitled "Characteristics of the *Yasiniyah* Method and Its Implications on the Behavior of Learners/Santri)", described the learning technique for reading the Qur'an developed in the East OKU Santri community. According to this research, the *Yasiniyah* technique is a continuation of the East Java tradition of the Qur'anic learning system. After coming into contact with local culture and responding to community requests, this practice evolved into a Javanese-South Sumatran *Pesantren* culture.

Munir (2007) in his study entitled "The Naqsabandiyah Khalidiyah Order (Study of the Origin, Teachings, and Its Spread in East OKU Regency, South Sumatra)." addresseed the characteristics of the Naqsabandiyah Khalidiyah *Tarekat* in the East OKU community which originally come from Java tradition, especially East Java. Even though the *tarekat* teachings and traditions have been in contact with the indigenous culture of South Sumatra, there appears to be no change or development in this situation. The tarekat's teachings are given in Arabic with a Javanese translation, as the original source of the tradition.

Munir and Nyayu Khadijah (2017), in their research entitled " *Madrasaẗ-Pesantren* Culture" analyzed the peculiarities of *madrasaẗ* culture in the Sabilul Hasanah Banyuasin *Pesantren* and the

Nurul Islam Seribandung *Pesantren* in Ogan Ilir, South Sumatera. The study found that the *Madrasaẗ-Pesantren* culture has unique and distinct characteristics compared to other Pesantrens. Different cultural roots, notably Javanese and Sumatran cultural roots, are responsible for the disparities.

However, there has been no single effort to conduct a study on the "*Salafi*" *Pesantren* culture in Palembang City, which is founded on trans-national culture. As a result, the study of Palembang's "*Salafi*" Pesantren culture is novel. This research is significant because the phenomenon of "*salafi*" Pesantrens in Palembang City began to manifest itself and appears to be a new trend in the form of educational institutions with Middle Eastern roots. Therefore, this research is both intriguing and relevant.

1. METHODOLOGY

A cultural anthropological method was employed in this research. The research subjects totaling 40 informans were the founders of the foundation, the leaders of the Pesantren, the students, the teaching staff, the education staff, the supervisor/head of the dormitory, the principal of the school/*madrasaẗ*, the kitchen administrator, and the security officer of the Zād al-Maʿād Pesantren in Palembang, and several parents/guardians of students/students, as well as the orderliness of dormitories/cottages. Documentation, observation, and interviews were utilized to obtain data. Data analysis has been done holistically and comprehensively since the beginning of the data collection procedure in the field. A holistic qualitative analysis was done by minimizing, showing, and confirming data.

2. RESULT AND DISCUSSION

A. Cultural Characteristics of the Trans-national Pesantren Ma'had Zād al-Maʿād, Palembang

The culture of the Ma'had Zād al-Maʿād Trans-national Islamic *Pesantren* has a complexity that contains elements of culture proposed by L. Cronk (1999), namely the system of knowledge, belief, art, law, morals, customs, and all other capabilities and habits acquired by man as a member of society. The legal order applied in *pesantren* is a system of norms or rules, also known as customs, as expressed by Philip Mayer, namely *kindship or domestic institutions* (Mayer, 2013). The change in culture, i.e., from Middle Eastern culture to a characteristic of *pesantren* culture, is due to human nature that develops life, encouraging the culture that surrounds it to change as well as stated by Julian Haynes Steward in his theory, "*Theory of Culture Change."* (Steward, 1972)

The Pesantren's curriculum system combines two types of knowledge: non-religious sciences (human knowledges) and Islamic religious sciences (revealed knowledges). Non-religious sciences included civic education, Indonesian language, mathematics, natural sciences, and arts & culture, as defined by the Minister of Religion affair's regulation number 13 of 2014 in article 28 paragraphs 1 and 2. The Islamic religious sciences in this *Pesantren* include themes that are in line with the Minister of Religion Affair's rule number 13 of 2014, as well as subjects that are in accordance with *Salafi*'s curriculum. The Qurʾānic sciences, *Tafsīr, Ḥadīṯ, Tawḥīd, Fiqh,* Ethic, Islamic History, and Arabic are among the subjects covered by PMA number 13 of 2014. *Manhaj, farāʾiḍ, and da'wah* have been added to this *Pesantren* unit.

The rules or legislations that govern this *Pesantren* are written down in the form of articles of law. The regulations and disciplines of the student (*Santri*) Trans-national *salafi Pesantren*, Zād al-Maʿād in Palembang, which has six chapters and 36 articles, provide the norms and regulations of this *Pesantren*. *Santri* is the subject of Chapter I, which has seven chapters. There are 17 articles in Chapter II about the guidelines for student's daily activities. Four items are included in Chapter III, which covers the details of various rules. There are two articles in Chapter IV about violations and

kinds of violations. Chapter V has four topics on punishment, forms, and criteria for punishment. As a conclusion, Chapter VI has one article (Ma'had Zaadul Ma'ad Palembang, 2021). (Document of Zaadul Ma'ad Pesantren 2021)

The students of Zād al-Maʿād, a transnational *salafi Pesantren*, follow the regulations or laws that govern the *Pesantren*. The student's behavior at this *Pesantren* includes greeting among students, teachers, guests, staff, and the community around the boarding school. They are kind, polite, and respectful attitude toward both *pesantren* residents and people outside of the *pesantren*. Student's greetings, which include the words *aẖī* for males and *uẖtī* for females (observation on September 18, 2021). This is meant as a way of honoring the elders and loving the younger. Kissing the hands of teachers or the senior *santri* is not required in *Pesantren* student's behavior. Students in this *Pesantren* are also not permitted to bow down when passing in front of the older persons or while they greet their teachers (Akhiruddin, personal communication, 15 September 2021).

In wearing clothes, Zād al-Maʿād *Pesantren* has a distinct style that is controlled by the student's dress code. The *pesantren* foundation has organized a particular uniform wear on learning. It is compulsory for female students to wear veils, socks, and gloves while they are in public locations. Whereas male students are demanded to wear non-Islamic pants, materials, and robes that are *isbal* (not longer than the ankles) in *santri* activities, both inside and outside of the classroom. T-shirts with football clubs, player names, depicted crosses, or non-Muslim product logos are not permitted to be worn in this *Pesantren* (documentation and observation on September 18, 2021)

The residents of Zād al-Maʿād *pesantren* use Indonesian as a medium of instruction in the learning process, both in non-religious sciences and Islamic religious sciences. Only students at the top level, or *ʿulyā*, specific programs for *da'i* cadre and Arabic learning use Indonesian as the medium of instruction on acquiring both non-religious sciences and religious sciences at the Zād al-Maʿād *pesantren*. Although it is currently at a limited level, Arabic is used as the medium of daily communication for the students in this *Pesantren* (A. Fitriansyah, personal communication, 14 September 2021).

The learning activities, athletics, arts, and recreational activities of the Zād al-Maʿād *pesantren*, Palembang have a special character. Educators in this *Pesantren* participate in solitary, group, and *murāja'aẗ* (repeating rote) learning exercises. This pesantren also has a unique character in the selection process for new student admission, i.e., interviewing prospective students as well as their parents. Among the sports activities of *santri* in this pesantren are archery, swimming, and football. *H̱aṭ, Ṭilāwaẗ al-Qurʾān, and Muḥāḍaraẗ* are some of the arts programs designed for the students. Computers for male and female students, culinary, sewing, and catering programs are among the extra-curricular activities offered at this *Pesantren* (I. Hajar, personal communication, 16 September 2021; *The Providing Social Services of Zād Al-Maʿād Pesantren to the Community*, 2021).

The Zād al-Maʿād *pesantren*'s value system is similar to that of Pesantren in general. This means that the established rules must be followed, and those who break them will face any consequences. The punishments that apply in this *Pesantren* have been altered to comply with applicable government legislation; nonetheless, punishments in the form of beatings as a form of Islamic religious teachings, such as beatings on the palms, continue to apply. This *Pesantren*'s value system prioritizes not just punishment, but also honors or awards for students who excel. The type of achievement is varied, such as the ability to do work ahead of schedule. Students who memorize brief *āyāt* or verses of the al-Qur'ān can surpass their duties and receive rewards such as coaching money, books, or coaching from more experienced teachers/ *ustāḏ*, vacation facilities, and so on (A. Dzar, personal communication, 7 September 2021).

The change in culture is to maintain order among its members caused by invention, diffusion, loss of cultural elements, and acculturation. (Liebkind & Kosonen, 2020) In this case, acculturation does not occur in the *pesantren* culture of Ma'had Zād al-Maʿād, but the change takes the form of an infiltrative- adaptive, accommodating the rules in the Regulation of the Minister of Religion and infiltrating the content of the *salafi manhaj* in the materials of learning. Adaptive and infiltrative are the strategies of the *salafi* as agents of preserving their traditions from their parent traditions to remote areas of the archipelago, and change as adaptation in maintaining their existence in society. The role is basically a form of the function of the agent of continuity and change, as proposed by Fram & Weiler (Setianingsih, 2015).

B. The Cultural Philosophy of the Trans-national Salafi Pesantren, Zād al-Maʿād Pesantren, Palembang

The knowledge system at the Zād al-Maʿād *pesantren* is a truth based on the Qur'an and al-ḥadīṯ (A. Fitriansyah, personal communication, 14 September 2021). This is a common tradition in salafi's tradition (Evstatiev, 2021) (Poljarevic, 2016). The knowledge system is presented based on knowledge that must be possessed by students according to their levels in accordance with their age and gender. The hallmark of the Trans-National "*Salafi*" *pesantren* is that it focuses more on educating students so that they have a good and straight understanding of Islam in all aspects, especially in matters of *aqidah*, worship, morals, and *manhaj* with standards according to Allah's and Prophet Muhammad orders and based on the understanding of the best generations. This orientation can be seen in its educational program, which provides specifically in terms of producing preacher's cadres (*da'i*), '*ulama'*, and al-Qur'ān's memorizer for students with Arabic language skills. Through mastering the Arabic language, it is hoped that they will be able to study Islamic religious sciences sourced from al-Qur'ān, al-Ḫadīth, and Arabic books by the *salafi* preacher, or *al-ṣāliḥ*, produce the memorizers of al-Qur'ān, and educate the *Rabbani* generation. In addition, in order to educate the nation's life, it can be in the form of participating in the success of the compulsory education program so that all citizens can continue their education or reduce the dropout rate.

In the of *Zād al-Maʿād pesantren* of Palembang, education is also regarded as an important thing and fundamental to give education on the right *ʿaqīdaẗ*, build strong beliefs, adhere to straight and worship according to the demands of the Prophet (pbuh) as well as *muʾāmalaẗ* and socialize in accordance with Islamic religious law as taught by the Prophet (pbuh) and practiced by the companions and the pious of the early generation (*salaf al-ṣāliḥ*). The behavior of students includes religious daily activities, social life as well as towards themselves. The religious behavior of the students is the behavior of the students in carrying out worship activities, prayer activities, or fasting. Judging from the aspect of prayer activities, the students of the *Zād al-Maʿād pesantren* have shown their independence and sense of responsibility to Allah Almighty.

The social behavior of students is the behavior or actions of students in interacting with other people. In general, the behavior of the students of the Trans-National *Salafi*, Zād al-Maʿād *pesantren* in the context of social interaction shows common behavior among *pesantren*s in general. They seem to be friendly, polite, and courteous, both to students, the teachers in schools and dormitories, as well as to education staff. While individual/ personal behavior is behavior that concerns self-interest without being directly related to other people. In general, the personal behavior of the students of the Zād al-Maʿād Pesantren shows modesty. During this research, the researchers got the hospitality of the students in interacting, greeting, and shaking hands. The smiles they spread amongst each other seemed to be reassurance to each individual.

Even though they believe that the salafi's are the most correct, the salafi's community still gives a good welcome to other communities, this is part of the image in order to get social affirmation.

(*Salafism and the State: Islamic Activism and National Identity in Contemporary Indonesia, by Chris Chaplin in: Bijdragen Tot de Taal-, Land- En Volkenkunde / Journal of the Humanities and Social Sciences of Southeast Asia, Volume 178, Issues 2–3 (2022)*, n.d.)

The clothes worn by the students of the Zād al-Maʿād *pesantren* have two meanings. First, clothes must cover the *nakedly* of both men and women. Male *nakedness* extends from the navel to the knees, whereas female *nakedness* encompasses the entire body. Clothes are not merely meant to cover the *nakedness's* borders; they are also not tight. Second, the clothes that covers the *nakedness*s does not resemble clothes worn by Jews (i.e., clothes that does not extend the ankles). Furthermore, the clothes' that are prescribed for them are not supposed to be described as *zuhd* in a literal sense and appear "tattered" in contrast to what is appropriate. Meanwhile, it is strongly advised for women to wear clothes that cover their entire body with thick and dark materials, particularly black colour, except when performing prayer, in which white clothes are suggested. At the Zād al-Maʿād *pesantren*, the significance and substance of clothes are intended as the actualization of authentic Islamic teachings in terms of dressing. It shows that women's clothing is considered as the most powerful symbol to confirm the salafi identity, so there is no process of adaptation to local culture. (Sunesti et al., 2018)

Zād al-Maʿād pesantren has certain words for which it has a special meaning. When a student welcomes his or her teachers or education personnel by using the word '*ustāḏ'*, for example, it has the connotation of respect and honor. When students use the words *aẖī* or *uẖtī* to welcome one another, it implies a respectful attitude. It is a greeting that is often used in daily life and conveys the value of respect. On the other hand, teachers and staff use the words *aẖī* or *uẖtī* to express flattery and praise. (Wahib, 2017) In general, there is a different greeting that is called by the local students. The greetings for male students are *mas, kang, cak,* and the greetings for female students are *mba* and *neng* (Khotimah et al., 2020).

The nature and purpose of *santri* activities in sports, arts, and extracurricular activities are such activities carried out by the santri in order to increase their potential, which are founded on the principles of *salafi*-style Islamic beliefs. Pertaining the application of Islamic values in sports is santri should not wear short pants for sports such as football; instead, pants that cover the *nakedness* (trousers or long sports training) must be worn. Sport is also not an activity that takes up a lot of time or an excessive amount of time. Hence, sport at this pesantren can be considered "Islamic."Besides that, in this pesantren, santri carry out sports activities together in order to develop sportsmanship values among students.

The implementation of system values in the *Zād al-Maʿād* is regarded as a kind of worship ('Ibādaẗ). This is because it was based on an intention to imitate and practice the Prophet's (pbuh) advice, which was practiced by his companions. *Tawḥīd* (belief system), *šarī'aẗ* (religious law), and moral values are the value systems that are firmly held and maintained (ethics). These are sacred values with unique qualities, in line with *salafi*'s motto, "confirming *Tawḥīd* and spreading sunnah." (Abdullah & Mohamed Osman, 2018; Rajafi et al., 2020; Syamsir et al., 2021) (*The Learning Activities of Zād Al-Maʿād Pesantren*, 2021)

In the framework of Zād al-Maʿād pesantren, *tawḥīd*'s truth values are to believe in Allah, there is no one like Him. All *salafi* followers must still this belief in their children and apply it in their daily lives. People who support the Zād al-Maʿād pesantren, on the other hand, are labeled as heretics if they follow other belief systems (Chaney & Church, 2017). Related to this value system, it is obligatory for the *salafis* to avoid heresy pertaining to the understanding of divinity (I. Hajar, personal communication, 16 September 2021). To ensure this, Zād al-Maʿād pesantren only teaches selected *tawḥīd* books, which are written by *salafi* scholars who are believed to have a straight

understanding as taught by the Prophet (pbuh), his companions, and the pious early generation (salaf al-ṣāliḥ). The values of *tawḥīd are tawḥīd ulūhiyyaẗ, tawḥīd rubūbiyaẗ and, tawḥīd asmā' and ṣifāt.*The *salafi* believe that the Prophet (pbuh) had given example in all areas of life, and therefore imitating him is worship. As a result, all daily practices (*ʿamaliyaẗ*) should adhere to what the Prophet and his companions, as well as the *salaf al-ṣāliḥ* have taught and exemplified, both in terms of charity and worship. All things that are not taught by the Prophet as well as his companions are considered as heresy (*bidʿaẗ*), even though such practices appear to be consistent with Islamic principles (*The Providing Social Services of Zād Al-Maʿād Pesantren to the Community*, 2021). In different contexts, this becomes an obstacle to realizing a multicultural culture. (Baidhawy, 2010)

Strengthening monotheism and disseminating the sunnah is an inherent obligation for the *salafi* (Wiktorowicz, 2006). This is founded on the notion that the truth must be conveyed, especially for those with knowledge. Hence, it is mandatory for every *salafi* follower who seeking knowledge to carry out *da'wah* using a technique that should not be questioned because it is believed to have been used by the Prophet (pbuh) and his companions.

The *salafi*'s da'wah is not only for non-Muslims, but also for Muslims who are perceived to be stuck in heresy (*bidʿaẗ*). It is true that the *salafis* recognize that preaching to Muslims who are enslaved by heresy (*bidʿaẗ*) is more difficult, and therefore, they frequently face enormous obstacles from them. This might lead to "hostility" between the *salafi* and other Muslim communities (Marchal, 2009). As a result, the *salafi* must remain consistent and patient in order to achieve success in their *da'wah*.

Morality is an essential thing of Islam for the Zād al-Maʿād *Pesantren*. One of the apostolic duties of the Prophet Muhammad, according to him, was to improve human character. Moral perfection, according to the *salafis*, is an essential component of Islamic perfection. However, in reality, people's moral conditions, especially Muslims', are still far from the ideal state of morality desired by the Prophet. As a result, teaching, instilling, and preaching morals that are consistent with the Prophet's teachings and practiced by his companions, scholars, and *salaf al-ṣāliḥ* is an important aspect of the *salafi*'s da'wah. To achieve this objekctive, all *salafi*sts must follow the moral texts authored by *salafi* intellectuals (Wagemakers, 2016).

C. The Cultural Urgency of the Salafi Pesantren of Zād al-Maʿād in the Contemporary Islamic Context

The trans-national *salafi pesantren,* Zād al-Maʿād, Palembang serves as an agent for the transmission of *salafi*'s teachings and values which were before centered in the Middle East, and later spread to entire world, including Malay-Indonesian world. Despite this pesantren is located in Palembang, its sustainability value is mostly influenced by the Middle East culture (Suharto, 2018). The second role played by Zād al-Maʿād pesantren is as an agent of change. The *pesantren* of Zād al-Maʿād believes that, as an agent of change, it has responsibility and power to make some adjustments from the ideals that have been strongly held by its main tradition (*salafi wahabi*). Several components of culture have changed, or at least served as a model of trans-national cultural adaptation with local and national cultures depending on specific considerations, allowing *Ma'had* Zād al-Maʿād to survive and exist in society. Adopting the Islamic national education system as an educational model implemented in this pesantren is one of the change tactics in adapting trans-national *salafi* Islamic culture (Naupal, 2019)

With regard of the cultural side of the *Pesantren* of Zād al-Maʿād, this pesantren seeks to build a trans-national cultural identity which includes knowledge systems, clothing, language, law & order, traditions and value systems that are included as local culture in the Middle East to be part of the

Indonesian local culture. Thus, there is a cultural exchange between local Indonesians and local Middle Eastern cultures which are global cultures, to be known to each other by people who previously had no cultural contact. This is a characteristic of the modern salafi's groups (Ali, 2019).

Another technique used by the Zād al-Maʿād pesantren is to use advent technology such as radio, YouTube channels, and other social media to create trans-national culture that can be used all over the world by anybody as the media for the community to adapt or embrace *salafi* culture, which is the main teaching of this society. Thus, Palembang's culture, which was formerly a local culture, has become part to global culture through to the effort of *Pesantren* of Zād al-Maʿād. This is linked to the worldwide role of the *salafi* network (Abdullah & Mohamed Osman, 2018).

Initially, the local community held Asʾariyyaẗ school in ʿaqīdaẗ, Šafiʾiyyaẗ school in fiqh, and Ġazaliyyaẗ in sufism. By the presence of the salafi community, specifically Wahabiyyaẗ in ʿaqīdaẗ, Hanbaliyyaẗ in fiqh and Usaiminiyyaẗ in ethic, then the community's valuables and religious viewpoints expand and diversify. *Salafi* preachers, particularly preachers from Zād al-Maʿād Pesantren, Palembang, were responsible for this shift. International events are frequently held in Palembang city. People involved in the events were extremely diversified, because they come from various places in the world. Some of them come from Middle East, which has Arabia culture, social and language. Hence, Zād al-Maʿād *Pesantren* can play a supporting role in the success of these events, such as serving as a guide and interpreter at the Islamic Solidarity Games. There are 14 Arabic countries that followed the Islamic solidarity Games (Al Droushi, 2020) .

There is open engagement between the *salafi* community and the local community, even though it occurs in certain aspect, but it was still linked to the global community. This openness allows mutual understanding and engagement among society. The constant interaction of society's elements has resulted a reciprocity process, in which *salafi* and non-*salafi* have mutual needs and profits. The emergence of *salafi* education units, *salafi* communication media, and *salafi proportion* institutions, among other things, became crucial means for transformation. In the larger society, the *salafi* group appears to play a part in numerous facets of social life that are beneficial to themselves and the community (Faist, 2010).

As has been mention previously, the Zād al-Maʿād pesantren has played a number of roles. The pesantren has succeeded on establishing *pesantren* and a number of formal religious education institutions associated with the Ministry of Religious Affairs. What is being done is a type of adaptation and responsiveness to the community's religious demands on the one hand, and the community's actual need to formal education for their children in order to participate in many fields of employment as citizens on the other hand. *Zād al-Maʿād pesantren* has taken part in the development of the *da'wah* bureau regeneration program, which is considered to be capable of conveying *salafi*'s vision and mission in Indonesia. At the same time, it can answer community's response of present day's society through various media that they have created (on-line). Furthermore, the *da'wah* regeneration program aims to train *salafi* da'wah interpreters to fill religious events in mosque, prayer rooms, and other public gatherings throughout the community. They have also transformed various *mosque* in State-owned enterprises, Regional owned enterprises, and government buildings into hubs for promoting their beliefs in order to speed up the expansion of the *salafi* Islamic heritage. The Zād al-Maʿād pesantren accommodates national policies to strengthen the existence of its transnational mission.

The *salafi* people have taken role in various social institutions, including religious groups and institutions such as the ʿulamāʾ community, *da'wah* community, and other social communities. Meanwhile, Indonesian *salafis* began to create schools (*Sekolah Dasar | SekolahSunnah.Com*, n.d.;

Sekolah Menengah Atas | *SekolahSunnah.Com*, n.d.; *Sekolah Menengah Kejuruan* | *SekolahSunnah.Com*, n.d.; *Sekolah Menengah Pertama* | *SekolahSunnah.Com*, n.d.), *madrasaïs* (*Madrasah Aliyah* | *SekolahSunnah.Com*, n.d.; *Madrasah Ibtidaiyah* | *SekolahSunnah.Com*, n.d.; *Madrasah Tsanawiyah* | *SekolahSunnah.Com*, n.d.), *pesantrens* (*Pondok Pesantren* | *SekolahSunnah.Com*, n.d.), and universities affiliated with formal and non-formal educational institutions that were governed by the community and affiliated with the government in accordance with national policy (*Perguruan Tinggi* | *SekolahSunnah.Com*, n.d.). In terms of *salafi* information media, they create community information centers with a wide reach, such as radio, television, YouTube channels, and other forms of social media. In the context of proportion institutions, Indonesian *salafi*s build and organize *proportion* institutions and cadres with the goal of becoming agents of *salafi* understanding and responding to public perceptions of *salafi* doctrine (Asrori, 2022; Bakti, 2018).

Based on facts propounded above, apparently the *salafi* (particularly *Zād al-Maʿād pesantren*) have been successful in fostering social interaction among the people of Palembang and South Sumatra in general. Furthermore, *Zād al-Maʿād pesantren* appears to be able to earn public's recognizing pertaining his rising existence. It is evidenced by the fact that how South Sumatera's (Palembang's people in particular) people chose this pesantren as education institution for their children (Ma'had Zaadul Ma'ad Palembang, 2021). Another social role played by the pesantren is to actively participate in providing social services to the community (*Developing Community Schools, Community Learning Centers, Extended-Service Schools and Multi-Service Schools*, n.d.). Among of them is to provide non-clinical health services based on the tradition of the *salaf al-ṣāliḥ* (ṭibb al-nabawī), establishment of cupping houses, ruqyaï centers, herbal houses, and alike. The Palembang *salafi* community appears to be utilizing this social space effectively and strategically (A. Dzar, personal communication, 7 September 2021; *The Providing Social Services of Zād Al-Maʿād Pesantren to the Community*, 2021).

Mutual needs and advantages are a fundamental premise of global community connections that must be kept by people to get a force for international peace. It is recognized that trans-national *salafi* has contributed to the good international relations performed by the Indonesian country in the international sphere. Working together effectively will have positive consequences in various areas. (Banjarani, 2020) It cannot be neglected that, every country in the world needs for civilized, religious, and adaptable Human Resources (HR) (Tomalin et al., 2019). Experiences of youth generation who are well acquainted with social life of other countries can help to reduce socio-economic inequities at this country and abroad (Nguyen & Zeichner, 2021). High work ethic, hard work habit, disciplined, sense of independence, being rational, supportive, and so forth are among the attitudes desired by world community (Xu & Zhang, 2021).

Local residents who have laziness on studying, working, or pursuing their needs were eventually inspired to participate actively in various aspects of life. The presence of global community in the midst of their community forces *salafi* community to compete and try their best to achieve the best thing (A. Fitriansyah, personal communication, 14 September 2021). Indonesian *da'wah* preachers worked to introduce tradition of *salafi's* doctrine, initially preaching from *langgar* (prayer room) to *langgar*, from mosque to mosque, and recently from social media like YouTube channel, Facebook, Instagram, and so forth. This is because such media is distributed, not only in the country, but also globally. Hence, information exchange becomes a priority(*The Information Exchange of Zād Al-Maʿād Pesantren*, 2021).

Information exchange is often examined in contrast in order to earn accurate information. This is difficult for dissenting understanding for information seekers (Apuke & Omar, 2021). This is also difficult to block, there are many conflict cases draw public's attention which lead to anarchy.

Consequently, it is potentially can rise of group-antipathy or anti-social attitude. So, it is need for tactics to face such global social phenomenon (Bartlett et al., 2014). This role can be carried out by the Zād al-Maʿād *pesantren* as trans-national *pesantren* as part of global *salafi* movement (Meijer, 2014).

Globalization is also inseparable from the world economic system; the true goal of globalization is to build developing countries into developed countries (Bao & Wang, 2019). Developed countries are not only known in terms of technological progress, but also the country's economic development in the realm of the global economy. Economic products that were previously unknown to other nations, then through local conservation agents, Indonesian products can be introduced to the global community through their *salafi* network. (Cantwell & Molero, 2003; Ahmad et al., 2020) On the other hand, *salafi* agents outside of Indonesia can introduce their products to local and national communities, especially in Palembang.

Middle Eastern products such as robes (Grant et al., 2019), veils (Palma, 2019), foods of Middle Eastern specialties (Vandenplas et al., 2019), date palm (Ben Khalfallah et al., 2021), some herbal medicines (Dimple et al., 2018), such as olive oil and so on are now easier to obtain. This is, of course, partly the role played by the *salafi* network. On the other hand, the difficulty to get Indonesian foods (culinary) for Indonesian people can be solved. It can be found in the Middle East present day easily. This is result to endeavor of the agents of preservation and change from the global community (Pramiyanti et al., 2022). It seems there is a tendency of Middle Eastern companies to move their production operations to Indonesia, or vice versa, Indonesian companies can open access to their country.

On empowering the community's economy, *Zād al-Maʿād pesantren* collects public funds as capital for the economic development of the people which is claimed to be a model of syar'i-based economic development. The funds were collected from the community such as students' contribution of educational services; some also come from the *jama'ah* of several assemblies as *infaq*, *zakāẗ*, *alms*, grants and *waqf*. These funding are given in personal names, on behalf of groups, or in the form of distribution from certain donors. According to information from several administrators of *Zād al-Maʿād pesantren* , the donors came from the surrounding community, the *salafi* community and also from abroad, especially Middle East. The forms of economic development of the people which are claimed to be syar'i-based businesses are the construction of clinics, the construction of health services, shops and business services, the construction of syar'i public cemeteries, the establishment of *salafi* educational institutions, the establishment of the *Rodja Darussalam* radio station and the development of *salafi* propotion content on the YouTube channel (A. Aflaha, personal communication, 9 September 2021).

In early period, efforts and economic movements of the *salafi*s in Indonesia were conventional and primordial in nature because they connect to the community directly and utilized religious institutions as the basis to the forming of public opinion in economic context (Lim, 2015). In this case, they hardly convince the public that the economic enterprises they built and run are a kind of practicing Islamic teachings as exemplified by the Prophet Muhammad, carried out by the companions and followed by the *salaf al-ṣāliḥ*. Meanwhile, the community was led in an opinion that following what the Prophet and his companions did, including in the economic aspect, is a necessity and should not be violated. As a result, traditional and conventional businesses that have been thriving in the community then expanded its services based on *šarʿī* norms. It can be seen by the establishment of several shops sell 'Islamic' and '*šarʿī*' goods such as fashion, robes, syar'i head-scarves, perfumed oil, *butbut* oil and others (*The Economic Enterprises of Zād Al-Maʿād Pesantren*, 2021).

The *salafis* have opened up new economic domains that can be exploited as sources of capital for the *salafi* movement as the world has become more globalized and information technology has advanced (Lecocq et al., 2013). The employment of YouTube channels on the internet as a source of money demonstrates this, since the length of YouTube shows featuring *salafi* content presented by its preachers is expanding (Gendron, 2016). In the Rodja group for instance, this will almost probably increase *salafis* income as well as their use of radio and television. Rodja group can be viewed as an economic activity similar to a firm because it is handled by a management that provides benefits.

The social activities and da'wah of the *salafis* also can regarded as economic activities since they earn benefit from them. The *da'is* of *salafi*s earn honoraria while they involved in any event and, frequently, they brought their community in such an even to conduct business. Businesses that provide community services also charge fees for their services at various levels of tariffs set by the community(*The Providing Social Services of Zād Al-Maʿād Pesantren to the Community*, 2021).The *Salafis* of Palembang, particularly in the *Zād al-Maʿād* pesantren, appear to be astute enough to find economic chance in the community that did not exist at the time of the Prophet (pbuh) and his companions, such as the funeral industry which is known as *šarʿī* Public Cemetery Park'. In order to participate in this initiative, the community must pay a set amount of money to obtain a specific area of land for burying family member. This is a new type of commercial and economic activity among the *salafi* (R. Andespa, personal communication, 13 September 2021).

Some *salafis* believe that politics is indirectly required because the issues of human life, particularly the life of the state, cannot be solved without it. Politics is defined as a method or plan for achieving public benefit through the using of al-Qur'an and al-ḥadīṯ -based procedures. However, Politics is not a priority thing to the *salafi*. They gave more concern to form Muslim society based on the genuine Islamic teaching in accordance to the al-Qur'ān and *al- Ḥadīṯ*. From the beginning, Islamic pardigm, which is the cornerstone for living together in a religiously heterogeneous society, has been constructed on a historical normative foundation. If there are obstacles does not mean that Islam's basic doctrines are intolerant and exclusionary, but rather than the historical-economic-political backdrop that surrounds the Muslim population in diverse regions is more determinant and conditioned (Chaplin, 2018). The intimate relationship between religious devotees is significantly more colored by competition for control of economic resources, political power, and power hegemony rather than the content of the ethical teachings of religion itself (Yilmaz & Morieson, 2021).

On the one hand, Zād al-Maʿād *pesantren* confirms to a truth system based on a scientific paradigm, and recognized the validity of religious teachings based on revelation on the other hand. The *pesantren* recognizes the true worth of science by teach the secular (non-religious) sciences. It is proved by pesantren's effort to open computer courses, skills, and football sports; explicitly there is no al-Qur'ān or al-ḥadīṯ which specifies it; but nevertheless held. While the inclusion of religious sciences, such as *Arabic/ Imlāʿ, Ḥadīṯ, Taḥfīẓ,* and *Taḥsīn,* classes in the curriculum of Pesantrens, demonstrates the acceptance of the truth value of revelation or religious teachings in the curriculum of Zād al-Maʿād pesantren.

In order to avoid involved into the wrong direction, such as act related to drugs and extreme religious ways, the knowledge system in this *pesantren* is a form of effort on minimizing the moral decadence and identity crisis of the Muslim youth generation, especially those who are marginalized. One way is to meet their moral and material needs. For the *salafi*, Islam has the concepts of *zakāt*, alms, *infāq*, and others that should be able to bring prosperity, resulting in Islam's development as *dīn al- raḫāʾ*. The cultural heritage of the nation in this context refers to the cultural inheritance that results from a process of comprehending life's fundamental teachings.

3. CONCLUSION

The cultural characteristics of the Zād al-Maʿād trans-national *pesantren* in Palembang which include knowledge systems, rules/laws, clothing, language, santri behavior, traditions and value systems are forms of continuity and change in trans-national *salafi* traditions that adapt the culture to maintain the existence of the *salafi* movement in Indonesia**.** The *salafi* trans-national *pesantren*, Zād al-Maʿād, is an agent of *da'wah* in the spread of *salafi's* understanding and, at the same time, as a center for cadre of *salafi da'i* from a young age as well as an adaptation of the internationalization program of *salafi* understanding through formal Islamic religious education. The *salafi* network can be utilized through its programs as a means of organizing international programs, especially to the Middle East with a culture-based approach. The trans-national *salafi pesantren*, Zād al-Maʿād, adopts the formal religious *Dīniyyat* Education system as the main aspect in an effort to maintain its existence and includes *Salafi-Wahabi* materials in the curriculum content of the *pesantren* as an effort to spread *Salafi-Wahhabi* ideology in Indonesia. Thus, there is an adaptive-ilfiltrative process in the trans-national *salafi Zād al-Maʿād pesantren* Palembang.

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ENVIRONMENTAL POLLUTION RESEARCH-BASED LEVEL ANALYSIS CHILDREN'S INTELLIGENCE IN THE MUSI RIVER PALEMBANG AS INDEPENDENT LEARNING-FREE CAMPUS (MBKM)

Delima Engga Maretha[1*], Erice Lestari[2]

Faculty of Science and Technology, Faculty of Tarbiyah and Education, Universitas Islam Negeri Raden Fatah

**Corresponding Author : delimaenggamaretha_uin@radenfatah.ac.id*

Abstract

At the beginning of 2020 the Ministry of Education and Culture of Indonesia issued the Independent Learning-Free Campus (MBKM) policy. Learning process activities outside the study program at the Merdeka Campus include: internships or work practices, projects in villages, student exchanges, research, entrepreneurship, independent studies, humanitarian projects and teaching at schools. These activities can be managed by the study program or under the coordination of the relevant directorate within Universities. This research develop kind of MBKM as research development of cognitive aspects in education as guidelines for developing all aspects in the form of learning. The development of environmental pollution as independent learning materials, based on research analysis of children's intelligence levels in the Palembang Musi River area is expected to make learning more innovative and interactive. This research aims to determine the level of IQ of children in the Musi River suburb of Palembang. This research consists of stages, Analysis of Children's Intelligence Levels in the Palembang Musi River Area using the CFIT (Intelligence Test and Questionnaire) and implementation MBKM. The results of the research show that children in the Musi River suburb of Palembang have a level of intelligence in the "Average IQ" category, indicating that children in this area have balanced intellectual abilities and do not experience intellectual retardation even though they live in slum areas and their parents' income those who are classified as low, the implementation

Keywords: *Riverside areas, IQ, MBKM, Environmental pollution*.

1. INTRODUCTION

Indonesia has shown great commitment to the provision of education. This is reflected in Article 31 Paragraphs 3 and 4 of the 1945 Constitution, which stipulates the government's obligation to promote national education in order to improve people's legal understanding. The law also stipulates an education budgetal location of at least 20% of the APBN and APBD (Sujanto, 2021). Nevertheless, education in Indonesia is inseparable from a number of problems. According to Fajr, education problems can be divided into two areas, namely micro problems, such as the curriculum, and macro problems, including the inequality of educationin various regions (Elvira, 2021). These problems are the main cause of the low quality of education in Indonesia. According to the PISA (*Program for International Student Assessment*) survey in 2018, Indonesia ranked 74th out of 79 countries in terms of education system. This is a very worrying position, considering the potential of existing human resources. The success factors of the education system involve students, the role of teachers, economic conditions, infrastructure and other factors (Fathurrochman et al. 2021). Indonesia is trying to improve the quality of education with the 2013 Curriculum, hoping to

improve its competitiveness (Fajri and Afriansyah 2019).

Indonesia's biggest challenge regarding education is no longer improving access but improving quality. The Indonesian Government hopes to develop a 'world-class' education system by 2025 (Rosser, 2018). Education is the most important thing for every country to develop rapidly. A great nation will make education a top priority, because with education, the poverty of the people in that country will be reduced, replaced by prosperity. However, in its development, education in Indonesia always faces several problems at every stage. These problems can only be resolved with the involvement of all parties involved in the education system, such as parents, teachers, school principals, government, society and the students themselves. An excellent environmental management could guarantee the availability of natural resources. One of the efforts to overcome the environmental crisis is through Education. Here, academics, experts, and administrators should handle environmental literacy promotion issues and sustainable development education in a more severe manner (Ozgurler & Cansaran, 2014). By learning science, students are expected to experience a positive attitude change and be able to contribute a positive impact on the environment. Srbinovski et al. (2010) stated that Environmental Education is not a discrete subject but incorporated in the Science Education curriculum.

The environment is something that is closely related to human existence. The environment is defined as all objects and conditions which include humans and their activities, which exist in the space where humans live and which influence the survival and welfare of humans and other living organisms. Hence, existence The environment in human life is one of the factors that can influence the creation of quality human resources. This is in line with the convergence theory proposed by William Stern that environmental factors have an important role in stimulating and improving children's abilities and intelligence. According to (Binet, 2010) intelligence is a single aspect of characteristics that continues to develop in line with a person's maturation process. Intelligence is defined as a form of a person's ability to acquire knowledge (study and understand), apply knowledge (solve problems), and think abstractly. Meanwhile, Intelligence Quotient or IQ is a score obtained from an intelligence test.

One factor that can influence a child's intelligence is the environment. A good environment will produce good intelligence, while a bad environment will produce poor intelligence. Research on children raised in slum environments in big cities has an average IQ lower than that of children their age from middle class communities. Kapitan Village, Kelurahan 7 Ulu, Seberang Ulu 1 District is a community village located on the Musi River and is a slum area in Palembang City. Based on the 2020 Integrated Social Welfare Data (DTKS) managed by the Indonesian Ministry of Social Affairs' Pusdatin, the number of new poor residents caused by the effects of the pandemic. This data shows that Kampung Kapitan is a poor area with the majority of people still having low incomes. Slums are a problem faced by almost all big cities in Indonesia, even big cities in other developing countries. Slum settlements are settlements that are unfit for habitation because of the irregularity of the buildings, high levels of building density, and the quality of the buildings and facilities and infrastructure that do not meet the requirements. Slum housing is housing that has experienced a decline in the quality of its function as a place of residence (WHO, 2010). Slum settlements are generally associated with high levels of poverty and unemployment.

Indonesia's education sector has undergone significant transformations in recent years, with a renewed focus on improving the quality of higher education. One of the initiatives launched to achieve this goal is the Merdeka Belajar Kampus Merdeka (MBKM) policy, which aims to promote academic freedom, encourage innovation and creativity, and improve the quality of higher education in Indonesia. Despite the government's efforts to implement this policy, its effectiveness in achieving the desired outcomes remains unclear (Ministry of Education and

Culture, 2020). This program also provides students with flexibility and opportunities for learning beyond the traditional classroom setting. Therefore, students can enhance their potential in the classrooms and beyond the schools. MBKM is an Indonesian government policy aimed at providing more autonomy to higher education institutions in designing and implementing their academic programs and enhancing the quality of higher education in Indonesia. The policy emphasizes empowering students to take charge of their learning process and encourages innovation and creativity among higher education institutions.

According to the Ministry of Education and Culture of Indonesia (2019), MBKM is an effort to transform higher education in Indonesia by promoting a more student-centered learning approach and enhancing the quality of education through the development of a more relevant and innovative curriculum. The policy also aims to strengthen the competitiveness of Indonesian higher education in the global arena by providing more opportunities for international collaboration and encouraging the development of research and innovation. MBKM has been implemented since 2019 and has gained significant attention and support from various stakeholders, including higher education institutions, students, and the government. However, the effectiveness of the policy in achieving its objectives and its impact on the quality of higher education in Indonesia needs tobe further investigated. MBKM policy was launched in Indonesia in 2019 as an initiative to promote student-centred learning and encourage innovation in higher education institutions. This policy aims to provide greater autonomy to higher education institutions and increase the quality and relevance of education for students. Several studies have been conducted to explore the effectiveness of this policy in Indonesian higher education institutions. The importance of MBKM lies in its potential to address some of the longstanding issues in the Indonesian higher education system, such as outdated curriculum, lack of industry relevance, and limited access to higher education for marginalized communities (Rohiyatussakinah, 2021). The policy encourages universities to take a more student centred approach to learning, which can help to improve the quality and relevance of education provided. Additionally, MBKM is expected to help reduce the skills gap between graduates and the demands of the job market, which is a key issue faced by many developing countries, including Indonesia.

2. LITERATURE REVIEW

A key task of intelligence testing for children with learning disabilities was to assess whether there was a significant discrepancy between their intellectual and their academic achievement. In the US, this has been an important criterion for diagnosing whether the child could be diagnosed as having a learning disability. In the UK, the discrepancy model was (and, remarkably still is in the work of some psychologists) used to determine whether a child can be diagnosed as dyslexic. Thus, high IQ poor readers were held to be dyslexic, whereas those with low IQs were considered to be poor readers whose decoding problems were a result of low level of cognitive functioning. While the discrepancy model can be challenged on the grounds that it introduces measurement error (Cotton, 2005), its use has been primarily discredited because supposed differences between high and low IQ poor readers have not proven to be meaningful in educational terms.

More recently, findings from neurophysiological studies have indicated no support for the argument that there are different aetiologies for IQ discrepant and non discrepant groups in relation to phonological awareness, a very influential aspect of reading disability (Fletcher et al 2007 ; Tanaka et al, 2011). The discrepancy model has proven to be of little value in assisting with educational decisionmaking. Findings from a series of meta-analyses and scorecard reviews (Flethcher, 2007; Tanaka, 2011, Hoskyn, 2000; Stuebing, 2002; Stuebing, Barth et al, 2009) led to a dismissal of the suggestion that IQ-achievement discrepancy is an important predictor of who will make decodingrelated gains (Francis et al, 1996, Flowers, et al 2001). Similarly, there is insufficient evidence to support the claim that IQ can be used to identify which poor readers will

best respond to targeted reading intervention (Gresham, Vellutino, 2010). Thus, in two meta-analyses Stuebing, 2002; Stuebing, Barth et al, 2009 concluded that IQ had minimal predictive power in relation to children's response to reading intervention. Such a contribution could hardy justify the costs of such assessment, particularly when it is clear that a simple baseline assessment of word reading skills represents "…a shorter task with a much stronger relation with outcome" (Stuebing et al, 2009). In trying to find some educationally prescriptive benefits from IQ testing, some have sought to identify various subtest profiles which may shed light on children's particular needs (Watkins, Kush and Glutting, 1997) A widely employed measure at the end of the last century was the ACID profile in which low scores on arithmetic (A), coding (C), information (I) and digit span (D) subtests from the Wechsler Intelligence Scales for Children were considered to be indicative of dyslexia (Vargo, Grosnner & Safford, 1995) A variant of this (the SCAD (Symbol search, Coding, Arithmetic, Digit span) profile) where the Information subtest was replaced by the Symbol Search was advocated by Kaufman (Kaufman, 1994). If, for example, a poor reader's scores on these subtests were found to be significantly poorer than for the other measures, he or she was considered to show evidence of a dyslexic profile.

Whatever classification systems and diagnostic labels are employed, educationalists are often concerned to determine how likely a given child is to profit from intervention. The key question here is whether assessing cognitive processes, as advocated by Hale and colleagues (2010) will provide sufficient information, above and beyond that yielded by traditional educational assessment, to justify its use. The evidence to support this stance appears not to be powerful. Fletcher and colleagues (2011), for example, found that while children's response to a focused small group intervention could be partially determined by cognitive assessment, the crucial factor seemed to be the severity of impairment in each child's reading skills. The additional contribution provided by the cognitive measures did not appear to justify the costs involved. Recent studies (Miciak, 2016; Rabiner, 2010; Fletcher, 2011) have similarly concluded that there is minimal value in assessing cognitive characteristics for the purpose of predicting how children will respond to intervention. Put simply, the additional information such assessments can provide, above and beyond that yielded by baseline academic assessment or curriculum based or embedded measures (Oslund, 2015) appears not to be worth the investment of resources that is required.

As indicated above, it is important to differentiate between the use of cognitive variables in order to inform predictions about students' likely future progress, and their potential to guide appropriate forms of targeted educational intervention: one should not confuse identification (for example, of learning disability status) with treatment (Fuchs et al, 2012). lower SES individuals and vice versa.

Deficiency of micronutrients, lack of breastfeeding, and presence of environmental toxins are associated with impaired neuropsychological development and classroom performance (Stuebing, 2002; Kaufman, 1993). Another major influence on intelligence is the level of cognitive stimulation the child receives at home. In addition, the ratio of encouraging comments made to children versus reprimands seems to have an influence on IQ. Here, the quality of mother–child interactions is most relevant in determining the development of intelligence in infancy and early childhood (Prifitera, 1993; Frederickson, 1999). Among the social factors affecting intelligence, the school the child goes to seems to have quite a major influence on IQ (Canivez,2013). Surprisingly, the quality of teaching in kindergarten and first-grade teaching also plays a role. Although the academic gains due to having more experienced teachers fade away in later grades, the noncognitive gains persist. Not only these social factors, but also physical exercise has a role to play in intelligence. While on children, it plays a role in creating and consolidating memory, in elderly, it has a role to play in maintaining intelligence for executive functions such as planning and scheduling of mental procedures (Kortteinen, 2009; Jimenez,2007, Stanovich, 2005) There is a lack of data on the factors which influence IQ in children; therefore, we conducted a multicenter questionnaire-based study to determine the environmental factors which influence IQ in children at

Musi River Palembang South Sumatra Indonesia.

3. METHODOLOGY

This research used a qualitative case study design to explore the effectiveness of the Merdeka Belajar Kampus Merdeka policy in Indonesian the program where the implementation in Schools that near Musi River at Palembang South Sumatra Indonesia. Data was collected through in depth interviews with key stakeholders, document analysis of policy documents and institutional reports, and observations of policy implementation in selected schools and area of people at Musi River Palembang.

The case study approach allowed for a detailed and comprehensive examination of the policy in its specific context especially IQ the students that live near Musi River Palembang. The participants for this study consisted of key stakeholders involved in the implementation and monitoring of the Merdeka Belajar Kampus Merdeka policy in Indonesian higher education institutions. Informed consent was obtained from all participants before their participation. Semi structured interviews were conducted as the primary method of data collection. The interviews aimed to explore participants' perceptions, experiences, and challenges related to the MBKM program's result.

The interview questions were developed based on a literature review of the MBKM program and its goals. The interviews were conducted individually and face to face with each participant. The researchers followed a flexible interview guide, allowing for spontaneous follow up question and probes to delve deeper into the participants' responses. The interviews were audio recorded with participants' consent and later transcribed verbatim for analysis.

In addition to interviews, supplementary data were collected through document analysis. Relevant documents, such as program guidelines, policy documents, and participant reflections, were obtained and reviewed to provide additional context and insights into the implementation and impact of the MBKM program. Thematic analysis was employed to analyze the qualitative data collected from the interviews and document analysis.

Children's Intelligence Level in the Musi River Edge Area Palembang :

Data collection techniques are a very urgent part of the research itself. The data collection procedures used in this research were intelligence tests, observation, The data obtained from observation in this research are as follows: Environmental situation and conditions in the Musi River suburbs of Palembang, Living conditions, The situation of the residents of Kapitan area 52 village interviews and documentation. The Data for measurement IQ and Quality of Environmental with The Factor used from : CFIT Intelligence Test. Observation, questionnaire and documentation.

4. RESULT AND DISCUSSION

A. Result

Data collection was carried out using the CFIT intelligence test and giving questionnaires to 20 children aged 12-15 years which aimed to see the level of intelligence of children in the Musi River suburb of Palembang. It was found that the average IQ of children in the Musi River suburb was 100.8. In the context of IQ measurement, an average score of 100.8 is included in the "Average IQ" category. This shows that the group of children in the area, consisting of 20 children aged 12-15 years, have an intelligence level that is around the population average.

The "Average IQ" category indicates that the majority of these children have cognitive abilities that are in line with the level of intelligence considered normal in IQ tests. This is a positive result, indicating that children in the area have balanced intellectual abilities and do not experience intellectual retardation. These results can provide useful information to educators, parents and researchers to understand the level of intelligence of children in the area. It can also be used as a basis for designing appropriate educational programs and providing additional support to children according to their needs. In this case, the average IQ of children reaches 100.8, can It was concluded that children in the Musi River suburbs had quite good intellectual abilities in the Average IQ category. The IQ level of children in the Musi River suburbs or elsewhere can be influenced by external factors including: parents' education, parents' social status, parents' motivation, and living environment. The results can be seen as follows:

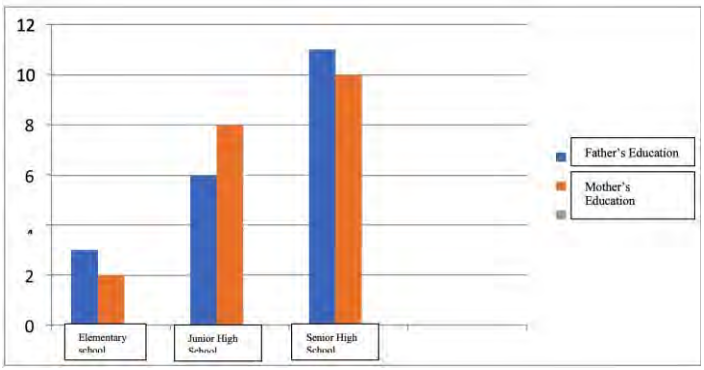

Figure 4. 1 Histogram of parental education in the Musi River suburb of Palembang

Questionnaires were given to 20 parents of children who had taken the CFIT intelligence test in the Musi River area of Palembang regarding parental education. From the questionnaire, the results obtained were: father's education: 11 people answered high school, 6 people answered middle school, 3 people answered elementary school, and mother's education: 10 people answered high school, 8 people answered middle school, and 2 other people answered elementary school. Results of the questionnaire given to 20 parents showed that the average education level of parents was between middle school and high school.

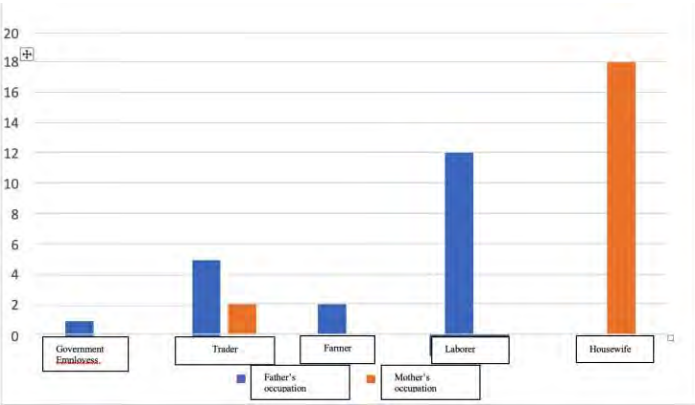

Figure 4. 2 Histogram of parental employment in the Musi River suburb of Palembang

Questionnaires were given to 20 parents of children who had taken the CFIT intelligence test in the Musi River area of Palembang regarding the parents' occupation. From the questionnaire, the results obtained were that for father's occupation there was 1 person who answered as a civil servant, 5 people who answered as traders, 2 people who answered as farmers, and 12 people who

answered as laborers. Meanwhile, for mothers' jobs, there were 2 people who answered as traders and 18 other people who answered as housewives. The results of the questionnaire given to 20 parents showed that on average the parents' jobs were as laborers and housewives.

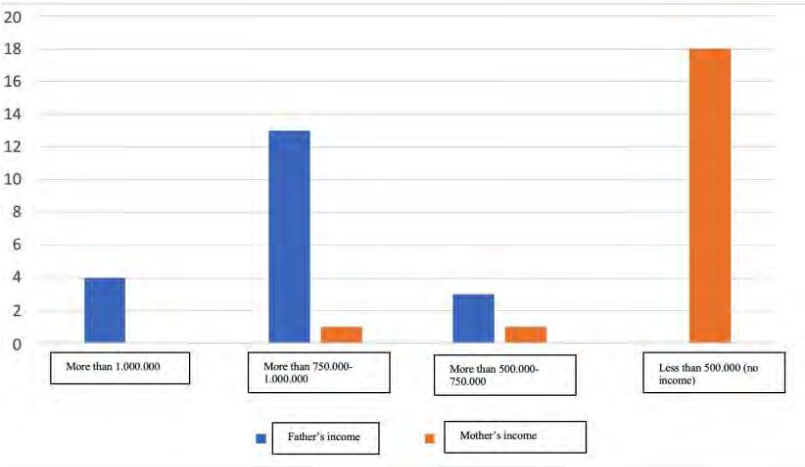

Figure 4.3 Histogram of parents' income in the Musi River suburb of Palembang

Questionnaires were given to 20 parents of children who had taken the CFIT intelligence test in the Musi River area of Palembang regarding their parents' income. From the questionnaire, the results obtained were that for father's work, 4 people answered more than 1.000.000 rupiah, 13 people answered between 750.000-1.000.000 rupiah, and 3 people answered between 500.000750.000,000. rupiah and for mother's income, 1 person answered between 750.000-1.000.000 rupiah, 1 person answered between 500.000-750.000,000 rupiah, and 18 other people answered less than 500.000 rupiah (no income). The results of a questionnaire given to 20 parents showed that the average parent's income was between 750.000-1.000.000 rupiah, which is classified as low income.

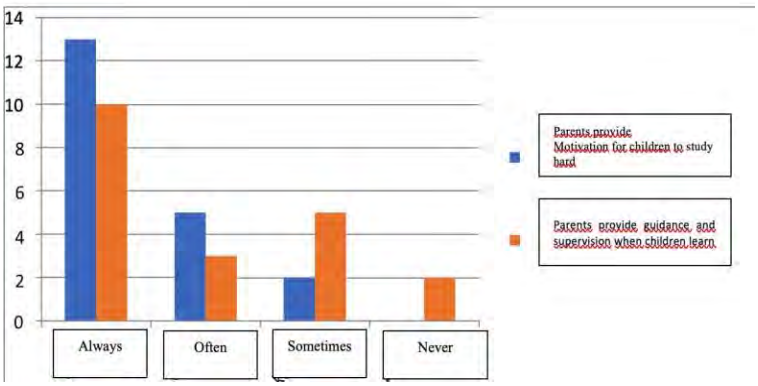

Figure 4. 4 Histogram of parents' motivation in the Musi River suburb of Palembang

Questionnaires were given to 20 parents of children who had taken the CFIT intelligence test in the Musi River area of Palembang regarding the role of parents in motivating children to learn. From the questionnaire, the results obtained were: For the question "Parents provide motivation so that children study diligently". A total of 13 people (65%) chose "Always" which means that the role of parents in providing motivation or encouragement for children to study is very high or always done. Then 5 people (25%) chose "Often" which indicates that motivation from parents is still

sufficient. And there are 2 people (10%) who chose "Sometimes" indicating that among the other 18 people the role of parents in providing learning motivation is fairly significant. low. However, it can be seen that overall of the 20 parents, 18 of them provide stable and continuous learning motivation to their children, of course this is something that is important.

positive. Then for the second question "Parents provide guidance and supervision when children learn" the responses were 10 people "Always", 3 people "Often", 5 people "Sometimes" and 2 people "Never". In the second question, the response obtained was still quite positive because there were only 2 children who did not receive guidance and supervision when studying, which indicates that the other 18 children were considered to receive sufficient supervision and guidance from their parents.

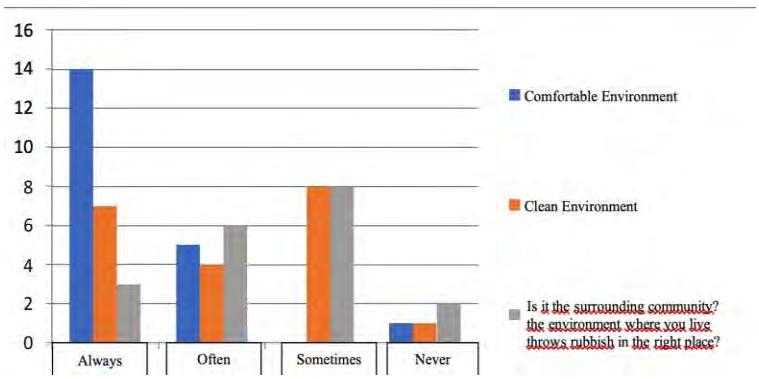

Figure 4. 5 Histogram of the residential environment in the Musi River suburb of Palembang

Questionnaires were given to 20 parents of children who had taken the CFIT intelligence test in the Musi River area of Palembang regarding the environment around where they lived. From the questionnaire, the results obtained were: For the question "Do you feel comfortable with the environment where you live". A total of 14 people chose "Always", then 5 people chose "Often". And there was 1 person who chose "Never" indicating that among 19 people there was only 1 person who felt uncomfortable with the environment where they lived. However, it can be seen that overall of the 20 people, 19 of them felt quite comfortable with the environment where they lived. For the second question "Is the environment where you live clean" the responses were 7 people "Always", 4 people "Often", 8 people "Sometimes" and 1 person "Never". In the second question, the response obtained was that on average the environment around where they live is still not clean, this is what makes the area on the edge of the Musi River a slum area in the city of Palembang. And for the 3rd question "Do people around the area where you live throw rubbish in the right place" the responses were 3 people "Always", 6 people "Often", 8 people "Sometimes" and 3 people "Never". In question 3, the response obtained was that on average the people around where they live have not disposed of their rubbish in the right place. This can be seen from the rubbish that is still strewn under buildings because rubbish is thrown haphazardly into the river and makes the river polluted.

B. Discussion

4.1. Children's Intelligence Level in the Musi River Bank Area, Palembang

The average IQ of children in the Musi River suburb is 100.8. In the context of IQ measurement, an average score of 100.8 is included in the "Average IQ" category. This shows that the group of

children in the area, consisting of 20 children aged 12-15 years, have an intelligence level that is around the population average.

The "Average IQ" category indicates that the majority of children have cognitive abilities that are in line with the level of intelligence considered normal in IQ tests. This is a positive result, indicating that children in the area have balanced intellectual abilities and do not experience intellectual retardation. The IQ level of children in the Musi River suburbs or elsewhere can be influenced by external factors including:

4.1.1 Parental Education : The influence of parental education on children's IQ has been a subject of research interest for decades. The results of questionnaires given to 20 parents of children who had taken the CFIT intelligence test showed that their parents' average education level was between middle school and high school, illustrating the relevance and significance of parental education on children's cognitive development.

A number of previous studies have confirmed a positive relationship between parental education level and child IQ. For example, research by Feinstein (2010) found that parental education level had a strong influence on children's IQ test results. Another study by White (2009) shows that children of parents with higher levels of education tend to have higher IQ scores. Research by Davis-Kean (2005) also emphasizes that the level of parental education not only reflects economic factors, but also has a significant influence on the learning environment and interactions that support children's cognitive development. Additionally, research by Brooks-Gunn and Duncan highlights that parental education levels can influence children's access to educational resources and opportunities that can impact their cognitive development. Through questionnaires and previous research, we can see that parental education has a significant impact on a child's IQ. Therefore, efforts to increase parental education levels can provide great benefits in ensuring optimal cognitive development for future generations.

4.1.2 Parents' Occupation

The results of the questionnaire given to 20 parents of children who had taken the CFIT intelligence test showed that on average their parents' jobs were as laborers and housewives. Parents' work and economy has an important role in the development of children's intelligence. In many cases, there is a positive relationship between the quality of work and economic stability of parents and the child's intelligence level. Good jobs and stable economic conditions tend to provide an environment that is more supportive of children's cognitive development.

Several previous studies have revealed the relationship between parents' work and economics and children's intelligence. For example, research conducted by Smith et al. (2015) show that children who come from families with stable jobs have better access to educational resources and intellectual development. The results of this study underscore that better jobs tend to give children better opportunities to pursue higher education and develop cognitive abilities. However, in this study, parents' jobs had no effect on children's intelligence levels. Although on average their father's job is a laborer and their mother's job as a housewife does not affect the child's low intelligence level. This is because housewives have more time at home. A person with the status and position of a mother has a role that must be carried out depending on the social and cultural conditions that a person has. The roles that a mother has are as a wife, a woman as a household organizer and as a mother and educator. In caring for and educating their children, parents must be able to make their children grow and develop into independent individuals.

Parents' employment and economic stability play a key role in influencing children's intelligence.

The better the parents' employment and economy, the greater the child's opportunity to pursue higher education and develop better cognitive abilities. However, it is important to remember that children's intelligence is also influenced by other factors, such as parenting, social environment, and genetic factors, all of which can interact with the role of parents' work and economics in shaping children's development.

4.1.3 Parent's Income

The results of the questionnaire given to 20 parents of children who had taken the CFIT intelligence test showed that their parents' average income was between 750,000-1,000,000, which is classified as low income. Parental income has a significant impact on children's intelligence development. Several previous studies have revealed a positive relationship between parental income and children's intelligence.

One relevant piece of research is a study conducted by Smith and Jones in 2010. They found that children from families with higher incomes had greater access to educational resources such as books, additional courses, and supportive learning environments. This allows them to better develop their cognitive abilities, such as reading, writing and analytical thinking skills. The results of this research are not in accordance with research conducted by Adinda (2016) which proves that parental income has no influence on the development of intelligence of class XI students majoring in Multimedia at SMK Al-Badri Gumuksari Kalisat Jember in the 2016/2017 academic year. Thus, it can be said that a child's non-material environment must be paid more attention to, such as the attitudes and patterns of interaction within the family.

In this study, parental income had no effect on children's intelligence levels. This is because even though their parents' income level is low, their parents' motivation in educating their children is high. It is important to note that parental income is only one factor that influences a child's intelligence. Other factors such as genetic factors, social environment, and the urge to learn also have an important role in the development of intelligence. In addition, there are many cases where children from low-income families achieve extraordinary intelligence through effort, motivation, and strong educational support.

In conclusion, parental income can influence children's intelligence by providing greater access to quality education and educational resources. However, other factors also play a role in the development of children's intelligence, and there are many cases where children from low economic backgrounds manage to achieve high intelligence through effort and strong support.

4.1.4 Surrounding area of residence

It can be seen that overall out of 20 people, 19 of them feel quite comfortable with the environment where they live. However the environment around where they live is not clean because on average the people around where they live do not dispose of their rubbish properly. This can be seen from the plastic waste that is thrown carelessly into the river and makes the river polluted. The types of plastic waste thrown away include plastic bags, cups, bottles, pipettes, used food wrappers and detergent.

The large amount of plastic waste thrown into the Musi River shows that there is still low public awareness of throwing rubbish in designated places, and low understanding of the negative impacts of throwing rubbish into the river. One of the negative impacts on the environment is that children feel less comfortable with their environment, so their focus on learning is reduced. A comfortable and safe environment tends to create a supportive atmosphere for children's cognitive development. Previous research has also highlighted the importance of the environment in influencing a child's

IQ. For example, a study by Evans and Fuller showed that children who live in environments free from air and noise pollution tend to have better cognitive development. Additionally, research by Hertzman and Boyce (2010) highlights the role of environmental stress and insecurity in influencing children's cognitive development. In the context of the Musi River suburbs, environmental conditions can vary, and factors such as water and air pollution, access to educational facilities can play a role in influencing children's IQ. Therefore, further understanding of these environmental impacts and efforts to improve them are possible provide significant benefits for the development of children in the area.

4.1.5 Implementation of MBKM

In terms of Research and Innovation, collaboration between universities, school, industry, and government also fosters research and innovation. Universities and school can work together with industries to identify research priorities, receive funding for research projects, and engage in joint research initiatives. This collaboration helps address industry challenges, promotes technology transfer, and encourages the development of innovative solutions (Supriati et al., 2022). This leads to the development of entrepreneurship and start-up support, which promotes entrepreneurship by supporting university-industry partnerships in the development of start-ups and entrepreneurial activities. Universities, school, industries, and government agencies may collaborate to provide mentorship, funding, and resources for students andgraduates interested in starting their own businesses. Last but not least, industry engagement in education. The initiative encourages industry professionals to contribute to the education process by participating in guest lectures, workshops, and seminars (Andari et al., 2021). By sharing their expertise and experiences, industry representatives can provide valuable insights to students and help bridge the gap between academic knowledge and industry practices (Wahyuni et al., 2022). The specific mechanisms and implementation of MBKM may vary between universities and regions in Indonesia. It is worth noting that the initiative aims to create a more flexible and student-centric learning environment, allowing students to customize their educational pathways based on their interests, skills, and career aspirations.

5. CONCLUSION

1. Environmental conditions in the area on the edge of the Musi River in Palembang, specifically area 52, are still very dirty due to the lack of public awareness in maintaining environmental cleanliness. Because there are still many people there who throw rubbish in the river. This is what causes rubbish to be scattered under their houses and makes the river water polluted.
2. Children in the Musi River suburb of Palembang, consisting of 20 children aged 12-15 years, have an intelligence level that is around the population average. The "Average IQ" category indicates that the majority of children have cognitive abilities that are in line with the level of intelligence considered normal in IQ tests. This is a positive result, showing that children in the area have balanced intellectual abilities and do not experience intellectual retardation even though they live in slum areas and their parents' income is relatively low. However, parental income is only one factor that influences children's intelligence. Other factors such as genetics, nutrition, social environment, and the drive to learn also have an important role in the development of intelligence. In addition, there are many cases where children from low-income families achieve extraordinary intelligence through effort, motivation, and strong educational support. In conclusion, parental income can influence children's intelligence by providing greater access to quality education and educational resources. However, other factors also play a role in the development of children's intelligence, and there are many cases where children from low economic backgrounds succeed in achieving high intelligence through strong effort and support.

3. The Implementation of MBKM is still need to stabilize, innovative and maintenaice so the Policy and the Program will conducted in the future.

Acknowledgement

This research will be presented in the ICTHM at Istanbul, Turkey and The funding from Universitas Islam Negeri Raden Fatah Palembang.

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BLOCKCHAIN TECHNOLOGY ADOPTION IN THE INDONESIAN BANKING SECTOR

Putra Rizki Wahyudi[1*], Ike Purnamasari[2]

**Corresponding author: Wahyudi: 2101026084@student.unmul.ac.id*

Abstract

The dynamics of Industry 4.0 have made major changes to the financial industry with the presence of fintech as a representative of financial sector innovation. The presence of cryptocurrencies which promote blockchain technology as a solution to speed, immutability, and transparency of transactions, has attracted the world's attention to use this technology. This research aims to find out what are the opportunities and challenges of blockchain technology adoption in the banking sector, and to find out at what stage banks in Indonesia are currently in adopting blockchain by using the diffusion of innovation theory as a framework. This research uses two different methods to answer each research question by conducting systematic literature review and document analysis. The potential for blockchain adoption identified in this study are cost and time efficiency, security and data integrity, trust and transparency, and regulatory compliance. The opportunities identified in blockchain adoption in banking include regulatory challenges, technical challenges, organizational challenges, cost challenges and social challenges. The stage of blockchain adoption in Indonesian banks is spread across three stages, namely innovators, early adopters, and laggards as the majority.

Keywords: *Blockchain Technology, Banking Sector, Systematic Literature Review, Diffusion of Innovation*

1.INTRODUCTION

In the current economic era, financial services entities have strengthened their commitment to the creation of innovative products and services. The rapid development of information technology has become an inescapable reality, pushing key sectors such as the financial sector to adapt to continuous innovation. The traditional system of financial institutions has undergone a significant transformation into a financial system that operates digitally. The collaboration between the financial services sector and information technology, known as financial technology (Fintech), was created with the aim of improving the efficiency of financial services through the use of technology. Financial services that are accessible to everyone, efficient, and adaptive can be realized through Fintech. This is reflected in the existence of financial services such as digital payments, online lending, and digital banking that are currently gaining popularity.

The development of technology has changed people's behavior, which previously chose to carry out various activities conventionally by using digital platforms as the main choice. The increase in internet users is evidence that people are starting to switch to doing their various needs through existing technology, this can be seen in Figure 1.1 below (Cindy Mutia Annur, 2023) which indicates an increase in the use of smartphones and the internet year after year in Indonesia. The

convenience that customers feel today comes from the development of financial technology, especially in banking. Every year digital financial services including banking in Indonesia experience a constant increase and show a growth trend. Referring to data from Bank Indonesia (Ahdiat, 2023), the number of digital banking transactions is experiencing rapid growth, recorded in 2018 the value of digital transactions amounted to 1-2 quadrillion and grew to 4-5 quadrillion rupiah in January 2023 (can be seen in Figure 1.2). As the number of users grows, financial institutions, especially banks, need to innovate their technology to maintain the stability and sustainability of the institution.

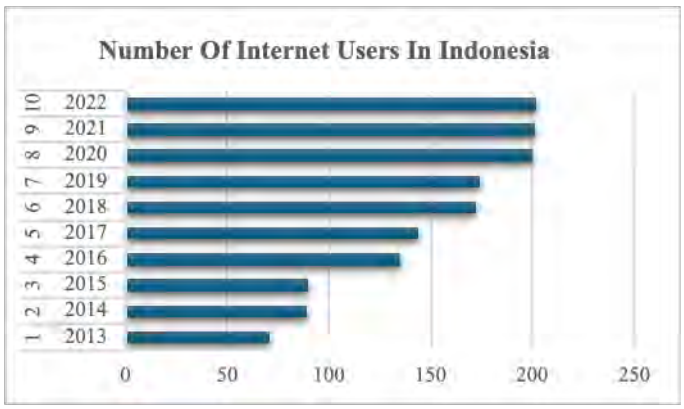

Figure 1.1. Internet Users in Indonesia from January 2013 to January 2022 (source: Cindy Mutia Annur, 2023)

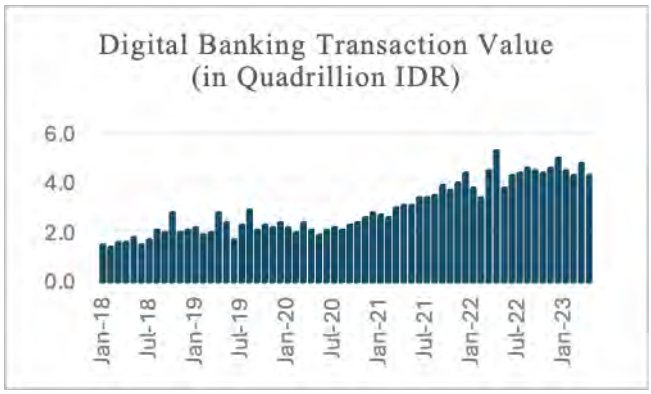

Figure 1.2. Transaction Value of Digital Banking in Indonesia (source: Katadata.co.id)

Financial technology innovation has changed people's transaction patterns in recent years, which tend to choose to use online financial services compared to conducting offline transactions at banks, this is characterized by a downward trend in the population of bank offices (can be seen in Figure 1.3). Today, customers want fast and secure access to banking services through various platforms and according to their needs (Otoritas Jasa Keuangan, 2021). In addition to the need for services that adjust to market demand and scientific developments, the current shortcomings in banking services in Indonesia are also an urgency for the banking sector to continue to update their technology.

Figure 1.3. Number of Bank Offices (source: Otoritas Jasa Keuangan, 2023)

Security issues in information technology are inevitable. Digital transformation in the banking sector not only brings beneficial opportunities, but also poses challenges in terms of data protection and leakage issues. Recently, various data hacking cases have occurred in banks in Indonesia. In January 2020 Bank Indonesia experienced a data leak of 74 gigabytes (KataData, 2022). Hacking cases also occurred in May 2023, the public was shocked by the revelation that Bank Syariah Indonesia was a victim of ransomware by the LockBit hacker group which allegedly hacked BSI's internal data amounted to 1.5 terabytes, including 15 million user data and passwords (Marcelliana et al., 2023). The security of customers' personal data is very important, because users will be reluctant to conduct digital transactions on networks that threaten the security of their personal data privacy.

The need for renewable technology requires financial institutions to provide more efficient services. Today, banks still use various information technology intermediaries in their operational systems (Victor, Chang, 2020). This results in high costs, large volumes of paperwork, and long customer waiting times when completing transactions. For example, cross-border transactions using conventional systems can take up to 2 days (Guo & Liang, 2016). To improve customer satisfaction and company profitability, Improved service efficiency in terms of transaction costs and time is needed in the banking sector in Indonesia. A widely discussed phenomenon in financial technology is the emergence of the digital currency bitcoin created by an unknown Satoshi Nakamoto in 2008, addressing the global finance crisis that year (Nakamoto, 2008). Bitcoin is a type of currency that operates without the supervision and regulation of certain bodies. This makes Bitcoin known as a decentralized currency because it does not rely on a single authority or entity (Aripin, 2018). Behind the breakthrough of bitcoin, which is the pioneer of cryptocurrency, there is a technology that supports the digital currency operating system, namely blockchain technology.

Blockchain technology opens up opportunities to significantly reduce costs, improve operational efficiency, and enhance security levels (Wu, B., & Duan, 2019). Blockchain opens opportunities for banks in Indonesia to provide better services with the features contained in it. Blockchain technology can be an innovation solution for the banking sector in Indonesia, especially in overcoming security, trust and efficiency issues. Coming from bitcoin and other cryptocurrencies, blockchain technology will change how money dynamics in the banking sector (Arora & Nabi, 2022). Blockchain technology will eventually be used by banks because this disruptive technology has an impact on digital transformation of banking and is inevitable. Aside from the potential it offers in overcoming problems in banking, there are challenges that banks will face in adopting blockchain technology. Creating a fully decentralized system is nearly impossible, and multiple levels of authority are needed to oversee financial institutions (Guo & Liang, 2016). The highest

throne of problems with blockchain is regulation due to its decentralized nature that makes it devoid of an authority that regulates and oversees it. Cost is also a challenge to the adoption of this technology, as in the case of bitcoin which has created annual cost overruns in terms of transaction recording., with the cost steadily increasing along with the number of users. Therefore, it is crucial for companies to carefully evaluate costs before implementing this technology (Deloitte, 2016).

In the banking industry, blockchain has been part of many conversations as the potential for this technology to disrupt the economic order is promising (Gao, 2021). Now banks are seen to have started implementing blockchain technology through the formation of consortiums, one example is the R3 consortium which is becoming one of the main and most important in the world (Guo & Liang, 2016). The increasing introduction of blockchain in various industries, especially in finance, requires the banking sector in Indonesia to respond immediately by conducting a series of analysis and learning about this technology. This research aims to explore the opportunities and challenges in the adoption of blockchain technology in the banking sector, based on the benefits and issues associated with the technology. In addition, this research will also analyze the extent to which banks in Indonesia have adopted this technology. Hopefully, this research will provide valuable insights for many people, especially those involved in the banking sector such as commercial banks, in determining the next steps in adopting this technology.

2.LITERATURE REVIEW

2.1 Financial Technology

Growing interest in recent years in Fintech, which stands for "financial technology," among financial industry players. Fintech describes the utilization of technological advances to provide financial services more efficiently and innovatively. This is confirmed by (Le et al., 2021) which states that Fintech is a technology-based financial service that is created based on new creative thinking, or it can also be pre-existing but presented with innovations that focus on ease of transactions and encourage increased access to customer financial services. (Bank Indonesia, 2018) explains Fintech as the result of the combination of financial services with technology, which in the future will change the face of traditional business models to be more pioneering and vibrant. In the past, payments required face-to-face interaction and the use of physical cash, but now, transactions can be made remotely, with payments settled in the blink of an eye. In line with the statement of (Marginingsih, 2019) defines Fintech as the latest innovative endeavor in the financial services industry that combines technological advancements with financial concepts, creating innovations with the aim of improving the financial transaction process to be more effective, efficient, safe, and in accordance with the times.

Fintech is not only a technological innovation, but also an important milestone in economic growth and scientific and technological progress. As defined by (Financial Stability Board, 2016), Fintech encompasses technology-enabled financial innovation, which is the process by which the latest technological concepts are applied in a financial context, resulting in new business models, applications, procedures or products. This not only has a significant impact on financial markets, financial institutions, and financial services, but also opens new opportunities and changes the traditional way the financial industry operates. Fintech, as one of the products of scientific advancement, is the use of technology that enables various financial activities through the process of digitization. The technology in question can be gadgets, the internet, and application services (Stevani et al., 2021).

The advancement of Fintech has radically changed the financial services industry by utilizing computer-based technology. Fintech is a cross between digital innovation and financial services, aiming to improve efficiency in the financial services industry with a different approach. Therefore,

(Zavolokina, L., Dolata, M., & Schwabe, 2017) considers Fintech as a fusion between technology and financial innovation that has the potential to elevate the financial services industry to a higher level. Fintech has demonstrated its advantageous innovation within the financial services sector, significantly enhancing financial inclusivity by catering to diverse customer demographics (Hasan, 2020). (Bhat et al., 2023) classify several technologies that are an integral part of Fintech which are categorized into 3 parts, namely:

1. Sources of Data: IoT Devices, Unmanned Aerial Vehicles (UAVs), Intelligent Applications, and Robotics.
2. Data Integration and Storage: Utilization of 5G/6G Networks, Robotics, Cloud Infrastructure, and Blockchain Solutions.
3. Data Processing and Transmission: Incorporation of Artificial Intelligence, Machine Learning, Augmented Reality (AR), Virtual Reality (VR), Metaverse Technologies, Quantum Computing, and Digital Replicas.

These technological advancements are instrumental in spearheading the evolution of Fintech and revolutionizing the landscape of financial services as we know it.

2.2 Blockchain Technology

Blockchain technology was first introduced as a virtual currency system that might replace centralized authorities in proprietary trading, transaction confirmation, and issuance of money units. Since Bitcoin became the first network application, this architecture was developed specifically for it. Blockchain technology uses cryptography to enable proprietary transactions on a decentralized network and digital ownership (Nakamoto, 2008). The fundamental objective of blockchain technology is to gather and circulate electronic data without having to look for intermediaries. According to (Tschorsch & B. Scheuermann, 2016) the use of blockchain offers parties to streamline the execution of transactions, speed up the transaction process, and transfer funds at a low price. In terms of security, blockchain technology uses hashing, a kind of encryption technology that converts data into a string of characters. Blockchain technology has the capacity to shake up the financial services sector worldwide by providing a vast amount of information about the way individuals engage with money and value.

Currently, the financial services and banking sectors are active participants in the ongoing Blockchain phenomenon. As shown in figure 2.1, blockchain is often referred to as a "distributed ledger" or a collection of financial records. Blockchain works in the following way: (Boobier, 2020):

1. A transaction starts a new phase for a person.
2. The transaction becomes accessible to a network of nodes, or a peer-to-peer computer network.
3. Sophisticated algorithms are incorporated into the validation law procedure.
4. Transactions may involve contracts, documents, additional records, cryptocurrencies, or "stable coins".
5. When the transaction is completed, a new block or data element emerges which then becomes an essential component of the ledger. Eventually, this will evolve into a permanent and immutable element of the "blockchain".
6. The transaction is considered complete.

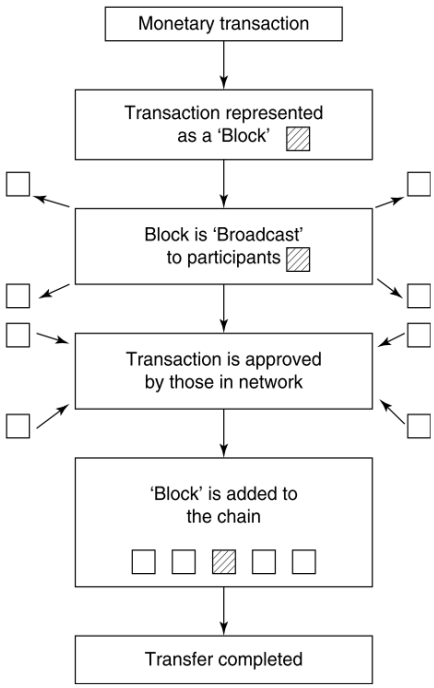

Figure 2.1. Blockchain operation (Source: Boobier, 2020)

Blockchain technology has the ability to fundamentally change the banking sector around the world by providing limitless opportunities to transform the way individuals conduct financial transactions and measure value. The growing interest in blockchain illustrates the ever-growing ambition of what it can achieve. Some argue that this innovation could represent the ember that ignites an era of change in internet value due to its ability to properly optimize the monitoring of asset operations and serve as an access to everyone, cryptographically protected, decentralized ledger featuring verifiable, reliable, and durable content (M. Gupta, 2018). The premise of a distributed ledger or shared ledger implies that data is hosted simultaneously on millions of computers, rather than centralized in one place. As a consequence, anyone with internet access and the appropriate password can access this data. (Boobier, 2020) highlights three main principles that comprise the idea at issue: 1. Decentralized system; 2. Visibility; and 3. Indestructibility.

2.3 Blockchain in Banking

One of the most important and stable financial intermediaries in the world is the banking industry, which plays an important role in the world economy. The advent of digitalization has had a profound impact on the banking sector and triggered a radical overhaul of the banking system. The financial world has evolved from the ancient barter system to commodity money, fiat currencies, and finally digital currencies and digital payment techniques, which are currently at the forefront of financial transactions. Automated Teller Machines (ATMs), electronic cash transfers, electronic clearing services, real-time gross settlement, internet banking, debit/credit cards, and mobile banking represent just a handful of the advancements that have contributed to making life more convenient for customers over the years thanks to technological advancements. The banking business relies heavily on technology in the contemporary era, and the recent development of blockchain technology has the possibility to reinvent it (Khadka, 2020). Blockchain, by enabling the recording of transactions in immutable blocks, eliminates the need for third-party

intermediaries. In theory, blockchain presents groundbreaking prospects for the banking and finance sector, promising significant transformation. Its capacity to disrupt traditional banking practices and introduce substantial change positions blockchain as a powerful force in reshaping the future of the banking industry (A. Gupta & Gupta, 2018).

The sector most interested in blockchain technology is banking. Blockchain is having a huge impact on banks, which implies that the financial sector will undergo many changes, both now and in the future (Peters & Panayi, 2016). The integration of Blockchain technology seems to be a positive development for the banking sector. Blockchain is an open-source and reliable technology that makes it easy to transmit value and data securely and instantly. With the use of this cutting-edge technology, banks can reduce the costs associated with payment processing and create new goods and services that open up significant new revenue streams. By implementing blockchain technology, banks can provide more affordable services for their clients and for themselves by cutting out useless middlemen (Werbach, 2018). This suggest that banks do not need to run every computer and manually check every transaction, as they do today. Instead, all network participants analyze the transaction, and consensus is reached collaboratively. Because of its ability to speed up and improve the efficiency of cross-border transactions, blockchain is being hailed as a revolutionary technology.

According to (Crosby et al., 2016), banks no longer see blockchain as a danger to established banking business models because of the many advantages the technology has over the legal and operational barriers required. While (Hassani et al., 2017) claims that there is visible resistance within the banking industry to using blockchain, with some failing to see its potential in the core business or preferring the use of other technologies such as cloud computing over blockchain. According to (Hassani et al., 2017), Bank-led blockchain collaborations and projects are a sign that the banking sector is moving towards blockchain technology. It is expected that this transition will result in significant changes for the financial industry, posing new risks as well as possible benefits for banks. In accordance with (Shorman et al., 2020) which states that, by utilizing peer-to-peer networks and reducing the need for third-party verification, a large number of banks in the financial sector are adopting blockchain technology to overcome obstacles. As a result, bank transfer procedures will become more efficient and economical.

2.4 Innovation Diffusion Theory

Rogers' book "Diffusion of Innovations" presents one generally accepted model for understanding this phenomenon. The study of embracing new inventions has continued for more than three decades (Sherry, 1997). This model has been used as a theoretical foundation in several studies conducted in various academic fields. Innovation Diffusion Theory states that the characteristics of an innovation have a significant impact on how organizations gather information and develop opinions (Rogers, 1995). In turn, these beliefs have a major impact on whether the innovation is accepted or rejected during the decision-making process (Rogers, 2003). So it can be concluded that Rogers' Diffusion of Innovations theory continues to be a very important framework in understanding how innovation characteristics shape organizational beliefs and, consequently, drive the decision-making process for the adoption or rejection of new innovations.

According to Rogers, acceptance of innovations is based on perceived quality; relative advantage suggests that people or communities are more likely to accept an innovation if it provides a faster and cheaper alternative to existing ones (Rogers, 1995). The most influential factor in determining adoption rates is perceived relative advantage, which refers to the belief that an innovation will outperform an organization's existing processes or technologies in terms of cost, quality, speed, flexibility, or other significant factors (Rogers, 2003). Therefore, it is expected by the author that the greater relative benefits that blockchain offers will increase the likelihood of wider adoption. According to (Yuen et al., 2021), compatibility of innovations that meet users' needs will reduce

ambiguity and encourage widespread acceptance.

(Rogers, 1995) explains that it is very important to emphasize that organizations and industries show different levels of adopting and then incorporating new technologies, leading to an increase in their maturity over time. A new technology usually progresses through the following phases in its adoption process: innovators, early adopters, early majority, late majority, and finally laggards (Kar & Navin, 2021). Nevertheless, the deployment of emerging technologies generally involves the use of survey-based methodologies (Yoo et al., 2020). However, these methods often have limitations in terms of their ability to capture documented evidence and collective insights from experts, especially when dealing with nascent technologies in geographically dispersed industries (Kar & Navin, 2021). This becomes particularly relevant when examining diffusion dynamics in established, process-centered industries with a global presence, such as the banking sector.

3.METHODOLOGY

This study employs two methods to address the research questions: systematic literature review and document analysis. To answer the first research question, the method used in this research is systematic literature review (SLR). Systematic literature reviews are particularly suitable when seeking to address specific questions (Rammal, 2023). According to (Okoli, 2015), a systematic literature review entails a methodical, coherent, comprehensive, and replicable strategy for identifying, assessing, and synthesizing existing works completed and documented by researchers, scholars, and professionals. Document analysis serves as the methodology utilized to address the second research question. Document analysis is used for its accuracy in understanding the state of adoption and advancement of blockchain technology across the Indonesian banking industry from the perspective of innovation diffusion theory. It entails a methodical process of examining or assessing various materials in both digital and physical versions (Bowen, 2009).

3.1 Definition of Research Question

In the early stages of conducting a systematic literature review, it is important to formulate research questions, as suggested by (Booth et al., 2019). This research aims to provide an overview of current research on blockchain technology in the banking sector, with a focus on Indonesian banks, by highlighting the importance of preparatory actions such as identifying needs, objectives, and research questions. The following research questions will be answered to achieve the research objectives:

RQ 1: *What the opportunities and challenges of blockchain technology adoption in the banking sector?* The purpose of this study is to look at the advantages and disadvantages of using blockchain technology in the banking industry. Focusing primarily on the financial sector, this research aims to show the real-world and prospective benefits that could result from the use of blockchain technology. The research recognizes the potential value that blockchain technology can provide, but also highlights the risks and barriers that could prevent blockchain from being properly integrated. The aim is to identify the biggest hurdles to blockchain implementation in banking with a thorough examination of these issues, which will inform future developments. It is hoped that by examining this data, in-depth knowledge will be gained to support strategic decision-making and policy-making useful to the banking industry.

RQ 2: *What stage of the blockchain technology adoption process is the Indonesian banking sector currently in?* Examining available secondary data is essential to determine the current state of blockchain technology integration in the Indonesian banking industry. This method helps in assessing the current status of adoption by applying Rogers' theory of the spread of innovation. The purpose of this study is to ascertain the current status of blockchain technology acceptance in Indonesian banking through the examination of publicly available secondary data.

3.2 Sources and Data Collection

The data utilized in this study is classified as secondary data. Put simply, secondary data encompasses all information not directly acquired by the author or analysis conducted on data collected by other parties (Shorman et al., 2020). Secondary data includes data that has been previously collected and considered for reuse in answering new research questions, even though the initial data collection was not intended for that purpose (Vartanian, 2010). Secondary data utilized in this study comprised literature sourced through searches across diverse databases, including Google Scholar, ScienceDirect, Emerald Insight, SpringerLink, IEEE Xplore, ResearchGate, and Taylor & Francis. The selection of these data sources was influenced by the observation that numerous journals are not indexed in conventional bibliographic databases, and some databases offer incomplete coverage of the journals of relevance despite being indexed. In addition, other secondary data sources include annual reports from selected banks in Indonesia, accessed through their official websites.

The chosen sample banks for document analysis include state-owned commercial banks and domestic private commercial banks, recognized as public entities and registered with the OJK. They are listed within the head office addresses of Conventional Commercial Banks and Islamic Commercial Banks in 2023 (Abdi, 2024). The selected banks totaled 43 consisting of 4 BUMN commercial banks and 39 national private commercial banks, for a list of bank names can be seen in table 3.1. The documents to be analyzed are the annual reports of each bank in 2023, totaling 43 documents according to the sample size. These documents consist of text and images captured without the direct involvement of the researcher (Bowen, 2009).

In this systematic literature review, the data collection method diverges from the approach typically utilized in research employing primary data. This study employs a three-stage process for data collection, encompassing literature search, selection, and analysis. We applied the PRISMA 2020 framework method to outline the comprehensive procedure of article selection and rejection during the literature review concerning the implementation of blockchain technology within the Indonesian banking sector. The PRISMA framework is a checklist based on evidence. It contains essential components designed to aid authors in the thorough reporting of systematic reviews and meta-analyses, ensuring effectiveness in communication (Hannan et al., 2023). This collection of elements functions as a mechanism to enhance transparency in systematic review reporting, guaranteeing that essential components are thoroughly addressed and documented during data collection in this research. Figure 3.1 depicts the PRISMA framework.

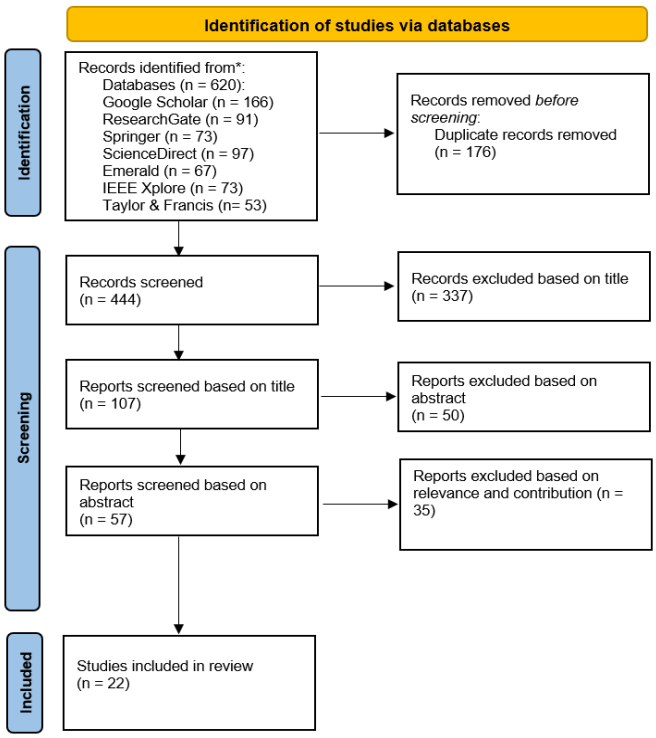

Figure 3.1 PRISMA Framework

The PRISMA framework consists of three main stages: identification, screening, and inclusion. In the identification stage, attention is focused on establishing keywords for the literature search and determining the sources where the search will be conducted. The screening stage establishes the criteria used to sort through the extensive search results and select the most relevant literature. The third stage, inclusion, involves documenting the content of the literature that was finally included in the study after the exclusion process (Page et al., 2021). During the identification stage, keywords, and their various combinations such as blockchain, blockchain technology, blockchain and banking, blockchain adoption, fintech, innovation diffusion, opportunities, and challenges, diffusion, banking industry were considered for the search. An initial search was conducted using the keywords "blockchain" and "blockchain banking" to provide an overview of publications covering those terms. A total of 620 articles were found. The identification stage required filtered search results before the actual screening stage. The exploration of literature was guided by a defined set of criteria for inclusion and exclusion, as outlined in Table 3.2. These criteria were instrumental in directing the selection of literature to be examined in this research.

Table 3.1. Inclusion and exclusion criteria

Criteria	Description
Inclusion	• Article has been released within the timeframe of 2020 to 2024. • Articles is written in English • The highlighted aspect pertains to the integration of blockchain technology within the banking sector in Indonesia, emerging economies, or globally. • Article has been released before 2020 • Article is available in languages other than English.

Exclusion	• The article focuses on the adoption of blockchain technology, excluding its implementation within the banking sector.

In the identification stage of the 620 articles obtained, 444 articles were obtained after excluding 176 articles due to duplication. At the screening stage, the 444 articles were identified through the title and 337 articles were removed due to mismatch of the article title with the required context resulting in 107 articles. As a next step, the abstracts were analyzed which resulted in the exclusion of 50 articles due to irrelevance to the context in terms of the abstracts which resulted in 57 articles after going through two stages of screening. To ensure validity and appropriateness to the context and research questions, the next step was to screen the entire content of the articles which resulted in the exclusion of 35 articles. Finally, 22 articles were subjected to full-text review at the end of the article selection process as shown in Figure 3.1.

3.3 Data Analysis and Synthesis.

After screening and selecting articles and determining the sample banks or documents to be analyzed, the next step is to synthesize the data by performing thematic synthesis on the selected articles and analyze the selected report documents with content analyze. In the SLR method, after carrying out the article selection process, the article will generally be synthesized using thematic synthesis. Thematic synthesis was chosen as it suited the purpose of mapping existing evidence and identifying potential knowledge gaps (Tong et al., 2012). Thematic analysis involves identifying significant concepts within data through the process of tallying, categorizing, and examining patterns and connections among various elements of the data (Braun & Clarke, 2006). In this research, NVivo14, a qualitative data analysis software, was utilized to conduct thematic synthesis, incorporating the selected papers. To synthesize the chosen articles, Braun and Clarke's thematic synthesis method was employed, adhering to the subsequent phases (Braun & Clarke, 2012):

1. Preliminary Phase: Acquainting Oneself with the Data
2. Subsequent Phase: Formulating Initial Codes
3. Third Step: Identifying Emerging Themes
4. Fourth Step: Evaluating Potential Themes
5. Fifth Step: Defining and Labeling Themes
6. Concluding Step: Aggregating the Findings into the Report

In document analysis, after collecting all annual reports from each selected bank, the next step is to analyze the data with content analysis. As indicated by (Seuring & Gold, 2012), content analysis offers the reliability of the resulting findings due to a structured and consistent procedure. According to (Seuring & Gold, 2012) content analysis consists of two levels. At the initial tier, the examination involves scrutinizing the overt content of texts and documents through statistical techniques. Conversely, the subsequent tier of analysis delves into uncovering implicit meanings embedded within words or arguments in texts and documents, necessitating a more profound interpretation. In this research, we executed a primary-level content analysis by identifying blockchain adoption-related content from the annual reports of each bank. These findings will be evaluated utilizing the diffusion of innovation theory as a framework to ascertain the level of blockchain adoption across different banks.

4.RESULT AND DISCUSSION

The results and discussion of the results will be divided into two parts in this section: insights as

well as conclusions from the systematic literature review and document analysis. This bifurcation is intended to streamline accessibility and furnish a methodical outline of responses to each research inquiry.

FINDINGS FROM SYSTEMATIC LITERATURE REVIEW

In the first phase we read all the selected articles to get to know and familiarize ourselves with them, during this phase we found that the selected articles had similar characteristics in their research findings, which was a discussion of how blockchain adoption in banking contained a series of opportunities or benefits and challenges or risk. When developing the codes, we found it unique how each article had its own way of developing themes, such as (Osmani et al., 2021) which created themes based on costs, benefits, risks and opportunities. After creating the codes, the next step is to develop themes based on the codes and of course in accordance with the first research question, which is: *What the opportunities and challenges of blockchain technology adoption in the banking sector?*

4.1 Opportunities of Blockchain Technology Adoption in The Banking Sector

The advent of blockchain technology offers a multitude of options that can be leveraged in a multitude of businesses. Based on the conclusions compiled from the literature references, several benefits that the adoption of this technology provides for banks will be examined in more detail in this part.

Figure 4.1. Opportunities of blockchain technology adoption in banking sector

4.1.1 Cost and Time Efficiency

According to 72% of the cited articles, the main advantage of using blockchain technology in the banking industry is its ability to save costs and save time. High transaction prices and long transaction times are two problems often faced by the financial industry, and blockchain offers a solution. Each party usually records their own financial transactions, so a third party is required to organize the information and verify the transactions. These procedures are often time-consuming and service fees are high (Gan et al., 2021). Commercial banks around the world are showing interest in blockchain technology as it can reduce costs associated with transactions with third parties and enable transactions within seconds (Osmani et al., 2021)(Choudhary & Saxena, 2024)

(Verma & Vemuri, 2022). Blockchain technology helps lower the costs associated with bank reconciliation by working on the basis of agreements and sharing information between the various parties involved in a transaction (Makkar et al., 2022).

The potential for blockchain to provide a few benefits to banks is becoming increasingly clear, particularly on the cost issue. A study showed that blockchain has the potential to cut central financial reporting costs by 70%, reduce business operational costs by 50%, and lower compliance costs by more than 50% (Choudhary & Saxena, 2024). And a survey found that large banks in the United States, Canada, and Europe tend to prioritize lower friction costs and lower capital costs (Arrifin & Subramanian, 2022). Blockchain as a technology that facilitates transactions is certainly the right choice for banks. Because reducing transaction costs and settlement time is the main organizational value of blockchain (Saheb & Mamaghani, 2021). Reducing transaction time by not having a middleman has also been proven. The UAE Blockchain KYC platform has radically shortened the time required to establish a connection with a bank, revolutionizing the procedure of creating an investor bank account (Hadjer & Abderrazek, 2021).

4.1.2 Security and Data Integrity

Improving security and ensuring data integrity are other opportunities for the adoption of blockchain technology in the banking industry. As indicated by 72% of referenced articles, this is a topic that is frequently discussed in articles. Security on blockchain has become commonplace today, this technology is promoted as a security solution to various security problems that exist in existing technologies or systems with its characteristic as a system with distributed storage or known as a distributed ledger. Blockchain technology protects the system from third parties who might manipulate it (Khanna & Haldar, 2023). In any financial system including banks, security is a priority. Compared to traditional banking, it is expected that security and privacy can be enhanced by using blockchain. Undoubtedly, blockchain technology offers a better level of trust and security (Muayad & Abumandil, 2022).

Blockchain includes a number of security protocols, including encryption, consensus techniques, and smart contracts, in addition to distributed storage. All these protocols work together to provide a high level of security for transactions and data storage. Blockchain functions as an immutable and decentralized ledger-based system, where transactions are securely linked and documented using cryptographic methods. This method ensures a high level of security and data integrity as the data cannot be altered or manipulated once recorded (Wankhade et al., 2023). Public and private key protocols are used in the encryption process that ensures data integrity and maintains the immutability of blockchain technology (Gamal & Aref, 2022). One important element of this technology is smart contracts, which can perform automatic validation and execution of contracts (Choudhary & Saxena, 2024).

Blockchain technology can also provide benefits to banks in the form of data integration such as simplification and elimination of duplicated data, which is useful in detecting various types of fraud or data manipulation. Blockchain technology in banking has significantly improved risk management, enhanced data exploration, and fraud detection capabilities (Addula et al., 2024) (Kawasmi et al., 2020). Blockchain creates accountability that reduces fraud and misuse of company resources. Banks can manage transactions more accurately as Blockchain makes the verification and validation process easier (Choudhary & Saxena, 2024). Blockchain technology reduces losses caused by document forgery by operating on the principles of exchanging information among multiple parties and achieving consensus in transactions (Makkar et al., 2022). Modern blockchain technology can store various types of data and regulate access and modification based on predefined rules, making it able to help prevent fraud, as altering pre-recorded blocks is extremely difficult (Arrifin & Subramanian, 2022).

4.1.3 Trust and Transparency

The third opportunity for blockchain adoption in the banking sector is trust and transparency, which was cited in 45% of the reference articles. System transparency and trust are inseparable, especially in the context of adopting new innovations, and the terms transparency and trust are often written together in one sentence in the analyzed articles. The adoption of blockchain can increase transparency while increasing trust (Kawasmi et al., 2020) (Osmani et al., 2021) (Saheb & Mamaghani, 2021) (Sankaranarayanan & Rajagopalan, 2020). A blockchain-based financial and banking system will eliminate the need for intermediaries due to the additional costs required by intermediaries, so the system must be built in a way that is trustworthy and reliable and open to the public to be transparent (Muayad & Abumandil, 2022). Because distributed data cannot be tampered with, it fosters an inherent atmosphere of trust where associates can operate knowing that they always have the same version of the truth and historical records cannot be altered (Sankaranarayanan & Rajagopalan, 2020).

Real-time asset tracking is made possible by blockchain immutability, which increases the transparency of contracts and transactions. The public can view blockchain applications, which enable this openness (Saheb & Mamaghani, 2021). When blockchain technology is applied to fields that require data disclosure, its openness feature guarantees data transparency (Osmani et al., 2021). Smart contracts, one of the features of blockchain technology, have the potential to fuel the growth of decentralized autonomous organizations and make it easier to create an open financial ecosystem with pre-defined rules and consensus procedures (Addula et al., 2024). Transparency and trust can be enhanced by using blockchain technology to streamline and eliminate middlemen. Decentralized consensus building is made possible by blockchain technology, which also has the creative potential to remove middlemen from procedures and streamline operations. Blockchain users have the ability to verify and track the specifics of their transactions, and the information contained in blocks serves as the foundation of trust previously built by governing organizations and laws (Gan et al., 2021).

4.1.4 Regulatory Compliance

Regulatory compliance is the last opportunities for blockchain adoption in the banking industry, and it's a subject covered in 22% of reference materials. Regulatory compliance is an important aspect that can be gained from blockchain adoption (Kawasmi et al., 2020), though only a small number of reference articles discuss it. Blockchain will reduce the regulatory burden as risks are mitigated by technology (Gan et al., 2021). Blockchain improves compliance by allowing auditors and regulators to monitor transaction data in real-time (Choudhary & Saxena, 2024). This eases the audit process and allows financial institutions to detect suspicious transaction activity earlier in compliance with regulations. The immutability and auditability of blockchain technology can make financial organizations better able to comply with regulatory compliance requirements. With all transactions recorded on the blockchain, it becomes a simpler task for auditors and regulators to monitor and verify activities, thereby reducing the risk of regulatory violations (Wankhade et al., 2023).

4.2 Challenges of Blockchain Technology Adoption in Banking Sector

Blockchain technology opens several highly beneficial opportunities for the banking sector if they adopt it, which are: opportunities to create efficiencies in business processes in the form of reduced costs and accelerated transaction processes, opportunities to create a banking system that is secure and has data integrity, opportunities to increase system transparency and trust, and opportunities to be more compliant with regulations. Beyond these opportunities, blockchain adoption also presents several serious challenges that will be discussed in this section.

Figure 4.2. Challenges of blockchain technology adoption in banking sector

4.2.1 Regulatory Challenges

Regulatory challenges are a major obstacle to the use of blockchain technology in banking, as noted by 86% of the articles references. In terms of regulation, blockchain has the potential to make it a form of regulatory compliance but regulation is also a challenge for the adoption of blockchain technology. Blockchain is seen as a technology that is still in its infancy, so there are differences in standards or regulations between countries. Therefore, a uniform regulatory structure is required to facilitate the development of this system (Gyimah et al., 2023). The adoption of blockchain technology has faced some important legal obstacles. The lack of legal requirements relating to the integration of blockchain technology and related practices into national systems has led to a few regulatory limitations, especially in developing countries. The emergence of independent miners as a result of these circumstances makes it difficult to determine the legality of these covert transactions in developing countries (Mbaidin et al., 2023). Regulators are faced with a dilemma when enforcing blockchain laws. The risk of not encouraging innovation through proper regulation can lead to losing a country's competitive advantage, while a state of lawlessness can increase criminal activities that take advantage of the legal vacuum (Khanna & Haldar, 2023).

A common challenge to technological innovation is the inability of regulation to keep up with the speed of development of a technology, and blockchain is no exception. The bottleneck in governance and regulatory compliance is due to the slow pace of rule-making compared to the rapid advancement of technology. Wide-scale adoption of these technologies is hampered by this gap (Saheb & Mamaghani, 2021). Blockchain is a fundamentally unprecedented technology, so regulation has always struggled to keep pace with technological advancements (Arrifin & Subramanian, 2022). This is certainly a focus for financial institutions, with banks being cautious about using blockchain technology associated with cryptocurrencies due to a lack of regulation (Hadjer & Abderrazek, 2021). Regulators will face difficulties in defining what constitutes a violation of the law. The policies will take into account the participation of various stakeholders to create a well-rounded ecosystem and take into account the current regulatory framework and financial conditions (Muayad & Abumandil, 2022).

Transparency in blockchain technology not only provides trust but is also a concern for users as it can raise privacy-related issues. The transparent and immutable ledger design of Blockchain technology offers built-in security measures including hashing and cryptographic encryption. However, the technology also presents new privacy concerns (Addula et al., 2024). The main

problem that transparency can pose is that some companies may not be enthusiastic about disseminating their information because it may jeopardize their competitive advantage position. This suggests that although transparency is an important feature in blockchain technology, it needs to be applied with caution to avoid adverse impacts on stakeholders (Gyimah et al., 2023). Many famous or wealthy people choose to hide their personal financial transactions (Shorman et al., 2020). Customers require a level of privacy that blockchain technology does not fulfill (Arrifin & Subramanian, 2022). Solid security measures are required where only approved persons, such as entities, should be able to access data as well as data storage. Information sharing should be done in a secure manner (Muayad & Abumandil, 2022)

Although blockchain has a sophisticated set of security protocols, it does not mean that the technology doesn't have security holes that can be abused by irresponsible parties. Significant barriers stand in the way of widespread use of blockchain and artificial intelligence (AI) in financial processes. These include privacy and security concerns (Addula et al., 2024). Security issues on the blockchain will still arise(Sankaranarayanan & Rajagopalan, 2020). When it comes to the difficulties associated with implementing blockchain technology in the banking industry, security and privacy are two of the most frequent concerns for consumers. Consumers voiced their concerns regarding the various security risks that exist in the banking sector (Gan et al., 2021). Until complete regulations and policies are developed, it is difficult to encourage widespread adoption of blockchain among all companies or individuals to protect the rights of users (Khanna & Haldar, 2023). To address the privacy and security challenges of blockchain, a policy framework is needed that allows users to have privacy rights and blockchain also needs to be standardized for security.

4.2.2 Technical Challenges

The technical challenges is the next obstacle associated with the implementation of blockchain technology in banking, as noted in 81% of the cited articles. From a technical standpoint, banks face several obstacles when implementing blockchain technology, such as concerns related to network performance, scalability, interoperability, security risks, infrastructure, standards, and immutability. Scalability is one of the main concerns when incorporating blockchain technology into financial procedures. Large data and transaction volumes must be managed by blockchain systems, which can strain network and computer resources (Addula et al., 2024). The most common technological issue that arises when using blockchain in emerging banking systems is scalability (Mbaidin et al., 2023). One of the most important issues that blockchain technology needs to solve is scaling. As transaction volumes increase, traditional public blockchains like Bitcoin and Ethereum may have performance issues that lead to longer processing times and higher transaction fees (Wankhade et al., 2023). Limitations and trade-offs between the number of transactions and available computing power can make blockchain systems less scalable (Saheb & Mamaghani, 2021).

As each industry uses different structured systems, creating interoperability across sectors or industries is difficult, and integrating blockchain systems into existing systems is challenging. This could impact the possibilities of the current banking system (Verma & Vemuri, 2022). Blockchain technology is specifically designed to serve a wide variety of distributed applications, including applications that may emerge in the future, such as financial services. As a result, in order to seamlessly join multiple blockchain networks, interoperability becomes an important issue for blockchain (Shorman et al., 2020). The need for interoperability has increased along with the growth of the banking sector (Arrifin & Subramanian, 2022). The structure of blockchain architecture, the underlying peer-to-peer mechanism, and related features make it vulnerable to several attacks. Network threats, mining/collection threats, and spending multiplication threats are common to blockchain technology. In blockchain technology, selfish mining is a known risk used

by miners to steal block rewards (Dora & Srinivasan, 2020).

Blockchain technology has yet to reach a sufficient level of maturity for use. The existence of a consistent description of standards and regulations as well as stable protocols are the main challenges for this technology (Gyimah et al., 2023). Despite the rapid progress of blockchain innovation, the underlying legal framework is still in an uncertain process of evolution, and the need for standardization across countries is crucial (Makkar et al., 2022). Blockchain technology requires a robust and reliable infrastructure to store and transact large volumes of data every day. While the technology is currently efficient for smaller amounts of data, handling large volumes requires a better infrastructure for transactions (Verma & Vemuri, 2022). It is important to recognize that data stored in the context of blockchain technology cannot be deleted. Due to human limitations, changes cannot be made in case of undiscovered errors (Sankaranarayanan & Rajagopalan, 2020). Blockchain technology requires a large network of participants. Realizing the benefits of the network becomes difficult if it is not widely disseminated and unevenly distributed (Palihapitiya, 2020).

4.2.3 Organizational Challenges

Organizational challenges are the third barrier to the adoption of blockchain technology in banking identified by these study, which was cited as a challenge in 59% of the articles referenced. The use of blockchain not only poses challenges to users but also to organizations as service providers that will implement it. Challenges to the organization consist of: lack of awareness and skill, stakeholders, changes to business processes, and several other challenges. In-depth knowledge and technical proficiency are required for the banking industry to adopt blockchain technology. Nonetheless, the main obstacle stems from the lack of utilization of the technology in banks. Unlike tech companies, banks typically focus on financial services rather than new technologies. Their teams often lack the technical knowledge required for blockchain implementation. This lack of awareness, including a limited understanding of how blockchain works, is considered a major obstacle to blockchain adoption in the banking industry. (Verma & Vemuri, 2022)(Arrifin & Subramanian, 2022)(Dora & Srinivasan, 2020).

To ensure successful implementation, the banking industry will need people with extensive technical expertise and experience using blockchain technology (Verma & Vemuri, 2022). However, challenges arise due to lack of familiarity and limited human resources and skilled experts (Saheb & Mamaghani, 2021). This becomes more complicated for small to medium-sized companies, which may not have the necessary skills (Khanna & Haldar, 2023). The integration of blockchain in banking services requires effective communication and collaboration with diverse stakeholders, including founding teams, developers, miners, and others (Shorman et al., 2020). Reaching agreement on the future direction of blockchain is critical, but it can be challenging to design governance models and consensus processes that suit the diverse needs of all stakeholders involved (Wankhade et al., 2023). In addition, top management support is critical in driving blockchain adoption within organizations, but overcoming organizational resistance to change remains a significant obstacle (Khanna & Haldar, 2023) (Saheb & Mamaghani, 2021). Most blockchain implementations are business process changes rather than technological changes, as blockchain technology requires workflow modifications and successful integration with existing systems and workflows, which creates challenges in business models (Khanna & Haldar, 2023)(Gan et al., 2021)(Mbaidin et al., 2023).

4.2.4 Cost Challenges

Cost challenges, which has been mentioned as a problem in 50% of the cited papers, is the next barrier to the adoption of blockchain technology in the banking industry. While blockchain technology can reduce transaction costs and time, setting up a blockchain system can be very

expensive at first. This barrier is especially noticeable in developing countries where the financial or banking sectors find it difficult to fully integrate blockchain into their systems due to the high cost of blockchain infrastructure. Therefore, while blockchain can save costs in the long run, the high initial cost remains a major obstacle in the adoption of this technology (Khanna & Haldar, 2023)(Sankaranarayanan & Rajagopalan, 2020)(Dora & Srinivasan, 2020)(Palihapitiya, 2020)(Mbaidin et al., 2023). Blockchain-based financial and banking systems can have significant development and operational costs. As a result, the industry has expanded its definition of development to include all parties involved in implementation and the total cost of implementation (Muayad & Abumandil, 2022).

Aside from initiation costs, energy costs are also a concern in blockchain adoption. Energy consumption on certain blockchain networks, such as Bitcoin, can be significant due to its consensus mechanism, namely proof-of-work (PoW). Blockchain infrastructure using PoW requires a large amount of computing power (Khanna & Haldar, 2023)(Wankhade et al., 2023). Therefore, when discussing the sustainability of blockchain technology, it is imperative to recognize the significant energy consumption involved in the transaction validation process. Businesses in developing countries face many difficulties as a result of this energy usage (Mbaidin et al., 2023). And one more cost that will arise from blockchain adoption, the operating cost. Transaction costs in the first few years are free, but after that the transaction costs on the network increase, while the growth of the database will increase the storage costs required, which then leads to higher infrastructure operating costs (Palihapitiya, 2020)(Mbaidin et al., 2023)(Osmani et al., 2021).

4.2.5 Societal Challenges

The last challenge associated with blockchain adoption in banking is the social challenge, although only cited by 27% of referenced articles, this challenge cannot be underestimated as it relates directly to potential users who are part of society. Societal behavioral changes related to more open data sharing are a major challenge in the face of the ongoing cultural revolution (Muayad & Abumandil, 2022). While blockchain technology promises a potential solution to these challenges, its adoption faces significant resistance from various parties and carries social risks that need to be considered (Gan et al., 2021). Lack of consumer readiness and market maturity as well as lack of consumer awareness are barriers to the adoption of blockchain technology (Saheb & Mamaghani, 2021)(Mbaidin et al., 2023). While resistance to change is common, it is not inevitable. It is important for customers to understand that their electronic transactions are safe and secure when switching to a trusted third party (BCT) (Gamal & Aref, 2022).

FINDINGS FROM DOCUMENT ANALYSIS

In this phase the author starts analyzing the content by looking for words about "blockchain" or "block chain" in the annual report document of each bank, after searching for words the next step is to observe the entire document in the information technology section, service digitization, digital transformation, digital banks, or other sections that discuss information technology or digitization. When collecting data on annual reports, we found that some banks did not upload their most recent annual reports (reports in 2023). Therefore, to maintain the validity of the analysis results, we used the 2022 and 2023 annual reports for each sample and browse the bank's official website for more information. The outcomes derived from analyze the content of each banking report will be assessed using the diffusion of innovation theory to ascertain the extent of blockchain adoption within individual banks. Employing Rogers' diffusion of innovation theory, we evaluate the adoption status by examining the level of blockchain technology integration within each bank, treating banks as consumers of blockchain technology. Consequently, we classify adoption statuses into innovators, early adopters, early majority, late majority, and laggards, based on the insights gleaned from the analyzed documents.

Table 4.1. Distribution blockchain adoption rate in Indonesian banking

	Innovators	**Early Adopters**	**Early Majority**	**Late Majority**	**Laggards**
Total Banks	1	17	-	-	25

From table 1, the level of blockchain adoption in the Indonesian banking sector is distributed across several stages. In the initial stage, known as innovators, there is one bank that spearheaded the adoption of blockchain technology in the Indonesian banking sector, namely BankPermata, which has used blockchain technology in 2021 in trade finance services and after that they also successfully carried out the first cross-border transaction between Indonesia and Thailand by partnering with Bangkok Bank PLC in terms of issuing a Letter of Credit from PT Chandra Asri Petrochemical Tbk. At the early adopter stage, there are 17 banks in Indonesia that have started the process of adopting blockchain technology. At this stage, there are different adoption steps among the banks. The first group are banks that have already started using blockchain technology in their services, influenced by the successful adoption of this technology by Permata Bank. Bank Muamalat Indonesia is an example of a bank that has adopted blockchain technology, using it to speed up transactions and strengthen the security of their customer data. The second group are banks that have created specialized teams to develop this technology in their services and there are also banks that collaborate with Fintech companies to assist banks in building blockchain in their systems later. An example of the second group is Bank BRI which created a special blockchain development team called Blockchain Center of Excellence, and an example of a bank that collaborates with a Fintech company is Bank BNI which collaborates with PT Adamobile Solutions Networks to develop blockchain, especially in trade finance and remittance services. The third group is banks that started adopting blockchain technology by attending several trainings, workshops, and webinars on blockchain, especially in banking, with the aim of getting to know blockchain more deeply as a form of initial steps to develop and adopt this technology, One of them is Bank BTN.

Majority of banks sampled in this study turned out to be at the last stage of blockchain adoption from the perspective of innovation diffusion theory, which is laggards, totaling 25 banks. The banks included in this stage are those that have not expressed any adoption or interest in blockchain, as indicated by the absence of the words “blockchain” or “block chain” in their annual reports in the last two years as well as on their websites. The limited interest exhibited by these banks towards blockchain adoption is largely attributed to the significant obstacles they anticipate encountering during the adoption process. Among these challenges are the absence of a well-defined regulatory framework for blockchain in Indonesia and the insufficient resources and infrastructure required for its implementation. These hurdles are particularly noteworthy in the context of Indonesia's status as a developing nation, and they represent the primary factors contributing to the banks' tepid enthusiasm for blockchain adoption. In the early majority and late majority stages, where technology adoption has started to become widespread or mature, none of the banks in the sample are at this stage. This stems from the fact that blockchain adoption in Indonesia, particularly within the banking domain, is still in its nascent phase. The current lack of clear standards for blockchain technology has led banks to delay adoption until a more conducive regulatory environment, technology standards, and infrastructure are in place. These challenges

prevent banks from engaging in comprehensive blockchain adoption, resulting in the majority stage not being filled by the banks in the sample.

5.CONCLUSION

The utilization of blockchain technology within the banking sector presents encouraging opportunity alongside notable challenges. Opportunities include cost and time efficiency, security and data integrity, trust and transparency, and regulatory compliance. However, challenges such as regulatory ambiguity, technical complexities, organizational readiness, cost constraints, and social factors hinder widespread adoption. While some Indonesian banks have embraced blockchain, most are still lagging due to either disinterest or a lack of clear standards and regulations. This study aims to spur interest in blockchain adoption among financial institutions, especially banks, by highlighting its benefits. Furthermore, it aims to raise awareness and identify solutions to adoption challenges. The research aims to enrich the literature on blockchain technology adoption, offering insights into its application in banking, particularly in Indonesia. However, it faces limitations due to reliance on secondary data for understanding blockchain adoption in the banking sector. Future research could overcome this by gathering primary data through direct interviews with key stakeholders, including banks, financial authorities, central banks, and fintech or blockchain associations. This approach would provide deeper insights into the adoption process and enhance the study's validity and applicability.

Acknowledgement

This study not been involved of other parties requiring acknowledgment or disclosure.

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THE INFLUENCE OF WORK MOTIVATION AND COMPENSATION ON JOB SATISFACTION AND FRAUD IN A FROZEN FOOD COMPANY (BEST MEAT)

Abd Rahman[1], Aslina Asnawi[1], Siti Nurlaelah[1]*

Animal Science And Technology Departement Socio Economic, Hasanuddin University, South Sulawesi, Indonesia

Abstract

One form of capital that is very important to achieve business goals is human resources. They expect reciprocity in the form of compensation according to what they do. Work motivation factors are also no less important in increasing job satisfaction. If employees feel dissatisfied, it will encourage them to commit fraud. This type of research is quantitative. The population that is used is all employees using the non-probability sample technique with 40 respondents, conducted between November and December of 2023. The research used the SEM (Structural Equation Modeling) technique using SmartPLS 4.0 software. The findings of the study indicate that compensation and work motivation on employee job satisfaction have a significant influence. Work motivation and job satisfaction have a big impact on fraud. However, compensation has no effect on fraud. It is hoped that companies will always pay attention to compensation and increase employee work motivation in order to achieve satisfaction at work. Apart from that, the company's internal supervision must be further improved to minimize fraud

Keywords : Job satisfaction, compensation, work motivation, fraud, Structural Equation Modeling

1.INTRODUCTION

One form of capital that is crucial to reaching business objectives is human resources. A company or organization that has clear goals and is equipped with adequate facilities, means, and infrastructure, without the support of human resources, is likely to find it difficult to achieve the desired company goals. Humans are creatures who have thoughts, feelings, and life needs. Of course, they expect reciprocity in the form of compensation for contributions according to what they do for the company. Appropriate compensation can encourage human resources to improve their performance, while inappropriate compensation can encourage human resources to commit fraudulent acts.

Fraud can be interpreted as a deliberate act outside the rules aimed at benefiting oneself and harming others (Tjahjono, 2013). Fraud can occur at all levels of employees, from the lowest level to middle level, even to the top level (top management) within the company. Fraud can include acts of corruption, misuse of assets, and manipulation of financial reports. Factors that make employees commit fraud are low levels of job satisfaction and lack of motivation at work. If management hopes that every worker can contribute positively to the attainment of company objectives, then motivation is a critical factor to consider. When an employee lacks motivation, their work motives and motivation are not satisfied, and they cannot fulfill their obligations to the required level or even beyond it. According to Hasibuan (2014), motivation is the provision of a driving force that piques an employee's interest in their job and inspires them to collaborate effectively and fully integrate their efforts in order to achieve satisfaction.

Apart from motivation and job satisfaction, appropriate compensation also plays a role in the likelihood of accidents occurring. Employee satisfaction with salary in relation to work and workload is expected to increase with appropriate compensation. According to Rivai (2004), employees receive compensation as a reward for their contribution to business activities. Benefits given to workers or organizational members contribute to shaping their level of job satisfaction. Wages or salaries, supervision, job security, working conditions, prospects for advancement, individual factors, and social factors are some of the variables that influence job satisfaction (As'ad, 2013).

Based on the results of observations, it is known that one of the enterprises operating in the retail and food sector is suspected of having performed an act by an employee. This can be caused by several factors, including the work pressure imposed by the company and the inappropriate benefits they receive so that some employees feel dissatisfied with their work. This is what motivates researchers to conduct further research.

2. LITERATURE REVIEW

Human Resources

Human resources are vital for coordinating and deploying other resources within an organization. The constant presence of people in companies underscores the significance of human resources. Without capable workers who are committed to the organization's goals, regardless of other advantages it may have, maximizing productivity and profitability becomes impossible (Qurrotun, 2011). To create competitive, generative, and innovative value, quality human resources must leverage their highest energy, such as intelligence, creativity, and imagination, rather than relying solely on raw energy, such as raw materials, land, water, or physical strength. The entirety of an organization's human resources significantly impacts its attempts to accomplish objectives. Regardless of how sophisticated the technology, information development, funds, or materials are, a corporation cannot attain its goals without human resources (Sutrisno, 2011).

Compensation

Compensation is one of the most critical aspects of employment relations, playing a significant role in human resource management. Compensation refers to the entire amount of money or other items that employees receive in exchange for their labor within the organization. This includes bonuses, pay, salaries, incentives, and additional benefits such as health insurance, paid time off, holidays, and food allowances (Yusuf, 2015). Employee compensation largely comprises goals and perks that directly impact the employees' experiences.

An accurate, transparent, and well-organized compensation plan can boost workers' motivation and sense of fulfillment, thereby improving output. Employees receive compensation in exchange for providing their services to the business. According to Sastrohadiwiryo (as cited in Kasenda, 2013), compensation is the payment made by an agency or organization to its employees for their time and energy contributed to the agency's or organization's advancement in meeting established short- and long-term goals.

H1: Compensation has a substantial beneficial impact on job satisfaction

Work Motivation

Motivation at work is crucial because it can drive and guide employees towards company goals. Therefore, motivation plays a significant role in determining employee behavior at work. Work motivation serves as a driver for individuals to perform their jobs effectively. Sutanto & Fandianto (2012) define work motivation as a person's psychological drive that determines the direction of behavior within an organization, including the level of effort and determination or persistence in overcoming obstacles. According to Robbins and Timothy (2016), motivation is the readiness to exert significant effort in order to achieve objectives, and it is influenced by an organization's ability to address specific personal needs. Motivation involves encouraging human behavioral processes to achieve goals. While motivation propels individual actions, it is also an element that influences behavior.. According to George and Jones (as cited in Fandianto and Sutanto, 2012), the following indicators can be used to measure this variable: Direction of Behavior, Persistence, and Effort. The employee's efforts reflect how they behave while on the job.

H2: Work motivation has a significant effect on job satisfaction

Job satisfaction

Everyone who works desires to be content with their workplace. Since each person's level of job satisfaction differs depending on the values that are important to them, job happiness is essentially a personal affair. The more aspects of the work that correspond with the person's tastes, the more satisfied they feel. Job satisfaction is defined as an affective or emotional response to many facets of one's job. This definition implies that job happiness is not a singular notion; someone could be incredibly content with one aspect of their profession yet unhappy with one or more others. When it comes to the working environment, employee collaboration, imbalances that are tolerated at work, and issues with physical and psychological components, an employee's attitude toward their work is correlated with their level of job satisfaction. Job satisfaction is an emotional attitude that is pleasant and enjoys one's work. To improve worker morale, dedication, and discipline, it is critical to provide as much job satisfaction as possible for employees (Prayogo et al., 2019). The 36-item JSS (Job Satisfaction Survey) measurement tool from Spector was used to gauge the research subjects' degree of job satisfaction. The items were then translated into Indonesian. According to Hedissa et al. (2012), this measuring tool takes a phased (aspect) approach to job satisfaction and includes nine facets: pay or wages, opportunities for advancement, supervision or superiors, fringe benefits (benefits beyond salary), contingent rewards, workplace conditions, coworkers, the work itself or type of work, and communication.

H3: Job satisfaction has a significant effect on fraud

Fraud

Fraud is defined as illegal conduct carried out by individuals or groups, both inside and outside the organization, with the goal of obtaining an advantage for themselves or their group that directly affects other parties. This encompasses theft, embezzlement, lying, and cheating. Here, "embezzlement" refers to manipulating the company's finances or assets entrusted to him for selfish goals that may be harmful to the business. Fraud cases are common and can result in significant damages. Fraud will have disastrous results if it cannot be reduced or avoided. Fraud prevention encompasses all measures taken to deter possible offenders, restrict areas of

vulnerability, and identify activities that are particularly susceptible to fraud.

Meanwhile, fraud prevention, as defined by Nugroho (2015), is an endeavor to reject or limit any kind of fraud or employee deception that negatively affects the organization of the company. Fraud prevention itself can be carried out with the awareness of each individual, especially since an operational system must be in place that is very adequate to reduce the level of fraud in a company. Internal auditors themselves must have skills in detecting indications of fraud in the company. This fraud can take various forms, such as fraud in the form of stealing assets and manipulating financial reports. This type of fraud can often be found in a company, and the thing that causes this act of fraud is a person's own motivational factors, both general and individual. There are many different reasons why someone would commit fraud. The fraud triangle theory, first presented by psychologist Cresse (1953), suggests that there are three factors that indicate why someone commits fraud: pressure, opportunity, and rationalization. This theory helps explain why someone commits fraud.

H4: Compensation has a significant impact on fraud.

H5: Work motivation has a significant impact on fraud.

Theoretical Framework

Based on the explanation of the research background, research formulation, and study theory, a research conceptual framework can be proposed to guide and facilitate the understanding of the flow of thinking in this research. Specifically, it aims to examine the influence of compensation and work motivation on job satisfaction within the firm, as well as to explore the impact of compensation, work motivation, and job satisfaction on fraud within the company.

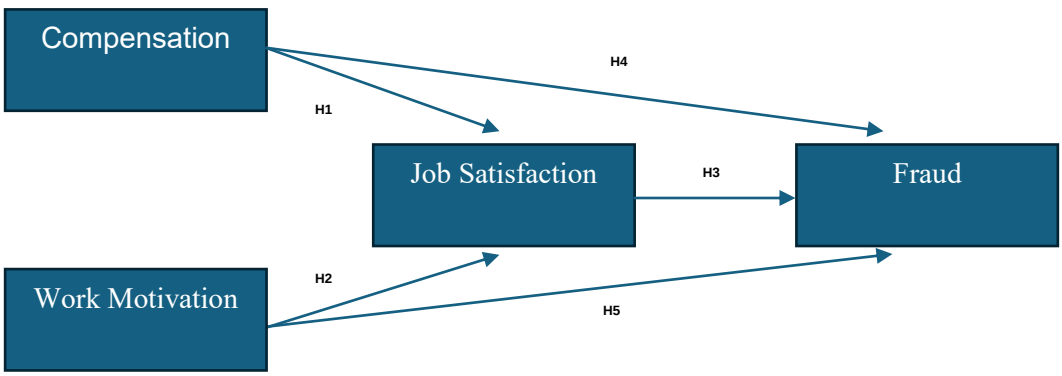

Figure 1 : Theoretical Framework

3. METHODOLOGY

The research was conducted at a frozen food company, namely at Best Meat Indonesia in the eastern area (South Sulawesi) during November-December 2023. It utilized a causal-comparative research approach, which investigated the cause-and-effect relationship between independent variables influencing and dependent variables affected. Non-probability sampling was employed, particularly a full sample, with a total of 40 respondents selected. Data collection methods included questionnaires, interviews, and observations, using both primary and secondary data sources. Data analysis was conducted using SmartPLS software, employing a form of structural

equation modeling (SEM) known as partial least squares (PLS) analysis.

4. FINDINGS

Respondents information

The majority of employees at the frozen food company are women, constituting 29 respondents (72%). The most dominant level of education among employees is at the high school level, with 35 individuals (88%), followed by bachelor's degree holders, accounting for 5 people (12%). This information suggests that the role of shop crew requires individuals with at least a high school diploma to a bachelor's degree due to the need for high-level thinking skills, sound decision-making abilities, and the capacity to work effectively both independently and in teams. In terms of tenure, the highest number of shop crew members have been with the company for 3-5 years, representing 53% of respondents. This indicates a significant level of experience and commitment among the shop crew, as they have remained with the company for an extended period. Analyzing Table 1 reveals that the majority of shop crew members fall within the age range of 21-25 years, accounting for 60% of respondents, followed by those aged 26-30 years, comprising 20%. This suggests that the shop crew is predominantly composed of young and productive individuals, reflecting a dynamic workforce within the company.

Table 1. Demographic Profile

Description	Criteria	Frequency	Percentage %
Gender	Male	11	28
	Female	29	72
Education	Senior High school	35	88
	Bachelor Degree	5	12
Length of Work	> 1year	2	5
	1-2 year	17	43
	3-5 year	21	53
	> 1Tahun	2	5
Age	16-20	3	8
	21-25	24	60
	26-30	8	20
	30-35	5	12

Evaluation of Measurement Models

SmartPLS is indeed a variation-based structural equation modeling (SEM) approach commonly used for path analysis, particularly in behavioral research. Path analysis is a multivariate statistical analysis method that assesses the contemporaneous influence of factors, aiding in prediction studies, exploration, or the construction of structural models (Hair et al., 2019). When using SmartPLS, model evaluation typically involves assessing the measurement model, the structural

model, and the overall quality and appropriateness of the model. This comprehensive evaluation process helps ensure the validity and reliability of the research findings.

Table 2. the values of CA, CR, AVE, and Factor Loading

Variabel	Measurement Items	Factor Loading	Cronbach Alpha	Composite Reability	Ave
Compensation	C7	0.865	0.679	0.862	0.757
	C8	0.875			
Work Motivation	WM1	0.798	0.949	0.956	0.686
	MW2	0.777			
	MW4	0.864			
	WM5	0.852			
	WM6	0.843			
	WM7	0.918			
	WM8	0.810			
	WM9	0.801			
	WM10	0.806			
	WM11	0.806			
Job Satisfaction	JS1	0.712	0.959	0.963	0.653
	JS2	0.735			
	JS3	0.757			
	JS5	0.843			
	JS6	0.854			
	JS7	0.875			
	JS8	0.745			
	JS9	0.884			
	JS10	0.764			
	JS11	0.781			
	JS13	0.816			
	JS14	0.891			
	JS15	0.765			
	JS16	0.864			
fraud	F1	0.930	0.940	0.951	0.735
	F2	0.876			
	F3	0.914			
	F4	0.807			
	F9	0.788			
	F10	0.801			
	F11	0.875			

The compensation variable demonstrates an adequate level of reliability, with a composite reliability value of 0.862, a Cronbach's alpha of 0.679 (> 0.60 or > 0.70), and convergent validity indicated by an AVE of 0.757 (> 0.50). Similarly, the work motivation variable exhibits satisfactory reliability, with a composite reliability value of 0.956, a Cronbach's alpha of 0.649, and an AVE of 0.686 (> 0.50), indicating convergent validity. Job satisfaction also demonstrates a satisfactory level of reliability, with a composite reliability value of 0.963, a Cronbach's alpha of 0.959, and convergent validity indicated by an AVE of 0.653 (> 0.50). Additionally, the fraud

variable exhibits satisfactory reliability, with a composite reliability score of 0.951, a Cronbach's alpha of 0.940, and an AVE of 0.735 (> 0.50). Moreover, if an indicator's factor loading exceeds the cross-loading value, it can be deemed legitimate. By comparing the loading value of the targeted construct, which must be higher than the loading value of the other construct, the cross-loading factor value can be used to determine whether a construct has appropriate discriminant validity. Table 2 indicates that the construct correlation is higher than the cross-loading, confirming the discriminant validity of the constructs.

Table3. *Fornell dan Lacker*

	Fraud	**Work Satisfaction**	**Work Motivation**	**compensation**
Fraud	0.857			
Work Satisfaction	0.191	**0.808**		
Work Motivastion	-0.169	0.658	**0.828**	
compensation	-0.011	0.731	0.609	**0.870**

Assessing discriminant validity using the Fornell and Larcker criterion involves examining whether variables are theoretically distinct and supported by empirical or statistical testing. According to Fornell and Larcker's criteria, a variable's root average variance exceeds its correlation with itself. In the research findings, the AVE values for the variables are as follows: remuneration (0.870), work motivation (0.828), job satisfaction (0.808), and fraud (0.857). These values indicate that each variable's root average variance exceeds its correlation with itself, confirming discriminant validity according to the Fornell and Larcker criterion.

Structural Model Evaluation

The evaluation of the influence hypothesis between research variables is integral to assessing the structural model. This involves using the t statistic value or p-value to test hypotheses between variables. A significant relationship between variables is indicated if the computed t statistic exceeds 1.96 (t table) or if the p-value is less than 0.05. The first hypothesis (H1) posits a significant increase in compensation relative to the increase in work productivity, with a path coefficient of 0.55 and a p-value less than 0.05. This suggests that every adjustment to compensation will indeed increase worker productivity.

The second hypothesis (H2) suggests a substantial influence of work motivation on job satisfaction, supported by a path coefficient of 0.338 and a p-value of 0.028 (< 0.05). This indicates that job satisfaction will rise with every shift in work motivation.

The third hypothesis (H3) proposes a significant relationship between job satisfaction and fraud, evidenced by a path coefficient of 0.645 and a p-value of 0.000 (< 0.05). This implies that fraud will increase in response to any shift in job satisfaction.

However, the fourth hypothesis (H4), suggesting no correlation between compensation and fraud, is rejected due to a path coefficient of -0.193 and a p-value of 0.282 (> 0.05). This indicates that fraud is unaffected by modifications to compensation, contrary to the hypothesis. Lastly, the fifth hypothesis (H5), which proposes a significant impact of work motivation on fraud, is accepted, as indicated by a path coefficient of -0.475 and a p-value of 0.048 (< 0.05). This suggests that work motivation does indeed have a substantial impact on fraud.

Table 4. Hypothesis Testing (Direct Influence)

Hypothesis	Path Coefficient	P-Value	95% Path Coefficient Confidence Interval		F Square
			Lower limit	Upper limit	
C -> WS	0.525	0.001	0.177	0.798	0.441
WM -> WS	0.338	0.028	-0.005	0.588	0.183
WS -> F	0.645	0.000	0.292	1.020	0.206
C-> F	-0.193	0.282	-0.608	0.099	0.021
WM -> F	-0.475	0.048	-0.849	0.043	0.151

Evaluation of Model Goodness and Fit

SEM PLS, a variance-based analysis, is utilized to evaluate prediction-focused model theories. To determine the appropriateness of the suggested model, several metrics are considered, including R square and the Goodness of Fit (GoF) Index. R square quantifies the amount of variance in endogenous variables that can be accounted for by other exogenous and endogenous variables in the model. According to Chin (1998), R square can be qualitatively interpreted as follows: 0.19 indicates low influence, 0.33 indicates moderate influence, and 0.66 indicates great influence.

The GoF Index evaluates both the structural and measurement models as components of the total model. It can only be calculated using a reflective measurement model, which is derived by multiplying the average geometric communality by the average R square. The GoF Index values are interpreted as follows, according to Wetzels et al. (2009): 0.1 indicates low GoF, 0.25 indicates medium GoF, and 0.36 indicates high GoF. Based on the R square values obtained, it can be concluded that the influence of compensation, work motivation, and fraud on job satisfaction accounts for 60.7% of the variance, indicating a medium influence. Conversely, the influence of compensation, work motivation, and job satisfaction on fraud accounts for 20.5% of the variance, indicating a low influence.

Table 4. Table R Square

	R Square	R square adjusted
Job Satisfaction	0.607	0.585
Fraud	0.205	0.139

Table 5. GoF Index

Average Communality	Rerata R square	GoF Index
0.687	0.406	0.528

According to Table 5, the calculated GoF model value is 0.528, which falls within the high GoF category. This indicates that the empirical data sufficiently explains the measurement models and suggests that they are highly suitable for the proposed model.

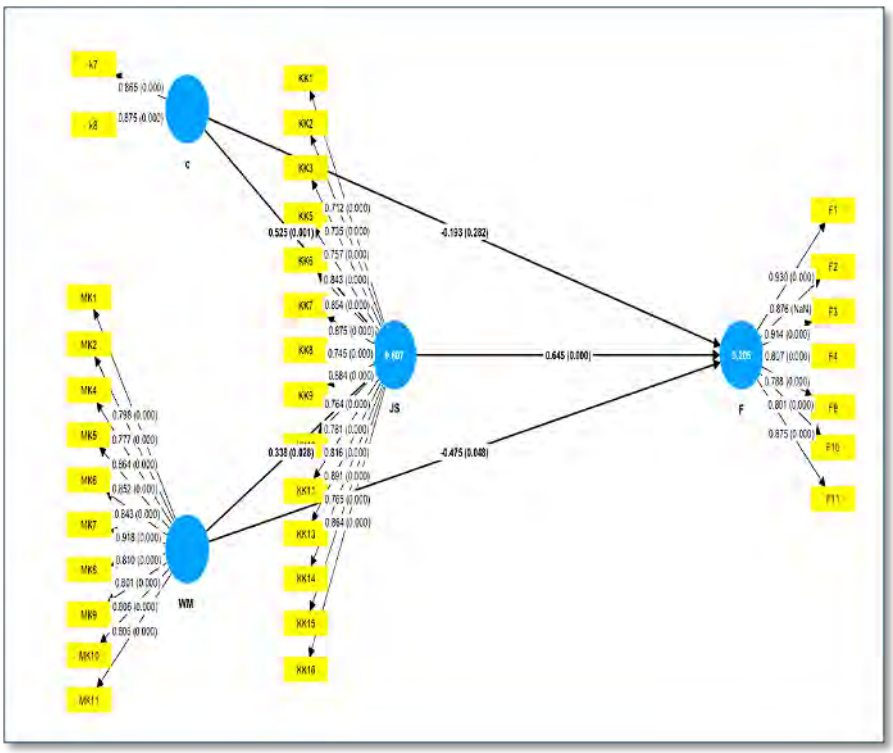

Figure 2. Structural Model

Discussion

Based on the research results, it is evident that compensation has a significant effect on job satisfaction, as indicated by a path coefficient of 0.525 and a p-value of 0.001 (< 0.05). Employees perceive that the compensation provided by the company, particularly in terms of allowances, aligns with the work they perform, such as serving buyers, maintaining shop cleanliness and assets, regular stock checks, and achieving sales targets. Furthermore, there is a need for improvement in the facilities provided to store crew members, including uniforms for a professional appearance, work-related attributes like stationery, brochures, freezers, and cleaning equipment. Adequate work facilities support employee productivity and performance. Therefore, it is essential for Best Meat management to maintain and continuously enhance compensation and facilities for store crew members to ensure job satisfaction. This finding aligns with research conducted by Putra et al. (2022), which suggests a positive influence of compensation

improvement on job satisfaction. When employees receive appropriate salary or compensation, they tend to feel more satisfied, leading to improved performance. Thus, Best Meat management should prioritize attention to compensation to maintain and enhance employee job satisfaction.

The work motivation variable significantly influences job satisfaction, as indicated by a path coefficient of 0.338 and a p-value of 0.028 (< 0.05). Work motivation appears stronger, particularly reflected in the level of persistence indicator, where store crew members consistently strive to correct mistakes, turn reprimands into motivation, and persist despite failures, especially in achieving sales targets. It is crucial to maintain this level of motivation for better performance at work. In this research, areas for improvement and acceleration include the direction of behavior and level of effort indicators. Behavioral direction pertains to employees' chosen behaviors that may hinder organizational success, such as tardiness, poor relationships with colleagues, and non-compliance with company regulations. Therefore, it is essential to motivate employees to exhibit positive behaviors beneficial to the organization.Similarly, the level of effort indicator relates to employees' diligence in completing tasks on time and performing their duties seriously to minimize errors. Thus, fostering positive motivation among employees is crucial, and the company plays a vital role in providing motivation through training, guidance, and feedback. This aligns with research by Brahmasari and Suprayetno (2008) and Subariyanti (2017), which suggest that work motivation positively and significantly impacts employee job satisfaction.

The research findings indicate a significant influence of job satisfaction on fraud, with a path coefficient of 0.645 and a p-value of 0.000 (< 0.05). Among the store crew at Best Meat, the most common justification expressed for fraudulent actions is the belief that their actions are normal. This justification often leads employees to resort to various methods to increase turnover, create fictitious receivables from customers, or misuse cash for personal purposes. It is imperative for companies to address this issue seriously to minimize fraudulent activities among their employees. One contributing factor to this behavior is human nature, as individuals often feel they do not have enough, leading to an increased inclination to commit fraud. Therefore, it is crucial for each store crew member to possess awareness of their responsibilities, as they have been entrusted by the company to be part of its operations. These findings align with research by Qurrotu (2011), which suggests a significant relationship between job satisfaction and employees' intentions to commit fraud, indicating a positive correlation. This implies that higher job satisfaction levels may lead to increased intentions of committing fraud among employees, as high job satisfaction can potentially correlate with a sense of entitlement or lack of ethical boundaries.

Based on the research findings, it is evident that compensation does not have a significant effect on fraud, as indicated by a path coefficient of -0.193 and a p-value of 0.282 (> 0.05). Therefore, the hypothesis suggesting a relationship between compensation and fraud is not accepted. These results suggest that the level of compensation, whether high or low, does not influence employees to engage in fraudulent activities. Instead, factors such as individual financial pressure, weak control systems, lack of audit trails, and restricted access to information are more likely to contribute to instances of fraud within the organization. The propensity for fraudulent behavior may also stem from individuals' inherent greed, which can be further exacerbated by opportunities presented and weak legal consequences. This aligns with research conducted by Firnanda et al. (2019), which similarly concluded that compensation suitability does not have an impact on fraud. Therefore, it is imperative for companies to focus on improving criteria for selecting and managing human resources in order to effectively mitigate fraud within the organization. This may involve enhancing control systems, implementing stricter audit procedures, and providing comprehensive training on ethical conduct and fraud prevention

The research findings reveal that work motivation has a significant effect on fraud, as evidenced

by a path coefficient of -0.475 and a p-value of 0.048 (< 0.05). This indicates that lower levels of work motivation correspond to higher instances of fraud committed by employees, whereas higher levels of work motivation are associated with a decreased likelihood of fraud or fraudulent activities by store crew members. This relationship is supported by various indicators of work motivation, such as behavioral direction, which encompasses employee habits in adhering to company regulations and guidelines, the level of persistence, which relates to employee initiative and dedication at work, and the level of effort, which includes achieving sales targets and completing tasks promptly. Therefore, it is crucial for management to continuously prioritize and enhance work motivation among all store crew members to mitigate instances of cheating or fraud. By fostering positive work motivation, organizations can create an environment where employees are more committed to ethical conduct and less inclined to engage in fraudulent behavior. These findings are consistent with research by Ferdila (2016), which suggests that higher levels of positive work motivation among employees are associated with a reduced tendency to commit fraud.

5. CONCLUSION AND RECOMMENDATIONS

Based on the research findings, it can be concluded that compensation and work motivation significantly influence employee job satisfaction. When there is a company policy to increase compensation, job satisfaction tends to increase as well. However, compensation does not have a direct effect on fraud. On the other hand, work motivation has a significant impact on both job satisfaction and fraud. Higher levels of work motivation are associated with increased job satisfaction and reduced likelihood of fraudulent behavior among employees.Therefore, it is essential for companies to implement compensation increase programs and prioritize work motivation initiatives as part of their human resource management strategies. Motivating employees is crucial, as it serves as a driving force that can lead to increased enthusiasm and productivity in the workplace.Moreover, the presence of work motivation has a mediating effect on the relationship between job satisfaction and fraud. By maintaining a focus on enhancing work motivation and providing adequate compensation, organizations can effectively reduce instances of cheating or fraud within their workforce.Overall, continuous attention and investment in work motivation programs for all employees, particularly store crews, are essential for fostering a positive work environment and minimizing fraudulent activities.

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ANALYSIS OF THE EFFECT OF CUSTOMER RELATIONSHIP MANAGEMENT AND QUALITY OF THE SERVICE ON CUSTOMER LOYALTY

Rona Arif[1)]; Mohammad Wartaka[2*)]; Hirayanti[3)]; Sumardjono[4)]

Program Studi Manajemen . Universitas Binaniaga Indonesia, Indonesia

**Corresponding Author: rona.arifsaputro@gmail.com*

Abstract

This research aims to study the effect of customer relationship management and quality of the services on customer loyalty either partially or simultaneously in order to create proper mix strategy of the company. Population of this research is the customers of Auto2000 Bogor Yasmin Branch who have carried out regular car maintenance at this workshop since 2021 which is 6,721 customers. Sampling taken has applied non probability sampling method with purposive sampling approach for the total of 378 respondents. Research variables covering customer relationship management and quality of the service as independent variables, and employee loyalty as dependent variable. Data analysis technique has covered validity test, realibility test, hypotheses test, multiple linear regression analysis, correlation analysis and determinant coefficient test. Based on the result of this research, it has figured out that contribution of customer relationship management and quality of the services upon customer loyalty is 36.8%, research result has shown that customer relationship management and quality of the service have had positive and significant effect on customer loyalty either partially or simultaneously. The strategies of mixed marketing that can be implemented by the company on the customer loyalty are advised as the following, to provide attractive program of the service, to optimize the utilization of customers data base, to optimize result of innovation and improvement related to handling customers' complaints, to implement the system of early detection of potential customer complaint and to optimize the application of system dealer management.

Keywords *Customer Relationship Management, Quality of the Service, Customer Loyalty.*

1.INTRODUCTION

During the Pandemic COVID-19 which has started since beginning of 2020 up to now, economic changes have happened all over the world affecting on various industries, one of them is the development of automotive industries. Though having had limited resources, it is not the obstacles for automotive companies to launch many types of vehicles having superior technology to supply automotive market demand. Nevertheless, it has shown that Sales of the vehicle in 2021 in Indonesia had increased significantly comparing to the previous year of 2020, based on the report of GAIKINDO delivery of car assembly to the dealers of wholesalers had reached 887,169 units.

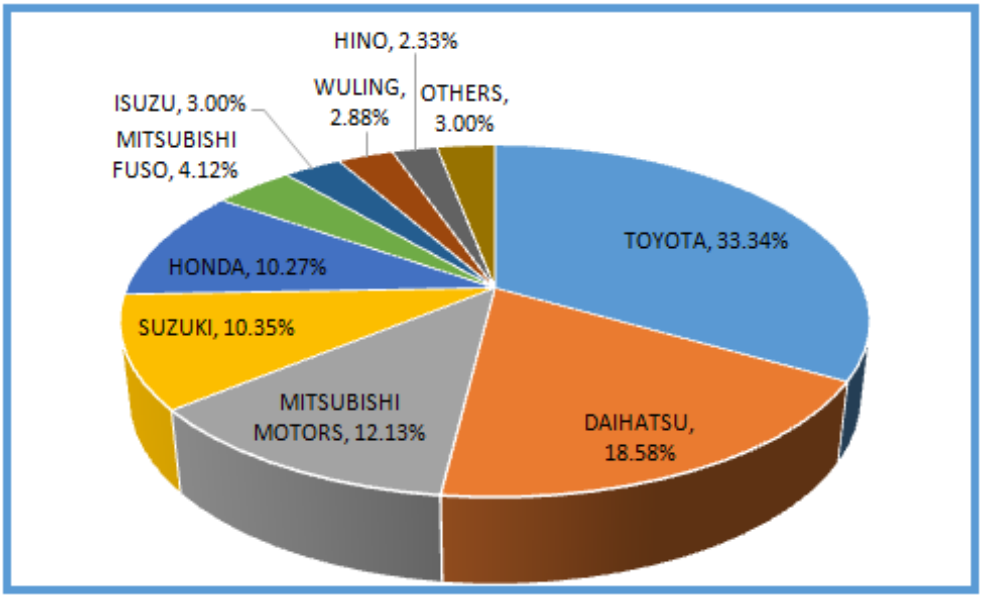

Figure 1. YTD 2021 Car Market Share in Indonesia
Reference: Car sales figures and analysis in Indonesia, *https://www.oto.com/beritamobil/desember 2021*

Significant changes at the wholesales in 2021 had not figured out yet any automotive national market share changes. Toyota was at the top position of the market share covering 33.34%, Daihatsu at the second top level covering 18.58 % and Mitsubishi at third position covering 12.13 %. And followed by Suzuki at the fourth level covering only 10.35 due to the company had rarely released new model (limited to face lift only)

Due to automotive companies' competition to sell their vehicles, the companies have to do their best efforts to market their vehicle in order to be able to be accepted by the customers. There are so many various ideas and innovation have been developed by the companies to win automotive market competition. Marketing the vehicles, automotive companies have offered after sales service which is the services given for the customers after buying a vehicle that could be done at a reliable workshop so that the customers can carry out regular maintenance and repair for their vehicle. Especially, due to Toyota vehicles brand has reached the top level of market shares comparing to other vehicle brand names, Toyota company has provided authorized workshops at many cities to offer maintenance or repair of the vehicles in order to be able to be the market leader in national automotive competition.

Other various workshops of other brands name have been competing as well to get more customers and to retain existing customers to carry out the maintenance and repair customer vehicles at their workshop. There are so many efforts, ideas and innovation created to increase the number of customers who are asking for maintenance for their vehicles, for example by getting new customers and retaining existing customers. One of the important key to win global competition is to be focus on the customers satisfaction which is by providing better service in order to retain the existing customers, because when they are very happy with the service, they will recommend the workshop to new customers. It means the existing customer indirectly has performed an important role to build up customer loyalty.

Applying concept of loyalty which is complex and dynamic has not necessarily reflected on repeated purchasing (Tjiptono, 2014). Customer Loyalty definition according to Griffin (2016) defined that some unit of decision makers have decided to do non-random purchasing from time to time. Referring to Kotler and Keller (2016) defined that loyalty is a strong commitment to purchase

or to support repurchasing preferred products or services in the future, eventhough there are so many influences of marketing situation and efforts which could potentially make the customers choose to buy another product or service. Conclusion, customer loyalty has been created when the customer having commitment to be loyal to purchase the products and services repeatedly.

Customer Relationship Management (CRM) is a factor affecting customer loyalty which is according to Tjiptono (2014) Customer Relationship Management is a holistic process to identify, to attract, to differentiate, to retain the customer by integrating supply chain of the company to create Customer Value at every step of value creation process. Main assumption of CRM is to build up a long-term relationship which is the best way to create customer loyalty because loyal customer is more profitable than disloyal customers.

According to Ariyanti (2017) the factor influencing customer loyalty is quality of the service offered by the company. Quality of the service is dynamic conditions related to the product, service, human, process and environment expectation covering five dimensions which is reliability, responsiveness, assurance, empathy, tangibles.

According to Musanto mentioned in Ariyanti (2017) explaining that a customer is a person who has carried out purchasing of the product repeatedly within a certain periode, but when in a certain time this person has never carried out repeat purchasing, this person cannot be said as a customer.

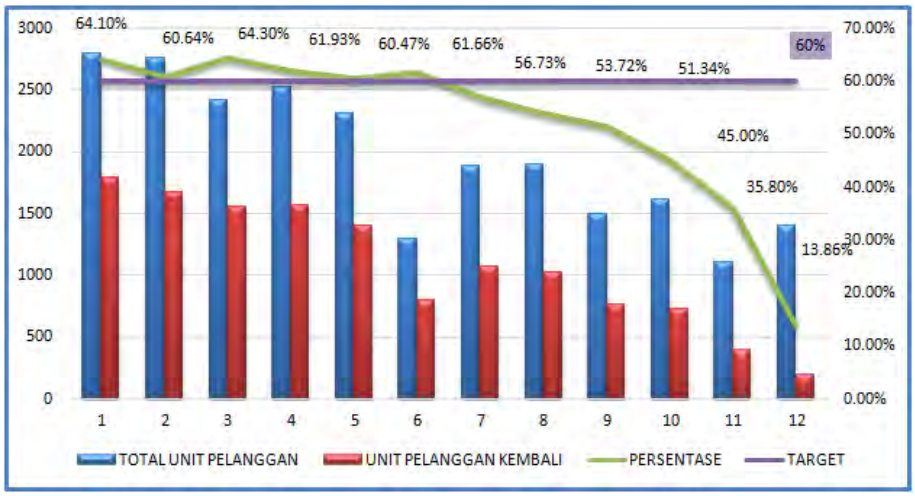

Figure 2. Data of returning customer at Workshop Auto2000 Bogor Yasmin year of 2019 – 2021.
Source: Data of Microstrategy VIN Retention at Workshop Auto2000 Yasmin Bogor Branch.

Level of customer loyalty at Auto2000 Bogor Yasmin is measured by indicating the customers who have carried out repeat maintenance within 6 months or 10,000 km mileage to request regular maintenance starting 1,000 km – 90,000 km or more. Selling more unit of new vehicles has been increasing customer loyalty which is reffered to 1,000 km regular maintenance requested. In order to identify achievement customer loyalty can be determined by the total of repeat maintenance requested. Nevertheless, within the last three years during the pandemic covid, the customers of Auto2000 Bogor Yasmin who requested regular maintenance had been decreasing fluctuatively.

Referring to the important role of customer relationship management and quality of the service of workshop employees in order to increase customer loyalty, this research has aimed to investigate the effect of customer relationship and quality of the service on customer loyalty either partially or simultaneously, and to offer recommendation applying the strategy about proper mixed marketing.

2.LITERATURE REVIEW

According to Griffin, J (2016) loyalty has defined based on buyer behavior. Loyal customer is identified as a person who 1) has done repeat purchasing regularly; 2) has purchased across lines of products and services. 3) has recommended to other people, and 4) has demonstrated immunity to competitors influencing.

According to Curatman et al (2020) defined that customer loyalty is a true deep commitment to purchase or to support repeat purchasing of preferred product and service in the future eventhough there are so many potential situation of marketing efforts distracting the customer.

1. Customer Relationship Management

Referring to I Putu Agus Eka Pratama (2020) defined that customer relationship management (CRM) is a sequenced and systematic activity executed by the company to understand the customer, to retain the customer and maintain their loyalty, as well as to get new customers in order to achieve the company development significantly. Referring to Buttle, F (2016:11), customer relationship management is a core business strategy integrating the process of internal function and external networking to create and to offer the company value to the customer gaining the profit.

According to Tjiptono, F (2019) defined that customer relationship management (CRM) is a process to build up and to manage a good relationship with the customer at organizational level by understanding, anticipating and managing the customer requirement based on the knowledge about customers in order to improve the effectiveness, efficiency and profitability of the organization.

2. Quality of the Service

Quality of the service is an important element being considered by the consumer to purchase a product. According to Parasuraman (2016) defined quality of the service is a global judgement or behaviour related to superiority of a service.

Referring to Tjiptono (2019) quality of service is an expected level of excellence and the way how to manage its level of excellence to cover the customer requirements, so that good or bad quality of the service is depending on the ability of a company to meet customer expectation consistently.

Research Hypothesis

The research of Rorong et, al (2020) and research of Budiyanto and Surya (2019) concluded that customer relationship management has affected positively and significantly on customer loyalty, it means that first hypothesis of the research is as follow:

H_1 : Customer relationship management (X_1) has affected partially on customer loyalty (Y)

However, the research of Mulyaningsih (2013) and research of Ardiyanti (2017) mentioned that quality of the service has affected significantly on customer loyalty, therefore the second hyphotesis as follows:

H_2 : Qualitity of the service (X_2) has affected partially on customer loyalty (Y)

Furthermore, the research of Rorong et. all. (2020) and Ardiyanti (2017) explained that Customer Relationship Management and Quality of Service simultaneously have affected on Customer Loyalty, therefore, the third hyphotesis of the research as follows:

H_3 : Customer relationship management (X_1) and Quality of the Service (X_2) simultaneously have affected on customer loyalty (Y)

3. Research Framework

The research framework describing the relationship among research variables can be designed based on the literature review and the previous stated debates, with the following details, 2 independent variables (customer relationship management and quality of the service), 1 dependent variable (customer loyalty), it is shown on Figure *3.*

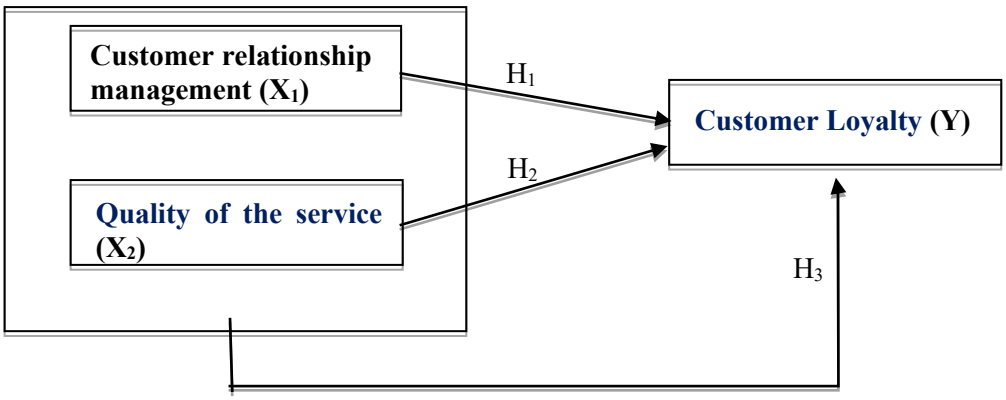

Figure 3. **Research Framework**

3.METHOD

The research method applied is quantitative method with casual descriptive and associative approach to discover whether there is a correlation between two or more variables in it.

Population of the research is the customers who have been carrying out maintenance of their car at the workshop Auto 2000 Bogor Yasmin totaling 6,721 customers. Sampling method has applied purposive sampling using Slovin equation for the total of 378 respondents.

Data analysis technique has applied multiple linear regression analysis processed using SPSS 26.0 program. Statistical technique applied has covered validity test, reliability test, hyphothesis test, multiple linear regression analysis, correlation analysis and determinant coefficient test.

In this research, employee loyalty is dependent variable but customer relationship management and quality of the service are independent variables. Definition of operational and indicator of each variable has been described on Table 1.

Table 1. Definition of Operational Research Variable

Variable (1)	*Indicator (2)*	*Measurement (3)*	*Code (4)*	*Scale (5)*	*Item (6)*
Customer relationship management *(X_1)*	Customer relationship management is a process to build up and to manage the relationship with the customer at organizational level by understanding, anticipating and managing customer requirements referred to the knowledge about the customers in order to increase the organization effectiveness, efficiency and profitability. (Tjiptono. 2019)				
	Trust	Integrity of the service	*CR 1*	*Interval*	*1*
		transparent service information	*CR 2*	*Interva*	*2*
	Commitment	Maintain quality of the service	*CR 3*	*Interva*	*3*
		Maintain good relationship	*CR 4*	*Interva*	*4*
	Communication	Accurate information	*CR 5*	*Interva*	*5*
		Ease of accesibility	*CR 6*	*Interva*	*6*
Qualiy of the service (X2)	Quality of the service is expected excellence level and monitoring the excellence level to cover the customer requirement, so that good or bad of quality of the service is depending on the ability of the company to meet the customer expectation consistently. (Tjiptono, 2019:59)				
	*Direct evidence (*tangibles*)*	Complete facilities and equipments	*KP 1*	*Interval*	*7*
		Neat performance of the employee	*KP 2*	*Interval*	*8*
	*(*reliability*)*	Ability to provide the service accurately.	*KP 3*	*Interval*	*9*
		Expected service excellence	*KP 4*	*Interval*	*10*
	(responsive)	Ready to provide quick service.	*KP 5*	*Interval*	*11*
		Service given by the right person.	*KP 6*	*Interval*	*12*
Customer Loyalty (Y)	Customer Loyalty is a deep commitment of a customer to purchase or to support repeat purchase of preferred product and service in the future eventhough there are so many influencing situation and marketing efforts which potentially can distract the customer (Curatman, et,al,2020:25)				
	Repeat purchasing	Regular maintenance	*LP 1*	*Interval*	*13*
		Repeat maintenance more than three times a year	*LP 2*	*Interval*	*14*
	Willing to other people	Recommending quality of the service to other people	*LP 3*	*Interval*	*15*
		Bring other people to carry out their car maintenance to the workshop	*LP 4*	*Interval*	*16*
	Showing immunity to competitor effort	Not being influenced by special discount offered by competitor workshop.	*LP 5*	*Interval*	*17*
		Refuse people who asked to move to other workshop.	*LP 6*	*Interval*	*18*

Source: Primary reseach data (2022)

4.RESULTS AND DISCUSSION

1. Result of Validity and Reliability Test

Validity and reliability test have been done previously to 30 respondents/customers who have carried out maintenance their car at Workshop Auto 2000 Yasmin Bogor.

Tabel 2. Summary of Validity Test

Variable	Indicator	Statement code	R-count	Conclusion
Customer Relationship Management (X_1)	Trustworthy	*CR 1*	*0.909***	*Valid*
		CR 2	*0.496***	*Valid*
	Commitment	*CR 3*	*0.834***	*Valid*
		CR 4	*0.622***	*Valid*
	Communication	*CR 5*	*0.824***	*Valid*
		CR 6	*0.509***	*Valid*
Quality of the Service (X_2)	Direct evidence/tangible	*KP 1*	*0.912***	*Valid*
		KP 2	*0.865***	*Valid*
	Reliability	*KP 3*	*0.919***	*Valid*
		KP 4	*0.404**	*Valid*
	Responsiveness	*KP 5*	*0.837***	*Valid*
		KP 6	*0.451**	*Valid*
Customer Loyalty (Y)	Repeat Order	*LP 1*	*0.902***	*Valid*
		LP 2	*0.737***	*Valid*
	Willing to recommend	*LP 3*	*0.536***	*Valid*
		LP 4	*0.730***	*Valid*
	Immunity to competitors	*LP 5*	*0.838***	*Valid*
		LP 6	*0.473***	*Valid*

**.Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Primary reseach data (2022)

Validity result of all the questions is shown on Table 2 identifying that all items of the question variable are valid because its correlation value is significant at *α 0.05 level* and R-count value is bigger than R-table (0.361)

Tabel 3. Result of Reliability Test

Variable	Cronbach's Alpha	*N of Items*	Conclusion
Customer Relationship Management (X_1)	*0.809*	*6*	*Reliabel*
Quality of the service (X_2)	*0.851*	*6*	*Reliabel*
Customer Loyalty (Y)	*0.783*	*6*	*Reliabel*

Source: Primary reseach data (2022)

Result of reliability test on Table 3 identifying that three variables of the research are reliable due to Alpha Cronbach Value is higher than r-critical value which is 0.600

2. Respondent Profile.

Respondents of the research are 378 persons collected from the customers who have been carrying out maintenance their car at Workshop Auto 2000 Yasmin. The respondents consist of 84.13 % men, and 15.87% woman. Besides based on gender, respondents profile presented according to booking type, model of the car, frequency of maintenance as shown on Table 4 herebelow.

Table 4. Profile of the Research Respondents

Category	Description	Total	Per cent
Gender	Men	318	84.13%
	Woman	60	15.87%
Tipe Booking	Booking	150	39.68%
	Non-Booking	86	22.75%
	Booking Express Maintenance	76	20.11%
	Non-Booking Express Maintenance	66	17.46%
Vehicle model	Fortuner	37	9.79%
	Innova	52	13.76%
	Rush	69	18.25%
	Raize	13	3.44%
	Avanza	97	25.66%
	Lainnya	110	29.10%
Frequency of the maintenance	first time	23	6.08%
	2-3 times	55	14.55%
	4-7 times	136	35.98%
	8-10 times	76	20.11%
	> 10 times	88	23.28%
	TOTAL RESPONDENTS	378	person

Source: Primary reseach data (2022)

3. Hypothesis Test

Partial Test (Test-t)

Table 5. Partial Test (Test-t)

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
	B	*Std. Error*	*Beta*		
(Constant)	*12.259*	*0.605*		*20.263*	*0.000*
Customer Relationship Management (X_1)	*0.060*	*0.026*	*0.111*	*2.283*	*0.023*
Quality of the service (X_2)	*0.381*	*0.034*	*0.542*	*11.150*	*0.000*

Source: Primary reseach data (2022)

Based on the data on Table 5, result of analysis of test-t indicating that significant value of variable customer relationship management(X_1) and quality of the service (X_2) are smaller than 0.05 which is 0.023 and 0.000. Therefore, it is explaining that customer relationship management (X_1) and

quality of the service (X_2) partially have affected significantly on customer loyalty at Auto2000 Bogor Yasmin.

In this case first hypothesis (H_1) and second hypothesis (H_2) have proved that customer relationship management partially has affected significantly on customer loyalty at Auto 2000 Bogor Yasmin.

Simultaneous Test (Test-F)

Tabel 6. Simultaneous Test (Test-F)

Model	*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
Regression	*795.098*	*2*	*397.549*	*110.796*	*.000[b]*
Residual	*1345.550*	*375*	*3.588*		
Total	*2140.648*	*377*			

Referring to the table 6 aforementioned, result of Test-F analysis has shown that significant value of 0.000 is less than 0.05, It has proved that customer relationship management and quality of the service simultaneously have affected significantly on customer loyalty at Auto2000 Bogor Yasmin

Therefore, first hypothesis (H_3) has proved that customer relationship management simultaneously has affected significantly on customer loyalty at Auto2000 Bogor Yasmin.

4. Multiple Linear Regression Test

Based on Table 5 aforementioned it is indicating that multiple regression equation as follows:

Y = 12.259 + 0.060 X1 + 0.381 X2 + e, which could be explained as the following:

a) Value of 12,259 is positive constant value meaning that without any additional variable customer relationship management and quality of the service, it has gained 12,259 value of customer loyalty.

b) Value of 0.060 is regression coefficient value of variable customer relationship management (X_1), it means that each increase of 1 point of customer relationship management has been increasing 0.060 points customer loyalty with the provision of other independent variables are constant. It is explaining that customer relationship management has correlated positively with customer loyalty, the better customer relationship management the more customer loyalty increases

c) Value of 0.381 is regression coefficient value of variable quality of the service (X_2), it means that each increase of 1 point quality of the service has been increasing 0.381 points customer loyalty with the provision of other independent variables are constant. It is explaining that the better quality of the service the more customer loyalty increases.

d) Term of error (e) is the replacement of all varibles being eliminated from regression model, nevertheless, collectively it is affecting related variables.

e) Based on the result of Multiple Linear Regression Analysis, in order to increase the value of customer loyalty (Y), the value of quality of the service (X_2) should have to be increased previously in order to get the value of customer relationship management (X_1)

5. Correlation Test

Table 6.Result of correlation analysis test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	*.609[a]*	*0.371*	*0.368*	*1.89424*

Source: Primary reseach data (2022)

Result of moment product correlation on Table 6 aforementioned identifying the result of R correlation coefficient of 0.609, it is explaining that there is a strong correlation between customer relationship management and quality of the service with customer loyalty.

6. Determination Test

Table 6 has indicated that value of R Square Adjusted is 0.368 or (36.8 %). It is explaining that percentage supported by the effect of independent variables which is customer relationship management and quality of the service simultaneously has affected on customer loyalty at 36.8 %, however the rest of 63.2 % is influenced by other variables that are not included in this research.

7. Discussion

Herebelow are the discussion related to the result of the research regarding the effect of customer relationship management and quality of the service on loyalty of customer.

a. Partial Effect of customer relationship management and quality of the service on customer loyalty. Result of the research has proved that customer relationship management and quality of the service partially have affected customer loyalty. It is in compliance with the research of Ardiyanti (2019), Rorong et al (2020), Sari and Mirza (2017), Mulyaningsih (2013), Ahmad and Nildha (2018), Budiyanto and Surya (2019), Andreano et al (2020) and Ariyanti (2017) which is the result of their research had declared that result of partial test of customer relationship management and quality of the service have affected customer loyalty.

b. Simultaneous Effect of Customer Relationship Management and Quality of the Service on Customer Loyalty. Result of the research has proved that customer relationship management and quality of the service simultaneously have been affecting customer loyalty. It is in compliance with the research of Ardiyanti (2017), Mulyaningsih (2013), and Ariyanti (2017) which is result of their research had declared that result of simultaneous test or F test of variables Customer Relationship Management (X_1) and Quality of the Service (X_2) had affected Customer Loyalty (Y).

c. Improving customer loyalty can be done by increasing the quality of service previously before customer relationship management. Quality of the service improvement can be done by implementing the strategy of mixed marketing (7P) as follows:

1) Promotion, by producing attractive promotion program related to customer invitation to conduct maintenance their vehicles such as voucher promotion and service discount as well as spareparts discount for the customers who have requested vehicle maintenance on a particular day when maintenance activity is quite low.

2) People, by providing additional workshop officer who can contact customer directly, and improving technician competency thru technical training or non technical training regularly.

3) Process*,* by optimizing the utilization of customers data base who have not come yet for their vehicle maintenance using cleansing data application such as Power BI Microsoft in order to be able to provide workshop promotion program to the right person; optimizing the result of innovation and improvement of trello application, one drive, google drive, and spreadsheet dealing with digital communication among workshop employees to be able to provide the service rapidly and accurately*;* applying early detection system to track potential customer who will be complaining about the vehicle maintenance at the workshop so that team customer relationship and workshop people are able to recover the related customer condition *;* Optimizing applications of management dealer system by creating data recapitulation activities about maintenance, reminder, and appointment to keep good relationship with customer.
4) Physical Evidence*,* by providing additional communication tools/equipments and workshop media promotion to support the communication process and information distribution to the customer*;* by providing additional diagnostic tools to diagnose customer complaint*; by* providing discount voucher as well as souvenir as the reward for the customer who is able to show proof of filling in the survey link related to the recommendation to use workshop Auto2000 Bogor Yasmin to other people.

5.CONCLUSION

Referring to the result of data analysis and discussion about analysis of the effect of customer relationship management and quality of the service on customer loyalty aforementioned, it can be concluded that customer relationship management and quality of the service either partially or simultaneously have affected customer loyalty at Auto2000 Bogor Yasmin.

Strategies of mixed marketing that could be applied by the company to improve customer loyalty at Workshop Auto 2000 Bogor Yasmin are as the following*:* providing attractive promotion program such as voucher and discount promotion*;* optimizing customer data base utilization who has not requested any maintenance yet or to remind due date of maintenance *;* optimizing result of innovation and improvement of contemporary application dealing with digital communication among the workshop people and customers*;* applying early detection system to track the customer who wil be potentially complaining due to dissatisfaction with quality of the service provided*;* optimizing dealer management system to keep good relationship with customer.

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