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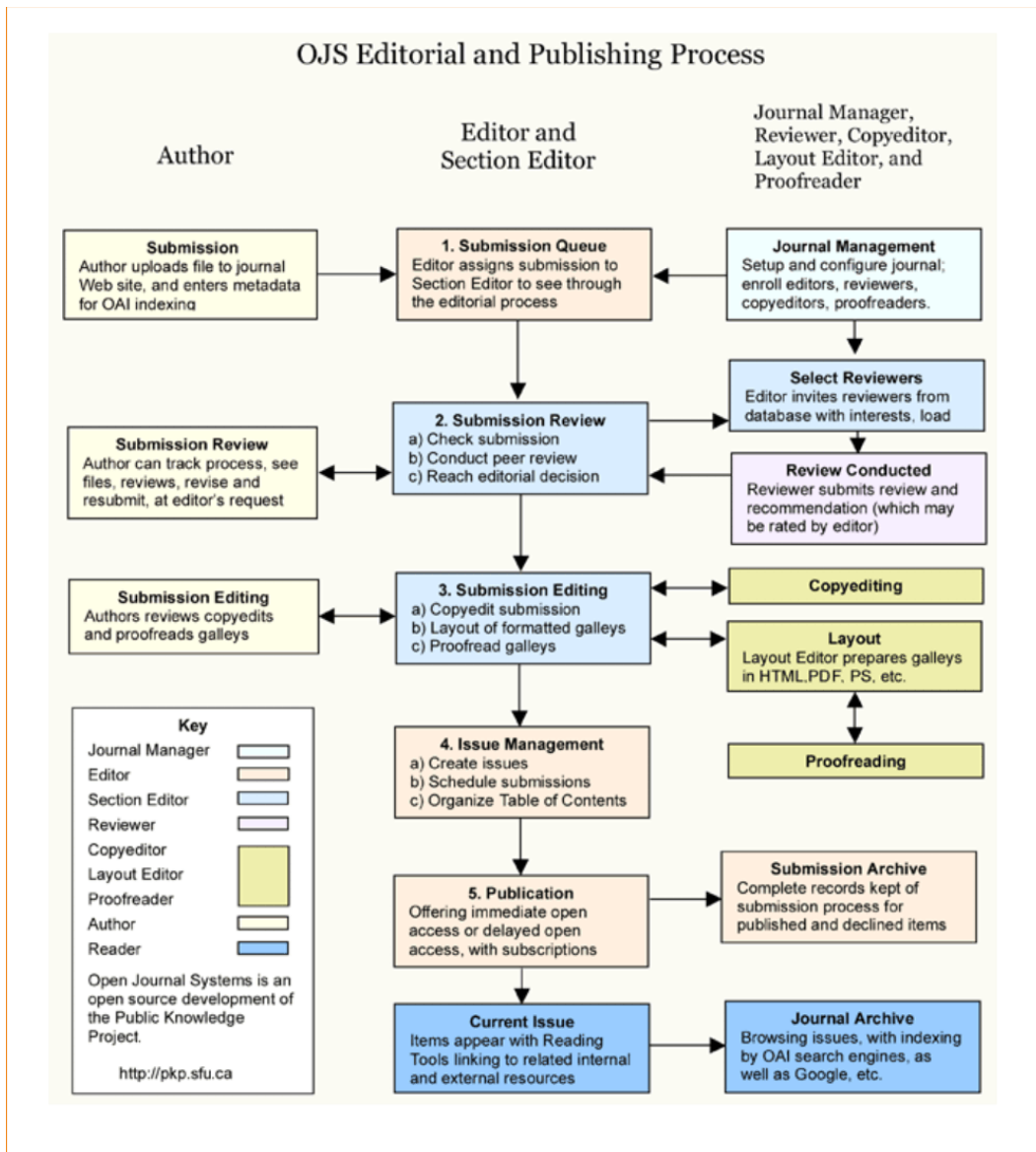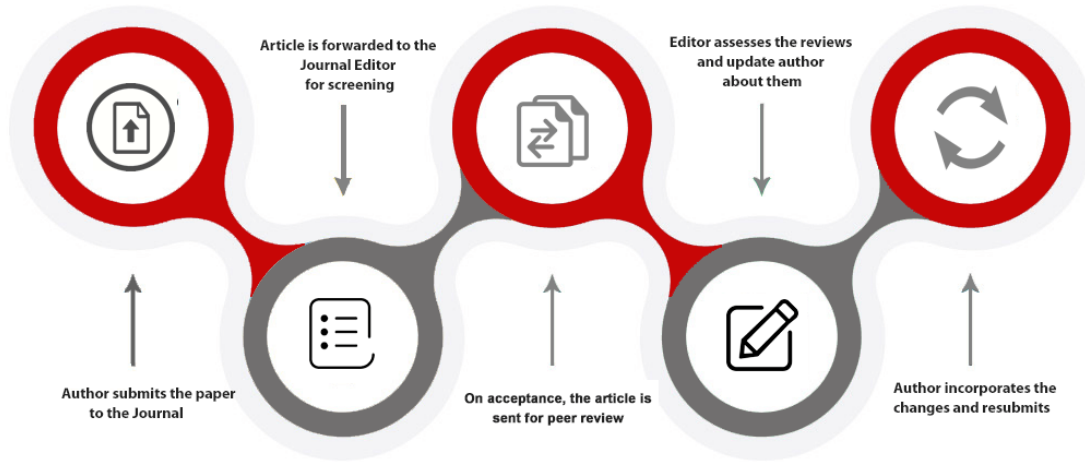
Principal Contact

Agus Sukoco
agus.sukoco@narotama.ac.id

Support Contact

Muhammad Ikhsan Setiawan
ikhsan.setiawan@narotama.ac.id

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The Influence of Microfinance Institutions on Nigerian Small, Micro, and Medium Enterprises

Victor Ekpo, Patrick Ebong Ebewo

Department of Management and Entrepreneurship, Tshwane University of Technology, Pretoria, South Africa

Corresponding Author*: ebewop1@tut.ac.za

ABSTRACT

Purpose: Poverty is a significant concern in most countries, including Nigeria, which has been dubbed the world's poverty capital. Most developing countries regard small, micro, and medium-sized companies (SMMEs) as a sure strategy to reduce poverty by lowering a country's unemployment rate. Microfinance institutions (MFIs), especially banks, were commissioned by the Central Bank of Nigeria (CBN) to cater to self-employed people and businesses. There is compelling evidence that MFIs are not doing enough and are failing to fulfill their mandate. As a result, this paper sought to investigate the impact MFIs have on SMMEs in Nigeria.

Design/methodology/approach: This descriptive study, made use of a convenience sample strategy to collect survey data from 384 SMMEs in two Nigerian states: Abuja and Nasarawa. Data was collected from 350 respondents.

Findings: The findings showed that MFIs significantly influenced SMMEs regarding technology transfer and financial services and aided SMME (small, medium, and micro enterprises) growth. MFIs in Nigeria are ineffective in offering the services of aspects of facilitator of SMEs growth, tool for social change, provider of banking services to the people and transferor of technology.

Practical implications: The CBN should make sure that MFIs, especially the banks focus more on servicing SMMEs. MFIs should do more in the areas of sensitiation and tailor their products to suit their customer base.

Originality/value: There are limited studies on the Nigerian context for SMMEs and MFIs.

Paper type: Research Paper

Keywords: Entrepreneurship, Micro-finance, Nigeria, SMMEs

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I. INTRODUCTION

SMMEs in developing countries such as Nigeria foster competition, resulting in external economic benefits such as productivity and innovation (Olaore, Adejare & Udofia (2021). SMMEs are critical in Nigeria for improving the living standards of owners, employees, and the community (Saidi, Uchenna & Ayodele, 2019). They help to increase real GDP, create jobs, reduce poverty, and diversify GDP sources (Aladejebi, 2019). SMMEs indirectly foster economic growth, particularly in poverty reduction, in addition to direct economic impacts (Saidi, Sodiq & Olushola, 2016). SMMEs in Nigeria, on the other hand, face challenges such as insufficient finances, limited entrepreneurial skills, insufficient marketing, underutilized technology, and governmental inadequacies (Joseph et al., 2021). It is in this regard that governments worldwide need to develop policies that unleash the innovation potential of SMMEs and business owners. In line with this, over the years the Nigerian government has developed programs to help encourage youths to pursue entrepreneurship. The government has provided the necessary tools and conducive environment for MFIs to operate so they can assist budding entrepreneurs as well as SMMEs (Zhiri, 2017). As part of financial liberation efforts, microfinance institutions (MFIs) target lower-income individuals. The body of knowledge about the impact of MFIs on clients' standard of living is growing. Some studies have found positive linkages in relation to income and consumption; Income and consumption (Duvendack et al., (2019), wealth accumulation (Osmani et al., (2015), food access

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(Stewart et al., 2010), Material flow cost accounting and higher productivity (Sahu, Padhy, Das & Gautam, 2021), village savings and loan association (Nnama-Okechukwu et al., 2019), macro impact of microfinance (Raihan, Osmani & Khalily, 2017), agricultural investment (Kaboski and Townsend, 2012), have all shown positive associations.

The risk of entrepreneurial innovation failure influences MFIs' caution when dealing with entrepreneurs, particularly in emerging markets (Milana & Ashta, 2020).). Entrepreneurial capabilities are shaped by the context in which MFIs operate (Muithya & Muathe, 2020; Kimmitt, Muñoz & Newbery, 2020), and microcredit provided by MFIs helps entrepreneurs improve their capabilities (Banerjee & Jackson, 2017).). Despite high interest rates, entrepreneurs seek loans from microfinance institutions (MFIs) to pursue their dreams of entering existing markets or creating new ones (Milana & Ashta, 2020; Kimmitt et al., 2016). Corruption, which is prevalent in many developing economies, including Nigeria, poses a threat to the impact of microfinance on entrepreneurship, lowering entrepreneurs' returns on investment (ROI) (Lawal, Adebayo & Iyiola, 2017; Kimmitt et al., 2016; Oriaifo, Torres de Oliveira, & Ellis, 2020).

MFIs have a minimalistic approach, which focuses solely on financial services such as microcredit, and the credit plus approach, which combines financial services with non-financial support such as skill acquisition and training (Hearth, 2018; Eunice Abdul, 2018). While the minimalistic approach reduces costs by focusing solely on microcredit, the credit plus approach aims to ensure that loans are used for entrepreneurial purposes while also lowering default rates, and promoting positive returns for MFIs (Hearth, 2018). MFIs use a variety of microfinance lending models, including the Grameen model, village banking models, group lending models, peer pressure models, and NGOs, to identify eligible recipients and deliver microcredit (Dwivedi, 2017). To suit their operations, these models frequently incorporate features from multiple approaches. Providing services to the poor while remaining sustainable and operationally efficient is a challenge in microfinance. MFIs frequently lack the necessary funds for lending and must rely on outside sources to meet their goals (Cobb et al., 2016). Kamal (2016) proposes innovative approaches such as microfinance bonds to tap into the financial market and attract investors seeking low-risk investments with high returns to secure the future of microfinance. However, to achieve social impact and sustainability, it is critical to attract investors who prioritize social outreach goals (Cobb et al., 2016). It is in this regard that the purpose of the study is to examine the influence of microfinance institutions on Nigeria's SMMEs as a medium of poverty alleviation especially in areas concerning provision of financial services to medium and small-scale businesses as well as entrepreneurs. The specific objectives for the study were; (1) to examine the influence of Nigeria's MFIs on SMMEs and entrepreneurs and (2)) to determine the relationship between access to MFIs services and Nigeria's SMME business performance.

The study focuses on a critical aspect of Nigerian economic development, namely the relationship between microfinance institutions (MFIs) and small, micro, and medium enterprises (SMMEs). SMMEs are critical to job creation, poverty reduction, and overall economic growth. Understanding the impact of MFIs on SMMEs is critical for policymakers, financial institutions, and stakeholders interested in promoting inclusive financial systems and sustainable development. Furthermore, this study adds to the existing literature by examining the Nigerian context. Nigeria's microfinance sector faces unique challenges and opportunities as a developing country. This study adds to the body of knowledge on the impact and effectiveness of MFIs in a specific socioeconomic and cultural setting by being conducted in Nigeria. Additionally, the study sheds light on MFIs' role in poverty alleviation and financial inclusion. It looks at how MFIs can help unbanked or underserved individuals and businesses gain access to capital, manage risks, and improve their economic well-being. The study's findings can help shape policy recommendations and strategies for expanding MFIs' reach and effectiveness in promoting inclusive growth and reducing poverty in Nigeria. Furthermore, the study's quantitative approach, which includes a questionnaire survey and statistical analysis, contributes to microfinance research methodology. The study ensures the reliability and validity of its findings by employing rigorous research methods and data analysis techniques, further strengthening the evidence base for future research and decision-making. Overall, this research on the impact of MFIs on SMMEs in Nigeria offers important insights into the dynamics of microfinance, entrepreneurship, and economic development. It provides a comprehensive understanding of the Nigerian context's challenges and opportunities, and it contributes to knowledge in the fields of microfinance, small business development, and poverty alleviation strategies. The study's findings and recommendations can help policymakers, practitioners, and researchers develop effective policies and interventions to promote the growth and sustainability of SMMEs in Nigeria and other developing economies.

A. Problem Statement

The need for microfinance institutions to survive in a recessionary economy like Nigeria has led microfinance institutions to neglect high-risk SMMEs who need access to credit facilities. Given the rapid increase in number of MFIs in Nigeria (Abraham & Balogun, 2012) it is imperative that a look at the influence of MFIs on SMMEs in Nigeria is examined. Against this background, the research problem is formulated as follows:

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Despite the efforts of the Nigerian Government to eradicate poverty and encourage entrepreneurial activities by providing a conducive environment for microfinance institutions to thrive through the regulations set by its Central Bank, SMMEs are still lacking access to microfinance financial services.

II. METHODS

The study adopted a positivism research philosophy through quantitative cross-sectional research method. A questionnaire was used to collect data from 350 respondents through random selection technique. with a questionnaire distributed to 350 randomly selected respondents. The population of this study comprised of SMMEs in Abuja (485,055) and Nasarawa (383,206). The distribution of microfinance banks (MFBs) is disproportionate and skewed with some states having a large presence of MFBs. Abuja has about 60 different MFBs and other states like Nasarawa has only 8 MFBs. On this basis, Nasarawa state was chosen as a financial constrained state because it has only 8 MFBs with 383,206 SMMEs as of 2013. This translates to potentially 47,901 SMMEs being served by 1 MFB. Similarly, Abuja is categorised as a financially unconstrained state because it has 485,055 SMMEs being served by 60 MFBs. This means potentially 8,084 SMMEs served by 1 MFB. The two states were also chosen because of their proximity to one another. Data for this research was sourced through questionnaires administered by the researcher personally and through proxies. Primary data analysis was done using survey as the research strategy. Survey research entails the use of carefully crafted questions and responses as the primary data source (Saunders et al, 2009). This study employed cross-sectional method because the data used did not track the same group of SMMEs to see if they maintained relationship with their MFIs year after year. Data collected measures the number of MFIs registered in a particular State at the time of conducting the research to ascertain the influence of these MFIs on the SMMEs in that state. If the study is repeated using same parameters, the same MFIs and businesses may not be the participants. This makes it repeated cross-sectional data hence the cross-sectional study used in this research.

Statistical Packages for Social Sciences (SPSS) V28 was used to analyse the measurement instrument. Both descriptive and inferential statistics were used, as recommended by (Chapman, (2018).). Descriptive statistics entailed screening the data for potential errors and examining variable frequencies. Validity checks were carried out, and descriptive measures were employed to summarize the data and sample. To analyse relationships between categorized variables of interest, inferential statistics were used. This included using correlational analysis to investigate the relationship between two variables while keeping in mind that correlation does not imply causation (Creswell & Creswell, 2018). Furthermore, t-test analysis was performed to determine the statistical significance of specific data sets.

III. RESULTS AND DISCUSSION

With regards to the demographic characteristics of the respondents that participated in the study the results of the study revealed that, 52% (n=183) of females and 48% (n=167) of males participated in the study. In terms of ages 15,1% were aged 18-25 years old, 14% were 26-35 years old, 18.6% were aged 35-45 years old, 18.3% were aged 46-55 years old, 18% were aged 56-65 years old and 16% were aged 66 years and above. To add on the results showed that about 85% of the respondents are educated and hold at least a higher certification and above higher certificate educational qualification while a mere 15% of the respondents have obtained other educational qualifications. This shows that they have a good understanding of all the requirements that are needed by microfinance institutions to qualify for funding and higher levels of education are often associated with an increased ability to comprehend concepts.

The results of the study also showed that majority (84.3%) of the respondents have registered their business while 15.7% of the business are not registered. These registered businesses have various form of ownership that include sole traders, partnerships, private limited companies, non-profit organisations and cooperatives. The legal status with regards to the registration provides them with better chances of obtaining funding as MFIs check the legal status of the business before assisting with finance provides assurance and collateral security to microfinance institutions. Furthermore, an examination of the number of years in business and the ages of entrepreneurs revealed an intriguing relationship. According to the data, a small percentage of the sample's entrepreneurs started their businesses while they were still in their teens. These entrepreneurs tended to stay in business for a longer period as they matured, particularly between the ages of 35 and 45, compared to those who started at a younger age. However, as entrepreneurs aged 50 to 65, the proportion of those still in business began to fall.

In terms of business sectors, the results of the study show that respondents operate their business across all 23 sectors considered to be the most vibrant in the Nigerian economy by the Central Bank of Nigeria (CBN).

These sectors include mining, agriculture, retail and consumer, business consulting, clothing, textiles, travel, and leisure. The entrepreneur's discretion in selecting a specific sector for starting a business is based on market conditions and a thorough cost/benefit analysis. Potential SMME entrepreneurs typically avoid sectors that are perceived to take longer to break even, as they may face difficulties obtaining funding from microfinance institutions. As a result, prospective SMME owners must choose a profitable business sector to increase their chances of obtaining funding from microfinance institutions, which carefully examine the financial statements of the enterprises before making lending decisions. In general, respondents reported receiving a variety of specialized services from microfinance institutions (MFIs). The services of money transfer and training were particularly well-regarded, with the highest mean of 1.53 and a standard deviation of 0.500, indicating that respondents were extremely pleased with how the MFIs provided these services. The service of technology offering, on the other hand, had the lowest mean of 1.48 and a standard deviation of 0.500, indicating that there is room for improvement in terms of incorporating technology into MFI services. It's worth noting that, even in the COVID-19 era, some financial institutions are still struggling to adopt and use available technology services, limiting their ability to provide such services to their clients. Despite the challenges posed by the pandemic, the overall mean of 1.51 for the provision of specialized services confirms that microfinance institutions are effectively providing services such as savings accounts, insurance, pension, money transfer, training, and technology to their clients.

The results of the study also reveal that SMMES receive consultation services from MFIs (leadership, finance, operation, marketing and administration. The consultant service of operation had the highest mean of 1.55 and the lowest standard deviation of 0.499, indicating that respondents were extremely pleased with how MFIs provided this service. Finance and administration offerings, on the other hand, had the lowest means, both close to 1.5, with means of 1.48 and 1.47, respectively, and standard deviations of 0.500, indicating that providing financial and administrative services may be more difficult for some microfinance institutions. Despite the challenges, the overall mean of 1.508 for providing specialized services confirms that microfinance institutions effectively provide consultant services to their clients such as leadership, operation, marketing, financial services, and administration. This demonstrates their dedication to assisting SMMEs in all aspects of their business operations.

The study results also showed that MFIs are not playing an effective positive role in assisting SMEs. The aspects of facilitator of SMEs growth (mean of 1.49), tool for social change (mean of 1.47), provider of banking services to the people (mean of 1.48), and transferor of technology (mean of 1.48) and destroyer of SMEs (mean of 1.48) received mean scores that are below 1.5 with a standard deviation of above 0.500 which indicates the ineffectiveness of MFI role on SMEs. Out of the six aspects that were used to measure the role of MFI on SMES only, the tool for empowerment (mean of 1.5) is regarded to be effective for MFI. This finding is consistent with the survey findings, indicating that MFIs are not viewed as agents of social change in the business environment. These findings emphasize the importance of MFIs improving their performance and effectiveness in areas such as social impact, finance, and administration. MFIs must address these perceptions and strive to better fulfill their intended roles as business growth enablers, banking service providers, and social change agents. Furthermore, descriptive analysis was conducted on several factors *to* examine the influence of microfinance institution (MFI) activities on the performance of small, micro, and medium enterprises (SMMEs) in Nigeria: micro-credit utilization, reasons for acquiring micro-loans, financing amounts received, interest charged, and collateral required. According to the findings, respondents borrow money primarily from friends and relatives, microfinance institutions, commercial banks, and credit cooperative societies, with the majority borrowing from friends and relatives. Most borrowed amounts are N500,000 or less, with SMMEs hesitant to borrow larger sums. Borrowed funds are typically used for construction projects, the acquisition of new equipment, the start-up of new businesses, the expansion of existing businesses, and as working capital. In Nigeria, interest rates on borrowed funds range from 10% to 50%, with *most* rates falling below 30%. Collateral security in the form of natural, physical, and financial assets is typically required by microfinance institutions. These findings can help MFIs and SMMEs tailor their financial services and support the growth and development of SMMEs in Nigeria.

V. CONCLUSION

The study concludes that MFIs in Nigeria positively influence SMMEs performances through offering the following services: money transfer, training, insurance and the service of technology transfer. The study also concludes that MFIs play an important for SMMEs in the Nigeria by effectively providing consultation services of leadership, finance, operation, marketing and administration. Contrary to the above the study concludes that MFIs in Nigeria are ineffective in offering the services of aspects of facilitator of SMEs growth, tool for social change, provider of banking services to the people and transferor of technology. From the data analyzed MFIs

provide the necessary services, skills and expertise that enable SMMEs to turn a net profit if correctly implemented.

Based on the study findings, policymakers and MFIs are recommended to consider the following:

1. The CBN should take proactive steps to ensure that MFIs prioritize serving SMMEs over serving as commercial banks. This can be accomplished through regulatory frameworks, licensing requirements, and MFI performance monitoring. MFIs can effectively contribute to the growth and sustainability of the SMME sector in Nigeria by promoting tailored financial products and services for them and dedicating a significant portion of their loan portfolios to them.

2. To better serve the needs of SMMEs, it is crucial for MFIs to enhance their efforts in sensitizing and educating their customer base. This can be achieved through targeted awareness campaigns and educational programs that provide SMMEs with valuable knowledge and skills related to financial management, business development, and entrepreneurship. In addition, MFIs should actively tailor their products and services to cater to the unique requirements of SMMEs, considering factors such as flexible repayment terms, loan sizes, and collateral requirements that are suitable for small businesses. By combining effective sensitization efforts with customized offerings, MFIs can effectively support SMMEs in their growth and development, empowering them to thrive in the dynamic business environment.

3. It is recommended that MFIs offer low-interest loans specifically designed for business expansion to foster the growth and development of SMMEs. MFIs can encourage SMMEs to borrow funds for expanding operations, investing in new technologies, or entering new markets by providing access to affordable credit. Lower interest rates not only alleviate the financial burden on SMMEs, but also improve their ability to repay loans, promoting long-term business growth. This strategy promotes entrepreneurship, fosters innovation, and facilitates the creation of job opportunities, all of which contribute to the overall economic development of the SMME sector.

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Unearthing Financial Wisdom: Exploring the Factors Shaping Financial Literacy among Agribusiness Entrepreneurs in Zimbabwe

Gumbo Lilian[1], Marimuthu Ferina[2], Vengesai Edson[3]

Midlands State University, Midlands, Zimbabwe[1]

Durban University of Technology, KwaZulu Natal, South Africa[2]

University of Free State, Bloemfontein, South Africa[3]

Corresponding Author*: liliangumbo21@gmail.com, ferinas@dut.ac.za, vengesaie@gmail.com

ABSTRACT

Purpose: Agribusiness serves as the cornerstone of the Zimbabwean economy, with a significant portion of the population relying on agricultural-related pursuits for sustenance. However, the concerning financial practices exhibited by agribusiness entrepreneurs, coupled with lackluster sectoral performance, present pressing issues. These issues manifest as pronounced instances of financial exclusion, loan defaults, and diminished productivity within the sector. The primary focus of this study was to assess the financial literacy of agribusiness entrepreneurs and elucidate the principal determinants of this literacy, employing the theoretical framework of the lifecycle hypothesis.

Design/methodology/approach: The research design employed was explanatory in nature, involving the collection and subsequent quantitative analysis of data via questionnaires. The study encompassed a population of 172,221 agribusiness farmers hailing from five distinct districts in Zimbabwe, namely Mutare, Mt Darwin, Mutoko, Gweru, and Masvingo. To ensure a representative sample, a sample size of 623 was calculated utilizing the Slovin formula.

Findings: The research outcomes unveiled an overall deficiency in financial literacy within the agribusiness sector, particularly pronounced among women, individuals with low incomes, those possessing limited educational attainment, and those supporting multiple dependents below the age of 18. As a crucial recommendation, the study advocates for the implementation of mandatory financial literacy courses at both the primary and secondary education levels. Such an intervention could contribute significantly to addressing the identified shortcomings in financial literacy among agribusiness entrepreneurs and subsequently foster more prudent financial behaviors within the sector.

Paper type: Research paper

Keywords: Financial Literacy, Financial Knowledge, Financial Behaviour, Financial Attitude

I. INTRODUCTION

Drawing lessons from the preceding 2008 global financial crisis, it becomes evident that incorporating financially illiterate individuals into the financial realm yields far-reaching implications for financial markets (Fairfax, 2018). Primarily, concurrent defaults undermined the stability of the financial system, rendering banks illiquid. Additionally, financial blunders led to household indebtedness. Concurrently, the exclusion of various economic sectors from financial access could potentially impede economic growth through financial disintermediation (Chiromo, 2019). This has prompted global leaders to advocate for equipping individuals with financial literacy capabilities (OECD, 2020).

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Financial literacy is fundamentally regarded as the cornerstone of entrepreneurship, as it fosters sound financial decision-making, effective financial management, and the proficient utilization of financial services (Thomas & Subhashree, 2020). The absence of financial literacy and inadequate money management skills, crucial for business ventures in general, consequently culminate in the failure of such ventures (Thomas & Subhashree, 2020). Literature underscores that financial literacy isn't a uniform phenomenon but rather exists as a continuum of abilities contingent on demographic variables such as gender, age, culture, family, and residency (Kadoya & Khan, 2017).

The financing approach for Zimbabwe's agricultural sector remains a subject of debate due to its strain on the fiscal budget. Allegations from industry representatives and human rights organizations underscore the urgency of finding a resolution for funding the agribusiness sector. The Confederation of Zimbabwe Industries (CZI) has called for swift action to fund agriculture, thereby alleviating the burden on the fiscal budget. The institution contends that the sector's funding relies on seigniorage through constant currency printing, which consequently erodes the national currency's value (CZI 2022). Smallholder farmers command 70% of Zimbabwe's agricultural land (Mhlanga and Ndhlovu, 2020; Ndhlovu, 2022). Regrettably, 76% of these farmers find themselves living below the poverty line (Chiromo, 2019).

Agribusiness entrepreneurs are anticipated to act as job creators rather than job seekers. They are expected to provide sustenance rather than endure food insecurity. However, as per Chiromo (2019), a majority of smallholder farmers grapple with food insecurity and resort to seeking labor to meet their ends. Notably, Zimbabwe has evolved into a substantial importer of agricultural products, particularly cereals (Zimbabwe Ministry of Finance and Economic Development, 2021). Past endeavors to provide agricultural input, finance, and farm mechanization support have failed to revitalize the sector, resulting in consistent food insecurity across various districts (Famine Early Warning System Network 2022).

The literature has chronicled instances of financial illiteracy behaviors among agribusiness farmers, encompassing failure to adhere to loan repayment commitments (Mutambara, 2016), diverting agricultural loans toward non-productive purposes, harboring reservations regarding formal bank loans while turning to higher-interest loan shacks for borrowing (Mutambara, 2016), and exhibiting low engagement with financial products (Mutambara, 2016). However, the literature does not delve into the primary determinants of this financial illiteracy. Evidently, inadequate financial decisions by agribusiness entrepreneurs underscore deficient financial capabilities. Collection rates for agricultural loans remain significantly low, even accounting for government-provided extended loan grace periods, reduced interest rates, and loan rollovers (Masiyandima et al., 2011). Policy makers and supporting institutions have scarcely undertaken initiatives to explore and bridge this gap in financial literacy. Consequently, this study aims to identify the principal determinants of financial literacy and recommend strategies to enhance the financial literacy capacities of agribusiness entrepreneurs in Zimbabwe.

A. Literature Review
1. Theoretical Framework

This study employs Bernoulli's marginal utility theory (1920) as its foundational framework. The theory elucidates that increased positive consumption enhances overall utility, leading individuals to allocate their funds where marginal utility is highest. Building upon utility's role, Markowitz (1952) introduced the modern portfolio theory, positing that an investor aiming to maximize utility should optimize the discounted value of future returns from investments. However, due to the uncertainty of the future, it's essential to consider expected/anticipated returns. Markowitz (1952) argued that under uncertainty, rational investors should operate based on probability beliefs. When objective probabilities are absent, expected probabilities must be forecasted. Markowitz (1952) thus formulated the portfolio variance computation to measure risk.

Subsequently, Modigliani and Brumberg formulated the lifecycle hypothesis theory in the early 1950s. This theory suggests individuals maximize utility within their available income and resources. The utility is a function of aggregate consumption across current and future periods, and an individual's consumption depends on resources earned throughout their life span, contingent on age.

Later, behavioral finance introduced the concept of financial socialization as a significant theoretical framework to comprehend financial behavior. Kahneman and Tversky (1979) asserted that utility theories alone inadequately describe human decision-making, particularly in risky scenarios. They identified market anomalies and irrational financial behaviors that defied utility theories, modern portfolio theory, and the capital asset pricing model. Through experiments and investigations, they concluded that human financial behavior was strongly influenced by personal experiences, emotions, attitudes, and psychology, challenging the notion of a purely rational investor and necessitating the incorporation of human behavior into finance.

2. Determinants of Financial Literacy

The literature extensively explores socio-demographic factors like age (Ye et al., 2022), gender (Bottazzi, 2021; Bucher-Koenen et al., 2016; Bucher-Koenen et al., 2017; Klapper & Lusardi, 2020), income (Feng et al.,

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2020), education level (Lusardi et al., 2014), marital status (Lusardi, 2019), financial utilization (OECD, 2020), and financial information (OECD, 2020) as key determinants shaping individuals' financial literacy levels. This section reviews and contrasts empirical literature on these determinants.

a. Age

The literature does not present a unanimous perspective on the impact of age on financial literacy. Lusardi (2014) argued that financial knowledge grows gradually with age, yet financial mistakes are prevalent among both the young and the elderly. Older individuals above 50 were found to lack financial sophistication, struggling with understanding essential aspects like risk diversification, investment fees, asset valuation, and portfolio selection. However, Ye et al. (2015) countered that cognitive aging does not necessarily lead to poor financial decision-making if the individual has developed financial expertise earlier. They proposed that the low financial literacy among the elderly stems from inadequate financial knowledge established in their youth. In contrast, Ye et al. (2022) proposed that an individual's chronological age doesn't dictate their financial literacy, but rather their perceived psychological age. Individuals who feel younger tend to engage more in financial planning activities like saving, investing, and purchasing insurance.

b. Gender

Chambers et al. (2019) explored gender and parental characteristics' effect on high school students' financial knowledge using the OECD's Programme for International Student Assessment (PISA) secondary data. Analyzing data from 18 OECD member countries and non-OECD countries, the study found a significant gender gap in financial literacy scores, favoring males in most countries. However, Slovakia was an exception, with female students outperforming males. Horna, Kiss, and Lenard (2021) suggested that gender differences in financial literacy may arise from varying preferences and personality traits between genders. Their experimental study on Hungarian high school students revealed gender gaps in social preferences like trust, trustworthiness, and altruism. Females exhibited greater selflessness but lower risk tolerance, greater present bias, and less competitiveness than males. These findings held even after controlling for age, school grades, cognitive skills, and family background.

The gender gap in financial literacy poses vulnerabilities, particularly among women, as evidenced during the COVID-19 pandemic (Sampson et al., 2021). This gap can hamper women's economic participation, financial control within households, knowledge transfer to the next generation, and exacerbate existing social inequalities (OECD, 2018).

c. Education

Wegner (2019) employed the 2015 National Financial Capability Study dataset to examine the link between financial education and financial literacy. Their findings revealed a positive relationship, where individuals who received financial education displayed higher financial literacy scores compared to those who did not. This aligns with previous research by Lusardi (2014) and Ansong and Gyensare (2012). Individuals with less than high school education struggled with basic financial calculations, while degree holders handled simple financial literacy tasks but encountered challenges with more advanced topics (Lusardi & Mitchell, 2014). It's noteworthy that diverse business courses don't necessarily translate to higher financial literacy, emphasizing the importance of financial education even for business students (Martinez, 2016).

Oppong-Boakye and Kansanba (2013) explored the financial literacy of undergraduate business students at Kwame Nkrumah University of Science and Technology, Ghana. The study found that education level significantly influenced financial literacy, with accounting, banking, and finance students displaying higher financial literacy compared to their peers from other fields.

d. Socio-Cultural Factors

Jorgensen and Savla (2010) investigated the impact of parental socialization on their children's financial literacy. Analyzing data from 18 OECD member countries and non-OECD countries, the study found a significant gender gap in financial literacy scores, favoring males in most countries. However, Slovakia was an exception, with female students outperforming males. Horna, Kiss, and Lenard (2021) suggested that gender differences in financial literacy may arise from varying preferences and personality traits between genders. Their experimental study on Hungarian high school students revealed gender gaps in social preferences like trust, trustworthiness, and altruism. Females exhibited greater selflessness but lower risk tolerance, greater present bias, and less competitiveness than males. These findings held even after controlling for age, school grades, cognitive skills, and family background.

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II. METHODS

For this study, a pragmatic research philosophy was adopted, along with an explanatory research design. This choice of philosophy was motivated by its endorsement of employing multiple data collection approaches, which helps mitigate the limitations associated with relying solely on one method (Creswell & Creswell, 2017).

The research focused on agribusiness farmers from five districts – Mutare, Mt Darwin, Mutoko, Gweru, and Masvingo – selected through a multistage random sampling process. The updated sampling frame provided by AGRITEX revealed that Mutare had 28,707 farmers, Mt Darwin had 25,704, Mutoko had 39,310, Gweru had 29,600, and Masvingo had 48,900 farmers. The cumulative population from these districts totaled 172,221. The sample size was determined using the Slovin (1960) sample size formula, which is effective when limited information exists about the population's distribution and behavior.

The Slovin (1960) formula is given by n = N / (1 + N(e^2)), where n represents the sample size, N is the population size, and e is the margin of error. Accordingly, a sample size of 623 was calculated using this formula. To ensure data validity and reliability, factor analysis, Cronbach's alpha, and a pilot study were utilized.

A. Measuring Financial Literacy

Financial literacy was operationalized through three main dimensions: financial knowledge, financial attitude, and financial behavior. The study adopted and adapted the OECD/INFE Toolkit, which gauges financial knowledge concerning concepts such as time value of money, interest compounding, simple interest calculation, compound interest, inflation, and risk diversification. Financial behavior was assessed through saving, prudent purchasing, timely bill payment, financial oversight, and responsible borrowing. Financial attitude was measured by attitudes toward long-term planning and saving versus short-term spending. The study also incorporated Lusardi's "big three questions" from internationally recognized financial literacy measurement tools, which assess understanding of interest compounding, inflation, and stock risk/diversification. The financial literacy score was computed by summing the scores from the three dimensions, then dividing by the total score and expressing it as a percentage.

B. Determinants of Financial Literacy Model Specifications

The standard multiple regression model (SMR) was employed to identify the determinants of financial literacy. The dependent variable was represented by the percentage scores of financial literacy. The independent variables encompassed age, gender, income, education level, farm size, years in business, financial products held, and financial services choice. The multiple regression model doesn't establish causality but quantifies the relationship between the dependent variable and the explanatory variables. It accommodates continuous, ordinal, and categorical variables as independent variables.

Linear regression was chosen due to its flexibility in handling a range of variables. In this context, financial literacy, the dependent variable, is a continuous ratio score. The model specification, represented as:

Multiple regression model (simultaneous): $Y = \beta_0 + \beta_1 x_1 \ldots\ldots + \beta_i x_i + \varepsilon$ (1)

Where:

Y is the dependent variable.

β_0 is the constant term.

$\beta_1 \ldots + \beta_{10}$ represent the beta coefficients to be estimated.

$x_1 \ldots x_i$ signify independent variables, including gender, age, marital status, education, income, business duration, dependents below 18, farm size, financial utilization, and financial information.

ε denotes the error term.

The purpose of this regression model was to discern the various factors influencing the financial literacy level among agribusiness entrepreneurs.

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Table 1 displays the expected relationship of the explanatory variables.

Table 1: Explanatory variables

Variable	Expected relationship based on literature review	Relationship signal expectation	Codification
Gender	Women have generally low financial literacy than man (Bucher-koenen et al 2016)	Positive	0- female 1 Male
Age	Age is usually lower among the young and the old (Lusardi and Mitchell 2014). The population of this research mainly included the middle aged and the old.	Negative	Continuous variable
Marital status	The single and the widowed generally have lower financial literacy than the married (Mutengezanwa 2018)	Negative	1- married 2- single 3- Divorced 4- Widowed 5-Other
Level of education	Literature concurs that higher levels of schooling or education leads to higher levels of financial literacy	Positive	1-Did not go to school 2-Did not finish primary 3-Primary level 4- 'O' level 5- 'A' level 6- Certificate 7- Diploma 8- Bachelor's degree 9- Masters 10- Doctorate
Income (Refers to income earned from agribusiness. Denominated	Individuals who earn low incomes tend to have lower financial literacy Santini and Ladeira (2019). Income acts as an entry barrier to opening a bank account and economic participation to the poor (Finscope, 2014).	Positive	1- less than $500 2- $ 501-1500 3- $1501-2500 4- $2501-3500

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in United states dollars)			*5-$3501-4500*
			6- $4501-5500
			7-$5501-6500
			8- $6501-7500
			9-$7501-8500
			10. Above $8500
Number of children under the age of 18	*Family composition especially the number of depended living in a family affects disposable income and thereby financial literacy*	*Negative*	*Continuous variable*
Size of the farm	*Large scale commercial farmers tent to be more knowledgeable about financial management than small scale farmers*	*Positive*	*1- Homestead land*
			2- Small scale farms
			3- Medium scale farms
			4- Large scale farms
Financial utilisation	*Financial literacy is related to use of more financial services and risk tolerance to invest in stock markets (OECD 2020).*	*Positive*	*1- Holds no financial product*
			2- Holds one financial product
			3- Holds more than one financial product
Financial information	*Financially literate individuals consult many sources of information before using a service.*	*Positive*	*1- Used personal experience*
			2- Used informal sources of information
			3-Used formal sources of information
			4- Used various sources of information

Source: Authors compilation (2022)

C. Pre-Estimation Diagnostic Test Results

Prior to conducting the standard multiple regression model, a battery of diagnostic tests was performed, encompassing assessments for heteroscedasticity, normality, and collinearity. The Durbin-Watson statistic, positioned well within the acceptable range of 2, indicated the absence of autocorrelation among error terms. The F-test yielded a p-value below 0.05, and the F-statistic registered at 140.6. This underscored the joint significance of the coefficients, validating their distinction from zero. Consequently, the null hypothesis, positing equality of all B coefficients to zero, was refuted, warranting the application of multiple regression. Furthermore, all Variance Inflation Factor (VIF) values remained below the recommended threshold of 10, confirming that the model adhered to the multicollinearity assumption (Pallant, 2020).

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III. RESULTS AND DISCUSSION

The sampling frame encompassed 172,221 farmers across various scales – large, medium, and small – in Zimbabwe. The study's designated sample size consisted of 623 agribusiness farmers. Among the distributed questionnaires, 440 were returned fully completed, with 433 deemed viable for analysis, resulting in a response rate of 70%. It's noteworthy that a response rate exceeding 60% is typically regarded as satisfactory for surveys (Baruch, 1999). The demographic composition of respondents is depicted in Table 2 below.

Table 2: Socio-demographics characteristics.

Variable	Classification (Frequency) Percentage
Gender	Male (217) 50.1%
	Female (216) 49.9%
Age	25-34 (38) 8.8%
	35-44 (74)17.1%
	45-59(171)39.5%
	60 and above (150) 34.6
Marital status	Married (301) 69.6%
	Single (13) 3.0%
	Divorced (40) 9.2%
	Widowed (77) 17.8%
	Other (2) 0.5%
Level of education	Did not go to school (8) 1.8%
	Did not finish primary level (25) 5.8%
	Primary level (74) 17.1%
	'O' level (118) 27.3%
	'A' level (15) 3.5%
	Certificate (37) 8.5%
	Diploma (81) 18.7%
	Bachelor's degree (61) 14.1%
	Master's degree (13) 3.0%
	Doctoral degree (1) 0.2%

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Monthly Income (monthly income was denominated in united states dollars)	*Less than $500 (162) 37.4%*
	$501-1500 (74) 17.1%
	$1501-2500 (33) 7.6%
	$2501-3500 (14) 3.2%
	$3501-4500 (10) 2.3%
	$4501-5500 (23) 5.3%
	$5500-6500 (13) 3.0
	$6500-7500 (16) 3.7%
	$7501-8500 (33) 7.6%
	Above $8500 (55) 12.7%
Number of employees at the beginning of the business	*No employees (272) 62.8%*
	1-5 (156) 36.0
	6-30 (5) 1.2%
Current employees	*No employees (162) 37.4%*
	1-5 (191)44.1%
	6-30 (79) 18.2%
	31-75 (1) 0.2%
Nature of business	*A combination of various farming activities (198) 45.7%*
	Cereals (80) 18.5%
	Animal husbandry (52) 12.0%
	Poultry (30) 6.9%
	Tobacco/ Cotton (41) 9.5%
	Horticulture and vegetables (29) 6.7%
	Aquaculture (3) 0.7%
Farm size	*Small scale farm (266) 61.4%*
	Medium scale farm (102) 23.6%
	Large scale farm (65) 15.0%

Source: SPSS analysis of primary data (2022)

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Both male and female entrepreneurs were adequately represented in this study. Considering the lack of consensus regarding the gender impact on financial literacy, ensuring a balanced representation of both genders held significant importance.

The study's demographic analysis revealed that the majority of the population (39.4%) fell into the age bracket of 45 and above. This observation highlights that the ownership of farms in Zimbabwe predominantly rests with individuals in the middle to old age range. Notably, young individuals have limited land ownership in the country.

Moreover, a substantial proportion of agribusiness entrepreneurs possess only basic primary and ordinary level education. It is well-documented in literature that education has a positive correlation with financial literacy.

Marital status indicated that a significant portion of respondents (69.6%) were married.

A. Financial Literacy Scores

Financial literacy scores were quantified by assessing dimensions of financial knowledge, financial behavior, and financial attitude. The findings revealed that agribusiness entrepreneurs in Zimbabwe exhibited relatively lower levels of financial knowledge and financial behavior. Consequently, they lack comprehension of fundamental financial market concepts and fail to adopt crucial financial behaviors like budgeting, saving, and retirement planning.

Descriptive statistics in Table 3 provide a more comprehensive insight into the surveyed population's financial literacy level.

Table 3: Financial literacy descriptive statistics

Financial literacy dimension	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Financial knowledge score	433	0	10	5.39	2.566	-.291	-1.136
Financial behaviour score	433	1	8	4.18	2.123	.560	-.923
Financial attitude score	433	0	3	2.49	.880	-1.687	1.779
Financial literacy score	433	10	95	57.46	21.825	.099	-.947

Source: SPSS analysis of primary data (2022)

The average financial knowledge score of agribusiness entrepreneurs was 5.39 out of 10 questions. OECD (2020) stipulated that the minimum financial literacy score should reach 70%. Therefore, the score of 5.39% fell below the 70% threshold, signifying a low level of financial knowledge. These findings align with the conclusions of OECD (2020) and Lusardi (2019), who identified pervasive low financial literacy globally. The distribution of financial knowledge scores exhibited negative skewness, revealing that most respondents struggled to provide accurate answers. The attained scores ranged from a minimum of 0 to a maximum of 10 (out of 10).

As indicated in Table 3, the average financial behavior score stood at 4.18 out of 8, falling below the recommended 70% benchmark. This result suggests that agribusiness entrepreneurs possess a limited grasp of financial behavior literacy. All surveyed participants attained at least one financial behavior score, with many acknowledging their involvement in the daily management of personal or household finances. However, adherence to essential financial behaviors such as budgeting, saving, and retirement planning remained deficient, underscoring a low level of behavior literacy. This observation concurs with the findings of Kadoya and Khan (2017), highlighting the widespread lack of sound financial practices.

Regarding financial attitude, the average score registered at 2.49 out of 3, illustrating that most agribusiness entrepreneurs harbor positive attitudes toward long-term financial planning, prioritizing it over short-term gratification and impulsive spending.

The composite financial literacy score combines financial knowledge, behavior, and attitude scores, spanning from 0 to 23. The mean financial literacy score computed to 57.46%, significantly below the 70% threshold. Consequently, the majority of agribusiness entrepreneurs are deemed financially illiterate. The range of scores varied from a minimum of 10% to a maximum of 95%.

B. Multiple Regression Model of Factors Affecting Financial Literacy

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To ascertain the demographic determinants impacting financial literacy, a Standard Multiple Regression (SMR) model was executed. Diagnostic evaluations encompassing multi-collinearity, normality, linearity, homoscedasticity, and residual independence were conducted prior to regression analysis. The outcomes of the SMR analysis are presented in Table 4. The unstandardized beta coefficients (B) denote the projected change in the dependent variable for each one-unit shift in the explanatory variable. These coefficients underpin the model's regression estimates. The standardized beta coefficients express regression coefficients in terms of standard deviations within the sample. These coefficients illuminate how the dependent variable is influenced by a one-standard-deviation shift in the explanatory variable (Martin and Bridgmon, 2012).

Table 4: Regression results

	Unstandardised Coefficients		Standardised Coefficients		
	β	Std. Error	β	T	Sig.
(Constant)	20.722	5.319		3.896	0.001
Gender binary	6.612	1.367	0.152	4.836	0.001
Actual age	-0.043	0.061	-0.022	-0.711	0.478
Marital status	-0.965	0.577	-0.054	-1.672	0.095
Level of education	3.262	0.44	0.313	7.421	0.001
Monthly income	2.144	0.29	0.336	7.38	0.001
Children below 18	-1.223	0.457	-0.078	-2.677	0.008
Financial products held	5.806	1.423	0.143	4.079	0.001
Financial choice influences	0.266	0.606	0.013	0.438	0.661

Dependent variable: Financial literacy	
R	0.852
R Square	0.726
Adjusted R Square	0.721
Std Error of the Estimate	1.527
F Statistic	140.608
Sig	0.001

Source: SPSS analysis of primary data (2022)

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The model's goodness of fit was assessed through the adjusted R-squared, revealing the extent to which the model accounted for variance in the dependent variable. As illustrated in Table 4, the model's adjusted R-squared was 0.721, indicating that the explanatory variables elucidated 72.1% of the financial literacy variance. Notably, the variables of gender ($\beta=0.152$, $p=0.001$), education level ($\beta=0.313$, $p=0.001$), monthly income ($\beta=0.336$, $p=0.001$), presence of children below 18 ($\beta=-0.078$, $p=0.008$), and held financial products ($\beta=0.143$, $p=0.001$) exhibited statistical significance with p-values below 0.05. However, age, marital status, and financial information sources showed no statistical significance. Gender, education level, and financial products held emerged as the most potent factors contributing positively to the dependent variable's explication.

1. Income

The regression findings in Table 4 underscore a noteworthy positive correlation between income and financial literacy ($\beta=0.336$, $p=0.001$). In essence, a one-standard-deviation increase in income corresponds to a 0.336 standard-deviation increase in financial literacy. This outcome signifies that agribusiness entrepreneurs' financial literacy escalates in tandem with income augmentation. Thus, entrepreneurs with higher income levels exhibit superior financial literacy compared to their lower-income counterparts. This disparity can be attributed to lower-income earners grappling with financial constraints, leading to a lack of exposure to diverse financial services and consequently diminished financial literacy. This aligns with Nanziri and Leibbrandt's (2018) contention that financial literacy amplifies as income ascends.

2. Level of Education

Notably, the level of education manifested a significant positive association with financial literacy ($\beta=0.313$, $p=0.001$). This infers that an elevation in educational attainment corresponds to an enhanced financial literacy quotient. The education gradient spanned from individuals without formal education to those holding doctorate degrees. Agribusiness entrepreneurs endowed with advanced education levels (diplomas or degrees) demonstrated heightened financial literacy in comparison to those with rudimentary education. Evidently, financial literacy burgeons as education progresses. This resonates with Falahati et al. (2022), who observed that individuals with business-related academic backgrounds exhibited higher financial literacy. This trend concurred with Twumasi et al. (2021), disclosing that higher education levels correlated with heightened financial literacy among farmers.

Policy implications underscore the necessity of targeted financial education initiatives for individuals with limited education, equipping them with essential financial skills. Furthermore, embedding financial concepts within basic educational curricula holds potential for arming individuals, both with and without tertiary education, with informed financial decision-making acumen. While the mean age of agribusiness entrepreneurs stood at 52 years, underscoring an aged demographic that attained qualifications during the colonial era, interventions are pivotal in infusing basic financial knowledge among them.

3. Gender

The variable of gender exhibited substantial explanatory influence, as evident in the unstandardized β coefficient of 6.612 within Table 4. Gender was coded as 0 for females and 1 for males, with an anticipated affirmative correlation between gender and financial literacy. Indeed, the findings corroborated this perspective by revealing a statistically significant and affirmative connection between gender and financial literacy. Thus, as gender transitions from 0 to 1, financial literacy rises. Males demonstrated heightened financial literacy relative to females, corroborating prior literature (Lusardi, 2019; Kurowski, 2021). Household gender roles could contribute to this variance, where women often manage domestic responsibilities while men oversee financial matters and sourcing of funds. The widespread financial illiteracy among women agribusiness entrepreneurs implies their limited grasp of loan option selection, time value of money concepts, hyperinflation management, and effective budgeting. Moreover, women are disproportionately vulnerable to financial emergencies and fluctuations caused by unfavorable farming seasons.

Policies aimed at gender gap mitigation should spotlight financial literacy as a means of enhancing financial well-being and resilience. Neglecting to address this gap could exacerbate women's financial disadvantage, amplifying disparities in livelihoods and economic performance. Given higher divorce and separation rates in Zimbabwe, women-led agribusinesses risk underperforming compared to their male counterparts.

4. Financial Products Held

Disaggregated data on financial products was categorized into payment products, savings, investments and retirement, credit products, and insurance. The scale ranged from 1 (no products held) to 3 (multiple products held). This variable was expected to yield a positive impact on financial literacy. Notably, Table 3's findings disclosed a significant positive relationship between held financial products and financial literacy ($\beta=0.143$, $p=0.001$). Excluding gender (with an unstandardized β coefficient of 6.612), this variable exhibited the most notable contribution to the dependent variable (with an unstandardized β coefficient of 5.608). Agribusiness

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entrepreneurs managing multiple financial product categories demonstrated heightened financial literacy compared to counterparts with fewer products or none. Most agribusiness entrepreneurs predominantly held one category of financial product, often payment products such as mobile money accounts like EcoCash and OneMoney. Rural areas of Zimbabwe evidenced elevated levels of financial exclusion (FinScope, 2014), amplifying financial illiteracy.

As posited by Atkinson et al. (2016), financial knowledge accrual through increased awareness kindles demand for financial products. This, in turn, enhances financial utilization. To this end, policy-makers should be vigilant in fostering financial product awareness via financial literacy programs and media platforms like radio and television. Moreover, enhancing financial inclusion necessitates efforts to embrace the financially marginalized populace, harnessing the transformative potential of heightened financial literacy.

5. Children Below 18 Years

Family composition's impact on financial literacy is underscored by the number of children below 18 years, influencing household expenditures and welfare. The hypothesis anticipated a negative relationship (Atkinson et al., 2016), with greater household dependence on lower financial literacy. The findings validated this expectation, unveiling a significant negative correlation between children below 18 years and financial literacy. Entrepreneurs hailing from households with more dependents aged below 18 exhibited lower financial literacy than counterparts with fewer dependents. This observation underscores the heightened need for effective resource allocation within larger families. The parallel between this finding and income's impact on financial literacy underscores the financial constraints larger families face, curbing financial utilization.

6. Marital Status, Age, and Financial Information Sources

Marital status, age, and the source of financial information were probed as potential determinants of financial literacy. The financial information source variable categorized use as informal (0) or formal (1). Results indicated no statistical significance, suggesting information source usage exerts negligible influence on financial literacy. Furthermore, marital status and age did not evince any significant link to financial literacy. While literature often associates single women with lower financial literacy compared to male counterparts (Lusardi, 2019), this research did not substantiate such a correlation. Widowed and divorced individuals could exhibit heightened financial literacy post-separation (Nanziri and Leibbrandt, 2018). Strikingly, the variable of age failed to attain statistical significance, conflicting with Van Rooji and Lusardi's (2011) inverted U-shaped correlation between age and financial literacy. As Zimbabwe's demographics predominantly feature middle-aged and older individuals, the insignificance of age is unexpected.

IV. CONCLUSION

This study elucidated the factors affecting agribusiness entrepreneurs' financial literacy levels, utilizing a standard regression model incorporating marital status, gender, age, income, education level, children below 18, and held financial products. The outcomes underscored the substantive positive impacts of gender, education level, monthly income, and held financial products. High-income earners and those with tertiary diplomas or degrees exhibited elevated financial literacy. Agribusiness entrepreneurs managing multiple finacial products demonstrated higher financial literacy. Gender disparities emerged starkly, with women agribusiness entrepreneurs manifesting significant financial illiteracy. Policy recommendations encompass tailored financial education, integration of financial concepts into basic education curricula, and initiatives to foster financial inclusivity. Through these measures, the study contributes to unveiling gender, income, and education-based financial literacy disparities, underscoring the necessity for targeted interventions to bridge these gaps.

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Gumbo Lilian[1], Marimuthu Ferina[2], Vengesai Edson[3]

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Pathways for Rural-Based Universities Transformation into Entrepreneurial Institutions in South

Kativhu Simbarashe[*] & Netshandama Vhonani

Community Engagement Directorate, University of Venda

Corresponding Author*: Simbarashe.kativhu@univen.ac.za, vhonani.netshandama@univen.ac.za

ABSTRACT

Purpose: For close to three decades, the entrepreneurial university has been growing at a slow pace in the developed countries but recently the developing countries have raised interest in adopting the concept. However, most universities in developing nations including in South Africa have largely relied on Eurocentric frameworks to guide them in adopting the entrepreneurial thrust into their strategic plans. This generic approach can be detrimental given the economic disparities, digital divide, and local needs between developed and developing universities. Therefore, drawing lessons from literature and case studies, the current paper seeks to contextualise the adoption of entrepreneurial universities in rural-based universities of South Africa. The paper seeks to demonstrate how a rural-based university can transform and embrace entrepreneurial drivers and components. A systematic review approach was followed to search and synthesise literature from Web of Science and Scopus databases.

Design/methodology/approach: The bibliometrics program was utilised to statistically quantify scholarly material and the distribution of science on entrepreneurial knowledge while the Atlas 9 software platform was used to synthesise literature.

Findings: Results showed that drivers of entrepreneurial universities are influenced by local socio-economic conditions and thus, rural-based universities need to conduct baseline studies that inform their implementation strategies. Suggested conceptual pathways to entrepreneurial transformation include curriculum rethink, inculcation of the entrepreneurial culture, enhancement of partnerships with local businesses and improvement of internationalisation.

Paper type: Research paper

I. INTRODUCTION

Universities have traditionally undertaken the triple functions of teaching, research, and service. However, growing calls and interest in partnering with businesses to enhance economic activities have resulted in the emergence of the entrepreneurial university (Rubens *et al*., 2017). The concept originated in developed countries where it has been implemented for close to three decades now (Sam and van der Sijde, 2014). Cognisant of the economic development benefits attained through the entrepreneurial university in these high-income countries, many universities in developing countries including South Africa are increasingly embracing the concept. However, many universities in developing countries are adopting the European Commission Guiding Framework for Entrepreneurial Universities (EC-OECD, 2012) to inform their implementation process.

Much as these guiding principles can work for Elite universities and developed economies, they might be less effective in rural-based universities in South Africa for several reasons: Firstly, rural-based universities in the country are still plagued with the digital divide and technological drawbacks which are key components of an entrepreneurial university. Secondly, rural economies are still small as evidenced by incessant poverty, unemployment, and limited industries (Maduku and Kaseeram, 2021). Thirdly, rural economic ecosystems are distinct from those in developed economies of the urban areas where most elite universities are found (Miles and

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Morrison, 2020). Given these dynamics, there is a need to contextualise the application of the entrepreneurial concept in rural-based universities.

The current paper sought to establish context-based pathways to transforming a rural-based university, such that it can positively contribute to the local economic growth of rural communities. This paper critically reviews the use of Eurocentric pathways to entrepreneurial universities to identify the strengths and weaknesses of various frameworks in the local context. As Bizri *et al.* (2019) argue, there is a need to investigate the role and nature of the EPU in contexts other than advanced/Western countries to better understand how to engage the university/industry/government triad and capitalise on available inputs to produce intended outcomes within various context-specific constraints. This provides a conceptual tool for developing rural-based entrepreneurial universities that can create a functional economic ecosystem, vibrant entrepreneurial culture, and effective rural development in South Africa.

II. METHODS

This paper followed a systematic review synthesis of existing literature from the Web of Science and Scopus databases. These databases contain vast scholarly material across the globe and thus, were ideal for a rigorous review of the entrepreneurial university concept. A systematic and logical review of the existing scholarly pieces of evidence available on entrepreneurial universities was conducted to inform rural-based universities of the pathways to adopting entrepreneurship as a strategy for enhancing local economic development. Keywords such as entrepreneurial university, academic entrepreneurship, innovation, university incubator and commercialisation of knowledge were utilised to guide literature search. Thereafter, the Bibliometrics program in the R studio programming platform was utilised to conduct a statistical analysis of publications, provide evidence on the existing knowledge and understand emerging areas of research. The program also enhanced transparency. Figure 1.1 shows detailed information on the literature sources utilised in the study. As shown, literature search parameters were set within the 2010-2023 timeframe to obtain recent literature and understand recent developments on the topic.

Timespan	Sources	Documents	Annual Growth Rate
2010:2023	128	272	6.13 %

Authors	Authors of single-authore	International Co-Authorsh	Co-Authors per Doc
640	30	35.29 %	2.76

Author's Keywords (DE)	References	Document Average Age	Average citations per doc
861	10797	4.17	21.57

After bibliometrics analysis, most relevant articles were directly utilised to guide a Qualitative Document Analysis (QDA) which was utilised. The approach follows 5 steps to increase consistency and rigour. The steps followed include setting criteria for the selection of documents, obtaining documents, analysis of relevant documents, validation and finalisation. The Atlas ti version 8 software was used as a platform for conducting the document analysis. The software facilitated literature synthesis through tools such as the word cloud, quotations, coding, and reports. This allowed for transparency in the secondary data analysis conducted. Figure 1.2 is an extract from Atlas ti version 9 showing a word map of keywords from utilised scholarly material.

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Figure 1.2 Word cloud showing keywords from utilised literature

III. RESULTS AND DISCUSSION

A. Entrepreneurial university scientific production

The entrepreneurial university has its roots in the United States of America and Europe. As such scientific production in the two regions has significantly grown than in any other region. As indicated in Figure 1.3, bibliometrics analysis shows that Europe and the USA have been leading in the production of entrepreneurial university scientific knowledge since 2010. This kind of knowledge is non-existent in the rest of Africa albeit in South Africa and West Africa where minimum productivity is evident. This creates a death of context-based knowledge that can inform the adoption of the entrepreneurial concept in higher education without relying on European approaches. As such this paper seeks to be a steppingstone towards the production of conceptual knowledge on the entrepreneurial university concept particularly in rural-based universities which are still lagging in many aspects.
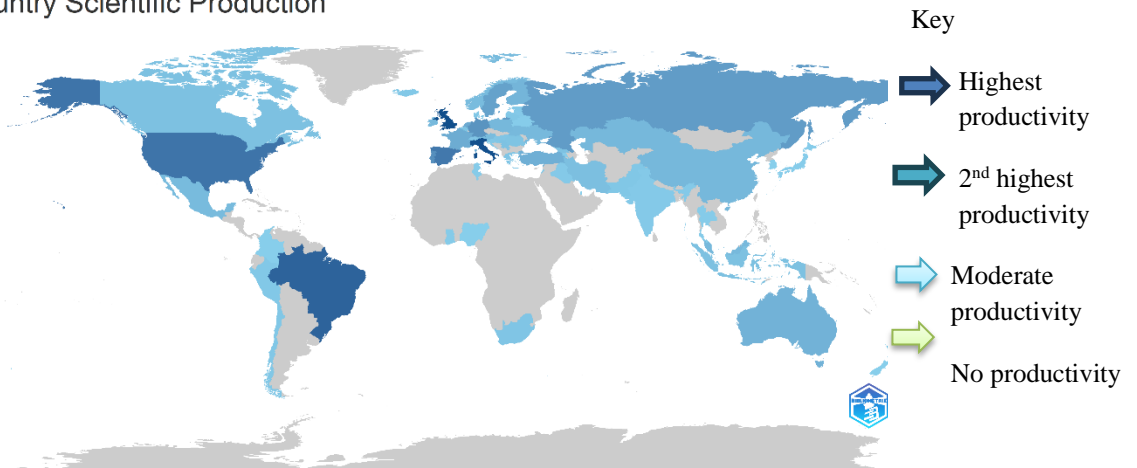
Figure 1.3 Current entrepreneurial university knowledge production since 2010

The following section discusses the conceptualisation of the entrepreneurial university concept.

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B. Contextualising rural-entrepreneurial university

Conceptualising entrepreneurial universities is not straightforward given the concept's evolving nature. As per Mascarenhas *et al.* (2017), the entrepreneurial university offers practices, opportunities, cultures and favourable environments that actively encourage and embrace entrepreneurship students and graduates. This definition emphasizes creating an entrepreneurial backbone and culture among students. Sperrer *et al.* (2016) add that entrepreneurial universities are drivers of innovation, self-development and an appropriate response to success in highly unpredictable markets. The entrepreneurial university thus, serves as a channel for spill-over effects contributing to socioeconomic development through its multiple missions of teaching, research and entrepreneurial activities. This concept is underpinned by two main topics which are academic entrepreneurship and commercialisation of knowledge.

Academic entrepreneurship entails the commercial application of academic research through spinouts, licensing, patenting and other activities (Abreu and Grinevich, 2017). Therefore, it is a key component in technology development and economic growth in each community. However, as Bozeman, Fay and Slade (2013) argued, in developing countries academic entrepreneurship is difficult to attain given that researchers lack knowledge about the market which is outside the dominion of purely academic research but critical for successful commercial activities. In the context of developing countries and societies, researcher access to industrial knowledge is critical but difficult due to organisational and operational culture differences. This makes it critical for researchers in rural-based universities to build relations with industrial partners to enhance bio-directional knowledge transfer.

The commercialisation of scientific knowledge is another key component in entrepreneurial university definitions. According to Brown (2016), this refers to the link between wealth and competitiveness in a global knowledge-based economy and the exploitation of scientific and technological developments in universities. Central to achieving these linkages are funding, inventions and patents (Mets *et al.*, 2023). Commercialisation of knowledge is not easy to achieve in rural-based universities of South Africa which are already struggling with funding, innovations and developing patents. In most cases, rural-based universities in South Africa are not able to produce high technology due to lack of funding, human resources and links to businesses. In this respect, rural-based universities must focus on developing low-tech tools that are relevant to local rural economic activities such as farming. More so, as recommended by Rasmussen *et al.* (2015) academic entrepreneurs need to expand and transform their networks to gain the necessary skills that enable them to transfer their knowledge to businesses. In the following section we critically examine the European Commission Guiding Framework for Entrepreneurial Universities and its applicability in rural-based-universities.

C. European Commission Guiding Framework for Entrepreneurial Universities

Regardless of the resistance of some critics to entrepreneurialism in the context of higher education, Urbano and Guerrero (2013) argued that transformation into an Entrepreneurial University (EU) will help develop regional or national economic performance and improve university funding. Leading universities in Europe, like IE in Madrid, and Imperial College in London, and American institutions such as Stanford University and Massachusetts Institute of Technology have led the way in demonstrating how such a model can be efficiently and effectively implemented. The main guiding frameworks for entrepreneurial universities were proposed by the following authors (Al-Shammari, 2010; OECD, 2012). However, all these frameworks are either developed in the American or European context. Figure 1.3 shows the most cited counties in all literature sources utilised in this study. This is a clear indication of the reliance on European and American-based sources to inform entrepreneurial universities even in countries like South Africa.

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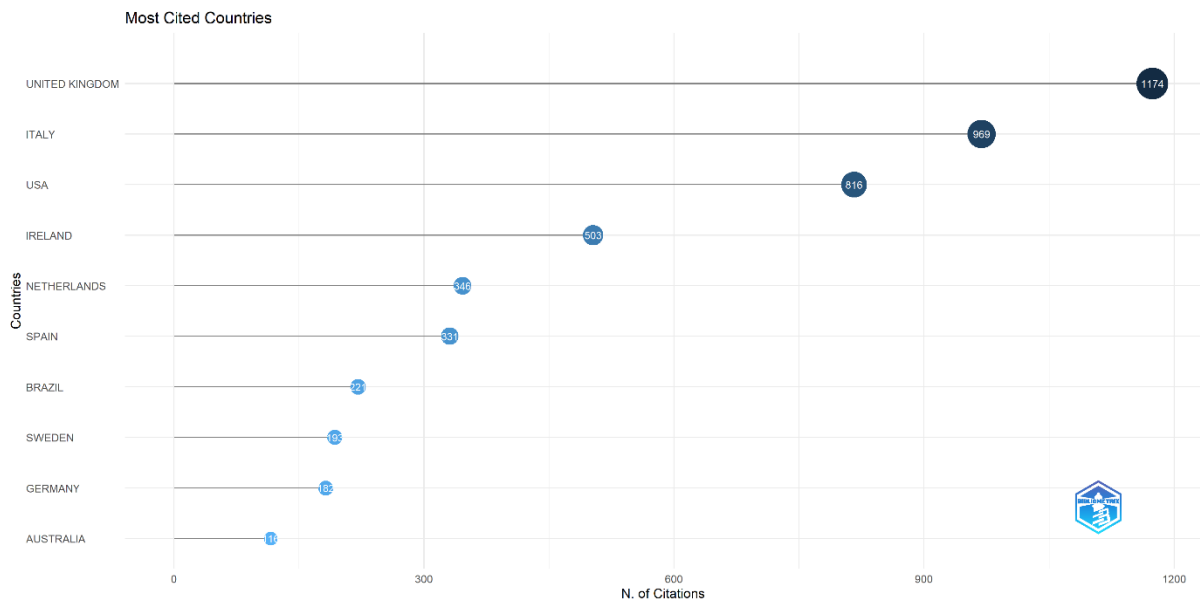
Figure 1.3 Most cited countries on entrepreneurial university concept since 2010

Notwithstanding the significant use of the frameworks mentioned above, the EC-OECD Framework for entrepreneurial universities is generally utilised across the world due to its comprehensiveness. It consists of seven dimensions, which are (1) leadership and governance (2) organizational capacity, people, and Incentives (3) entrepreneurship development in teaching and learning (4) Pathways for Entrepreneurs (5) University– Business/External Relationships for Knowledge Exchange (6) The Entrepreneurial University as an Internationalized Institution (7) Measuring the Impact of the Entrepreneurial University (OECD, 2012). Each of these dimensions contains a series of items and indicators used to gauge the likelihood of success of institutions implementing the entrepreneurial goal. Looking at each element, we critically assess the suitability of utilising the framework to guide the implementation of entrepreneurial strategic imperatives in rural-based universities.

D. Leadership and governance

According to OECD (2012), universities as entrepreneurial organisations should contain clear entrepreneurial activities well established in their mission and strategic plans. Specific objectives for entrepreneurship with associated performance indicators such as commercialisation of research results through technology transfer and business startups as well as generating entrepreneurial competencies and skills among others should also be developed. Developing strategic plans with entrepreneurial intent and clear objectives is seemingly not a problem for rural-based universities, the challenge is in the implementation where there is limited commitment and uncoordinated integration of entrepreneurial activities across the universities. Often, university faculties and departments work in silos which make it difficult to integrate entrepreneurial activities. More so, as Ndebele, Muhuro and Nkonki (2017) argue, rural universities naturally face staffing constraints, as many qualified professionals prefer to work in metropolitan universities where social amenities are readily available. This makes it difficult to obtain and retain competent and highly experienced leaders in executive and faculty positions.

E. organizational capacity, people, and Incentives

Organisational structure and capacity can either propel or constrain entrepreneurial activities. For instance, entrepreneurial universities must invest in entrepreneurial activities through sustainable financial strategies rather than relying on limited state funding (OECD, 2012). Unfortunately, rural-based universities in South Africa are still largely reliant on state funding through subsidies, research funds and student funding schemes such as the NFSAs. This makes it difficult to fund entrepreneurial activities. More so, universities should foster an entrepreneurial culture by recruiting staff that have a strong entrepreneurship background. (OECD, 2012). However, because most rural-based universities in the country have only recently adopted entrepreneurship as one of their key strategic focuses, it is difficult to suddenly replace existing staff with those with entrepreneurial interests. Moreso, as behavioural theories show, it is very difficult to change staff behaviours to suit the new strategic focus within a short space of time. More so, limited financial resources make it difficult for these universities to adequately incentivise staff members who excel in entrepreneurial activities to instil more passion.

F. Entrepreneurship development in teaching and learning

Universities are expanding their entrepreneurial education offerings to all staff and students. To succeed these universities should have structures in place to facilitate entrepreneurial development across all activities. For instance, there is a need to have Professors of entrepreneurship and senior staff who are responsible for entrepreneurship at the faculty level. Staff should also take an entrepreneurial approach to teaching in all departments, promoting diversity and innovation in teaching and learning. In this regard, there should be mechanisms in place by which teaching staff have codified the expected learning outcomes about entrepreneurship in all degree programmes. Keeping the curriculum up to date with recent research findings and encouraging the internal exchange of knowledge is also crucial.

G. Pathways for Entrepreneurs

Supporting pathways taken by potential entrepreneurs, that is form ideas to market growth or into employment is also critical. Developing entrepreneurs is often focused on the provision of opportunities and facilities rather than the inspiration and motivation that is necessary for individuals to move from ideas to action. Thus, universities should link their start-ups and companies with the wider entrepreneurial ecosystem (OECD, 2012). As much as this is possible, it is still challenging for rural-based universities to link potential student entrepreneurs to companies as these institutions operate in areas with minimum economic activities and industry.

H. University–Business/External Relationships for Knowledge Exchange

Active involvement of a range of stakeholders is a contributing factor in successful Entrepreneurial Universities. Universities should place a high value on knowledge exchange through collaboration and partnership with regional and local organisations, SMEs, social enterprises, schools, alumni and entrepreneurs (OECD, 2012). However, these partnerships should be more than just memorandum of understanding but active engagements of mutual benefit. Mechanisms should also be in place to partner with incubators and science parks in the surrounding areas to maximise knowledge exchange. However, this may not be realistic in rural areas where there are hardly business incubators and science parks. Instead, universities can utilise opportunities such as those provided by agricultural value chains which are dominant in rural spaces.

I. The Entrepreneurial University as an Internationalized Institution

As per OECD (2012), as internationalisation is progressively integrated into strategic processes, it becomes essential for universities to be able to make informed decisions on institutional direction, as well as assess and enhance performance according to different objectives over international activities. Internationalisation is a process of integrating an international, intercultural or global dimension into the purpose and functions such as teaching/learning, research service or delivery of higher education (Knight, 2018). To enhance internationalisation, institutions should support international mobility through exchange schemes, scholarships, overseas internships and the use of other broader mobility programmes (OECD,2012). However, even before adopting the entrepreneurship model, financial instability has been limiting rural-based universities' capacity to support the international mobility of staff and students. Thus, unless they become financially stable, rural-based universities will not fulfil the internationalisation element of an entrepreneurial university in South Africa. Attracting international and entrepreneurial staff and students should also be prioritised. However, geopolitical forces and demands have seen some rural-based universities cut down on their recruitment of international staff and students in favour of local citizens.

J. Measuring the Impact of the Entrepreneurial University

The success of an entrepreneurial university is also based on the ability to understand the impact of the changes which are made. The impacts affect internal stakeholders such as students/graduates and staff and external stakeholders such as local businesses, organisations and communities. However, as noted by OECD (2012), impact measurement in universities is still premature as most of the measurements are mainly focused on spin-offs and research outcomes rather than local economic development, graduate entrepreneurship and retaining talent.

Despite the significance of the entrepreneurial university elements described above, there seems to be a lack of consensus regarding the key success factors of the EU especially in developing countries which are often described as countries with low per capita income, little export diversification and minimal integration into the global financial system (Toye, 2011). Given this argument, it is unclear whether it is essential to follow the Western model of the entrepreneurial university or perhaps a more basic and contextualised model in design and implementation in developing societies (Autio *et al*., 2014). More so, as Kalar & Antoncic (2015) successful transformation to the EU requires creating entrepreneurial leaders, developing suitable strategic plans, establishing infrastructure, and learning from developed countries. Although rural-based universities in South Africa have the desire to implement EU ideologies, their strategic plans are largely reliant on Eurocentric frameworks,

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technological infrastructure is poor, and links to the industry and business fraternity are fragile. Bearing this lack of context-based transformation pathways to entrepreneurial rural-based universities we provided adjusted pathways in the following subsection.

K. Way forward

The literature consistently showed that the Eurocentric framework for Entrepreneurial universities is a critical tool. However, its generic application in the developing world can be misleading given geopolitical and socio-economic contextual distinctions. In this section, we suggest context-specific pillars for developing a successful rural entrepreneurial rural-based university in South Africa factoring in the educational inequalities discussed in previous sections.

L. Inculcating entrepreneurial culture

Transforming from a rural-based traditional university to an entrepreneurial institution requires a change of ideas, mindset, norms and values for individuals and systems. This is in line with Farsi *et al* (2012) recommendation that building an entrepreneurial culture at the individual, group, university and community levels is a major requirement in the typical entrepreneurial university mission. This entails not only changing university strategic plans but inculcating an entrepreneurial mindset across all faculties and organs of the university. Universities must commit to changing employee and student attitudes, entrepreneurial culture, behavioural control, geographically specific factors, entrepreneurial education and learning modus operandi (Lose and Kapondoro, 2020). Of course, institutions must do so in cognisance of the fact that behavioural changes take time and thus, constant reconditioning, awareness campaigns and constant monitoring measures should be in place. As Leih and Teece (2016) argued, university leaders must combine strategic thinking with capacity building.

M. Internationalisation

Rural-based universities have already made strides to enhance their internationalisation prowess. For instance, massification, increased staff and student mobility and research collaborations (De Wit, 2019). Given this foundation, entrepreneurial pursuit may enhance institutional abilities to attract foreign investments, internal entrepreneurial staff and students to strengthen their national and regional economic development potential. Gibb (2012) further notes that internationalisation could include the creation of international networks which strengthen collaborations, research output and commercialisation. This can be achieved by encouraging staff and postgraduates to engage in collaborative research activities and improving the infusion of internationally entrepreneurial-minded staff and students.

N. Innovation transfer for local growth

Rural-based universities are in spaces with distinct local economic activities such as agriculture, mining, services, heritage and tourism as opposed to large firms and industries. Many frameworks (Aranha and Garcia, 2014; Powell, 2012) suggest that an entrepreneurial university should produce knowledge and transfer it to industry and society. In this regard, rural-based universities must understand the economic needs of their immediate rural areas to provide relevant innovations for boosting rural development. Central to understanding local economic needs and providing relevant innovation is the core creation of ideas to establish a two-way flow of information.

O. Entrepreneurial incubation

To become an entrepreneurial university, rural-based institutions also need to provide a conducive environment for entrepreneurs to learn and thrive. As Martin *et al*. (2019) suggest, it is crucial to establish relevant structures such as the on-campus incubators, licencing, intellectual property office, spinoff activities, funding bureau and other relevant institutions. Most of the rural-based universities already have some of these infrastructures but commitment to utilise them efficiently is still lacking. For instance, institutions must not only include students from business management faculties in their business incubators but the whole institution. Entrepreneurial activities must be allowed on campus under supervision and mentorship. These facilities can become hubs of entrepreneurial activity, attracting entrepreneurs, investors, and industry experts to the region.

P. Curriculum rethink

Rural-based universities such as the University of Venda are commonly known for providing traditional missions such as teaching, learning and research services. Entrepreneurial universities seek to balance a variety of external demands with institutional responses while safeguarding their academic excellence. As such rural-based institutions need to revolutionise their curriculum in all degree programs to include entrepreneurial focus. This should be done across faculties to enhance the uptake of entrepreneurial ideologies and culture across the breadth of the institution. There is also a need to encourage interdisciplinary collaboration and provide

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opportunities for students to work on real-world projects and startup ventures. In support, Aranha and Garcia (2014) recon that the objective of entrepreneurship education in developing societies is to enhance students' entrepreneurial skills and behaviour early on thereby enabling graduates to overcome the challenges and risks they are likely to face in the turbulent markets of developing nations.

Q. Strengthening stakeholder partnerships

Building partnerships with all relevant development stakeholders is a key priority for entrepreneurial universities. Aranha and Garcia (2014) argue that Entrepreneurial universities must be involved in active engagements with the industry which normally have criteria related to the desired skills and qualities of potential employees. Their research and development agenda should also be informed by industry needs to increase their degree of relevance in problem-solving. In the rural-based university context, the focus should be on engaging with local businesses that include agricultural farms, tourism, trading and service providers who form most local economic activities rather than forging partnerships with large industries in the urban areas. This supports sentiments by Nkomo and Sehoole (2007) that universities acting in isolation cannot activate the full range of potentials embedded in their immediate community or society at large.

R. Engagement of local communities

Entrepreneurial rural-based universities need to actively involve the local community in university initiatives. Organize entrepreneurship and innovation events, workshops, and conferences that bring together stakeholders from academia, industry, and the community. Encourage community members to participate in university programs, research projects, and startup ventures. This also establishes co-working spaces on or near the campus, where entrepreneurs, students, and community members can collaborate, share resources, and work on their ventures.

S. Accumulating resources

An abundance of resources could be instrumental in helping the Entrepreneurial university achieve its intended goals. However, rural-based universities in South Africa often struggle to obtain human resources, infrastructure, technology, financial resources and other resources (Kativhu, 2021). Furthermore, overreliance on government funding makes rural-based universities subject to government demands and restrictions which affect their academic freedom and independence (Reyes, 2016). To address these challenges, these universities need to develop internal income-generating activities, seek external funds from partnering industries and organisations, secure research contracts and rigorously head hunt productive researchers.

IV. CONCLUSION

Literature consistently shows the significance of entrepreneurial universities as business incubators and a catalyst for economic development. Various facets of entrepreneurial universities such as innovation, technology transfer, academic entrepreneurship and university-industry partnerships have made the new approach more appealing to socioeconomic development agents. However, despite the existence of the approach for almost three decades now, its implementation in South Africa is still pre-mature owing to the lack of locally relevant guiding frameworks and principles. Results of this study show that South Africa is among the least contributors of entrepreneurial scientific knowledge to the world and the rest of Africa has also not largely contributed anything. This has created a dearth of information on the approach and an overreliance on Eurocentric frameworks. This can be misleading especially for rural-based universities that experience different socio-economic conditions and education qualities to those in developed nations. Although the Eurocentric frameworks are a critical starting point, we provided adjusted dimensions/drivers that can guide the transformation of rural-based universities in South Africa into entrepreneurial institutions. These dimensions consider socio-economic realities facing these universities such as limited access to industries, limited funding, social injustices, limited innovation and technology transfer as well as resource scarcities. Suggested dimensions include, curriculum rethink, inculcation of entrepreneurial culture, strengthening campus business incubators, accelerating internationalisation, strengthening local stakeholder partnerships and enhancement of community engagement practices.

A. Recommendations

The lack of locally relevant knowledge on entrepreneurship and the modus operandi for its adoption in rural-based universities necessitate the need for accelerating empirical research on the topic in South Africa. Particular attention should be given to understanding the socio-economic conditions in these institutions and identifying opportunities that enable the adoption of the entrepreneurial approach. Given that drivers of entrepreneurial

universities are influenced by local conditions, rural-based universities need to conduct baseline studies that inform their implementation strategies. Studies on fostering entrepreneurial culture among staff and students, production and transfer of relevant innovations for rural development purposes are also critical aspects. This will help in crafting context-based frameworks for entrepreneurial rural-based universities in the country and the region at large.

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Kativhu Simbarashe[*1] **& Netshandama Vhonani**[2]

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Kativhu Simbarashe[*1] & Netshandama Vhonani[2]

Entrepreneurial Coaching for the Development of Entrepreneurial Self-Efficacy in Women Entrepreneurs

Molema, L.M[1], Ndlovu-Hlatshwayo, E.N.[2], Ebewo, P.E[3].

Centre for Entrepreneurship Development, Tshwane University of Technology[1]

Department of Management and Entrepreneurship, Tshwane University of Technology[2]

Department of Management and Entrepreneurship and Centre for Entrepreneurship Development, Tshwane University of Technology[3]

Corresponding Author*: MolemaLM@tut.ac.za

ABSTRACT

Purpose: This study explored entrepreneurial coaching to develop women entrepreneurs by enhancing their entrepreneurial self-efficacy. It sought to understand how entrepreneurial self-efficacy in women entrepreneurs can be developed through entrepreneurial coaching.

Design/methodology/approach: This study's methodology was a descriptive literature review.

Findings: The findings showed that entrepreneurial coaching is a development intervention that can be used to enhance the entrepreneurial self-efficacy beliefs of women entrepreneurs, thereby increasing their chances of engaging in successful business creation and operation.

Research limitations/implications: Entrepreneurial coaching for women entrepreneurs as a research field is still in its developmental stage, as such, there are limited sources of literature.

Practical implications: The study contributes to the overall discourse on entrepreneurial coaching as a supportive intervention in enhancing entrepreneurial self-efficacy for women entrepreneurs.

Originality/value: The combination of entrepreneurial coaching, entrepreneurial self-efficacy and the development of women entrepreneurs is still emerging.

Paper type: Conceptual paper

Keywords: Entrepreneurial coaching, Women Entrepreneurs, Entrepreneurial Self-Efficacy, Entrepreneurship Development.

I. INTRODUCTION

Today's working world has an increasing emphasis on entrepreneurship. By fostering innovation, producing new jobs, and boosting productivity, entrepreneurs play a critical role in the development and expansion of the economy in South Africa. This highlights the significance of entrepreneurs for the country's labour markets and economy (Zizile & Tendai, 2018). Rudhumbu, Du Plessis and Maphosa (2020) note, that the concept of entrepreneurship extends beyond the act of starting a business to include the processes of opportunity identification and exploitation as well as an entrepreneur's personal growth (Suchitra & Pai, 2022). To continue achieving this personal growth, South African governments have over the years prioritized the growth of those deemed to have previously been disadvantaged, particularly women entrepreneurs (Ajuna, Ntale & Ngui, 2018). Since these women are considered latecomers to the "game" of entrepreneurship, it is assumed that they lack the necessary skills and abilities to establish and develop a business (Zizile & Tendai, 2018).

It takes a lot of effort to become and grow as a woman entrepreneur. Women entrepreneurs, for instance, have to put up with longer workdays, extreme time constraints, and a great deal of complexity and uncertainty compared to professional working-class women (Stephan, 2018; Hunt, Samman, Tapfuma & Mwaura, 2019). As

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a result of obtaining less social support at work, they are more stressed out (Cardon & Patel, 2015; Kotte et al., 2020). Additionally, women entrepreneurs typically play numerous jobs at once, acting as both a shareholder and an internal employee of the company (for instance, as managing director), thereby, gaining a more significant stake in their business (St-Jean, 2011). Even though some of the demands of their jobs, such as having high levels of responsibility, are similar to those of executives (Berman, 2019), women entrepreneurs are more emotionally and financially entwined with their businesses (Kotte et al., 2020). Literature indicates that when operating their business, women entrepreneurs face many challenges, such as gender discrimination, a lack of training, a lack of capital, facing marginalisation in business, at home, and in their communities (Shmailan, 2016; Maziriri, Tafadzwa & Nzewi 2019; Mahasha, 2016; Nieman & Nieuwenhuizen, 2019). As a result, due to cultural and societal perceptions, women entrepreneurs are discouraged from taking chances and obtaining knowledge, which prevents them from taking advantage of prospective business possibilities (Mahasha, 2016; Nieman & Nieuwenhuizen, 2019). However, as a means of challenging social and cultural norms, many women use entrepreneurship to support their families (Nxopo, 2014).

The latest Global Entrepreneurship Monitor (GEM) Women's Entrepreneurship Report revealed that women's start-up rates decreased by 15% from 2019 to 2020 and remained unchanged in 2021 (GEM, 2022). Women had significant decreases in 2020 than males in both their intentions to launch a business within the next three years and overall start-up rates, although not in upper-middle-income countries (GEM, 2022). Furthermore, the 2020 FinScope Micro, Small, and Medium Enterprises (MSME) Survey of South Africa revealed that there are approximately 2.6 million entrepreneurs in South Africa, 46% of whom are women, who are responsible for 3.2 million SMMEs (Finmark Trust, 2020). For the year 2022, Statistics South Africa (Stats SA) indicated that women entrepreneurs are 21,7 per cent and male entrepreneurs 28,0 per cent (STATSSA, 2022).

There is no doubt that women entrepreneurs engage in business activities in the above stats. However, given the high job demands of women entrepreneurs, there is a great understanding that women entrepreneurs may benefit greatly from external support when establishing and operating a business (Kutzhanova, Lyons & Lichtenstein, 2009). Entrepreneurial Coaching (EC), a recent addition to entrepreneurial development that promotes business development, is a strategy that can help as external support for women entrepreneurs (Behrendt & Greif, 2022).

Entrepreneurial coaching is a comprehensive form of entrepreneurial support that contains advice, training and learning (Wu, 2016; Devine, Houssemand & Meyers 2013, Schermuly et al., 2021). There is no main universal definition of entrepreneurial coaching among previous scholars. Several empirical studies cite Audet and Couteret's (2012) definition of EC, which they define as individual coaching support given by a coach to entrepreneurs in early start-up stages to help them acquire and develop the skills and knowledge necessary to establish themselves as independent entrepreneurs (Ben Salem & Lakhal, 2018; Mansoori, Karlsson & Lundqvist, 2019; Saadaoui & Affess, 2015). According to its description and considering its effectiveness, entrepreneurial coaching appears to be a particularly suitable and promising way of helping women entrepreneurs (Jones, Woods & Guillaume, 2016; Kotte, 2019). Bozer & Jones, (2018) describe entrepreneurial coaching as a development strategy that uses a collaborative, reflective, and goal-focused interaction to help women entrepreneurs to achieve entrepreneurial goals. As per its description and given the evidence of its effectiveness, entrepreneurship is a suitable and favourable approach to supporting women entrepreneurs (Jones et al., 2016; Kotte, 2019; Crompton & Smyrnios, 2011). These definitions assert that entrepreneurial coaching is a multifaceted notion, emphasising the existence of a wide range of coaching practices, such as psychological coaching, business coaching, sports coaching, and entrepreneurial coaching (Ben Salem & Lakhal, 2018; Schermuly et al., 2021). The primary support intervention for women entrepreneurs in this study will be entrepreneurial coaching (EC). The study adopts a definition of EC as a supportive intervention that empowers women entrepreneurs in their personal and professional lives to foster growth on a skill level, improving performance and psychological development.

Women entrepreneurs are more adaptable to change and innovation within their businesses, which may be crucial for the expansion and longevity of the enterprise (Saadaoui & Affess, 2015; Vidal-Salazar, Ferrón-Vilchez & Cordón-Pozo, 2012; Wakkee, Elfring & Monaghan, 2010). To have a positive, significant, and long-lasting impact on women entrepreneurs and their businesses, entrepreneurial coaching puts planning and preparation into action, clarifies expectations and responsibilities, and offers support (Centre for Coaching, 2015; Crompton & Smyrnios, 2011). The literature also demonstrates that entrepreneurial coaching has a significant impact on critical components of women entrepreneurs' personal and professional lives, including self-efficacy, performance, growth, and skill development.

Women entrepreneurs are described as individuals or a group of individuals who start, plan, and run a business (Modiyani, 2022). Another definition of a woman entrepreneur is someone who controls and owns a business in which women hold at least 51% of the capital and at least 51% of the jobs created by the business (Arvind & Ranjith, 2023). Even though women entrepreneurs frequently face significant challenges in starting and managing their businesses, they play an important role in the development of the global economy (Brush et al., 2017; De Vita, Mari & Poggesi, 2014). In limited circumstances where women have fewer rights and resources

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than men, these difficulties are made worse (Chamlou, Klapper & Muzi, 2008). Markets operating from positions of unfairness regarding legal rights, trade restrictions, or capital accessibility are referred to as constrained environments (Moulick, Pidduck & Busenitz, 2019). For instance, women entrepreneurs in developing nations may have more societal and legal constraints and have less access to resources than their male counterparts (Chamlou et al., 2008; Simarasl et al., 2022; Soleimani & Kiaee, 2020). In addition, women entrepreneurs still have concerns and difficulties in running their businesses because of family obligations, societal pressure, a lack of self-confidence, and low self-efficacy (Arvind & Ranjith, 2023).

Entrepreneurial Self-Efficacy (ESE), is founded on social cognitive theory, and it refers to individuals' beliefs concerning their skills and abilities in running a new venture (Boudreaux, Nikolaev & Klein, 2019; Forbes, 2005), and meta-analytic evidence links ESE positively to new venture performance (Miao, Qian & Ma, 2017). Entrepreneurial Self-Efficacy is prominent among the numerous potential characteristics that could lead to women entrepreneurs' success and has emerged as a crucial component affecting the results of new ventures (Miao et al., 2017). Boudreaux, Nikolaev and Klein (2019), note that ESE, which is influenced by social cognitive theory, relates to people's perceptions of their capacities for managing a new business. Entrepreneurial Self-Efficacy may be improved with entrepreneurial coaching intervention (Newman et al., 2019), ensuring enhancement of the performance of new ventures for excluded populations, such as women entrepreneurs operating in limited circumstances (McGee & Peterson, 2009). Entrepreneurial Self-Efficacy (ESE) has emerged as a critical factor impacting new venture-related outcomes (Miao et al., 2017; Saadaoui & Affess, 2015; Ngetich, 2020).

To explain how ESE is developing and affecting women entrepreneurs, two common arguments have been made. First, it is believed that early developmental phases in women, such as socialisation and personality formation during childhood, contribute to ESE (Mueller & Dato-On, 2008; Luthans & Ibrayeva, 2006). Even though there is no reasonable ground to question the credibility of these findings, they are less useful in influencing the success of women entrepreneurs because they are specific to family systems and historical experiences. Second, there is a growing body of research connecting entrepreneurial coaching elements to ESE, particularly in environments with fewer restrictions (Kazumi & Kawai, 2017).

There is a need for a comprehensive understanding of the effectiveness of entrepreneurial coaching as a means of fostering ESE among women entrepreneurs (Saadaoui & Affess, 2015; Hunt, Field & Woolnough, 2019; Pekkan, 2018). Despite efforts to promote gender equality and inclusivity in entrepreneurship, South African women entrepreneurs continue to face numerous challenges, including limited access to resources, societal stereotypes, and gender-based barriers (Shmailan, 2016; Maziriri et al., 2019; Mahasha, 2016; Nieman & Nieuwenhuizen, 2019). While ESE has been identified as an important predictor of entrepreneurial success, the extent to which coaching interventions can empower women entrepreneurs and improve their self-efficacy in the South African context is unknown (Yusuff, Mohamad & Wahab, 2019; Simarasl et al., 2022).

The study's objective is:

To review and synthesize existing literature on entrepreneurial coaching and its effects on entrepreneurial self-efficacy among women entrepreneurs.

This research will help to inform support strategies and policies aimed at promoting women's entrepreneurship in the country. This research will contribute to the body of knowledge in the areas of EC and ESE in women entrepreneurs. The study's findings will have important implications for policy, program design, and coaching techniques, assisting in the creation of a supportive environment in South Africa for the success of women entrepreneurs.

II. METHODS

To identify any possibly observable patterns emphasising how entrepreneurial coaching increases women entrepreneurs' entrepreneurial self-efficacy, this study aims to synthesize the literature (Kotte et al., 2020; Brinkley & Le Roux, 2018; Nieman & Nieuwenhuizen, 2019; McGee et al., 2009; Modiyani, 2022; Kazumi & Kawai, 2017). As a result, a non-empirical investigation was conducted based on an extensive descriptive literature review. This is a methodical approach to finding, gathering, and analysing literature regarding a specific topic to better identify any trends that could be interpreted about the phenomenon (Kazumi & Kawai, 2017). The strength of this strategy is that the author may carefully select publications that communicate different points of view from a body of literature (Iwu, Sibanda & Makwara, 2022). To carefully find, evaluate, and analyze relevant studies on entrepreneurial coaching and entrepreneurial self-efficacy, particularly in the context of women's entrepreneurship, the author employed the descriptive literature review technique for this study. No publication has been excluded from this work based on the date of publication (Ebewo, Ndlovu-Hlatshwayo & Myburgh, 2023). Different works were accepted reasonably, particularly when they directly addressed the idea of entrepreneurial coaching, entrepreneurial self-efficacy, and women entrepreneurs. In addition to finding the

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materials (publications) for this study, a variety of academic databases were searched, including Google Scholar, ResearchGate, and several respectable journals. There were 102 publications in the first collection. Based on the primary exclusion criteria, which was that they were not focused on the definition or conceptualisation of entrepreneurial coaching, entrepreneurial self-efficacy, or women's entrepreneurship, 21 publications were eliminated from this group.

III. RESULTS AND DISCUSSION

Literature mentions that entrepreneurial coaching is a multifaceted notion that can perform a variety of support roles, including psychological, cognitive, emotional, and professional ones (Kotte et al., 2020; Brinkley & Le Roux, 2018; Huflejt-Kukasik & Jędrzekczyk, 2022). As a result, it can offer a comprehensive type of entrepreneurial support (Ben Salem & Lakhal, 2018; Ye et al., 2016). Furthermore, it has the opportunity to offer women entrepreneurs a means of ongoing learning, development and support, but for it to be used effectively, it is critical to look at the needs and preferences of women entrepreneurs (Hunt et al., 2019). The extent to which this type of development may help women entrepreneurs become more self-confident in their abilities as entrepreneurs and the significance of its prospective applicability (McGee et al., 2009).

The definitions of entrepreneurial coaching, used in this study intended to address two key areas specifically aimed at increasing ESE: first, improving performance at a skill level and entrepreneurial activity; and second, creating relationships that allow entrepreneurial coaching to develop the women entrepreneurs' psychological development (Hunt et al., 2019). Studies on coaching in entrepreneurial contexts have found that it can be very beneficial or the growth of women entrepreneurs, but little is known about how entrepreneurial self-efficacy impacts the performance of businesses once they have been established and operating (Audet & Couteret, 2012; McGee et al., 2009; Orser, Riding & Stanley, 2012; Tillmar, 2007). Because EC can be customized to the unique needs of a woman entrepreneur, it is the best form of individual development because it is task-specific and focuses on the ESE of the women entrepreneur (O'Connor & Lages, 2004).

Earlier research, Bandura's (1986) self-efficacy process is the most suitable theoretical framework for the entrepreneurial coach to use when removing obstacles to entrepreneurial intention, activity, and growth. It without a doubt contributes to the development and expansion of new businesses (St-Jean & Audet, 2012), and both start-up and established business owners typically lack the resources and support (such as networks and advice) necessary to create and grow a successful enterprise (Shinnar et al., 2018). Entrepreneurial Self-Efficacy, as mentioned before, is the term used to describe people's beliefs in their abilities to start and operate an enterprise (Boudreaux et al., 2019; Forbes, 2005). Entrepreneurial Self-Efficacy is unique to the entrepreneurship area as opposed to general self-efficacy, which represents people's generalized ideas about their capacities (Boudreaux et al., 2019; Newman et al., 2019). Entrepreneurial self-efficacy has been a central topic in entrepreneurship research because of its impact on critical outcomes, such as entrepreneurial intentions (Laguna, 2013; Piperopoulos & Dimov, 2015; Tsai, Chang & Peng, 2016), entry into entrepreneurship (Cassar & Friedman, 2009; Wennberg et al., 2013), and venture performance (Hmieleski & Baron, 2008; Hmieleski & Corbett, 2008; Prajapati & Biswas, 2011).

As a result, it is recommended that emerging and new business owners prioritise getting EC to give them the support they need (Alstrup, 2000; Hunt et al., 2019). Below is how EC can be used to enhance the ESE of women entrepreneurs.

Tailored coaching programs: Create entrepreneurial coaching plans that are particularly suited to the needs and challenges that women entrepreneurs encounter (Quak, Barenboim & Guimaraes, 2022). Both the development of confidence and business-related abilities should be covered in these programs. This can assist women entrepreneurs in overcoming self-doubt and fostering a positive perspective on difficulties (Kazumi & Kawai, 2017).

Coaching and role models: Connecting women entrepreneurs with successful women mentors and role models is a key component of development (Theaker, 2023). This can offer motivation, guidance, and a feeling of empowerment can be again through coaching and modeling (Dow, 2014; Whitlock, Hampton & Campbell 2023). Numerous studies have found that coaching can encourage collaborative learning environments where women entrepreneurs and the entrepreneurs can exchange best practices and gain knowledge from one another's experiences (Joo, Yu & Atwater 2018; Helms, Arfken & Bellar 2016; Dow, 2014; McDonald & Westphal, 2013; Dworkin, Maurer & Schipari, 2012).

Access to resources and skills: Ensure simple access to tools like capital, market analysis, and technology, women entrepreneurs' success and confidence may be hindered by the lack of resources and skills (Grimm & Paffhausen, 2015). Providing courses on investing and financial literacy, for example, women business owners'

confidence in managing their company's finances can be increased by providing them with financial education (Quak, et al., 2022; Kotte et al., 2020).

Entrepreneurial mindset: Women entrepreneurs must be conscious of their own physical and emotional reactions in diverse circumstances to recognise them and comprehend how they affect entrepreneurial self-efficacy (Pekkan, 2018; Brinkley & Le Roux, 2018). To enhance entrepreneurial intent and behaviour, entrepreneurial coaching can assist women entrepreneurs in thinking critically about their behaviour and how that influences their entrepreneurial self-efficacy and success as an entrepreneur (Mauer, Neerguard & Linstad, 2017; Hunt et al., 2019).

The results of this study demonstrated the reviewed and synthesized existing literature EC and its effects on ESEamong women entrepreneurs. As a result, it appears that EC is a type of development intervention that can be used to improve women entrepreneurs' ESE of their ability to start and run successful businesses.it is in this regard that the study provides valuable insights to inform support strategies and policies aimed at promoting women's entrepreneurship in South Africa.

IV. CONCLUSION

The study indicated in the beginning that the concept of EC as a support system continues to be unclear in its definition. Additionally, it was found that EC serves a support function for women entrepreneurs as evidenced by the benefits obtained from the intervention (Brinkley & Le Roux, 2018). These benefits mostly consist of the acquisition of new abilities, and views, improved communication, learning, higher self-awareness, and ESE (Nieman & Nieuwenhuizen, 2019). The literature demonstrates that women entrepreneurs, particularly those with ESE, can boost the performance of their enterprises (Luthans & Ibraveva, 2006; McGee & Peterson, 2019; Pekkan, 2018). Moreover, the study demonstrated that using EC as a system of support for women entrepreneurs can increase their ESE (Yusuff, et al., 2019). The key results are that, despite the difficulties faced by women entrepreneurs, the South African governments have over the years prioritized the growth of those deemed to have previously been disadvantaged, particularly women entrepreneurs and that customised EC provided opportunities for women entrepreneurs to advance their knowledge and technical skills (Rudhumbu, et al., 2020; Iwu et al., 2022). Considering the importance of entrepreneurship coaching as a learning technique and support function once more about the difficulties and opportunities facing women entrepreneurs (Rudhumbu, et al., 2020; Iwu et al., 2022). Overall, this study affirmed that EC can be used to develop the ESE of women entrepreneurs.

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Entrepreneurial Coaching for the Development of Entrepreneurial Self-Efficacy in Women Entrepreneurs
Molema, L.M[1], Ndlovu-Hlatshwayo, E.N.[2], Ebewo, P.E[3]

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Molema, L.M[1], Ndlovu-Hlatshwayo, E.N.[2], Ebewo, P.E[3]

Analysis of Electronic Word of Mouth, Brand Image, Brand Trust Against Purchase Interest

Endah Budiarti

Department of Economic and Business, Universitas 17 Agustus 1945 Surabaya

Corresponding Author*: endahbudiarti@untag-sby.ac.id

ABSTRACT

Purpose: This study aims to 1). Analyze and prove the effect of electronic word of mouth on Brand image and Brand trust. 2). Analyze and prove the effect of Brand Image and Brandtrust on buying interest. 3). Analyze and prove the effect of electronic word of mouth on buying interest.

Design/methodology/approach: The population of this research is the University of August 17, 1945 Surabaya students who know the products and brand of Asus laptop. Sampling using a purposive sampling method with the criteria of students who use Asus laptop products and brands. A sample of 190 respondents. The data used in this study are primary data sourced from questionnaires. data analysis and hypothesis testing in this study using the Structural Equation Model (SEM).

Findings: The results showed that Electronic word of mouth influences brand image variablesand Asus Laptop brand trust variables. Brand image and Brand trust affect the variable purchase interest Asus Laptop. Electronic Word of Mouth affects the variable purchase interest Asus Laptop.

Paper type: Research paper

Keywords: Electronic Word of Mouth, Brand Image, Brand Trust, Purchase Interes

I. INTRODUCTION

The potential for a large laptop market share in Indonesia makes various brands emerge to compete, one of which is Asus, according to data from the GFK research institute shows that the Taiwanese company dominates the Indonesian consumer laptop market share by November 2018 at 41.8 percent. an increase of 41.2 percent from the previous year. Beginning in 2018 Asus introduced themselves by releasing their latest products, namely ultra thin laptops and NVIDIA GTX-based gaming laptops with the Asus ROG (Republic of Gamers) and TUF Gaming series as their sales strategy and became popular so they succeeded in attracting Indonesian consumers and strengthening Asus's position as No.1 laptop sales brand in Indonesia with a percentage reaching 60.1 percent.

The emergence of electronic word of mouth in the marketing world cannot be separated from the development of the internet in the world. The internet itself is themain key of electronic word of mouth because if there is no internet it would not be possible to have electronic word of mouth. Indonesia is one of the biggest internet usersin the world number 6 in the world. The growth of internet users in Indonesia is supported by laptops and affordable mobile broadband connections which will encouragethe growth of internet access for countries that cannot rely on fixed lines. And now electronic word of mouth is one of the most effective marketing sources for making purchasing choices.

Electronic word of mouth changes a person's behavior and decisions with thegrowth of the internet and e-commerce, consumers now prefer to use other people's opinions and recommendations to make purchases and even electronic information isused as a consideration for making purchases. According to Kumar & Kudeshia (2017) that electronic word of mouth has a positive influence on buying interest by shaping consumer behavior and ultimately creating buying interest in consumers, but in research Totlak et al (2014) revealed that electronic word of mouth did not have a significanteffect on buying interest, explaining that the difference in results was due to differencesin the study sample.

While Branding is considered an important mission for many companies. A strong brand can increase consumer confidence in products and services and can help gain deeper knowledge about other factors. One way to get a Brand image is to be able to use electronic word of mouth (E-WOM), because brand image and perception can be greatly influenced by consumers with the help of electronic word of mouth through social media networks. Electronic word of mouth is considered to be able to shape the brand imageand consumer behavior towards a brand. Brand image is an important mediator in the relationship between interpersonal influence on buying interest in luxury goods, this shows that a strong brand image will improve consumer relations with one of the brands related to buying interest

In a brand, consumers have certain expectations of the services they will receive. When services meet expectations, trust is built in the brand. To that end, the brand image obtained by consumers has an impact on trust because when the brand is able to create trust in the services expected by consumers. A good brand image of Asus laptops will bring up consumer confidence in the Asus brand. Consumers' willingness to trust a brand or even though it is risky because there are expectations that the brand will give positive results as brand trust. Asus consumers have the hope to get a satisfaction guarantee when using the product, even though there is a possibility of the risk they receive. With a good brand trust in the product, will increase consumer buying interest. For a product with a trusted brand, consumers will tend to repeat purchases on that brand.

A. Literature Review

Electronic word of mouth is a positive or negative statement made potentially and actually by consumers who have used products or services from a company and can be accessed by many people and institutions through the internet. According to Hennig- Thurau et al (2004) electronic word of mouth also encourages people to gather information about desired products and services that are not only collected throughknown people but also from other people in a large scope who already use products or These services and collectively can encourage consumer buying interest Tariq et al, (2017), this opinion is also reinforced by research conducted by Elseidi & El Baz (2016) that in the world of marketing, electronic word of mouth can play an important role in influencing activities purchasing, while according to Jalivland (2012) positive electronic word of mouth has an important function to increase buying interest by creating afavorable image for the company or for the brand itself.

One way to get brand image is to use E-WOM because according to Jansen et al, (2009) that through brand image and perception can influence consumers with the help ofelectronic word of mouth through social media networks. Meanwhile according to Jalilvand (2012) E-WOM online communication that is posted interactively may have a strong effect on brand image. E-WOM is also one of the factors that greatly influences brand image. According to Jalilvand (2012) and Torlak et. al., (2014) Similar research conducted by Yunus et al., (2016) that electronic word of mouth that is positive and has credible information that is trustworthy and objective can improve a brand image (brand image)

According to Malik, Ghafoor, Iqbal et al (2013) Brand image is consumers' perception of a brand, which is reflected in the brand associations held in the consumer's memory. Brand image plays an important role in improving company performance because it is an indirect tool that is able to change consumer buying behavior. Research conducted by Wang & Tsai (2014) says that brand image builds a brand, because brand image is a source in creating brand credibility and reputation which will affect consumer buying interest.

Semuel and Lianto (2014) which shows that the better respondents' evaluation of E-WOM will lead to a higher brand image. In addition, positive E-WOM can also increase brand trust.

Brand Trust has a very big influence on consumer buying interest, because if a brand is no longer trusted by consumers, then the consumer buying interest in products with that brand will be low. However, if a brand has been trusted by consumers, the consumer buying interest in products with that brand will be high. So, brand trust orbrand trust will affect the level of consumer buying interest. According to Semuel and Lianto (2014) if the trust of the brand is denied by the brand owner it will be difficult for consumers to be interested in buying back the product

Hennig-Thurau et al., (2004: 39) Electronic word of mouth is a form of marketing communication that contains positive or negative statements made potentially and actually by consumers who have used products or services from a company and can be accessed by many people and institutions through the internet. E-WOM indicators include: Platform assistance, Venting negative feelings, Concern for other consumers, Extraversion / positive self-enhancement, Social benefits, Economic incentives, Helping the company, Advice seeking.

Kotler and Keller (2012: 248) "Brand imagery describes the extrinsic properties of the product or service, including the ways in which the brand attempts to meet customers psychological or social needs" ie brand image describes the extrinsic nature of a product or service including ways where the brand is trying to meet the psychological or social needs of customers. Brand image "Preception and beliefs held by consumers. As reflected in the associations held in consumers memory "that is as a set of perceptions and trust held by customers towards a brand that is reflected through the associations that are in thecustomer's memory. Brands namely: Excellence brand association, Strength of brand associations, Uniqueness of brand associations,

Brand trust will affect costomer satisfaction and customer loyalty. Brand trust has avery important influence on the sustainability of the brand, because if a brand is no longertrusted by consumers then products with that brand will be difficult to develop in the market. But on the contrary if the brand is trusted by consumers, then products with thesebrands will continue to develop in the market. According to Delgado (in Ferinnadewi, 2008: 150) brand trust is the expectation of reliability and good intentions of the brand. Based on this definition brand trust reflects two important components, first, namely, consumer confidence that the product is able to meet the promised value or in otherwords the perception that the brand is able to meet consumer expectations by fulfilling brand promises that ultimately create customer satisfaction, secondly, consumerconfidence that the brand is able to prioritize the interests of consumers when problems inproduct consumption arise unexpectedly. There are two indicators that measure brand trust, namely: Brand reliability and Brand intensity.

Kotler (2016: 15) interest is a behavior that arises in response to an object that shows the desire of the customer to make a purchase. Purchasing interest is obtained froma learning process and thought process that forms a perception. This buying interest creates a motivation that continues to be recorded in his mind and becomes a very strong desire that in the end when a consumer must meet his needs will actualize what is in his mind. Indicators of buying interest of a prospective consumer are as follows: Attention, Interest, Desire and action.

B. Conceptual framework
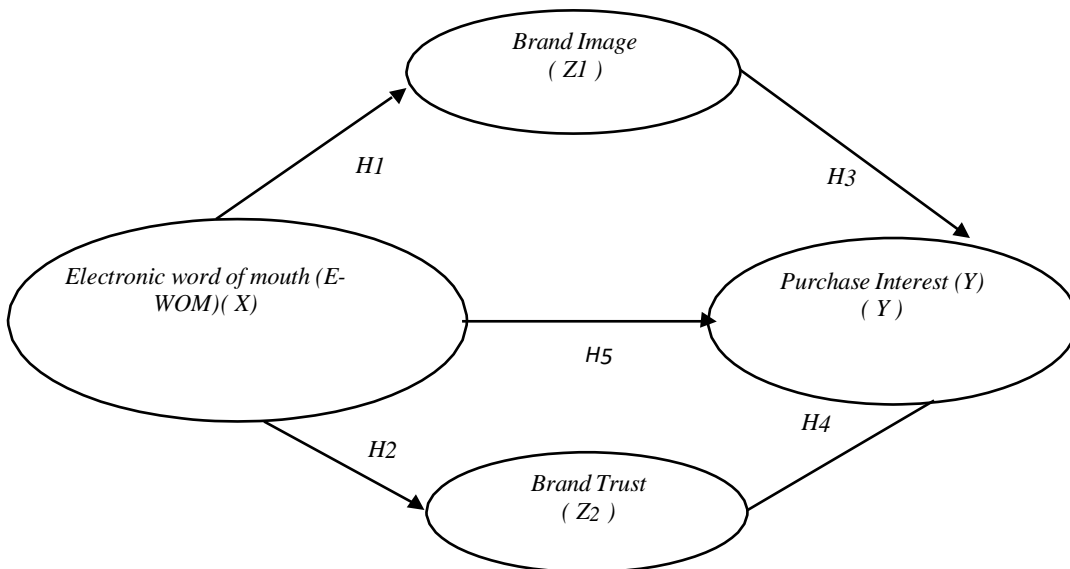
II. METHODS

The variables in this study consisted of three types of variables namely the dependent variable namely buying interest, the mediator variable in this study was the brand image variable (Z1) and brand trust (Z2), and the independent variable was Electronic word of mouth (e-WOM). The measuring instrument used is structural equation modeling (SEM) with PLS (Partial Least Square) program. The sampling method uses a purposive sampling method, with a total sample of 190 students becoming respondents.

III. RESULTS AND DISCUSSION

The Bootstrapping Stage results are as follows:
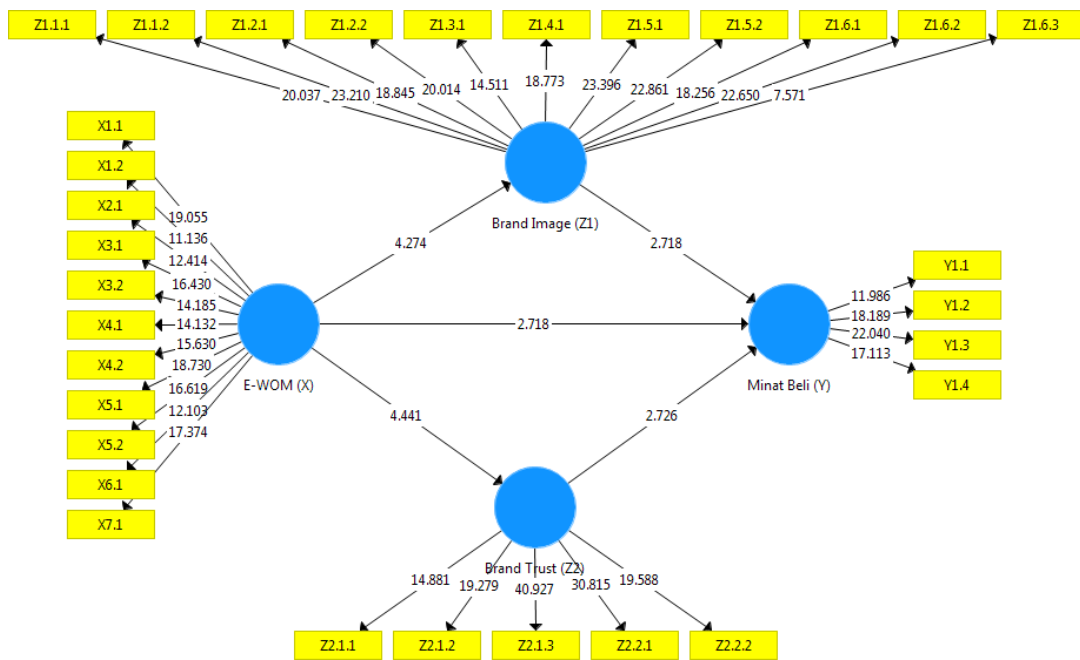
Figure Path Analysis Results

Hypothesis Testing Results Table

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t Statistics (|O/STDEV|)	P Values
E-WOM (X) -> Brand Image (Z1)	0.413	0.411	0.097	4.274	0.000
E-WOM (X) -> Brand Trust (Z2)	0.439	0.439	0.099	4.441	0.000
Brand Image (Z1) -> Purchase Interest (Y)	0.279	0.283	0.103	2.718	0.007
Brand Trust (Z2) -> Purchase Interest (Y)	0.251	0.251	0.092	2.726	0.007
E-WOM (X) -> Purchase Interest (Y)	0.238	0.233	0.088	2.718	0.007

Test results show that:
  a. E-WOM has a significant influence on Brand Image, because the value of t statisticis 4.274 which means it is greater than 1.96.
  b. E-WOM has a significant influence on Brand Trust, because the value of t statistic is4,441 which means it is greater than 1.96.
  c. Brand Image has a significant influence on Purchase Interest, because the t value ofstatistics is 2,718 which means it is greater than 1.96.

    d.   Brand Trust has a significant influence on Purchase Interest, because the t value ofstatistics is 2.726, which means it is greater than 1.96.

    e.   E-WOM has a significant influence on Purchase Interest, because the t value ofstatistics is 2,718 which means it is greater than 1.96.

Electronic word of mouth influences Asus Laptop brand variable variables. Based on the results of the analysis obtained a loading factor value of 0.413 for the variable electronic word of mouth on brand image which shows a positive influence between electronic word of mouth on brand image. This shows that hypothesis 1 "E-WOMinfluences Asus Laptop Brand Image" can be accepted has been fulfilled. This means thatthe higher the electronic word of mouth activity, the better the Asus laptop brand image.

The significant influence of electronic word of mouth on brand image variables is based on the t-statistic value of 4,274 (greater than 1.96) which indicates that hypothesis one is accepted. Electronic word of mouth which is proven to have a significant and positive effect on brand image shows that brand image can be improved through the presence of a positive electronic word of mouth   This result is in line with the statement of Jansen et al, (2009) which states that through brand image and perception can influence consumers with the help of electronic word of mouth through social media networks.

The results in this study support the findings of research conducted by Yunus et al., (2016) who found that electronic word of mouth that is positive and has credible information that is trustworthy and objective can improve a brand image This is also in line with Jalilvand (2012) which states that WOM online communication that is posted interactively may have a strong effect on brand image.

Electronic word of mouth affects the Asus Laptop brand variable trust. Based onthe results of the analysis obtained a loading factor value of 0.439 for the variableelectronic word of mouth on brand trust which shows a positive influence betweenelectronic word of mouth on brand trust. This shows that hypothesis 2 "E-WOM influences Asus Laptop Brand Trust" can be accepted has been fulfilled. This means that the higher the electronic word of mouth activity, the better the brand trust of consumersin Asus laptop products.

The significant influence of electronic word of mouth on brand trust variables is based on the t-statistic value of 4,441 (greater than 1.96) which indicates that hypothesis two is accepted. Electronic word of mouth which is proven to have a significant and positive effect on brand trust shows that brand trust can be increased through the existence of a positive electronic word of mouth.

The results in this study support the findings of a study conducted by Semuel and Lianto (2014) which shows that the better respondents' evaluation of E-WOM will lead toa higher brand image. In addition, positive E-WOM can also increase brand trust.

Brand image affects the variable purchase interest Asus Laptop. Based on theanalysis results obtained by the loading factor value of 0.279 for brand image variableson buying interest which shows a positive influence between brand image on buying interest. This shows that hypothesis 3 "Brand Image has an effect on Interest in Buying Asus laptops" can be accepted has been fulfilled. This means that the more positive the brand image that is formed in the minds of consumers, the higher consumer buying interest for Asus laptop products.

The significant influence of brand image on the buying interest variable is based onthe t-statistic value of 2,718 (greater than 1.96) which indicates that the third hypothesisis accepted. Brand image that has been proven to have a significant and positive effect onbuying interest shows that buying interest can be increased by planting a positive brand image on Asus laptop products.

The results in this study support the findings of research conducted by Wang &Tsai (2014) which shows that brand image builds a brand, because brand image is a source in creating brand credibility and reputation which will affect consumer buying interest.

Brand trust affects the variable purchase interest Asus Laptop. Based on the analysis results obtained by the loading factor value of 0.251 for the brand trust variable on buying interest which shows a positive influence between brand trust on buyinginterest. This shows that hypothesis 4 "Brand Trust has an effect on the Purchase Interest of Asus laptops" can be accepted has been fulfilled. This means that the better the level ofconsumer confidence in the Asus brand, the higher the consumer's buying interest inAsus laptop products.

The significant influence of brand trust on the buying interest variable is based on the t-statistic value of 2.726 (greater than 1.96) which indicates that the fourth hypothesis is accepted. Brand trust that is proven to have a significant and positive effect on buying interest shows that buying interest can be increased by instilling brand trust in consumers in Asus laptop products. This is in line with the opinion of Semuel and Lianto (2014) which states that if the trust of the brand is denied by the brand owner it will be difficult for consumers to be interested in buying back the product.

4.   Electronic Word of Mouth affects the variable purchase interest of Asus Laptops. Based on the results of the analysis obtained a loading factor value of 0.238 for the variable electronic word of mouth on buying interest which indicates a positive influence between electronic word of mouth on buying interest. This shows that hypothesis 5 "E-WOM influences the Interest in Buying Asus laptops" can be accepted has been fulfilled.

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This means that the higher the electronic word of mouth activity carried out, the higher the consumer buying interest for Asus laptop products.

5. The significant influence of electronic word of mouth on the purchase interest variable is based on the t-statistic value of 2,718 (greater than 1.96) which indicates that the fifth hypothesis is accepted. Electronic word of mouth which is proven to have a significant and positive effect on buying interest shows that buying interest can be increased by the existence of electronic word of mouth activities regarding Asus laptop products. This is in line with the opinion of Elseidi & El Baz (2016) which states that in the world of marketing, electronic word of mouth can play an important role in influencing purchasing activities.

6. The results in this study support the findings of research conducted by Jalivland (2012) which shows that positive electronic word of mouth has an important functionto increase buying interest by creating a favorable image for the company or for the brand itself.

IV. CONCLUSION

1. Electronic word of mouth effect on Asus Laptop brand image variables.
2. Electronic word of mouth influences the Asus Laptop brand trust variable.
3. Brand image affects the variable purchase interest Asus Laptop.
4. Brand trust affects the variable purchase interest Asus Laptop.
5. Electronic Word of Mouth affects the variable purchase interest of Asus Laptops.

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Green Human Resource Management and Its Role in Driving Sustainable Organization

Bayu Airlangga Putra

Sekolah Tinggi Ilmu Ekonomi Indonesia (STIESIA), Surabaya, Indonesia

Corresponding Author*: bayu.airlangga71@gmail.com

ABSTRACT

Purpose: Throughout the last decade, academics and business people have become interested in research on environmentally friendly workplaces. As a result, new fields of study such as green human resource management (GHRM) are gaining interest. Greening the workplace means greening common corporate tasks such as human resource management, marketing, operations, and supply chain management. GHRM plays a strategic role in helping companies to implement and develop strategic initiatives, as well as achieve corporate sustainability. In particular, green human resource management (GHRM) practices are also critical for generating organizational pride and motivating employees. Employees will feel proud of their company because they believe that their company supports community development, improves public health, and protects the environment and natural resources. This paper aims to examine in sufficient detail the GHRM concept followed by its various benefits for the business world, both at the organizational and individual levels.

Design/methodology/approach: This paper is an in-depth review of several literatures regarding GHRM.

Findings: A large number of experts and researchers agree that GHRM has an important role in realizing sustainable organizations while contributing to environmental protection from local to global scales.

Research limitations/implications: This paper is conceptual and general in nature. Further, more in-depth empirical research still needs to be carried out, using both quantitative and qualitative approaches.

Practical implications: There needs to be collaboration between academics and practitioners in developing the GHRM concept into various practical environmental management and corporate social responsibility (CSR) that are more concrete and specific according to their respective business sectors and communities.

Originality/value: This paper is very relevant to remind business people that they are facing increasingly serious ecological challenges and there is not much time left to overcome them.

Paper type: Conceptual paper

Keyword: Corporate Social Responsibility, Environmental Management, Green Human Resource Management, Organizational Sustainability.

I. INTRODUCTION

For decades, the main focus of business has been the pursuit of short-term financial gain alone. However, in the current era, awareness has emerged of the need for business activities that respect the environment and society more. Over the past decade, academia and the corporate world have become interested in environmentally friendly workplaces. As a result, new fields of study such as green human resource management (GHRM) are starting to be incorporated. Greening the workplace means greening common corporate tasks such as human resource management, marketing, operations, and supply chain management (Khateeb & Nabi, 2023). Employees play an important role in this awareness. Active participation and organizational actions, such as an integration of environmental initiatives into daily operations, have a major impact on the work environment. Employees are critical to a company's sustainable environment because of their attitudes toward environmental actions. Employee behavior characterized by pro-environmental behavior (PEB) contributes to reducing the company's

environmental footprint, thereby reducing environmental degradation and climate change in the future. PEB encourages consistency in socially and ecologically responsible organizational goals, which helps the organization's long-term future success and development. The direct impact of PEB contributes to reducing energy and raw material consumption, pollution and waste. The indirect impacts can be in the form of identifying environmental damage to ecological facilities and equipment, as well as modification practices in business (Papademetriou et al., 2023).

In this regard, various ideas have emerged to implement environmentally friendly human resource management or "Green Human Resource Management" (GHRM), which is believed to have the potential to form pro-environmental behavior (PEB), both voluntary and mandatory. This idea rests on the idea of the need for a guiding mechanism for organizational workers to engage in environmentally friendly behavior aimed at conserving organizational resources and thereby contributing to corporate sustainability. GHRM is an innovative management concept and pattern that applies the "green" concept to human resource management to achieve the company's strategic environmental management goals through the use of environmentally friendly management practices. It is an important component of a green management system. Green recruitment, green training and environmental performance are examples of complementary and coordinated practices aimed at fostering green values, knowledge and skills, while encouraging employees to participate in corporate social responsibility activities and, as a result, corporate environmental performance.

Many experts and researchers have found that green job analysis, green hiring, green performance evaluation, green training, and green awards significantly improve a company's green performance. These experts believe that eco-friendly initiatives and environmental management practices cannot be implemented adequately without GHRM (Papademetriou et al., 2023). GHRM highlights the importance of human resource management in environmental prevention, control and protection in business operations. Environmentally friendly human resource management practices are the best way to survive and preserve organizations, taking into account the concern for global environmental protection (Khateeb & Nabi, 2023). Thus, GHRM has become a prominent issue in corporate environmental management.

More specifically, GHRM is also closely related to corporate social responsibility (CSR), which refers to the various dimensions that companies address to help society and improve their image and performance. Various aspects are involved in CSR, including, but not limited to, corporate ethical behavior, employee welfare, environmental considerations, environmentally friendly human resource management (GHRM), economics, and leadership. It has been noted that adequately implemented HRM initiatives in a company can produce positive outcomes such as improved corporate image and corporate sustainability. Additionally, employee perceptions (e.g. commitment and satisfaction) towards the company can be improved when CSR and HRM initiatives are aligned and enforced, which can help companies face challenges in society.

GHRM is described as an initiative undertaken by human resources departments that focuses on the environmental, economic, and social performance of employees, which in turn can produce sustainable results for the company. GHRM plays a major role in issuing and implementing environmentally friendly policies for companies as well as encouraging employees towards environmentally friendly behavior to obtain sustainable performance in the context of CSR. GHRM practices are a tool that enables CSR in companies to have a positive impact on society and the environment. This further ensures the company obtains profits through strategic decision making that leads to company sustainability (Yahya & Zargar, 2023).

II. METHODS

Before discussing GHRM in more detail, it would be good to review a little about the big concept that underlies the emergence of GHRM itself, namely the concept of sustainability. The concept of sustainability arise due to the rapidly changing business environment, environmental degradation, and awareness of the society to protect the environment. GHRM itself is expected to be able to produce a green life style (GLS) in order to increase efficiency, employee engagement and discipline, positive environmental improvement, as well as lower the operational costs of business. It needs to be realized that GLS is complex facet and is related to individual experiences, hierarchies, values, latent attitudes, multiple behaviors, and barriers. GLS can be broadly defined as "living well". For this reason, GLS is important for developing the industry, so that everyone in the community can enjoy their lives under a safe, healthy environment and always maintain business sustainability (Setyaningrum & Muafi, 2023).

GHRM refers to a series of positive plans enterprises take to deal with environmental problems. Previous research has shown GHRM effects green employee behavior and organizational citizenship behavior for the environment. On the other hand, green organizational culture, green purchasing, and top management

commitment toward greening the workforce are the key antecedents for the exercise of GHRM practices (Liu & Zhang, 2022).

Green human resources management (GHRM) basically consists of two major elements, namely environmentally friendly human resource practices and preservation of knowledge capital. Environmentally friendly human resource practices include reducing carbon footprints through less paper printing, virtual teleconferencing and interviews, recycling, telecommuting, online training, and energy-efficient office space, which can help companies find alternatives to significantly cut costs without lost his best talent. Green human resources refers to the contribution of human resource management activities and policies to the broader environmental agenda. This is an important concern for human resources because it is an important issue for all employees as well as customers and other stakeholders. Green human resources also refers to the use of every employee interface or touchpoint to promote sustainable practices and increase employee awareness and commitment to sustainability issues. This is a human resource that can make a big impact without incurring much expense. In addition, good environmental management can increase sales and provide funding to increase environmentally friendly benefits with greater employee involvement (Birbirsa & Worku, 2022).

According to Faisal (2023), green human resource management (GHRM) involves a variety of organizational policies, practices, and processes that encourage the use of environmentally friendly methods that could be advantageous to the individual, business, and the environment. A few example of GHRM activitites include green recruitment and selection, green training and development, green compensation management, green performance management, green employee empowerment and participation, and Green employee relations.

There are various GHRM practices, such as selecting and hiring new staff with green awareness, values, and knowledge; preparing training to develop and reinforce staff members' green competencies and skills; conducting green performance assessments with specific criteria for evaluating green work behaviors and performance; and rewarding staff based on the successful accomplishment of green organizational goals (Elshaer et al., 2023).

Bahmani et al. (2023) tried to link the Ability, Motivation and Opportunity (AMO) theory with human resource management (HRM) and use it in the context of GHRM. AMO theory is taken into consideration as it highlights the role of HRM in issuing policies, imitate practices, and establishing green setting across all processes (e.g., recruitment, training, performance, rewards, and involvement). This theory encompasses various aspects such as management, teamwork, organizational culture, career development, green jobs, engagement, and well being (psychological and physical). HRM practices, including GHRM, are believed to drive organizational performance by influencing employees' abilities, motivation and opportunities to increase their contributions (Xie & Lau, 2023).

Another popular theory adopted in GHRM research is the resource-based view (RBV), stating that valuable resources can assist organizations in the form of gaining sustainable competitive advantages. Recently, researchers have found the theory of natural resource-based theory derived from the RBV, provides a more specific explanation for GHRM from the view of creating competitive advantage through environmental management (Xie & Lau, 2023).

III. RESULTS AND DISCUSSION

An in-depth literature study conducted by Mahdy (2023) revealed various benefits of implementing GHRM as well as various implications as follows:

1. To achieve proactive ecological management globally, it is necessary to encourage organizational behavior that supports environmental engagement. Everyone needs to realize that in a community-oriented business, this involvement is a core factor in the success of the organization. This is where GHRM and the various functions associated with it play a very important role. As part of the global business environment, various organizations need to build a good image and reputation in the market to stay ahead of the competition. This can be a strong motive to implement GHRM to make a difference to the organization which leads to strong organizational prestige, especially in its contribution to environmental conservation. Thus, effective implementation of GHRM plays an important function in organizational performance. Growing understanding of environmental sustainability has encouraged businesses to integrate environmental topics into their tasks, goals and strategies. In overcoming environmental problems, organizations also need to integrate ecological behavior into their operations, thereby making employees proud of their institution's role in protecting the environment.
2. GHRM includes specific procedures and activities that align with the three cornerstones of sustainability—environmental, social, and economic balance. The formation of sustainable human resources depends on exploring external conditions in the form of existing opportunities, changes, movements and risks, as well as creating a balance between economic, social and environmental conditions. Sustainable human resources are

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great employees who really respect the environment and show extraordinary commitment and job satisfaction to the organization, and are always ready to take an ecological approach. In this case. the involvement of the HR function can make an important contribution in building complex, confusing, and difficult to imitate socially complex resources that ultimately lead to increased competitive advantage. Organizations can also implement GHRM practices at all levels, which can be achieved, for example, by incorporating GHRM goals and practices into management information systems (MIS).

3. Recruitment, training, assessment and motivation practices in GHRM are supporting factors in creating a green culture in the organization. This culture encourages employees to proactively reduce waste, use fewer resources, develop recycling programs, and thereby improve the organization's environmental performance. An environmentally friendly psychological climate and environmental knowledge are important mediators between these GHRM practices and pro-environmental behavior. Thus, organizational environmental culture is positively related to GHRM, which in turn has a positive impact on the company's environmental performance. At the individual level, GHRM also has a positive effect on employee job satisfaction.

4. Green job descriptions (GJD) emphasize the incorporation of green elements into job elements. This encourages the integration of environmental protection obligations in every position, with an emphasis on actual practices within the organization. Organizations should incorporate their ecological and social requirements into job descriptions and specifications.

5. Green training (GT) and job rotation are aimed at creating green skills that can support the achievement of SDGs. GT is also believed to have the most decisive impact in increasing employees' voluntary nature in green behavior. In connection with this, organizations also need to pay more attention to evaluating employee green performance, in an effort to ensure that training results are truly effective in improving green performance.

6. Green performance management and green compensation enable organizations to address individual stress by improving environmental performance. GHRM mediates the influence of individual stress on environmental performance through green training and development and green engagement, as well as green performance management and green compensation. We should not forget top management support and cross-departmental learning, which are very important to facilitate environmentally friendly behavior among employees without making them stressed and burdened.

7. Green rewards and compensation (GRC) can create environmental learning for employees, shape their environmental cognition, encourage their creativity for green innovation, and encourage their environmental commitment, all of which contribute to improved environmental performance. In implementing green compensation, it is also necessary to consider special rewards for owners of creative ideas to protect the environment. This is believed to further motivate and encourage employees to care about the environment and use environmentally friendly practices.

8. Companies can use GHRM practices as a useful motivational tool for employees to display environmentally friendly behavior. In addition, companies can make their employees more committed to the environment and demonstrate environmentally friendly behavior that benefits all stakeholders by implementing GHRM practices. Preference for environmentally friendly HR practices in recruitment, selection, empowerment, engagement, training and development can increase the creativity of green employees.

9. An empowered workforce is more motivated to carry out environmentally friendly tasks. HR is the backbone of an effective organization, so motivated green employees will greatly influence social and organizational productivity. To optimize this, organizations can work to detail the various affirmative outcomes of green interventions to develop the business circumstances necessary to increase green behavior in employees who undertake them voluntarily. HR practitioners must also provide their employees with education and training programs regarding environmental conservation. With this process, managers can also translate the company's CSR strategy into GHRM practices in order to achieve business goals effectively. Thus, GHRM is the right instrument for managers to increase employee awareness of CSR activities. This is in line with the findings of various research which shows that performance appraisal, teamwork, recruitment and selection practices are the most important functions for improving CSR performance.

10. There is a need to link GRHM with various other functions such as green supply chain management (GSCM). GSCM can be directed so that it can contribute optimally to company performance and in turn contribute to the company's capacity to support human resource development and corporate social responsibility. On the other hand, GHRM also needs to continue to be optimized to create a suitable environment to realize a sustainable environment along the organization's supply chain. The role of the management team, selection and recruitment, reward and payment systems, as well as performance and evaluation have a positive impact on the social responsibility of the company and its partners in the supply chain network. Here it can be seen that GHRM and GSCM together can have an impact on the company's environmental and financial performance. The researchers emphasized that GHRM and GSCM can have a positive influence on

sustainable performance, so they need to be implemented cross-functionally in various management systems and organizational units for effective environmental management.

11. GHRM is also closely related to strategic human resource management (SHRM) and performance management (PM). It is important to realize that aspects of SHRM and PM are crucial in sustainable human resource management. Important organizational metrics such as ROI, market ratios, and profits are an integral part of SHRM planning and implementation, as well as in other operational activities. Organizations can also implement green performance management (GPM) activities, such as balancing metrics to measure environmental impact and identifying how responsibility should be spread across the organization.

12. GHRM is also closely related to leadership functions in organizations. For example, to increase green creativity and generate green competitiveness, organizations can concentrate on encouraging transformational leadership and have managers play an important role by acting as actors in driving green innovation. This is closely related to employee involvement in green initiatives. Good leadership must provide opportunities for employees to participate and be involved in the organization's environmentally friendly initiatives that enable them to contribute to the achievement of green goals (G-goals) in more creative ways.

13. CSR planning and practice depend on GHRM support and trustworthy leadership. Therefore, organizations should use GHRM when selecting candidates and evaluating performance. Additionally, organizations must train leadership that can be trusted for the concept of sustainability. Appointing a leader with high ethical criteria can provide the results employees want. When an organization adopts GHRM practices. When organizations and leaders adopt pro-green behavior and implement GHRM-level practices, employees are more likely to take action outside their traditional roles.

Elshaer *et al.* (2023) states that GHRM provides various benefits for organizations, such as to improve organizational citizenship behavior (OCB) toward the environment; promote in-role green work behaviors; develop a circular economy; improve social reputation; and promote innovative performance, green values, and job satisfaction. In this regard, it needs to be understood that an important component in GHRM is green human capital (GHC). According to Nureen *et al.* (2023), GHC is the sum of employees' pollution preventin or green innovation-related information, competence, expertise, intelligence, inventiveness, and dedication which is entrenched in people, nor firms. GHC assists organizations in adhering to stringent international environmental rules, adds value to the organization, and satisfies customers' stringent environmental needs. In addition, it is argued that for organizations to implement an environmental strategy effectively, they must have environmental information that enables them to determine the relevant opportunities for process and product modification. In this approach, GHC reduces the environmental effect and gives organizations a competitive edge by reducing expenses.

Muisyo *et al.* (2022) found that GHRM practices influence green creativity, both individually and collectively. Here green culture also plays a mediating role. Apart from that, there is also servant leadership as a moderator. These results recommend company management to implement GHRM practices to foster green creativity at the employee and team level. Apart from that, company management needs to pay attention to the four elements that strengthen green culture (leadership emphasis, message credibility, co-worker involvement, and employee empowerment) which play a key role in increasing employee green creativity.

IV. CONCLUSION

The concept of GHRM has gained a lot of attention from both researchers and practitioners. The basic purpose of the GHRM is to minimize the carbon footprint of each worker on the environment. GHRM also relates to the look after resources and participation of the workforce to control pollution. It is also suggested that firms should be aware of their resources and capabilities that make their human resource management green (Farrukh *et al.*, 2022). Therefore, GHRM can be defined as the awareness and application of environmental components in all HRM processes, such as recruitment, training, rewarding, and developing a green workforce who understand environmentally friendly values and practices (Rajabpour *et al.*, 2022).

This paper summarizes various thoughts and findings from various scientific articles, both in the form of empirical research and literature studies, regarding the concept of green human resource management and its various benefits and implications. It is hoped that this paper will provide benefits for academics and practitioners who are interested in topics surrounding environmental management and sustainability, especially GHRM. Academics can explore research ideas regarding GHRM and its very diverse elements. GHRM is also open to being connected with various other constructs in the fields of management and business, such as performance, productivity, organizational culture, supply chain management, and strategic management. For practitioners, it is

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hoped that this paper can at least be an initial reference to start exploring GHRM as a solution for managing business sustainably while providing welfare and satisfaction for employees as valuable human capital.

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Social Ancient Rarity Improvement as Rustic the Travel Industry, Contextual Analysis: The Village of Siangan, Gianyar District – Indonesia

Agus Kurniawan, I Wayan Runa, I Wayan Mariyana Wandira

Infrastructure and Environmental Engineering Master's Study Program, Postgraduate

Warmadewa University, Indonesia

Corresponding Author*: aguskurniawan@warmadewa.ac.id

ABSTRACT

Purpose: Traditional Siangan Traditional Village can be found 31 kilometers northeast of Denpasar City. As a spiritual tourism village, this village has cultural potential that can be developed. Seven ancient sites, natural beauty, local art, and cultural traditions can all be used as tourist attractions in Siangan Traditional Village. The indigenous village krama community has not fully appreciated the potential of existing cultural heritage to be used as a starting point for spiritual tourism. To support the tourism growth of Siangan Village, community empowerment is needed to inventory heritage in the form of cultural artifacts and their use as tourist attractions. Yayasan Sentir Bali as a partner in the Community Partnership Program (PKM) is expected to be able to face the following problems: (1) the inventory of all cultural heritage in Siangan Traditional Village, (2) the historical background of cultural heritage in Siangan Village, and (3) the unused cultural heritage as a spiritual tourism base.

Design/methodology/approach: By conducting an inventory of cultural heritage in Siangan Traditional Village and managing cultural heritage as a tourist attraction, this PKM is a form of community empowerment in the use of cultural heritage. Structuring as a foundation for spiritual tourism. Archaeological documentation techniques and public archaeology approaches are used in the implementation of cultural heritage management models.

Findings: Partners together with communities will recognize the importance of cultural heritage as the foundation of spiritual tourism, which has implications for goodness-being a community, as a result of this strategy.

Paper type: Research paper

I. INTRODUCTION

Artifacts are a form of physical culture in the form of the results of activities, deeds, and also the work of all humans in society in the form of objects or things that can be touched, seen, and also documented. It is the most concrete among the three forms of culture. In the reality of social life, one form of culture cannot be separated from another form of culture (Wisnumurti et al., 2019). For example: the form of ideal culture governs and also gives direction to human actions (activities) and also works (artifacts). A cultural artifact is any physical evidence of a culture or the people who constitute or are part of it and the particular form and function of objects within that culture (Bhuana et al., 2022; Lukáč et al., 2021).

Siangan Traditional Village is one of the villages in Gianyar District, Gianyar Regency which is classified as a traditional village. Orbitally, Siangan Traditional Village is located 27.7 KM northeast of Denpasar City. Siangan Village has rich and diverse cultural heritage potential, and is supported by the atmosphere of the natural environment, watershed with beautiful waterfalls. Therefore, since 2019 Siangan Traditional Village has been designated by the Regent as one of 19 Tourism Village villages in Gianyar Regency. In order to realize Siangan as a Tourism Village, Siangan Traditional Village seeks to explore the existing potential to be developed as a

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spiritual tourism village. Some of the efforts that have been made by the community with the government include the development of village infrastructure to support tourism, making a village master plan blue print and building road access to the waterfall in Siangan Traditional Village.

Field observations show that, Siangan Village has the potential for unique and interesting tangible and intangible cultural heritage. In Siangan Village, there is potential for cultural heritage in the form of ancient temples that show ancient heritage patterns such as Kahyangan Tiga Temple (Puseh Temple, Village Temple and Dalem Siangan Temple), Segara Temple, Ganter Temple, Agung Temple and Merajan Agung Puri Siangan. The intangible cultural heritage in Siangan Traditional Village is in the form of sacred art Sanghyang Dedari Dance at Gunung Sari Temple, various karawitan arts, and various religious rites and unique traditional ceremonies. However, the archaeological value and uniqueness of the existing cultural heritage have not been utilized as a spiritual tourism attraction of Siangan Traditional Village (Cerdeiras et al., 2018; Sroczynska, 2019).

II. METHODS

Data collection of potential and problems was carried out by field surveys and interviews with partner groups. The data obtained during field surveys and interviews with the Sentir Bali Foundation will be sorted and selected according to needs. After data analysis is carried out, it is continued by making a design scheme in the form of a structuring design scheme related to the realm of architecture, as well as management and marketing solutions related to the realm of cultural economy. After the structuring and management design scheme, the results will be conveyed to partners in FGD activities. After the FGD gets the results selected together, it is necessary to hold a socialization related to the Development Plan of Cultural Artifacts as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency.
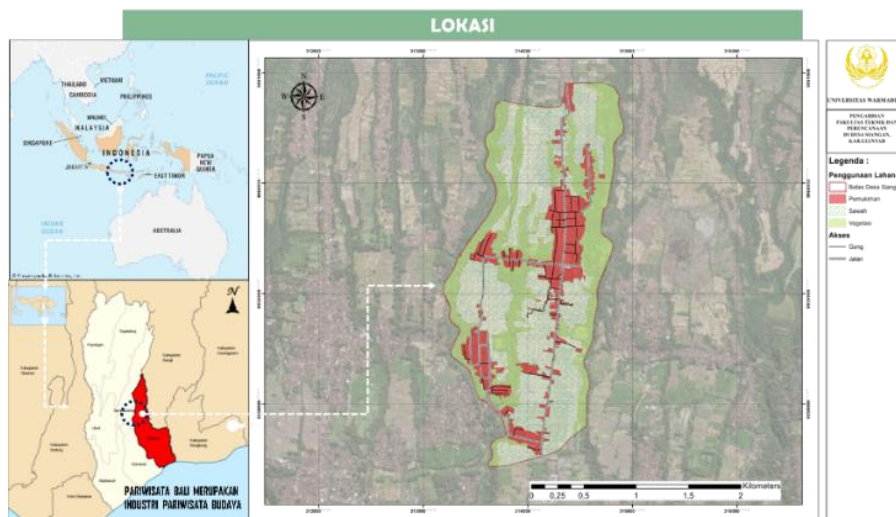
Figure 1 Research Location

A. Data Collection
1. Cultural Heritage Potential

Existingly, the Siangan Village Area in Siangan Village has potential cultural heritage in the form of ancient temples that show ancient heritage patterns such as Kahyangan Tiga Temple (Puseh Temple, Village Temple and Dalem Siangan Temple), Segara Temple, Ganter Temple, Agung Temple and Merajan Agung Puri Siangan. The hue of the area provides an overview and mapping of the potential of the Mertasari coastal area that can be developed. Community Empowerment PKM Activities In the Preparation of Cultural Artifacts Development Plan as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency resulted in the output of this activity in the form of design, which will be built physically by partners and can be directly enjoyed by partners and the community.

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Figure 2 Cultural Heritage Map

Data collection of potential and problems was carried out by field surveys and interviews with partner groups. All important matters related to primary data will be recorded and recorded. Not to forget it is also documented as a data collection process. Here are each of the PKM locations and their activity plans.

After the structuring and management design scheme, the results will be conveyed to partners in FGD activities. Exposure from potential data and problems to the results of alternative designs is explained in this activity. Of course, partners will be invited to discuss so that criticism and input from partners will also be accommodated in this activity. The results of the FGD will be reevaluated and revised if needed (Matlovičová & Husárová, 2017; Sobaih & Naguib, 2022).

After the FGD gets the results that are selected together, it is necessary to hold a socialization related to Community Empowerment in the Preparation of a Plan for the Development of Cultural Artifacts as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency. This activity becomes a wider and more direct liaison with the community, especially those engaged in tourism.

Figure 3 Cultural Heritage Location

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III. RESULTS AND DISCUSSION

A. Economic and Social Impact

Economic impact, The biggest motivation to develop tourism is the existence of economic benefits. The economic impact focuses on profits through tourist destinations. Some of the benefits obtained by the development and development of tourism areas are: state foreign exchange revenues, increasing public income, increasing government tax revenues, creating job opportunities, improving economic structure as well as encouraging and diversifying entrepreneurial activities and stimulating the region's economy ' (Lukáč et al., 2021; Ratna Sari & Putri Sri, 2017).

Community Empowerment in the Preparation of Cultural Artifacts Development Plan as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency and surrounding areas will have a positive impact on increasing PAD for Siangan Village. The importance of professional and commercial management of this tourist area by related parties is supported by infrastructure development, the availability of complete infrastructure facilities and the ability of quality management human resources, so that gradually it can attract more tourists to visit. With the determination of entrance tickets to tourist areas for tourists, of course, this can make maximum income for the region.

Social impact, due to community empowerment in the preparation of plans for the development of cultural artifacts as village tourism in Siangan Village, Gianyar District, Gianyar Regency and surrounding areas, there are 2 (two) aspects that are seen as impacts, namely social interaction and social change. Furthermore, respondents who are the objects / targets of the study consist of various parties, namely: 1). Community leaders; 2). Society, divided into: a). Local people who live and strive in tourist areas, b). Local people who live but do not try in tourist areas, c). Local communities and businesses in tourist areas; 3). Tourist area manager; 4). Tourists, divided into: a). Local within the province of Bali and b). Local from outside Bali province.

Socio-cultural impacts that occur from aspects of social interaction of the community in the study area as a result of the development of the tourist area of Siangan Village and its surroundings, such as interactions in religious activities, economic activities, health service activities, entertainment activities, sports activities, business cooperation, trade promotion interactions, silahturahmi, information sharing, and interaction in photo activities. Thus, the development of the tourist area of Siangan Village and its surroundings has a positive impact on the community in terms of community social interaction.

Figure 4 FGD with the Community

The existence of the tourist area of Siangan Village and its surroundings can have a socio-cultural impact on the community, especially on aspects of positive social change, such as the atmosphere of the tourist area is increasingly crowded, the construction of new facilities, the improvement of tourist areas, job vacancies, community economic activity increases, community income increases, there is a change in language use, changes in the way of communication and cultural exchanges.

B. Partner Contribution to Implementation

The partner's contribution to the implementation of PKM activities starts from granting permission to use the Siangan Village area as a PKM location with the signing of a Statement Letter by the partner, which in this case is the Sentir Bali Foundation as the chairman of the Siangan Village area manager. The next contribution is in the framework of collecting potential data and problems carried out with field surveys and interviews to partner groups. The partners are very helpful in collecting data through observations in the Siangan Village Area which

is carried out with a direct measurement process to the Siangan Village Area. This observation and documentation was carried out by observing and taking pictures of the Siangan Village Area with the results in the form of photos to strengthen previous quantitative data.

Other contributions are also in collecting data with qualitative methods such as interviews with selected informants, namely from the management, community stall owners, beach area visitors, and community leaders who have valid information / in accordance with reality in the field and to complete quantitative data. The next contribution is in obtaining data in the form of literature on the elements of regional planning, Siangan Village, and conservation approaches, so that in the end it can be used to answer the formulation of the problem. At this stage, the management informs the structuring activities that have been carried out in the Siangan Village area.

The next planned contribution is the FGD activity to discuss the structuring design scheme in the form of presentations to partners. In this FGD activity, potential data and problems will be presented until the results of alternative designs are explained in this activity. Of course, partners will be invited to discuss so that criticism and input from partners will also be accommodated in this activity. The results of the FGD will be reevaluated and revised if necessary. FGD can be done more than 1 time until you get an optimal result result. In this activity also needs to be documented as a process.

After the FGD obtained the results that were selected together, the next contribution was in socialization activities related to the design / idea of development in the form of Community Empowerment in the Preparation of Development Plans for Cultural Artifacts as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency. This activity becomes a wider and more direct liaison w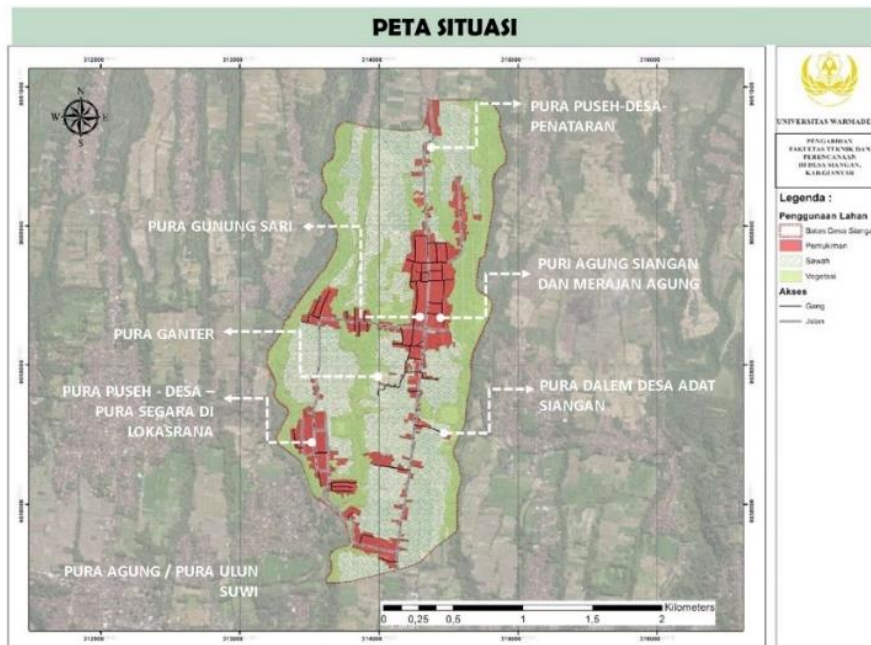ith the community, especially those engaged in tourism. After the socialization of the Application of Planning Ideas, it was continued with the submission of the results of community service, namely the concept of Community Empowerment in the Preparation of Cultural Artifacts Development Plan as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency, to the Bali Sentir Foundation as the manager of Siangan Village Tourism.

Figure 5 FGD with village officials

C. Strategic steps of Planning Approach

The next plan of PKM activities for the Development of Cultural Artifacts as Village Tourism in Siangan Village is as follows:

This plan in the field of implementation will be adjusted to the needs of the Sentir Bali Foundation as a Service Partner, because this activity exists because of the needs and requests of partners. The planning approach used in analyzing this activity is as follows: Pendekatan Perencanaan Dari Bawah dan Dari Atas (Top Down And Bottom Up Planning).

It is an approach in spatial planning with a new paradigm that is integrative and accommodating according to authority on a local scale and on a regional scale in the Siangan Village Area.

a. Holistic Intersectoral Approach (Comprehensive)

It is an approach in spatial planning carried out through the use of analysis and diagnosis stages in each related sectoral plan, coordination, synchronization and integration of development plans between sectors. With that, Community Empowerment in the Preparation of Cultural Artifact Development Plans as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency which is compiled is an integrated planning with other spatial planning and with regional development planning covering various sectors of activity.

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b. Sustainability Development Approach
Is a planning approach based on sustainable development by taking into account aspects of environmental sustainability for long-term interests.

c. Community Approach
It is a spatial planning approach based on efforts to invite local communities to be involved in every implementation of development activities so that there is a balance in development.

d. Supply-Demand Approach
The spatial planning approach based on supply-demand market law due to the concept of Community Empowerment in the Preparation of Cultural Artifacts Development Plan as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency must always be adjusted to the needs, interests and demands of the community who will later enjoy the results of the development of the Siangan Village Area.

IV. CONCLUSION

Based on the implementation and results of activities at the location, the conclusions of community service activities Community Empowerment in the Preparation of Cultural Artifacts Development Plan as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency this year are: The concept of arranging accessibility and parking, The concept of arranging public open spaces, open fields and parks, and Community Empowerment in the Preparation of Cultural Artifact Development Plans as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency.

Based on the implementation and results of activities at the location, suggestions for community service activities Community Empowerment in the Preparation of Cultural Artifacts Development Plan as Village Tourism in Siangan Village, Gianyar District, Gianyar Regency are:

a. The implementation of community service through socialization and social action is expected to continue and Warmedewa University as a leading educational institution in Bali must remain a pioneer in community service.

b. For the community, in particular, the community of visitors to tourist areas in Bali, to always participate in protecting the environment by maintaining existing tourist attraction facilities.

c. It is necessary to increase cooperation between the government and the community in environmental conservation management.

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The Mediating Role of Work Loyalty in Relationship Between Professionalism on Employee Performance

Muhammad Ja'is[1], Joko Suyono[1], Damarsari Ratnasahara Elisabeth[2]

Universitas Narotama, Surabaya, Indonesia[1]

Sekolah Tinggi Ilmu Ekonomi Mahardhika, Surabaya, Indonesia[2]

Corresponding Author*: joko.suyono@narotama.ac.id

ABSTRACT

Purpose: The purpose of this study is to analyze the influence of professionalism on employee performance, professionalism on work loyalty, and to analyze the mediating role of work loyalty.

Design/methodology/approach: The sample in this study were 74 employes of regional drinking company owned by the regional government in East Kutai, Indonesia. Questionnaire was used to obtain the data and data analysis technique used was Partial Least Square (PLS).

Findings: The results indicated that professionalism influences employee performance, professionalism influences work loyalty, and work loyalty is able to mediate the influence of professionalism on employee performance.

Research limitations/implications: This research is limited to doing regional drinking company owned by the regional government in East Kutai, Indonesia. For generalization so that further research can be carried out in different organizations or companies and in different regions (cities).

Practical implications: The results of this research can be used as a reference to improve employee performance in regional drinking company owned by the regional government and similar industries.

Originality/value: The results of the research show that among the variables of professionalism and work loyalty need to be implemented in regional drinking company owned by the regional government and similar industries.

Paper type: This paper can be categorized as research paper.

Keywords: Professionalism, Work Loyalty, Employee Performance

I. INTRODUCTION

Every company will always try to improve the performance of its employees in the hope that the company's goals will be achieved. Employee abilities are reflected in performance, good performance is performance that is able to provide maximum work results. The employee's performance is one of the capital for the company to achieve its goals. Thus, employee performance is something that company leadership must pay attention to. Performance is generally defined as a person's success in carrying out a job. Employee performance is the work result achieved by a person in carrying out the tasks assigned to him to achieve work targets. Employees can work well if they have competencies that match the demands of their work. Employee performance is one of the determining factors for a company's success in achieving its goals. For this reason, employee performance must receive attention from company leadership because a decline in employee performance will have an impact on the company's overall performance. Besides that, employee performance is also an indicator of the contribution made by employees to the company. Employees who have a positive contribution to the company will have an impact on the success of the company concerned.

Employee performance is a result achieved by workers in their work according to certain criteria that apply to a particular job. Robbins (2019) explains that employee performance is a function of the interaction between

ability and motivation. Robbins (2019) further stated that setting performance goals is setting targets that are useful not only for evaluating performance at the end of the period but also for managing work processes during that period. Employee performance is a result achieved by workers in their work according to certain criteria that apply to a particular job. Robbins (2019) also explains that employee performance is a function of the interaction between ability and motivation. Setting performance goals is useful for setting targets and not only for evaluating performance at the end of the period but also for managing work processes during that period. Boone and Kurtz (2016) stated that evaluation of employee performance can be done by comparing actual results with desired results. In the opinion of Mangkunegara (2020) performance is the result of work both in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. Good performance is optimal performance, in the sense of performance that is in accordance with company standards and supports the achievement of company goals, namely the company's vision and mission. Increasing employee performance will bring progress for the company to be able to survive (sustainable) in increasingly fierce competition. In this case, employee performance is influenced by several factors both related to the workforce itself and related to professionalism, competence and work loyalty.

From several previous studies, it can be seen that there are several variables needed to improve employee performance, including professionalism (Prabayanthi and Widhiyani, 2018; Ferawati, Darna and Suhendi, 2020; Ichsan, Nasution, Setiadi, 2022) and work loyalty (Add and Sambul, 2018; Ronaldy et al, 2019; Marentek et al, 2021; Indrastuti el al, 2018; Wardhani et al, 2023; Al-Edenat and Alhawamdeh, 2018; Ifadah, 2021).

An employee is required to have professionalism to achieve satisfactory performance in carrying out work. Professionalism is an understanding that teaches that every job must be done professionally. A professional person is a person who has special abilities as a profession. Siagian (2018) believes that professionalism is expertise and reliability in carrying out tasks so that they are carried out on time, of high quality, cost-effectively and in accordance with established procedures. Sedarmayanti (2017) also provides a similar opinion regarding professionalism which defines professionalism as an attitude in carrying out work that requires skills obtained through certain training and education and is carried out as a job that is a source of income. An employee who has professionalism at work always encourages himself to work professionally. An employee who has professionalism at work will always try to realize himself in accordance with what has been determined by his leadership. He will identify himself both with the work environment and with his work. The importance of professionalism at work requires someone to change their mindset towards a better, even better, direction. Without professionalism, a company will not last long because professionalism is what brings all activities in the company to life. Every employee needs to have high professionalism at work because apart from having great benefits for other parties, professionalism can also help the employee to become a better person.

Every company definitely expects its employees to have high loyalty for the sake of the company's success. The higher the loyalty of employees in a company, the easier it is for the company to achieve its stated goals. On the other hand, if employee loyalty in a company is very low, it will become increasingly difficult for the company to achieve its goals. Hasibuan (2019) stated that work loyalty or fidelity is one of the elements used in employee assessment which includes loyalty to their work, position and company. This loyalty is reflected by the employee's willingness to protect and defend the company inside and outside of work from interference by irresponsible people. Poerwopoespito (2018), states that loyalty to work is reflected in the attitude of employees who devote their abilities and expertise, carry out their duties responsibly, are disciplined, and are honest in their work.

This research was conducted with the aim of analyzing the influence of professionalism on employee performance, the influence of professionalism on work loyalty, the influence of work loyalty on employee performance and the influence of professionalism on employee performance through work loyalty.

A. Literature Reviews and Hypotheses
1. Employee Performance

Performance is a comparison between work performance, namely a comparison between work results and expected standards (Dessler, 2020). According to this definition, performance focuses on the results of the work. According to Siagian (2020) performance is a universal concept which is the operational effectiveness of employees, organizational parts and parts based on established standards and criteria. Bernardin and Russell (in Faryandi, 2018) state that: "Performance is defined as the record of outcomes produced on a specified job function or activity during a specified time period". That is, performance can be described as a record of what has been done on a specific job within a certain time period. According to Hasibuan (2021), performance is a work result achieved by a person in carrying out the tasks assigned to him which is based on skill, experience, seriousness and time.

According to Rivai (2020), performance is the result or overall level of success of a person during a certain period in carrying out tasks compared to various possibilities, such as standard work results, targets or goals or criteria that have been determined in advance and have been mutually agreed upon.

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Mangkunegara (2019) said that performance is the result of work in terms of quality and quantity achieved by an employee in the ability to carry out tasks in accordance with the responsibilities given to him by his superiors.

According to Mangkunegara (2019) there are several characteristics of employee performance, namely as follows:

6. Have high personal responsibility
7. Can take and bear the risks faced.
8. Have realistic goals.
9. Have a comprehensive work plan and strive to realize its goals.
10. Utilize concrete feedback in all work activities carried out.

Performance is basically the result of an employee's work in a certain period which can be compared with various possibilities and can be measured and assessed Soeprihanto (quoted by Suharyoko, 2016). Meanwhile, according to Tadjuddin (quoted by Suharyoko, 2016), performance is a result or level of success achieved by workers or employees in their field of work, according to certain criteria that apply to a particular job and evaluated by certain people.

Based on the definitions above, it can be said that performance is the manifestation or appearance of employees in carrying out work. A person can be said to have good work performance when they can carry out their work well, meaning they achieve the targets or work standards that have been set and are even expected to exceed the work standards in question.

According to Rivai (2020) there are several performance benefits which basically include:

1. Improvement of performance, in the form of activities to improve employee performance.
2. Placement decisions, assisting in promotions, transfers and demotions in general.
3. To improve employee performance.
4. As employee training and development.
5. Human resources feedback. Good or bad performance throughout a company identifies how well its Human Resources are functioning.

Meanwhile, Mathis and Jackson (2019) stated that several factors within employees and within the organization that determine individual performance include the following:

1. Individual abilities, consisting of several components, namely talents, interests and personality factors.
2. The effort put in consists of motivation, work ethics, attendance and task design.
3. The organizational support it receives consists of training and development, equipment and technology, work standards, management and co-workers.

Traditionally, people work based on job descriptions that contain job duties and responsibilities. However, performance standards must emphasize work results and not tasks. So a set of work standards describes the results that should exist and occur in satisfactory work completion. Preparing performance standards based on job descriptions will provide opportunities for supervisors and employees to work. Therefore, a job description can function as a statement about the general goals that subordinates must achieve in supporting organizational goals. Furthermore, Sofyandi (2019) believes that performance standards are considered satisfactory if:

1. The statement indicates several key areas of employee responsibility
2. Contains how a work activity will be carried out
3. Direct attention to the quantitative mechanisms by which performance results will be measured..

2. Professionalism

Professionalism can be defined as an individual's capacity and expertise in executing tasks within their respective fields and levels. According to Harefa (2004), professionalism primarily revolves around one's attitude towards work. He further elaborates that several indicators of professionalism include possessing advanced skills, providing services oriented towards the public interest, adhering to strict standards of work behavior, and having a compensation system that reflects work performance. Sedarmayanti (2017) asserts that professionalism is evidenced by work outcomes that align with the technical or ethical standards of a profession. Typically, work activities are associated with monetary compensation. To foster a culture of professionalism in fulfilling institutional missions, fundamental prerequisites include having competent human resources, well-structured work programs, adequate time for program implementation, sufficient financial support, and appropriate facilities and resources. Sedarmayanti (2017) further emphasizes that professionalism serves as a cornerstone for establishing bureaucratic efficiency within the government and serves as a benchmark for the proficiency of personnel in executing their duties effectively. Competence, effectiveness, efficiency, and accountability are key measures of professionalism. Alternatively, Siagian (2014) suggests that professionalism entails reliability in task execution, ensuring tasks are completed with high quality, timeliness, precision, and adherence to easily understandable procedures for clients. Maister (2013) characterizes professional individuals as reliable and

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trustworthy experts who demonstrate proficiency, skillfulness, knowledge, responsibility, diligence, discipline, and seriousness in carrying out their job responsibilities.

According to Maskun (2018), professionalism is a form or field of activity that can provide services with specialization and high intelligence. This form or field of activity in carrying out its achievements carries out three main principles, namely:

1. There is basic knowledge that can be studied carefully and there is an attitude in someone who masters a technique that can provide services to the community.
2. The standard measure of success achieved by a profession is how quickly we provide services to the community and not what someone can achieve for their personal interests.
3. Develop a system of supervision over the efforts and practical activities of professionals in implementing their knowledge and educational results through the establishment of associations or associations and the creation of various codes of ethics.

The first step that must be taken so that someone can have the status of a professional is to have sufficient intellectual abilities, namely an ability in the form of being able to easily understand, comprehend, study and explain a phenomenon. This means that the level, degree, quality and quantity of professionalism in Indonesia can be seen from how much and how high the quality of the intellectual community exists to support this professionalism (Maskun, 2018).

Research on the influence of professionalism on employee performance has been carried out by several previous researchers, including Prabayanthi and Widhiyani (2018), Ferawati, et al (2020), Ichsan, et al (2022). The results of this research prove that professionalism influences employee performance. Thus, a hypothesis can be made as follows:

H1: professionalism influences employee performance.

3. Work Loyalty

Sudimin (2003) defines work loyalty as employees' willingness to contribute their abilities, skills, thoughts, and time towards achieving company goals while maintaining confidentiality and refraining from activities detrimental to the company's interests. Loyalty, as formulated by Sudimin (2003), entails allegiance to a person or entity and abstaining from treachery when called upon. Robbins (2015) contends that loyalty involves a commitment to safeguarding both emotional and physical well-being. Siswanto (2005) characterizes loyalty as a firm determination to comply with, execute, and distribute tasks with full responsibility and awareness. Agustian (2009) describes loyalty as adherence to cherished principles.

According to Dessler (2015), employee loyalty is an affirmative emotional disposition towards work that fosters enthusiasm and fondness for one's job. Essentially, loyalty can be construed as a steadfast commitment to something, whether tangible or intangible, including attention and thoughts. Companies rely on employees with high levels of loyalty to achieve their goals successfully. Hasibuan (2016) argues that employee loyalty is evidenced by their sincerity in defending and safeguarding the company against external threats. This sentiment is echoed by Poerwadarminta (2002), who defines loyalty as trust, dedication, and allegiance marked by responsibility, love, and exemplary service.

Company attitude reflects employees' identification with the organization, demonstrated through their eagerness to contribute and exhibit loyalty. Robbins (2015) asserts that loyalty is intertwined with trust, as individuals are willing to sacrifice and remain faithful to their beliefs when trust is present. Hence, loyalty exhibits a positive correlation with the level of trust; the greater the trust employees have in the company, the higher their loyalty.

Poerwopoespito (2014) highlights work loyalty as exemplified by employees who dedicate their skills with honesty and discipline, resulting in a sense of responsibility, enthusiasm, and motivation (Nitisemito, 2015). To foster employee loyalty, companies must cultivate a sense of belonging among employees, encouraging them to perceive the company's growth as their own. From the aforementioned definitions by experts, it can be concluded that work loyalty signifies employees' steadfast dedication to the company, manifested through their commitment to its progress and willingness to sacrifice for the collective goals.

Steers and Porter (1983) delineate several aspects of loyalty, including a strong desire to remain with the company, a commitment to perform well, and a firm belief in company values. Nitisemito (2015) emphasizes loyalty in employee conduct, such as adherence to regulations and responsible work ethics. Compliance with regulations demonstrates employees' willingness to follow established protocols, while responsibility entails executing tasks diligently with awareness of associated risks, fostering a sense of accountability and dedication. Kurniawan (2015) identifies aspects of loyalty as obedience, responsibility, dedication, and honesty.

Obedience entails employees' adherence to company regulations and superiors' directives, refraining from violating established rules. Responsibility involves completing tasks with excellence and timeliness, with a willingness to accept associated risks. Dedication encompasses employees' sincere contribution of thoughts and

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efforts to the company, characterized by alignment between words and actions. Overall, work loyalty reflects employees' allegiance to the company, motivating them to remain, develop, and trust in its endeavors.

Simamora (2002) outlines three primary reasons for loyalty: rational factors (e.g., wages, career advancement), emotional factors (e.g., comfortable work environment, job satisfaction), and spiritual factors (e.g., fulfillment of spiritual needs). Steers and Porter (1983) suggest that work loyalty is influenced by personal characteristics, job characteristics, organizational structure, and the experience gained within the company. Ultimately, work loyalty is shaped by a combination of rational, emotional, and spiritual factors, driving employees to remain committed and dedicated to their organizations..

Previous research on the influence of professionalism on work loyalty has been carried out by several previous researchers, including Turumondo et al (2022), and Firdaus et al (2022). The results of this research prove that professionalism influences employee work loyalty. Apart from that, there are also several previous studies which prove that work loyalty influences employee performance Add and Sambul (2018), Ronaldy et al (2019), Marentek et al (2021), Indrastuti el al (2018), Wardhani et al (2023) , Al-Edenat and Alhawamdeh (2018), Ifadah (2021). The results of this research prove that work loyalty influences employee performance. Thus the following hypothesis can be made:

H2: professionalism influences work loyalty

H3: work loyalty influences employee performance

H4: professionalism influences employee performance through work loyalty

Based on the problem formulation that has been created and also based on previous research, a research framework can be prepared as follows:
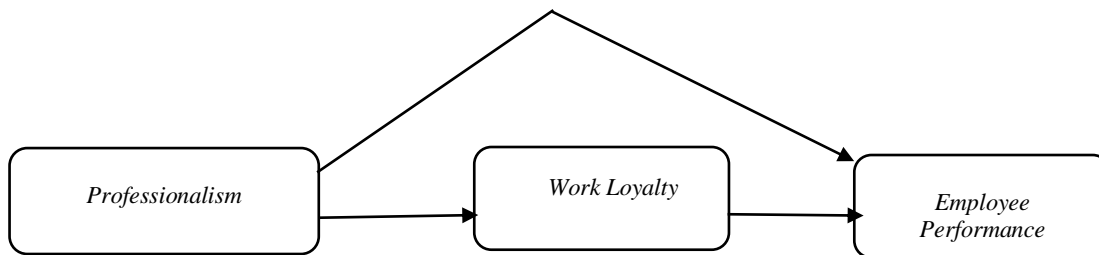
Figure 1. Research Model

II. METHODS

The population in this study were 70 employees of regional drinking company owned by the regional government in East Java, Indonesia. Meanwhile, the sampling technique used total sampling, meaning that the entire population of 70 people was taken as the research sample. The questionnaire technique is used to obtain data related to the research variables. The questionnaire is arranged in the form of a closed statement with 5 (five) alternative answers using a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The data analysis technique used to analyze questionnaires that have been filled out by respondents is Partial Least Square (PLS).

III. RESULTS AND DISCUSSION

A. Hypothesis Testing

Based on the data processing that has been carried out, the results can be used to answer the hypothesis in this research. Hypothesis testing in this research was carried out by looking at the T-Statistics values and P-Values values. The research hypothesis can be declared accepted if the P-Values value is <0.05 (Yamin and Kurniawan, 2011). The following are the results of hypothesis testing obtained in this research:

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Table 1. Hypothesis Testing

Hypothesis	Influence	T-statistics	P-Values	Result
H1	Professionalism -> Employee Performance	3.346	0,001	Accepted
H2	Professionalism -> Work Loyalty	4,676	0,000	Accepted
H3	Work Loyalty -> Employee Performance	4,220	0,000	Accepted
H4	Professionalism -> Work Loyalty -> Employee Performance	2,797	0,005	Accepted

Based on the data presented in the table above, it can be seen that several hypotheses proposed in this research are as follows:
1. The influence of professionalism on employee performance has a P value of 0.001 or smaller than 0.05. This means that the professionalism variable influences employee performance.
2. The influence of professionalism on work loyalty has a P value of 0.000 or less than 0.05. This means that the professionalism variable influences work loyalty.
3. The effect of work loyalty on employee performance has a P value of 0.005 or smaller than 0.05. This means that the work loyalty variable influences employee performance.

The influence of professionalism on employee performance through job satisfaction has a P value of 0.000 or less than 0.05. This means that the professionalism variable influences employee performance through work loyalty.

IV. CONCLUSION

Based on the results of hypothesis testing, it can be concluded that professionalism has an influence on employee performance. The relationship between these two variables is positive. These results indicate that changes that occur in professionalism will have an impact on changes that are in line with employee performance. If professionalism increases, it will trigger an increase in employee performance. On the other hand, if professionalism is low, it will have a negative impact on employee performance by resulting in a decrease in quality. In this context, if professionalism increases, employees will have better motivation and ability to carry out their duties. This then contributes to improving overall Employee Performance. Conversely, if professionalism is low, employees may be less motivated, less able to cope with job demands, and the quality of their performance may decrease.

Referring to the results of hypothesis testing, it shows that professionalism has an effect on work loyalty. Both variables have a positive relationship direction. These results indicate that changes that occur in the Loyalty variable will result in changes in the Work Loyalty variable that are directly proportional. If professionalism is shown in a good position, it will encourage high work loyalty. Conversely, low professionalism will have the effect of decreasing work loyalty. In this context, if professionalism increases, employees tend to feel more satisfied and engaged with their work. They may be more motivated to give their best in their work, show loyalty to the organization, and strive to achieve organizational goals. On the other hand, if professionalism is low, employee work loyalty can decrease due to a lack of commitment and quality of work produced.

In accordance with the results of the hypothesis test, it confirms that Job Leadership has an effect on Employee Performance. The direction of the relationship between the two variables is positive. These results indicate that changes that occur in the Work Loyalty variable will have a directly proportional impact on changes in the Employee Performance variable. If work loyalty improves, it will encourage increased employee performance. On the other hand, low work loyalty will have the effect of decreasing employee performance. In this context, if Job Loyalty increases, employees tend to be more motivated to do a good job, contribute actively, and show higher performance. They may be more committed to achieving organizational goals and put in extra

effort to support organizational success. Conversely, if Job Loyalty is low, employees may be less motivated, less involved, and less likely to contribute optimally to their work. This can result in a decrease in the quality of performance and a lack of dedication to the organization.

Referring to the results of hypothesis testing, it shows that Management Support influences Employee Performance through Work Loyalty. The relationship between these three variables is positive. These results indicate that changes in the Work Loyalty variable will encourage a directly proportional influence of Competency on Employee Performance. If work loyalty increases, the influence of professionalism on employee performance will be greater. The research results confirm that work loyalty is a variable that has the ability to influence the influence of professionalism on employee performance. In this context, work loyalty acts as a mediator factor between professionalism and employee performance. In this research, Job Loyalty acts as a mediator between Professionalism and Employee Performance. This means that a high level of Work Loyalty can strengthen the relationship between Professionalism and Employee Performance. When an employee has a high level of Professionalism and also a high level of Work Loyalty, they tend to show better performance. This can happen because loyal employees tend to have high intrinsic motivation and feel responsible for giving their best in their work. High work loyalty can also increase employee involvement and desire to support organizational goals.

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Work Accident Risk Analysis in Tukad Ayung Bridge Replacement Project

Ida Bagus Made Yatana, Putu Ika Wahyuni, I Wayan Muka

Infrastructure and Environmental Engineering Master's Study Program, Postgraduate

Warmadewa University, Indonesia

Corresponding Author*: ibyatana99@gmail.com

ABSTRACT

Purpose: Analysis of the risk of work accidents in the Tukad Ayung Bridge replacement project needs to be carried out by identifying, assessing, and controlling risks using the HIRARC method. This study aims to conduct a work accident risk analysis in the Tukad Ayung Bridge replacement project, precisely in the implementation of concrete girder installation.

Design/methodology/approach: The data used are qualitative and quantitative data with primary data sources and secondary data. The data collection techniques used are observation, interviews, questionnaires, literature studies, and documentation studies. The data analysis technique used is HIRARC.

Findings: The results showed that; 1) There are 24 types of work accident risks identified in the concrete girder installation work in the Tukad Ayung bridge replacement project in seven stages of work, namely, the concrete girder preparation stage, girder truss making, erection (segmental girder setting), prestressed steel installation (strand), strand cable stressing work, girder concrete tendon grouting, and diaphragm installation stage, 2) The results of risk analysis on concrete girder installation work on the project The replacement of the Tukad Ayung Bridge, is in the moderate category, which is as many as 12 risks with a percentage of 50%. Furthermore, as many as 11 risks are included in the high category with a percentage of 45.837%. Meanwhile, in the extreme category as much as one risk with a percentage of 4.17%, 3) Risk control efforts that can be carried out from the three levels of risk found, namely moderate, high, and extreme, namely by reducing risk through administrative control, engineering control, and warning system.

Paper type: Research paper

Keyword: Risk Analysis, Work Accident, Tukad Ayung Bridge.

I. INTRODUCTION

The rapid growth and economic development that results in increasing population needs requires adequate transportation facilities and infrastructure in quality and quantity. In this regard, on the Simpang Cokroaminoto - Simpang Tohpati road there are three steel frame bridges that have a pavement width of 7 meters (two lanes) while the width of the road pavement is 14 meters (four lanes, two lanes). This causes a narrowing of the road when passing the three bridges. Therefore, a bridge replacement project was carried out Simpang Cokroaminoto - Simpang Tohpati so that traffic flow could be launched.

One of the bridge replacement projects on the Simpang Cokroaminoto - Simpang Tohpati bridge section is the replacement of the Tukad Ayung Bridge. The Tukad Ayung Bridge replacement project is one of the important aspects in efforts to improve infrastructure in Denpasar City, especially in East Denpasar district.

Tukad Ayung Bridge is one of the bridges that underwent replacement which aims to improve bridge infrastructure. This project is also carried out to improve inter-regional connectivity in addition to providing alternatives for residents to increase economic productivity. Tukad Ayung Bridge was previously an Australian

type steel truss bridge that had a pavement width of 7 meters (2 lanes). After replacement, the bridge is currently a concrete girder construction type so that its service life is stronger and more durable.

Considering that the Tukad Ayung bridge is the only access that connects between regions on the Simpang Cokroaminoto - Simpang Tohpati bridge, of course, this bridge replacement project is very important to do. In addition to the importance of the role of the bridge, it is also important to identify possible risks that arise in the Tukad Ayung bridge replacement project. Many risks may occur, both as a result of high rainfall causing flooding, water runoff that can wash away passing motorists, to the risk of work accidents that can be experienced by project workers. In this regard, this study reviewed the risk of work accidents in the Tukad Ayung Bridge replacement project, especially in concrete girder installation work.

Safety issues are also part of project planning and management. The implementation of Work Health and Accidents (K3) in the workplace aims to create a safe, comfortable, and healthy working atmosphere and environment for workers (Nursyachbani &; Susanto, 2018). The construction industry is considered the most vulnerable to accidents, the causes that often occur work accidents are human error, electric shock, and falling from a height (Soekiswara, 2020).

Research conducted by Wiyasa et al., (2015) showed that 78 high risks were identified, the most of which were in Tower Crane Operation work items. To reduce risks in the implementation of construction, it is necessary to carry out training related to K3 risks to each worker, implement a shift system and provide holidays to workers alternately, conduct health checks, control hazardous and high-risk work environments. In addition, research conducted by Novi & Apdeni (2022) which aims to determine the level of risk of work accidents in the construction project of replacing the Titian Panjang-Kayu Tanam bridge in West Sumatra, shows that as many as 8 work items were identified with the hazard identification, risk and opportunity assessment (IBPRP) method, the results of the work accident risk level values were as follows: 44% major risk, 56% medium risk, and 0% low risk.

Suparman & Fitriani (2016) also conducted a work accident risk analysis on the Musi VI Bridge project in Palembang, where this study showed that there were 64 risks of occupational injuries with 13 low risks, 47 medium risks, and 4 high risks. This risk control effort is carried out by requiring workers to use PPE according to the type of work, strict supervision of workers in the use of PPE, checking the work environment (safety patrol) regularly, safety talk every week, installing safety signs and checking worker health.

Based on the description above and previous research, this study has differences with research conducted by Wiyasa et al., (2015), Novi &Apdeni (2022), Suparman &; Fitriani (2016), which specifically analyzes the level of hazard risk in the implementation of Concrete Girder installation using the Hazard Identification, Risk Assessment And Risk Control method(HIRACH). Based on initial observations, in the Tukad Ayung bridge replacement project there are several causes of work accidents, such as workers who do not use complete Personal Protective Equipment (PPE), heavy rain so that work stops, activities side by side with heavy equipment and others so it is necessary to conduct research on work accident risk analysis in the Tukad Ayung bridge replacement project.

A. Literature Review

a. Occupational Health and Safety (K3)

Occupational Safety and Health (K3) philosophizes as a thought and effort to ensure the integrity and perfection of physical and spiritual work in particular and humans in general, the results of their work and culture towards a prosperous and prosperous society. While scientific understanding is science and its application to prevent the possibility of accidents and occupational diseases (Nursyachbani &; Susanto, 2018). Part of the company's overall management system which includes organizational structure, planning, implementation, responsibilities, procedures, processes and resources needed for the development, implementation, achievement, review and maintenance of occupational safety and health policies in order to control risks related to work activities in order to create a safe, efficient and productive workplace (International Labour Organization, 2013).

b. Occupational Health and Safety Risks (K3)

K3 risk is a risk related to the source of hazards arising in various activities that concern aspects of people, equipment, materials, and the work environment. Generally, risk is connoted as a negative thing (negative impact). Losses due to accidents from other events are risks that must be faced by every organization or company. To deal with the risks associated with K3, various concepts and approaches have developed to prevent accidents and unwanted events. One of the efforts to control K3 is to implement an Occupational Health and Safety Management System (SMK3) (Setiyadi, 2012).

c. Risk Management

Risk management is a process of identifying, measuring risks and establishing a strategy to prevent and deal with risks. Risk management is an integral part of the management process that runs within a company or institution. Risk management involves the process, culture, and structure in managing a risk effectively and planned in a good management system (Ramli, 2010). In the K3 aspect, risk management is an effort to manage

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K3 risks to prevent unwanted accidents in a planned manner, and structured in a good system. K3 risk management relates to hazards and risks that exist in the workplace where these hazards and risks can cause losses to the company and workers. Based on some of these explanations, the concept of Risk management can be compiled as a form of management of Risk to minimize adverse consequences that may arise through planning, identification, analysis, handling, and monitoring of Risks. Risk management is defined as the process of identifying, measuring, and ascertaining risks and developing strategies to manage those risks. In this case, risk management will involve processes, methods, and techniques that help project managers maximize the probability and consequences of positive events and minimize the probabilities and consequences of opposite events (Socrates, 2013).

d. Concrete Girder

In the world of construction, the meaning of concrete girder is a concrete block that is between two supports which can be pear or *abutment* in bridge construction. The function of the concrete girder beam is to channel the load above the construction to be delivered to the structure at the bottom. In general, the girder can be in the form of steel beams in the form of profile I, in the form of concrete blocks in the form of I (*Prestressed Concrette I Girder / PCI Girder*), some are in the form of boxes or boxes (often referred to as *box girders*), some are T-shaped and also several other shapes. Concrete girder has a span length from 20 meters to 40 meters so it is often used in bridge construction.

According to the design system, concrete girder is a girder that can be divided into two, namely precast concrete girder and also on-site concrete girder. Precast girder concrete is a concrete girder that has been produced and molded at the factory and then transported to the project site or field where the girder concrete will be used. While on-site girder is a concrete girder that is cast in the field or at the place of project implementation. This on-site girder can be a custom girder or a girder designed according to the model and follows the concrete design process in general, which uses formwork as a form of mold.

II. METHODS

This research was conducted on the Tukad Ayung bridge replacement project precisely located on Jalan Gatot Subroto Timur, Denpasar. The location of Tukad Ayung Bridge is at coordinates: 8038'09.86" S 115014'21.12" E. The types of data used in this study are quantitative and qualitative data. The data sources used are primary data sources and secondary data. The population in this study is project managers, supervisors, and technical experts who are outside the Tukad Ayung Bridge replacement project totaling 42 people. Based on calculations using the Slovin formula, the sample in this study was obtained as many as 30 respondents. The data collection methods used in this study were observation, interviews, doocumentation studies, literature studies, and questionnaires using a Likert scale of 1-5. The data analysis technique used in this study is HIRARC.

Figure 1. Research Location

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III. RESULTS AND DISCUSSION

A. Characteristics of Respondents

The characteristics of respondents indicate the identity of the respondents used in this study. The characteristics of respondents in this study can be seen in Table 1.

Table 1. Characteristics of Respondents

No.	Characteristis of Respondents	Frequency	Percentage
1	By Gender		
	Woman	2	7%
	Men	28	93%
	Total	30	100%
2	By Age		
	25-35 years	7	23%
	36-45 years	11	37%
	> 45 years	12	40%
	Total	30	100%
3	By Position		
	Engineering Experts	22	73%
	Project Manager	3	10%
	Supervisor	5	17%
	Total	30	100%
4	Based on Recent Education		
	High School/Equivalent	3	10%
	Bachelor	27	90%
	Total	30	100%

Source: Primary data processed, 2023

Based on this description, it can be seen that the majority of respondents in this study are men with the age of > 45 years with the majority having positions as technical experts and the last education, namely Bachelor.

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B. Identification of Work Accident Risk in Tukad Ayung Bridge Replacement Project

Based on the results of observations and interviews that have been conducted by researchers related to identifying the risk of work accidents in the Tukad Ayung bridge replacement project. The work that is the focus of this risk identification is the installation of concrete girders. Identification of the risk of work accidents for concrete girder installation work in the Tukad Ayung Bridge replacement project based on the method of implementing work consisting of seven stages of work. The seven stages of work on the concrete girder installation work of the Tukad Ayung Bridge replacement project along with 24 possible risks can be described as follows.

1) The concrete girder preparation stage, where there are risks that include:
   a. Workers impaled by fragments of material
   b. Workers or communities are hit by concrete girders.
   c. Girders are dropped or impacted.
   d. Collision of heavy equipment/vehicles transporting concrete girders.
2) Scaffolding Manufacturing Stage (*girder truss*), where there are risks that include:
   a. Workers or communities hit by blocks
   b. Workers pinched beams
   c. Scaffolding fell on workers
3) Erection *stage* (*Setting segmental girder*) where there are risks that include:
   a. Workers or communities hit by blocks
   b. Worker falls from a height
   c. Engine malfunction due to overload
4) Strand Installation Stage where there are risks that include:
   a. Workers or communities pierced by prestressed steel
   b. Worker falls from a height
   c. Workers exposed to burrs
5) Strand *Cable Stressing Work Stage* where there are risks that include:
   a. Worker falls from a height
   b. Workers or the public are ejected by broken strand cables
   c. Worker punctured end of kable *strand*
   d. Material falling from a height
6) Tendon grouting *stage* of concrete girder blocks where there are risks that include:
   a. Workers exposed to chemicals
   b. Workers crushed by *grouting machines*
   c. Exposure to other materials/materials
7) Diaphragm Installation Stage where there are risks that include:
   a. Worker falls from a height
   b. Pinched workers
   c. Workers crushed by falling machines
   d. Workers crushed by diaphragm material, falling from a height

C. Work Accident Risk Assessment at Tukad Ayung Bridge Replacement Project

Risk assessment is carried out by distributing questionnaires containing questions that aim to determine the risk assessment of respondents used in this research. Respondents used in this study include Project Managers, Technical Experts and Supervisors both who are directly involved in the Tukad Ayung Bridge Replacement project and who are not involved in the work but have knowledge related to bridge construction work.

Previously, validity and reliability testing was first carried out on the questionnaire used as a research instrument in this study. Based on the results of the validity test, it can be seen that the risk indicators in the assessment of the level of likelihood and severity used in this study have a correlation coefficient value greater than 0.30 with a significance value smaller than 0.05. This shows that the statement items in the research instrument are valid and suitable for use as a research instrument. Based on the results of reliability tests, it can be seen that all indicators used in this study have a Cronbach's Alpha coefficient of more than 0.70. Thus, it can be stated that the research instrument has met the requirements of reliability or reliability so that it can be used for further analysis.

This risk level analysis is a way to categorize risks into groups based on their level of risk. To determine the category of variables is to use the risk categorization table referring to AS/NZS 4360:2004. Before conducting a risk level analysis, an assessment of the level of likelihood (likelyhood) and severity (severity) was previously carried out based on the results of the questionnaire distribution. The calculation begins by determining the percentage of probability and severity of a risk then continues by entering the probability level based on the percentage category presented in Table 2.

Table 2. Determination of Likelihood and Severity Levels

Probability/Severity Values	Rating Scale	Level
$0\% < n \leq 20\%$	Very Low (VL)	1
$21\% < n \leq 40\%$	Low (L)	2
$41\% < n \leq 60\%$	Moderate (M)	3
$61\% < n \leq 80\%$	High (H)	4
$81\% < n \leq 100\%$	Very High (VH)	5

Source: Wirantika (2022)

Where n is the percentage value of the degree of probability and severity obtained based on the calculations made. After obtaining the value of the level of probability and severity, then multiplication is carried out between probability and severity (L x S) so that the level of risk can be determined. One example of the calculation is as follows.

1. Calculation of the Probability Level (L) of Risk R1
   Total score   = 76
   Number of data   = 30
   Highest answer   = 5
   Probability rate formula:

   $$L = \frac{Total\ Skor}{Total\ of\ Data\ x\ highest\ score}\ x\ 100\%$$
   $$= \frac{76}{30\ x\ 5}\ x\ 100\% = 51\%$$

   The result of calculating the probability rate of 51% based on table 2 is at level 3 or LR1 = 3

2. Calculation of Severity Level (S) Risk R1
   Total score   = 76
   Number of data   = 30
   Highest answer   = 5
   Probability rate formula:

   $$S = \frac{Total\ Skor}{Total\ of\ Data\ x\ highest\ score}\ x\ 100\%$$
   $$= \frac{76}{30\ x\ 5}\ x\ 100\% = 51\%$$

   The result of calculating the severity rate of 51% based on table 2 is at level 3 or SR1 = 3
   Based on the calculation of L and S on risk R1, the level of risk R1 is obtained as follows:
   Risk Level R1   = L x S = 3 x 3 = 9

The product of L and S at risk R1 produces a value of 9, meaning that based on the level of risk, the value shows R1 is at a high level. Further calculations for all risks identified in this study can be seen in the appendix. The table of results of the overall level of risk in this study is as follows.

Table 3. Risk Level Analysis

Code	Phase Work	Risiko	L	S	Risk Level
R1	Concrete girder preparation	Workers impaled by fragments of material	3	3	High
R2		Workers or communities crushed by concrete girders	4	2	High
R3		Girders dropped or impacted	2	3	Moderate

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R4		Collision of heavy equipment/vehicles transporting concrete girders	2	2	Moderate
R5	Scaffolding Manufacturing Stage (girder truss)	Workers or communities hit by blocks	4	2	High
R6		Workers pinched beams	2	3	Moderate
R7		Scaffolding fell on workers	2	4	High
R8	Erection Stage (Setting segmental girder)	Workers or communities hit by blocks	4	3	High
R9		Worker falls from a height	4	2	High
R10		Engine malfunction due to overload	4	4	Extreme
R11	Prestressed Steel Mounting Stage (Strand)	Workers or communities pierced by prestressed steel	4	3	High
R12		Worker falls from a height	4	2	High
R13		Workers exposed to burrs	4	2	High
R14	Strand Cable Stressing Work Stage	Worker falls from a height	3	2	Moderate
R15		Workers or the public are ejected by broken strand cables	3	4	High
R16		Worker punctured end of kable strand	2	3	Moderate
R17		Material falling from a height	3	2	Moderate
R18	Grouting stage tendon concrete girder block	Workers exposed to chemicals	3	2	Moderate
R19		Workers crushed by grouting machines	2	3	Moderate
R20		Exposure to other materials/materials	2	3	Moderate
R21	Diaphragm Installation Stage	Worker falls from a height	3	2	Moderate
R22		Pinched workers	4	2	High
R23		Workers crushed by falling machines	2	3	Moderate
R24		Workers crushed by diaphragm material fall from a height	3	2	Moderate

Source: Primary data processed (2023)

Based on Table 3. It can be seen that of the 24 risks identified, these risks are at moderate, high, and extreme levels. The following is presented risk mapping based on risk categories presented in Table 4.

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Table 4. Risk Mapping by Risk Category

Probability / likelihood of hazard	Severity of hazard				
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastropic (5)
Rare (1)					
Unlikely (2)		Moderate (R4)	Moderate (R3, R6, R16, R19, R20, R23)	High (R7)	
Prosibble (3)		Moderate (R14, R17, R18, R21, R24)	High (R1, R15)		
Likely (4)		High (R2, R5, R9, R12, R13 R22)	High (R11, R8)	Extreme (R10)	
Almost certain (5)					

Source: Primary data processed (2023)

Based on Table 4, it can be seen that the majority of risks identified in the concrete girder installation work in the Tukad Ayung Bridge replacement project are in the moderate category, which is as many as 12 risks with a percentage of 50%. Furthermore, as many as 11 risks are included in the high category with a percentage of 45.83%. Meanwhile, in the extreme category as much as one risk with a percentage of 4.17%.

D. Control of Work Accident Risk in Tukad Ayung Bridge Replacement Project

After identifying hazards and risk assessments, the next step is to determine risk controls. Risk control is the final stage in data processing using the HIRARC method. Risk control aims to provide solutions to risks that have been identified and whose levels are known. Regarding risk control, priority is given to risk levels from medium to high, while low risk levels are ignored. Based on the analysis carried out in the Focus Group Discussion (FGD) with K3 Risk Expert sources, alternative risk controls were obtained to minimize the possibility of the risk of work accidents occurring or appearing in the Tukad Ayung bridge replacement project. Regarding risk control that can be carried out from the three levels of risk found, namely moderate, high and extreme, namely by reducing risk through administrative control, engineering control and warning systems.

IV. CONCLUSION

Based on the results of research and discussion that have been described, it can be concluded that:
a. There are 24 risks of work accidents identified in concrete girder work in the Tukad Ayung bridge replacement project, namely 1) The concrete girder preparation stage, there are four risks, 2) The stage of making scaffolding (girder truss), there are three risks, 3) The erection stage (setting segmental girder) there are three risks, 4) The stage of laying prestressed steel (cable strand) there are three risks, 5) The stage of stressing cable strand work There are four risks, 6) The tendon grouting stage of the concrete girder block has three risks, 7) The diaphragm installation stage has four risks.

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e. Based on the risk identification that has been carried out, related to the risk assessment of work accidents in girder work in the Tukad Ayung Bridge replacement project, it can be seen that the majority of risks identified in concrete girder work in the Tukad Ayung Bridge replacement project are in the moderate category, which is as many as 12 risks with a percentage of 50%. Furthermore, as many as 11 risks are included in the high category with a percentage of 45.83%. Meanwhile, in the extreme category as much as one risk with a percentage of 4.17%.

f. Based on risk assessment on possible risks that occur or arise in the Tukad Ayung Bridge replacement project, there is risk control that can be done from the three levels of risk found, namely moderate, high, and extreme, namely by reducing risks through administrative control, engineering control , and warning systems.

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The Mediating Role of Job Satisfaction in Relationship Between Top Management Support on Employee Performance

Sri Eka Kumaladewi[1], Joko Suyono[1], Damarsari Ratnasahara Elisabeth[2]

Universitas Narotama, Surabaya, Indonesia[1]

Sekolah Tinggi Ilmu Ekonomi Mahardhika, Surabaya, Indonesia[2]

Corresponding Author*: sriekadewi1971@gmail.com, joko.suyono@narotama.ac.id

ABSTRACT

Purpose: The purpose of this study is to analyze the influence of top management support on employee performance, top management support on job satisfaction, and also to analyze the mediating role of job satisfaction.

Design/methodology/approach: The sample in this study were 70 employes of regional drinking company owned by the regional government in East Java, Indonesia. Questionnaire was used to obtain the data and data analysis technique used was Partial Least Square (PLS).

Findings: The results indicated that top management support influences employee performance, top management support influences job satisfaction, and job satisfaction is able to mediate the influence of top management support on employee performance.

Research limitations/implications: This research is limited to doing regional drinking company owned by the regional government in East Java, Indonesia. For generalization so that further research can be carried out in different organizations or companies and in different regions (cities).

Practical implications: The results of this research can be used as a reference to improve employee performance in regional drinking company owned by the regional government and similar industries.

Originality/value: The results of the research show that among the variables of top management support and job satisfaction need to be implemented in regional drinking company owned by the regional government and similar industries.

Paper type: This paper can be categorized as research paper.

Keywords: Top Management Support, Job Satisfaction, Employee Performance

I. INTRODUCTION

The success of a company really depends on the function of its employees as human resources. The role and function of an employee is to help increase productivity, maximize performance, and utilize time efficiently because if employees do not work productively and are inefficient, they will no longer be the most important asset for the company and will even become a burden for the company. Employee performance is very important because it can produce added value for the company. The performance of a company really depends on the performance of its employees. If employee performance is very good, it can be expected that the company's performance will be good too. Conversely, if employee performance declines, it will cause company performance to decline. Employee performance in a company plays a very important role in increasing company productivity. Employees with high performance will help the company realize the goals that have been set. Without the support of good employee performance, it is very difficult for a company to realize its stated goals. The success of a company in achieving its goals is greatly influenced by employee performance. Every company will always try to improve employee performance in the hope that the company's goals can be achieved.

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According to Robbins (2017) employee performance is a function of the interaction between ability and motivation. Setting performance goals is very useful for setting targets and not only for evaluating performance at the end of the period but can also be used to manage work processes during that period. Meanwhile, Mangkunegara (2016) stated that performance is the result of work both in quantity and quality produced by an employee in carrying out his duties in accordance with the responsibilities given to him. According to As'ad (20018) performance is the level of success a person has in carrying out their work duties. So the activity that is commonly assessed in an organization is employee performance, namely how an employee carries out everything related to a job, position or role in the organization. The success of an organization in achieving its goals and fulfilling its social responsibilities largely depends on its employees. If employees are able to carry out their duties well, the organization will be able to achieve its stated goals. How well an employee carries out his role in carrying out the tasks that are his responsibility. Hasibuan (2016) stated that performance is a result of work obtained by a person in carrying out the tasks assigned to him which is based on experience, skills, experience and time. Good performance is optimal performance, in the sense that the performance is in accordance with the standards set by the leadership of the organization. Increasing employee performance will increase the success of an organization so that an organization is able to survive in the face of increasingly fierce competition.

From several empirical studies, there are several factors that influence employee performance, including top management support (Ahmad et al., 2020; Azhmy et al, 2022; Adiyantari and Yatnyana, 2019; Dukhan et al., 2017; Chen el al, 2019) , and job satisfaction (Azhari et al, 2021; Paparang et al, 2021; Adha et al, 2019; Hendrayana et al, 2021; Egenius et al, 2020).

Top management is someone who has a top position with responsibility for achieving certain goals and making the highest decisions (Cahyadi, et al, 2020). Understanding top management support according to Ragu-Nathan et. al. (in Cahyadi, Mukhlisin and Pramono, 2020) is the extent to which management is involved in activities and the importance of information systems. According to Belout et. al. (in Cahyadi, et al, 2020), top management support is how top management provides the resources, authority or power needed for project success. According to Romney & Steinbart (in Anriva, 2019), "top management support is how top management defines the information and processing needed, creates system goals and objectives, carries out system reviews, and allocates funds. Top management support includes funding guarantees and determining development priorities.

Sutrisno (2019) defines job satisfaction as the way employees view their work in relation to conditions at work, employee cooperation, rewards received at work, and matters related to physical and psychological elements. Wibowo (2016) emphasized that everyone who works is expected to feel satisfied with their work location. Managers anticipate that productivity will be influenced by job satisfaction. Therefore, managers must understand what needs to be done to ensure that their staff members are satisfied with their jobs.

This research was conducted with the aim of analyzing the influence of top management support on employee performance, top management support on job satisfaction, and also to analyze the mediating role of job satisfaction.

A. Literature Reviews and Hypotheses
1. Employee Performance

Performance is a comparison between work performance, namely a comparison between work results and expected standards (Dessler, 2020). According to this definition, performance focuses on the results of the work. According to Siagian (2020) performance is a universal concept which is the operational effectiveness of employees, organizational parts and parts based on established standards and criteria. Bernardin and Russell (in Faryandi, 2018) state that: "Performance is defined as the record of outcomes produced on a specified job function or activity during a specified time period". That is, performance can be described as a record of what has been done on a specific job within a certain time period. According to Hasibuan (2021), performance is a work result achieved by a person in carrying out the tasks assigned to him which is based on skill, experience, seriousness and time.

According to Rivai (2020), performance is the result or overall level of success of a person during a certain period in carrying out tasks compared to various possibilities, such as standard work results, targets or goals or criteria that have been determined in advance and have been mutually agreed upon.

Mangkunegara (2019) said that performance is the result of work in terms of quality and quantity achieved by an employee in the ability to carry out tasks in accordance with the responsibilities given to him by his superiors. According to Mangkunegara (2019) there are several characteristics of employee performance, namely as follows:
1. Have high personal responsibility
2. Can take and bear the risks faced.
3. Have realistic goals.
4. Have a comprehensive work plan and strive to realize its goals.

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5. Utilize concrete feedback in all work activities carried out.

Performance is basically the result of an employee's work in a certain period which can be compared with various possibilities and can be measured and assessed Soeprihanto (quoted by Suharyoko, 2016). Meanwhile, according to Tadjuddin (quoted by Suharyoko, 2016), performance is a result or level of success achieved by workers or employees in their field of work, according to certain criteria that apply to a particular job and evaluated by certain people.

Based on the definitions above, it can be said that performance is the manifestation or appearance of employees in carrying out work. A person can be said to have good work performance when they can carry out their work well, meaning they achieve the targets or work standards that have been set and are even expected to exceed the work standards in question.

According to Rivai (2020) there are several performance benefits which basically include:
1. Improvement of performance, in the form of activities to improve employee performance.
2. Placement decisions, assisting in promotions, transfers and demotions in general.
3. To improve employee performance.
4. As employee training and development.
5. Human resources feedback. Good or bad performance throughout a company identifies how well its Human Resources are functioning.

Meanwhile, Mathis and Jackson (2019) stated that several factors within employees and within the organization that determine individual performance include the following:
1. Individual abilities, consisting of several components, namely talents, interests and personality factors.
2. The effort put in consists of motivation, work ethics, attendance and task design.
3. The organizational support it receives consists of training and development, equipment and technology, work standards, management and co-workers.

Traditionally, people work based on job descriptions that contain job duties and responsibilities. However, performance standards must emphasize work results and not tasks. So a set of work standards describes the results that should exist and occur in satisfactory work completion. Preparing performance standards based on job descriptions will provide opportunities for supervisors and employees to work. Therefore, a job description can function as a statement about the general goals that subordinates must achieve in supporting organizational goals. Sofyandi (2019) further argues that performance standards are considered satisfactory if:
1. The statement indicates several key areas of employee responsibility
2. Contains how a work activity will be carried out
3. Direct attention to the quantitative mechanisms by which performance results will be measured.

2. Top Management Support

According to Dermawan and Kunkun (2015), top management is an executive manager such as the chief executive officer, the information system director, chief operation officer, members of the board of directors, president, vice president. and others. According to Lestari, et al (2017), top management is the highest or top management level usually consisting of the board of directors and the main director. The board of directors has the task of deciding matters that are very important for the survival of the company. Top management is in charge of setting operational policies and guiding the organization's interactions with the environment. Top management, also known as executive officer. In charge of planning activities and company strategy in general and directing the course of the company. Examples of top management are the CEO (Chief Executive Officer), CIO (Chief Information Officer), and CFO (Chief Financial Officer). From some of the above definitions, it can be concluded that top management is the highest level of management that regulates the running of the company and sets operational policies, which usually consists of the board of directors and main director (Safitri, 2017).

According to Budi and Abijono (2016), in general, there are five main tasks that are carried out by a CIO who must be responsible to the company's chief executive officer (Chief Executive Officer) or the president director. These tasks include:
    a. Understanding business
        The first and foremost task which is the responsibility of other executives in the board of directors is to thoroughly study and understand in detail and in detail the business the company is engaged in. Fast competition and a very dynamic business environment require company executives to constantly monitor and study aspects outside the company intensely and continuously.
    b. Building division image
        The second task which is the responsibility of a CIO is to build the credibility of the information systems directorate he leads. This is very important considering that many employees consider that strategic use

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of information systems is a characteristic of the company in the future, not now. However, no matter what, the existing directorate of information systems must be able to prove that the activities carried out today are a way or a bridge to the future. The information systems division must have a good image in the eyes of other functions in the company. The most effective strategy is to assist human resources within the company to improve their performance through the use of information technology, because this is the main mission of the existence of an information system in the company.

c. Improving the quality of technology users
    A CIO has a duty to promote information technology so that it is actively used by company employees. In addition to providing educational training programs, a strategy is needed to make employees interested in learning further and utilizing existing technology. The goal is to make employees familiar with computers, so that in addition to improving the quality of their work, new innovations in the form of development ideas in the future will also influence the development of information systems in the company.

d. Declaring information technology vision
    The next task for a CIO is to determine the company's vision through the use of information systems in the future. A good senior executive is always proactive. Helping a company plan its vision for the future is one example of a proactive attitude that must be promoted among companies. The vision for the use of information systems is an integral part of the company's general vision.

e. Information System Development
    The final mission of a CIO is of course to make all of the above things real, include planning and developing the company's information system architecture, which occurs from components such as software, hardware, brain ware, processes and procedures, infrastructure, standards, and so on. On an ongoing basis, a CIO must be able to optimally utilize the company's current information system, in line with its future development plans.

The definition of top management support according to Cahyadi, et al (2020) is the extent to which management is involved in activities and the importance of information systems. According to Belout et. al. (cited by Cahyadi, et al, 2020), top management support is how top management provides the resources, authority or strength needed for project success. According to Anriva (2018), top management support is how top management defines the information and processing needed, makes system goals and objectives, reviews the system, and allocates funds. Top management support includes guaranteeing funding and determining development priorities. According to Ikhsan and Bustaman (2016), top management support is "… a form of manager support for system users. One form of management support is providing facilities." These facilities can be in the form of training and providing assistance to system users when facing problems related to the system. From some of the statements above, it can be concluded that top management support is a form of manager support to users, this support is in the form of providing facilities and supporting their activities when planning.

The dimensions of top management support according to Chen and Paulraj (2004) cited by Yulianti (2012) are as follows:

a. Quality decisions
    Quality decisions are at the core of all planning is decision making, a choice of ways of acting. In this connection, decisions are as a way of acting that is chosen by managers as the most effective, meaning placement to achieve goals and solve problems.

b. Decision acceptance
    Acceptance of a decision is a conscious reaction to several alternative solutions by analyzing the possibilities of these alternatives and their consequences. Each decision will make a final choice, it can be an action or an opinion.

c. Satisfaction with the decision process
    Satisfaction with the decision process shows pleasant feelings related to the employee's view of the decision.

Research on the influence of top management support on employee performance has been carried out by several previous researchers, including Ahmad et al. (2020), Azhmy et al (2022), Adiyantari and Yatnyana (2019), Dukhan et al. (2017), Chen et al (2019). The results of this research prove that top management support influences employee performance. Thus, a hypothesis can be made as follows:

H1: top management support influences employee performance.

3. Job Satisfaction

Hariandja (2016) posits that job satisfaction encompasses individuals' positive or negative feelings towards various facets or aspects of their work tasks. Similarly, Hasibuan (2016) defines job satisfaction as an emotional disposition characterized by enjoyment and fondness for one's job, which is manifested through work morale.

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This emotional connection to work can be seen as the outcome of a comparative analysis between what employees actually receive from their work and their expectations, desires, and perceived entitlements (Gomes, 2016). Job satisfaction within the workplace refers to the contentment experienced by employees through factors such as recognition for their efforts, favorable job placements, fair treatment, adequate equipment, and a conducive working environment. It is noteworthy that individuals who prioritize job satisfaction at work tend to value the intrinsic rewards of their work over monetary compensation, despite the latter's significance. Conversely, satisfaction beyond the workplace pertains to employees' contentment with the level of remuneration received from their work, enabling them to fulfill their needs outside of work. Moreover, job satisfaction, when viewed in the context of both internal and external aspects of work, is characterized by a harmonious balance between emotional fulfillment derived from work and the adequacy of remuneration. Employees who experience this integrated form of job satisfaction tend to feel content when they perceive fairness and appropriateness in both their work outcomes and compensation.

According to Yulk (2015) several theories about job satisfaction can be grouped into three types, namely what is referred to as a) discrepancy theory, b) equity theory, and c) two factor theory. Discrepancy theory measures a person's job satisfaction by calculating the difference between how much of something there should be and how much there is now. A person's job satisfaction depends on the discrepancy between the value of the desired expectations, with what according to his feelings or perceptions he has achieved or obtained from his work. Thus, people will feel satisfied if there is no difference between the desired and their perception of reality, because the desired minimum limit has been reached. If what is obtained is greater than desired, then people will be satisfied again even though there is discrepancy, but it is a positive difference. On the other hand, the farther the perceived reality is below the minimum standard, negative discrepancy will occur, and the greater the dissatisfaction of a person with work. Equity theory was first developed by Yulk (2015). The principle of this theory is that people will feel satisfied or dissatisfied depending on whether or not they will feel equity in a situation obtained by comparing themselves with other people in the same class, office or elsewhere. The elements of this theory can be grouped into three, namely input, outcome, comparison, and equity-in-equity elements. What is meant by input according to Yulk (2015) is as follows: input is anything of value that and employee perceives that he contributes to his job. that can support the implementation of work. For example inputs are education, experience, skills, business, equipment, and others). Outcome is anything of value that the employee perceives he obtains from the job, for example wages, additional status symbol benefits, recognition, opportunities for achievement or self-expression. While the comparison person can be interpreted as the feelings of someone in the same company, or in another place, or it could be with himself in the past.

Yulk (2015) delineates several theories concerning job satisfaction, which can be categorized into three main types: a) discrepancy theory, b) equity theory, and c) two-factor theory. Discrepancy theory assesses an individual's job satisfaction by quantifying the variance between the perceived ideal and the current reality. The level of job satisfaction is contingent upon the disparity between one's desired expectations and what they perceive to have attained from their work. Hence, individuals are inclined to feel content when there's congruence between their desired and perceived realities, as it signifies the fulfillment of minimum expectations. Moreover, if the obtained outcomes surpass the desired ones, individuals tend to experience satisfaction, albeit with a positive variance. Conversely, negative disparity between perceived and desired outcomes leads to dissatisfaction, intensifying as the perceived reality falls further below the minimum standard.

On the other hand, equity theory, pioneered by Yulk (2015), posits that individuals' satisfaction or dissatisfaction hinges on their perception of fairness, attained through comparisons with peers within the same organization or elsewhere. This theory delineates three primary elements: inputs, outcomes, and comparisons, along with equity-in-equity elements. Inputs encompass anything of value that employees perceive they contribute to their job, such as education, experience, skills, resources, and more. Outcomes, on the other hand, represent the rewards or benefits employees perceive they receive from their job, including wages, status symbols, recognition, and opportunities for advancement or self-expression. Comparisons may involve evaluating one's own situation against others in the same workplace or elsewhere, or even comparing current circumstances with past experiences. In summary, Yulk (2015) introduces these theories to provide frameworks for understanding the dynamics of job satisfaction, shedding light on how individuals perceive and evaluate their work experiences in relation to their expectations and the circumstances of their peers.

Previous research on the influence of top management on job satisfaction has been carried out by several researchers, including Surya et al (2021) and Niehoff et al (1990). The results of this research prove that top management support influences job satisfaction. Apart from that, there are also several previous studies which prove that job satisfaction influences employee performance (Azhari et al, 2021; Paparang et al, 2021; Adha et al, 2019; Hendrayana et al, 2021 and Egenius et al, 2020). Thus the following hypothesis can be made:

H2: top management support influences job satisfaction
H3: job satisfaction influences employee performance
H4: top management support influences employee performance through job satisfaction

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Based on the problem formulation that has been created and also based on previous research, a research framework can be prepared as follows:

Figure 1. Research Model

II. METHODS

The population in this study were 70 employes of regional drinking company owned by the regional government in East Java, Indonesia. Meanwhile, the sampling technique used total sampling, meaning that the entire population of 70 people was taken as the research sample. The questionnaire technique is used to obtain data related to the research variables. The questionnaire is arranged in the form of a closed statement with 5 (five) alternative answers using a Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Data analysis technique used to analyze questionnaires that have been filled out by respondents is Partial Least Square (PLS).

III. RESULTS AND DISCUSSION

A. Hypothesis Testing

Based on the data processing that has been carried out, the results can be used to answer the hypothesis in this research. Hypothesis testing in this research was carried out by looking at the T-Statistics values and P-Values values. The research hypothesis can be declared accepted if the P-Values value is <0.05 (Yamin and Kurniawan, 2011). The following are the results of hypothesis testing obtained in this research:

Table 1. Hypothesis Testing

Hypothesis	Influence	T-statistics	P-Values	Result
H1	Top Management Support -> Employee Performance	2,137	0,005	Accepted
H2	Top Management Support -> Job Satisfaction	4,4690	0,000	Accepted
H3	Job Satisfaction -> Employee Performance	5,715	0,000	Accepted
H4	Top Management Support -> Job Satisfaction -> Employee Performance	2,177	0,000	Accepted

Based on the data presented in the table above, it can be seen that several hypotheses proposed in this research are as follows:
1. The influence of top management support on employee performance has a P value of 0.005 or less than 0.05. This means that the Top Management Support variable influences employee performance.

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2. The effect of top management support on job satisfaction has a P value of 0.000 or less than 0.05. This means that the Top Management Support variable influences Job Satisfaction.
3. The influence of job satisfaction on employee performance has a P value of 0.005 or less than 0.05. This means that the Job Satisfaction variable influences employee performance.
4. The influence of top management support on employee performance through job satisfaction has a P value of 0.000 or less than 0.05. This means that the Organizational Support variable influences employee performance through job satisfaction.

IV. CONCLUSION

Referring to the results of hypothesis testing, it can be seen that Top Management Support influences Employee Performance. The direction of the relationship between the two variables is positive. These results indicate that changes that occur in the Top Management Support variable will be accompanied by changes in the Employee Performance variable in a directly proportional manner. If Top Management Support improves, it will trigger an increase in Employee Performance. On the other hand, poor top management support will have an impact on reducing employee performance. The results of this research are in line with several previous researchers, including Ahmad et al (2020), Azhmy et al (2022), Adiyantari and Yatnyana (2019), Dukhan et al (2017), Chen et al (2019). This research provides evidence that top management support influences employee performance. Having top management support will make it easier for employees to carry out their duties. Employees will easily complete their work because they are fully supported by top management. Problems faced by employees will be easily resolved because they always receive direction and support from top management.

Referring to the results of hypothesis testing, it shows that Top Management Support has an effect on Job Satisfaction. Both variables have a positive relationship direction. These results indicate that changes that occur in the Top Management variable will have a directly proportional impact on changes in the Job Satisfaction variable. If top management support shows a good position, it will encourage high job satisfaction. Conversely, low Top Management Support will have the effect of decreasing Job Satisfaction. Top Management support in real form will make employees satisfied with the work they do. Referring to the variable description data, it can be seen that job satisfaction of employees of regional drinking company owned by the regional government in East Java, Indonesia is good. These results cannot be separated from the contribution of Management Support which is in the quite good category. Top Management support will make employees comfortable and happy with their work, co-workers, happy with supervision, and the salary they receive. The results of this research are in line with the results of several previous researchers, including Surya et al (2021) and Niehoff et al (1990). The results of this research prove that top management support influences job satisfaction.

In accordance with the results of hypothesis testing, it confirms that job satisfaction influences employee performance. The direction of the relationship between the two variables is positive. These results indicate that changes that occur in the Job Satisfaction variable will have a directly proportional impact on changes in the Employee Performance variable. If Job Satisfaction improves, it will encourage increased Employee Performance. On the other hand, low job satisfaction will have the effect of decreasing employee performance. Referring to the variable description data, it can be seen that the performance of employees of regional drinking companies owned by the regional government in East Java, Indonesia is very good. These results are a contribution to job satisfaction which is in the good category. Employees who feel emotionally comfortable and happy with their work will make it work well, producing quality and quantity targets in accordance with company regulations. Previous research on the influence of job satisfaction on employee performance has been conducted by several previous researchers, including Azhari et al (2021), Paparang et al (2021), Adha et al (2019), Hendrayana et al (2021), Egenius et al (2020). The results of this research prove that job satisfaction influences employee performance.

Referring to the results of hypothesis testing, it shows that Management Support influences Employee Performance through Job Satisfaction. The relationship between these three variables is positive. These results indicate that changes in the Job Satisfaction variable will encourage a directly proportional influence of Organizational Commitment on Employee Performance. If job satisfaction increases, the influence of Top Management Support on Employee Performance will be greater. The results of this research confirm that Job Satisfaction is a variable that is able to encourage the influence of Top Management Support on Employee Performance. Theory states that feelings of enjoyment or emotion towards work will shape the influence of Top Management Support on Employee Performance. Employees who enjoy their work will create Top Management Support which will influence employee performance. The results of this research are supported by previous research which states that top management support for employee performance, namely the research of Ahmad et al (2020), Azhmy et al (2022), Adiyantari and Yatnyana (2019), Dukhan et al (2017), Chen et al (2017) with research results proving that top management support influences employee performance. Meanwhile research on

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job satisfaction on employee performance) has been carried out by several previous researchers, namely Azhari et al (2021), Paparang et al (2021), Adha et al (2019), Hendrayana et al (2021), Egenius et al (2020). The results of this research prove that job satisfaction influences employee performance.

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The Influence of Transformational Leadership Intrinsic Motivation and Work Discipline on Employee Perfomance

Hikmah Nurjanah, Linda Puspita Herawati, Lisa Harry Sulistiyowati

Faculty of Economy, Universitas Swadaya Gunung Jati, Cirebon, Indonesia

Corresponding Author*: lisaharry@ugj.ac.id

ABSTRACT

Purpose: This research aims to analyze the influence of Transformational leadership, intrinsic motivation, and work discipline on turnover intention at Cirebon Regency Secretariat.

Design/methodology/approach: This type of research uses a quantitative approach and uses primary data. The population in the study was 110 employees of Cirebon Regency Secretariat. The sampling technique in this research uses saturated samples, namely a sampling technique that uses all population members as samples data collection through questionnaires. The analysis method used is the Statistical Product and Service Solution (SPSS) Version 25 method.

Findings: The results of this syudy show that transformational leadership effects employee performance, intrinsic motivation effects employee performance, and work discipline effects on employee performance.

Research limitations/implications: This research focuses on the influence of transformational leadership,Intrinsic motivation and work discipline on employee performance.

Practical implications: Based on the research results of the three variables, namely transformational leadership,intrinsic motivation and work discipline, both directly and indirectly, it turns out that they simultaneously influence employee performance .Based on the research results, variable transformational leadership,Intrinsic motivation and work discipline have a join (simultaneous) effect on employee perfomace at the Cirebon Regency Secretariat.

Originality/value: This paper is Original

Paper type: Research paper

Keyword: Transformational Leadership, Intrinsic Motivation, Work Discipline, Employee Performance.

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I. INTRODUCTION

The enactment of Law No. 23/2014 on Regional Government has led to various structural, functional, and cultural changes in the order of regional governance. One of the most essential changes is related to the position of the main tasks and functions of government institutions. Regional empowerment as an effort to improve the performance of government officials can occur when government officials can change themselves in order to implement regional autonomy. In the era of regional autonomy, the enthusiasm for reform is still very much felt in life, which leads to the spirit to leave the old order, which is not open towards a more democratic, accountable, and transparent government, so as to realize good governance. It is evident that the implementation of regional autonomy is not that easy to be implemented by each region because a region must be able to prepare itself in order to foster better human resources. Therefore, the implementation of regional autonomy is very important in improving the performance of the apparatus.

Likewise, with Government Regulation Number 18 of 2016, in the formulation of the duties and functions of each regional apparatus, the Regional Secretariat, as a staff element, essentially carries out the function of coordinating policy formulation and coordinating the implementation of regional service tasks and regional technical institutions, starting from the planning process, implementation, monitoring and evaluation, reporting,

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and administrative services. In addition, the Regional Secretariat also carries out other general government functions that are not covered by the duties of regional offices and technical institutions, such as handling cooperation affairs, borders, and others. In carrying out its main duties and functions as well as in an effort to achieve the vision and mission of the Cirebon Regency Government, the Regional Secretariat always strives to continuously improve its performance as a reliable staff element in all aspects, including the implementation of good governance. In the following years, the Regional Secretariat prioritized increasing the capacity, speed, and quality of services, as well as the efficiency and effectiveness of resource management. Given that humans are the driving force behind other resources in improving performance, the main challenge for the Cirebon Regency Regional Secretariat apparatus in this era of autonomy is the development of quality human resources with a broad horizon and the ability to think. The benchmark for improving employee performance is due to the application of leadership style, work motivation, and work discipline.

The success and success of an organization's performance are determined by the quality of its human resources, leaders, and subordinates, so that the understanding of performance is fulfilled. To measure the performance of government apparatus as an element of employees, it is usually measured by the appearance of work, discipline, and attendance of employees. Good employee performance will have an impact on the overall performance of the organization or company, which in turn can be seen in the achievements of the organization or company. Performance is the result of work achieved by someone in an organization in order to achieve organizational goals in a certain period of time. Tika (2011: 121). Employee performance is an individual thing because each employee has an unequal capacity when doing his job. Performance in government is a response to the success or failure of predetermined company goals. Leaders sometimes do not monitor employee performance unless their performance is at such a bad stage that the government or company experiences a fatal crisis. Leaders have an essential position in the organization; it is necessary to have a leader to be able to direct and influence each member of the organization. The leader is someone who has responsibility for the sustainability of the organization. They must guide and manage their members to achieve the goals of the organization. In carrying out his leadership duties, a leader has different lead patterns and styles.

(Northouse, 2013; Yukl, 2011). Leadership is one of the processes affecting a group of people to achieve common goals.

One of the popular theories built by leadership in the West is the model of transformasional leadership story.

(Conger 2002). views transformational leadership as the leadership that goes beyond incentives for performance, to develop and encourage workers intellectually and creatively, as well as to transform their own concerns into and essential part of the organization's mission. In this view transformational leadership has an important role in influencing members within the organization and involving members to contribute to the organization

consciously. In addition, transformational leadership also provides the perspective that organizational leaders are also responsible for being leaders of changes that will occur within the organization.

Intrinsic motivation has been studied since the early 1970s. Intrinsic motivation is the self-desire to find new things and new challenges, to assess one's potential, to observe and to gain knowledge. It is influenced by an interest or enjoyment in the task itself, and exists within the individual rather than depending on external pressures or a desire for reward.

In 1973, Lepper et al. studied that intrinsic motivation represents a motivation to indulge in an activity purely for the reason of the activity itself. When individuals are intrinsically motivated, they practice activities for the interest and enjoyment those activities provide (Csikszentmihalyi, 1975), and they typically perform at relatively high levels (Amabile, 1996; Grolnick& Ryan, 1987). Intrinsic motivation has appeared as an important phenomenon for educators, a natural wellspring of learning and achievement that can be systematically undermined by parent and teacher practices (Ryan & Stiller, 1991). Because intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces that engender and undermine it. Findings suggest that perceiving oneself as competent at an activity often promotes enjoyment of that activity, as does the presence of ''optimal'' challenges (Csikszentmihalyi et al., 1975) and valuing competence in the activity (Elliot et al., 2000).

Motivation is important because it supports human behavior so that they want to work hard and enthusiastically toward achieving optimal things. Motivation, as an encouragement, is an important factor in carrying out optimal work. Without motivation, an employee feels reluctant to do a job well. Employee performance will be achieved if there is a willingness from oneself and can be encouraged by other parties. In addition to leadership and motivation, work discipline is a factor that affects performance. Work discipline is crucial for a company or government agency to realize company goals. Without good work discipline, it is difficult for a company to achieve optimal results. Good discipline reflects the magnitude of a person's responsibility towards the tasks. Discipline is the sixth human resource function of the most important human resource management operative function because the more employee discipline, the higher the work performance they can achieve. Without good employee work discipline, it is difficult for companies to achieve optimal work results.

Latainer (Sutrisno, 2019: 87) defines "discipline as a force that develops in the body of employees and causes employees to adjust voluntarily to decisions, regulations, and high values of work and behavior." According to Sumadhinata (2018), work discipline is a tool managers use to communicate with employees so that they are willing to change their behavior and to increase awareness and willingness of someone to obey all rules and social norms that apply in a company. Meanwhile, according to Fererius Hetlan (Muhyadin, 2019), work discipline is an attitude of willingness and willingness of a person to obey and obey the norms of regulations that apply around him.

Employee performance (work performance) is the work of quality and quantity achieved by an employee in carrying out their duties in accordance with the responsibilities given to him. Performance is defined as "the achievement or achievement of a person regarding the tasks assigned to him. Performance is the result obtained by organizations, either profit- or non-profit-oriented, that are produced over a period of time.".

Based on several understandings that encourage the above, it can be concluded that when the influence of transformational leadership, intrinsic motivation, and employee discipline decreases, employee performance will decrease, and vice versa, if motivation and work discipline increase, performance will also increase in a company. So the achievement of the performance of employees of the Cirebon Regency Regional Secretariat is very influential with the increase in transformational leadership, intrinsic motivation, and work discipline. If these three things are applied, the greater the influence and good impact on employee performance and the higher the performance achieved by employees. Likewise, on the contrary, the decline in transformational leadership, intrinsic motivation, and work discipline has a greater influence on the decline in employee performance in a company.

A. Literatur Review
1. Transformational Leadership
Burns (1978) defined a transactional leader as the one who leads through social interchange—he changes one thing into another, suggests a financial reward for good results, or punishes financially for unachieved results. A transactional leader changes valuable things with his subordinates in mutual agreement to pursue higher goals.

Stogdill (1974) had the same opinion at the beginning of the 1970s when he stated that 'there are almost as many definitions of leadership as there are persons who have attempted to define the concept' While Bennis admits the difficulty of understanding the concept (1959, p. 259), 'of all the hazy and confounding areas in social psychology, leadership theory undoubtedly contends for the top nomination.

Transformational leadership can produce a vast array of individual, group, and organizational outcomes (Lynch, 2015).

2. Intrinsik Motivation
In 1973, Lepper et al. studied that intrinsic motivation represents a motivation to indulge in an activity purely for the reason of the activity itself. When individuals are intrinsically motivated, they practice activities for the interest and enjoyment those activities provide (Csikszentmihalyi, 1975), and they typically perform at relatively high levels (Amabile, 1996; Grolnick & Ryan, 1987). Intrinsic motivation has appeared as an important phenomenon for educators, a natural wellspring of learning and achievement that can be systematically undermined by parent and teacher practices (Ryan & Stiller, 1991). Because intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces that engender and undermine it. Findings suggest that perceiving oneself as competent at an activity often promotes enjoyment of that activity, as does the presence of ''optimal'' challenges (Csikszentmihalyi et al., 1975) and valuing competence in the activity (Elliot et al., 2000).

According to self-determination theory, all people seek to satisfy three inherent psychological needs: the need for developing competence, the need for relatedness (creating meaningful connections with others), and the need for autonomy (perceiving that one is able to initiate and regulate one's own actions). Satisfaction with these psychological needs promotes intrinsic motivation (Deci, Vallerand, Pelletier, & Ryan, 1991). Motivation can fall anywhere on the continuum from amotivation (lack of the intent to act), to extrinsic motivation (seeking to avoid punishments and gain external rewards), to introjected regulation (studying or behaving well because one feels pressure from within), to identified regulation (recognizing the importance or value in developing a behavior or skill), and finally, to intrinsic motivation (behavior motivated purely by the inherent benefits) (Deci et al., 1991; Ryan & Deci, 2000).

3. Work Discipline
Latainer (Sutrisno, 2019: 87) defines "discipline as a force that develops in the body of employees and causes employees to adjust voluntarily to decisions, regulations, and high values of work and behavior." According to Sumadhinata (2018), work discipline is a tool managers use to communicate with employees so that they are willing to change their behavior and to increase awareness and willingness of someone to obey all rules and social

norms that apply in a company. Meanwhile, according to Fererius Hetlan (Muhyadin, 2019), work discipline is an attitude of willingness and willingness of a person to obey and obey the norms of regulations that apply around him.

Discipline is a manifestation of employees' respect for the rules and regulations in the organization. Employees who ignore or frequently violate these rules and regulations require a higher level of compliance (Mustofa et al., 2021). Conversely, if employees are obedient and adhere to company regulations, it reflects good compliance. Specifically and generally, compliance refers to actions taken to correct incorrect behavior and attitudes exhibited by employees. In other words, work discipline is the state or willingness of employees to comply with the applicable rules in the organization, which ultimately affects the achievement of the organization's goals.

This work discipline must continue to be held and become a principle for employees so that their contribution to supporting the success of various operational functions of the company can increase. The loss of work discipline will affect the efficiency and effectiveness of job duties.

Work discipline can be interpreted as an attitude to respect, obey, and comply with the regulations applied, both written and unwritten, and also to be able to perform them and accept the punishment if there was a violation during performing the duty and authority (Gomes, 2000). "Discipline of work is a tool used by managers to communicate with employees so that they are willing to change behavior and to increase awareness.

person's willingness to comply with all laws and social norms prevailing in a company (Rivai, 2004).

4. Employee Perfomance

According to Whitmore in Hamzah (2012), performance is the ability of someone to carry out required functions. According to Whitmore, an understanding is one that demands the bare minimum requirements for success. As a result, Whitmore asserts that the representatives' performance bears a significant amount of responsibility for someone's work. Dessler defines performance as "work performance," namely the comparison of the results of specified standards. Whereas, according to Mangkunagara, performance is the consequence of both the quality and amount of labor accomplished by an individual in carrying out assigned tasks. In other words, performance is a representation of someone's labor; in other words, performance is a person's performance. This work is related to the tasks performed by someone who is responsible for them.

Performance is defined as the sum of an employee's actions and inactions. A worker's performance is based on the quality and quantity of work he or she does while completing his or her obligations in line with his or her responsibilities. However, without management's sincere efforts, it is not easy to boost employee performance (Kristiana et al., 2020). The importance of employee performance as an organizational driver to achieve the goals of the organization refers to the work ability of an employee about what he can do or not. According to Ikon (2019), employee performance is a function of the ability of human resources to complete tasks or work

II. METHODS

According to Kirkan (2011), transformational leadership is a leadership pattern used by leaders to change the current situation by following those who follow their organization's problems through inspiration, persuasion, and excitement to achieve a higher understanding of the vision for the realization of shared goals within the organization.

(Ryan &Deci, 2000, 2017.). Intrinsic motivation is the inherent tendency to seek out novelty and challenge, to explore and investigate, and to stretch and extend one's capacities.

(Hersona&Sidharta, 2017). Work discipline is implementing management to strengthen organizational guidelines, The dimensions of work discipline are preventive, progressive, and corrective.

The population in this study at the Cirebon Regency Regional Secretariat is 110 employees, using saturated samples. The type of data used in this study is primary data. Researchers used a questionnaire as a data collection medium that was distributed directly to respondents.

The data collection technique in this study is an instrument test consisting of a validity test and a reliability test. In this study, the validity test was used to test the effect of the transformational leadership variable (X1), intrinsic motivation (X2), work discipline (X3), and employee performance (Y) by comparing the rcount value with the rtable value. If the rcount value Y of the rtable value is positive, the validity test is declared valid, while the reliability test in this study is according to Guildford (1956). There are several reliability criteria, namely: y0.20, which includes very low reliability; 0.20–0.40, which includes low reliability; 0.41–0.70, which includes medium reliability; 0.71–0.90, which includes high reliability; and 0.91–1.0, which includes very high reliability.

The classical assumption test consists of a normality test. The normality test in this study uses normal PP plots of the regression table regarding questionnaire items that are detected normally in the table. The

multicollinearity test is carried out to detect the presence or absence of multicollinearity symptoms in this study by paying attention to the VIF and tolerance numbers. Multiple linear regression is used to predict the relationship between one related variable and three independent variables; the coefficient of determination is used to measure the extent of the model's ability to run the dependent variable; hypothesis testing, consisting of the t test (persial), is carried out with separate acceptance and rejection criteria. partial, while the F test (simultaneous) is a test carried out with acceptance and rejection criteria together. Persial, while the F test (simultaneous) is a test carried out with acceptance and rejection criteria together.

III. RESULTS AND DISCUSSION

The data instrument test consists of a validity test and a reliability test. The following is a table of validity tests and reliability tests.

Table 1 Validity Test Results

No	Variable	R. Count	R. table	Information
1	Transformational leadership (X1)			
	1	0.386	0,1576	Valid
	2	0.680	0,1576	Valid
	3	0.577	0,1576	Valid
	4	0.744	0,1576	Valid
	5	0.629	0,1576	Valid
	6	0.753	0,1576	Valid
	7	0.758	0,1576	Valid
	8	0.597	0,1576	Valid
	9	0.638	0,1576	Valid
2	Intrinsic Motivation (X2)			
	1	0.632	0,1576	Valid
	2	0.538	0,1576	Valid
	3	0.799	0,1576	Valid
	4	0.778	0,1576	Valid
	5	0.586	0,1576	Valid

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No	Variable	R. Count	R. table	Information
3	Work Discipline (X3)			
	1	0.327	0,1576	Valid
	2	0.439	0,1576	Valid
	3	0.630	0,1576	Valid
	4	0.665	0,1576	Valid
	5	0.695	0,1576	Valid
	6	0.703	0,1576	Valid
	7	0.672	0,1576	Valid
4	Employee Perfomance (Y)			
	1	0.623	0,1576	Valid
	2	0.711	0,1576	Valid
	3	0.700	0,1576	Valid
	4	0.646	0,1576	Valid
	5	0.682	0,1576	Valid
	6	0.753	0,1576	Valid
	7	0.725	0,1576	Valid
	8	0.783	0,1576	Valid
	9	0.721	0,1576	Valid
	10	0.712	0,1576	Valid
	11	0.744	0,1576	Valid
	12	0.731	0,1576	Valid
	13	0.749	0,1576	Valid
	14	0.769	0,1576	Valid
	15	0.739	0,1576	Valid
	16	0.665	0,1576	Valid
	17	0.603	0,1576	Valid
	18	0.565	0,1576	Valid

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No	Variable	R. Count	R. table	Information
19	*0.546*	*0,1576*	*Valid*
20	*0.690*	*0,1576*	*Valid*
21	*0.662*	*0,1576*	*Valid*
22	*0.652*	*0,1576*	*Valid*

The correlation of each statement item has a calculated r-value greater than the r-tabel, so based on the validity test, it shows that all statement items on the variables of transformational leadership, intrinsic motivation, and work discipline on employee performance are declared valid and can be used as search instruments.

Table 2 Reliability Test Results

Variabel	Cronbach Alfa	Information
Transformational Leadership (X1)	*0,887*	*Hight reliability*
Intrinsic Motivation (X2)	*0,851*	*Hight reliability*
Work Discipline (X3)	*0,831*	*Hight reliability*
Employee Perfomance (Y)	*0,955*	*Hight reliability*

Based on the table above, it is known that the results of reliability testing of all independent indicators and the dependent variable show reliability, so it is stated that all indicators have proven high reliability.

The classic assumption test consists of a normality test and a multicollinearity test. The following is a table of normality tests and multicollinearity tests.

Table 3 Normality Test

		Unstandardized Residual
N		*110*
Normal Parameters [a,b]	*Mean*	*.0000000*
	Std. Deviaton	*6.74627970*
Most Extreme Differences	*Absolute*	*.080*
	Positive	*.058*
	Negative	*-.080*

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Test Statistic	*.080*
Asymp. Sig. (2-tailed)	*.081^c*

Based on the table above, it can be seen that the union of normality with the Kolmogorov-Smirnov test, namely the Asymp.Sig. (2-tailed), is 0.081 > 0.05, which means that the data is normally distributed. This can also be seen from the P-Plot images as follows:
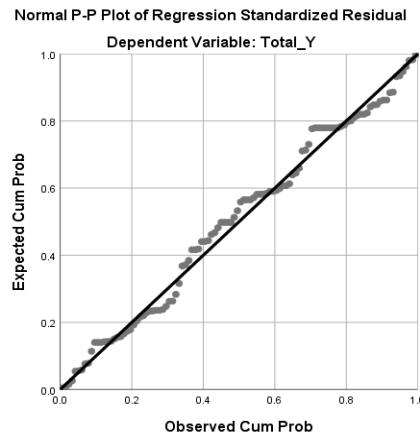
Figure 1 NormalityTestResults

Based on the table above, the regression model used in this study is normally distributed because the questionnaire items are around the normality threshold.

Table 4 Multicollinearity Test Results

Model	*Collinearity Statistics*	
	Tolerance	*VIF*
(Konstan)		
Transformational Leadership	*.630*	*1.586*
Intrinsic Motivation	*.561*	*1.781*
Work Discipline	*.830*	*1.205*

Based on the table above, the multicollinearity test from the data output results shows that the regression model used does not show symptoms of multicollinearity.

Table 5 Multiple Linear Regression Test Results

Y =a+b1X1+b2X2+b3X3

Y=15.494 +0,223 X1+0,356X2+ 0,259X3

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Tabel 6 model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.654ᵃ	.427	.411	6.841

Based on the coefficient of determination test tab, it is known that the adjusted R square value is 0.41.1%, or 41%, which means that the effect of transformational leadership, intrinsic motivation, and work discipline on employee performance is 41%, and the remaining 59% is influenced by other factors not examined.

Tabel 7 T-test results (partial)

Model	Unstandardized Coefficient		Standardized Coefficients	T	Sig.
	B	Std. Kesalahan	Beta		
(Konstan)	38.051	7.656		4.970	.000
Transformational Leadership	1.391	7.656	.578	7.360	.000
Intrinsic Motivation	1.623	.312	.447	5.196	.000
Work Discipline	1.429	.277	.445	5.161	.000

Based on the results of the t test using SPSS version 25, it is known that the transformational leadership variable (X1) has a positive effect on employee performance. This is evidenced by the tcount value of 7.360, which is greater than the t table value of 1.98217. Intrinsic motivation (X2) has an effect on employee performance. This is evidenced by the tcount value of 5.196, which is greater than the t table of 1.98217. While work discipline (X3) affects employee performance, This is evidenced by the tcount value of 5.161, which is greater than the t table of 1.98217.

So it can be concluded that H1 is accepted, H2 is accepted, and H3 is accepted.

Table 8 F Test Results (simultaneous)

Model	Sum of Square	Df	Mean Square	F	Sig
Regressional	3700.215	3	1233.405	26.355	.000b
Residual	4960.840	106	46.800		
Total	8661.005	109			

Based on the table above, it can be seen that the significant value of 0.000 is less than 0.05, indicating that the variables of transformational leadership, intrinsic motivation, and work discipline have a joint influence (simultaneously) on employee performance at the Cirebon Regency Secretariat.

IV. CONCLUSION

Based on the results of this study, it can be concluded that transformational leadership affects employee performance at the Cirebon Regency Regional Secretariat, intrinsic motivation affects employee performance at the Cirebon Regency Regional Secretariat, and work discipline affects employee performance at the Cirebon Regency Regional Secretariat. Suggestions given by researchers: (1) For the Cirebon Regency Regional Secretariat Agency, from the results of the study, it can be seen that transformational leadership, intrinsic motivation, and work discipline affect employee performance at the Cirebon Regency Regional Secretariat. Therefore, company leaders can strive to improve employee transformational leadership styles. This can include efforts to better understand and meet the individual needs of employees. Agencies can also try to create a work environment that encourages intrinsic motivation, such as by providing challenging and meaningful work, providing constructive feedback, and rewarding employee achievement. Implement clear and consistent work rules and procedures to help improve work discipline. (2) Although this study provides significant insights, there are still opportunities for further research. In-depth research could be directed towards further combining these variables and exploring how they interact with each other and influence employee performance. For example, consider whether transformational leadership is more effective in improving employee performance with high intrinsic motivation and good work discipline. This research opens a window to further understand the complex relationship between transformational leadership, intrinsic motivation, and work discipline.

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The Influence of Competence Job Stress and Workload Through Job Satisfaction on Employee Performance
(Case Study at PT. Serasi Shipping Indonesia, East Kalimantan Province)

Antonius, Imam Nazarudin Latif, Titin Ruliana

Master of Management Department, University of 17 Agustus 1945 Samarinda,

Jl. Ir. H. Juanda no. 08 Samarinda City, East Kalimantan, Indonesia

Corresponding Author*: titin.ruliana15@gmail.com

ABSTRACT

Purpose: The purpose of this research is to determine and analyze the influence of competence, work stress, and workload on employee performance through employee job satisfaction as a moderating variable.

Design/methodology/approach: Quantitative research with a correlational approach. The population and sample of this research are all employees of pt. Serasi shipping Indonesia, east Kalimantan province, totaling 41 people. Data analysis uses partial least squares.

Findings: Competency research results, work stress, and workload have a significant effect on employee job satisfaction. Competence and work stress do not have a significant effect on employee performance. Workload and job satisfaction have a significant effect on employee performance. Competence, work stress, and workload have a significant indirect effect on employee performance with job satisfaction as a moderating variable pt. Serasi shipping indonesia, east kalimantan province.

Paper type: Research paper

Keyword: Competency, Stress, Workload, Satisfaction, Performance.

I. INTRODUCTION

A. Background

Human resources are the main asset in an agency, this shows that human resources must always be maintained, maintained, and developed. Quality human resources are resources that can demonstrate work behavior that leads to the creation of the aims and objectives of an organization, namely how to manage human resources that lead to good performance. Human resources can be the center of problems or problems for an agency when their potential is not developed optimally, whereas human resources can be a source of success for an agency if their potential is developed optimally (Novaritpraja, 2020). Human resources, including employees/employees, are the most important assets in an organization. Organizations will take various methods to improve the performance of their employees, consisting of factors including internal factors and external factors of the organization. Judging from the internal factors that influence performance, they include competence, work stress, workload, and job satisfaction. Job satisfaction itself can also be influenced by competence, work stress, and workload, so job satisfaction can be a mediating variable that influences performance. External factors that influence performance come from the environment such as behavior, attitudes, and actions of colleagues, subordinates or leaders, work facilities, and organizational climate.

Employee performance includes the quality and quantity of output as well as reliability in work. An employee can work well if they have high performance so they can produce good work too. With high performance possessed by an employee, it is hoped that an organization's goals can be achieved as desired. Vice versa, if

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employees in an organization cannot provide good performance, then the organization's goals will be difficult or may not even be achieved as expected (Khatimah, 2015). Employees achieving performance according to company targets is not an easy thing to achieve. Many things prevent an employee from achieving the expected performance. One of them is the behavior that employees apply while working, where good or bad employee behavior at work can encourage good performance in an employee, thereby influencing the performance of the company or agency.

One field of work that requires maximum employee performance is the shipping sector. A Preliminary study on services of PT Serasi Shipping Indonesia, East Kalimantan Province, which has branches in Sangatta City, Bontang City, Samarinda City, and Balikpapan City, shows that employee performance is still less than optimal, where observations in agency services are still less than optimal, such as problematic ship documents and language differences between parties. ship with the agent which results in delays in the loading process and the target time. This can happen because there is still a lack of employee competence.

PT. Serasi Shipping Indonesia, East Kalimantan Province carries out two loadings, including loading at the terminal (JT) and loading in the middle of the sea, which can take between 2-3 weeks depending on coal availability. This causes the ship to be in the middle of the sea for a long time, which can trigger work stress in employees.

PT. Serasi Shipping Indonesia East Kalimantan Province works from Monday to Friday from 08.30 WITA to 17.30 WITA. All employees are closed on Saturdays, Sundays, and major holidays, but working days and national holidays can change at any time according to company policies. This is related to implementing shipping and creating effectiveness and time efficiency for the company. This creates a high workload for employees.

Seeing this, there is still less than optimal employee performance and a lack of job satisfaction, which can be caused by a lack of competence, work stress, and a workload that is too high. Based on these problems, researchers are interested in research on "The Influence of Competency, Work Stress, and Workload through Job Satisfaction on Employee Performance (Case Study at PT. Serasi Shipping Indonesia, East Kalimantan Province)".

Based on the background description, the problem in this research can be formulated as follows:
1. Does competence influence the job satisfaction of employees at PT Serasi Shipping Indonesia East Kalimantan Province?
6. Does work stress have an effect on employee job satisfaction at PT Serasi Shipping Indonesia East Kalimantan Province?
7. Does workload have an effect on employee job satisfaction at PT Serasi Shipping Indonesia East Kalimantan Province?
8. Does competency influence the performance of employees at PT Serasi Shipping Indonesia East Kalimantan Province?
9. Does work stress affect the performance of employees at PT Serasi Shipping Indonesia East Kalimantan Province?
10. Does workload affect the performance of employees at PT Serasi Shipping Indonesia East Kalimantan Province?
11. Does job satisfaction influence the performance of employees at PT Serasi Shipping Indonesia East Kalimantan Province?
12. Does competency have an indirect effect on employee performance with job satisfaction as a moderating variable at PT Serasi Shipping Indonesia East Kalimantan Province?
13. Does work stress have an indirect effect on employee performance with job satisfaction as a moderating variable at PT Serasi Shipping Indonesia East Kalimantan Province?
14. Does workload have an indirect effect on employee performance with job satisfaction as a moderating variable at PT Serasi Shipping Indonesia East Kalimantan Province?

B. Literature review
1. Competence

Competency has a very important role because in general competence (Novriyanti, 2019) concerns a person's basic ability to do a job and is important for an individual's life because it is the ability to determine how an individual behaves in various situations. Therefore, the competencies possessed will have an impact on employee performance. Competence can be related to job satisfaction, which according to (Seta A. Wicaksana D, 2021) explains Lawler's theory that competency as a skill is part of the input factors that influence job satisfaction or dissatisfaction. Supported by research by (Khatimah, 2015) shows that competence influences employee job satisfaction.

Supported research by (Julaili Ismi, 2021); (Novriyanti, 2019); (Harjani S, 2019); (Anggraini, Novita, Hermanto, 2022); (Wulandari et al., 2022) shows that competence influences employee performance. Research

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by (Khatimah, 2015) produces the opposite conclusion from previous research that competence has no direct effect and no significant effect on employee performance.

This research uses competency indicators (Khatimah, 2015) as follows: 1) Motives, 2) Traits, 3) Self-concept, 4) Knowledge, 5) Skills.

2. Work Stress

Mangkunegara (2016) states that work stress is "as a feeling of pressure or pressure experienced by employees when facing work". Work stress is related to job satisfaction, according to Handoko (2018), stress is a condition of tension that affects a person's thinking process, emotions, and condition. The result is that excessive stress can threaten a person's ability to deal with the environment and ultimately interfere with carrying out their duties, resulting in dissatisfaction.

Supported by research by (Rahmayuliani, 2018); (Elizar et al., 2020); shows that there is an influence of work stress on employee performance. Meanwhile, research (Qastalano, 2019) shows the results that work stress does not affect performance.

Indicators of work stress in research (Qastalano, 2019) are: 1) Excessive workload, 2) Time pressure, 3) Demands from superiors, 4) Work errors, 5) Responsibility.

3. Workload

Workload (Maula & Amri, 2023) is the amount of work or tasks assigned by a superior to an employee. Appropriate workload conditions will make employees comfortable at work, where employees do not feel anything burdensome when working. Employee workload can occur in three conditions. First, the workload is according to standards. Second, the workload is always high. Third, the workload is too low. Heavy or light workload will impact employee performance.

In addition, workload can be related to job satisfaction. According to Kamil (2016) , workload is a very important thing to pay attention to. The workload received by employees is one of the factors in creating employee job satisfaction to actualize themselves. If the employee's workload is too high, it will cause pressure at work which will have the impact of reducing employee job satisfaction. According to (Larosa, 2020) , job satisfaction itself is that employee behavior is greatly influenced by their level of satisfaction. When an employee feels satisfaction at work, he will try as hard as possible with all his abilities to complete his work. Employee job satisfaction is an important target in human resource management because it directly or indirectly affects employee performance. This research is supported by Amir's research (Amir, 2021); (Elizar et al., 2020); (Larosa, 2020); (Qastalano, 2019); (Safitri, 2022)shows that workload influences employee performance.

This research workload uses indicators (Supardi, 2017) as follows: 1) Variation of work that must be done; 2) Target the amount of work that must be completed; 3) The employee's level of difficulty in completing the task; 4) There is a predetermined time limit; 5) There is under pressure on employees at work.

4. Job Satisfaction

Job satisfaction has a significant influence on the productivity of an organization directly and indirectly. According to Robbins (2018), stress is an opportunity if the stress offers potential gain. Performance is the result of contributions achieved by employees following job standards. Therefore, companies must fulfill job satisfaction needs and create work comfort for employees by meeting time requirements, work itself, personality, wages and promotions, co-workers, and work environment (Robiatul Adawiyah, 2015) .

Job satisfaction itself can be a moderating variable on the influence of competence, work stress, and workload on employee performance. Munandar (2018) stated that good employee competence will create employee satisfaction at work because they can carry out tasks according to targets due to the competence they have. This has an impact on the employee's performance. Supported by research by (Khatimah, 2015) shows that competence has an indirect effect on employee performance which is mediated by job satisfaction. Alhamdi (2018) research shows that competence and motivation influence employee performance and job satisfaction as moderating variables at the Patra Convention Hotel Semarang. Research Anggraini, Novita, Hermanto (2022) shows that there is an influence of competence on employee performance through job satisfaction.

Robbins (2018) explains that stressful conditions can make employees experience dissatisfaction at work and reduce performance. Employees who experience excessive work stress can become dissatisfied with the work they do have an impact on the employee performance decreasing or not being good at doing their work. Research results (Elizar et al., 2020); (Aidila Afriza, 2021). shows that there is a relationship between work stress and employee performance.

Choirunissa (2020) various indicators of job satisfaction which were later developed into instruments measuring satisfaction variables, namely: 1) Whether or not the type of work carried out by workers is interesting;

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2) The amount of compensation received by workers; 3) Opportunities for promotion; 4) Competence of superiors in providing technical assistance and behavioral support, and support from co-workers.

5. Performance

Performance is a manifestation of the work carried out by employees which is usually used as a basis for evaluating employees or organizations. As'ad (2018) states the definition of performance is "the results achieved by a person according to the standards applicable to the work in question". Mangkunegara, 2016) states that performance is basically: It is formed after employees feel satisfaction because their needs are met. In other words, if employee needs are not met as they should be, then job satisfaction will not be achieved, and in essence, performance will be difficult to form. Performance comes from the language of job performance or actual performance (work performance or actual achievements achieved by a person or an institution). Performance is the result of the quality and quantity of work achieved by an employee in carrying out his duties in accordance following the responsibilities given to him.

The performance indicators used according to Qastalano (2019) are: 1) Quantity, 2) Quality, 3) Timeliness, 4) Work plan, and 5) Teamwork.

C. Conceptual Framework
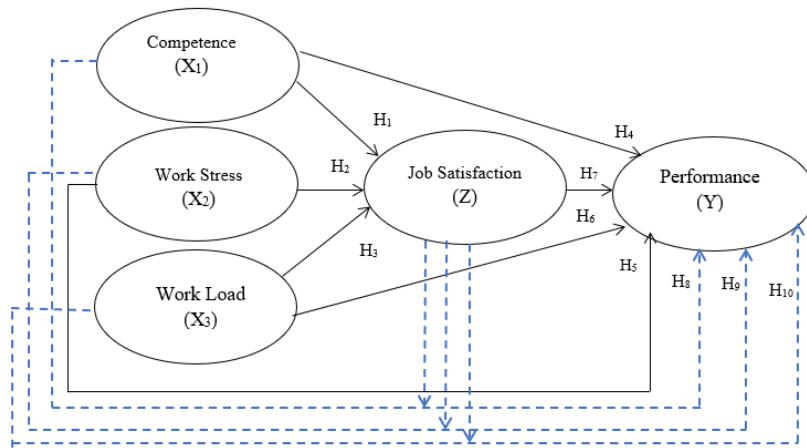
Figure 1. Research Framework

Line Description::

———————————————> = direct influence.

– – – – – – – – – – –▶ = indirect influence.

D. Hypothesis

The hypothesis of this research is as follows:
1. Competency influences the job satisfaction of employees at PT Serasi Shipping Indonesia, East Kalimantan Province.
2. Work stress influences the job satisfaction of employees at PT Serasi Shipping Indonesia, East Kalimantan Province.
3. Workload influences employee job satisfaction at PT Serasi Shipping Indonesia, East Kalimantan Province.
4. Competence influences the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan Province.
5. Work stress influences the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan Province.
6. Workload influences the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan Province.
7. Job satisfaction influences the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan Province.
8. Competence indirectly affects employee performance with job satisfaction as a moderating variable PT. Serasi Shipping Indonesia, East Kalimantan Province.

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9. Job stress indirectly affects employee performance with job satisfaction as a moderating variable PT. Serasi Shipping Indonesia, East Kalimantan Province.
10. Workload indirectly affects employee performance with job satisfaction as a moderating variable PT. Serasi Shipping Indonesia, East Kalimantan Province.
11. Competency has an indirect effect employee performance with job satisfaction as a moderating variable.

II. METHODS

A. Type of Research

This research was conducted at the shipping company PT. Serasi Shipping Indonesia. The scope of this research is to analyze the influence of competency, work stress, and workload through job satisfaction on employee performance in 2023. This research uses primary data research obtained from questionnaires to research samples, secondary data comes from library data.

B. Population and Sample

The population in this study were all employees of PT. Serasi Shipping Indonesia East Kalimantan Province consists of 15 people from the Sanggata branch, 10 people from the Bontang City Branch, 6 people from the Balikpapan City Branch, 10 people from the Samarinda City Branch, a total of 41 people in all branches. This population was used entirely as a sample (census method) of 41 people.

C. Data Analysis Method

The statistical method used to test the hypothesis proposed in this research is Partial Least Square (PLS) with the help of the AMOS 23 software program. There are several steps in using PLS (Partial Least Square) according to Ghozali (2015), including :

1. Outer Model Testing

According to Husain (2015), outer model analysis is carried out to ensure that the measurements used are suitable for measurement (valid and reliable). There are several calculations in this analysis:
1) Convergent Validity
    The convergent validity of the measurement model with reflexive indicators is assessed based on the correlation between the item score or component score and the latent variable score or construct score estimated with the PLS program. The expected value exceeds > 0.7 as the minimum limit for the factor loading value, meaning that the value meets the convergent validity requirements so that all indicators are suitable for use in further research and analysis.
2) Discriminant Validity
    If the loading value of each indicator item on the construct is greater than the cross-loading value, namely 0.5. Thus, it can be concluded that all constructs or latent variables have good discriminant validity, where the indicators in the construct indicator block are better than the indicators in other blocks.
3) Composite Reliability
    A variable can be declared to meet composite reliability if it has a value > 0.6 or a composite reliability measurement if the reliability value is > 0.6 then the constructed value has a high-reliability value.
4) Average Variance Extracted (AVE)
    The model has better discriminant validity if the square root of the AVE for each construct is greater than the correlation between the two constructs in the model. AVE is an average variance of at least 0.5.
5) Cronbach alpha
    A variable can be declared reliable if it meets the Cronbach Alpha value > 0.7.

2. Pengujian *Inner Model*

Inner Model Testing The structural model (inner model) is evaluated by looking at the coefficient values of the relationship path parameters between latent variables.
1) Coefficient of Determination (R^2) If the R^2 result > 0.67 for the endogenous latent variable in the structural model indicates the influence of the exogenous variable on the endogenous variable is in the good category.
2) Goodness of fit (Q^2) The calculation result of $Q^2 \geq 0.90$ means that the structural model without moderating variables or with moderating variables is fit, so the model can be used for hypothesis testing.

3. Proving hypothesis

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1) Direct causal effect is the influence of an exogenous variable that has a positive and significant effect on an endogenous variable that occurs without other endogenous variables.
2) Indirect causal effect is the influence of an exogenous variable that has a positive and significant effect on an endogenous variable that occurs through another endogenous variable.
3) Total causal effect is the sum of direct causal and indirect causal effects.

III. RESULTS AND DISCUSSION

A. Research Results

The Model analysis is carried out through evaluation of the outer model and inner model, which is explained below:

1. *Outer Model* Testing

Outer model analysis is carried out to ensure that the measurements used are suitable for measurement (valid and reliable). The results of testing the outer construct indicator model are presented based on the following image:
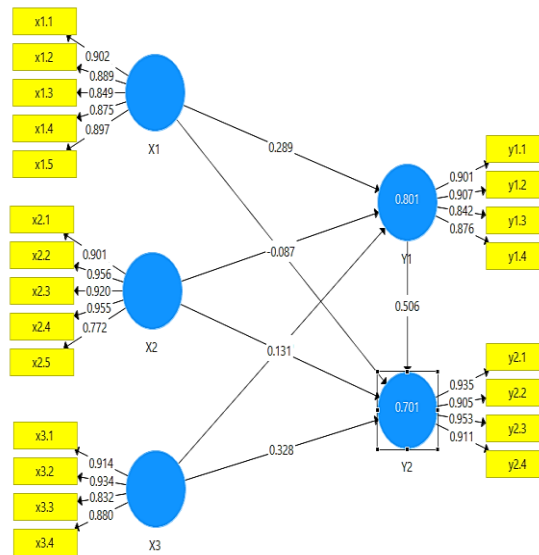
Figure 2. Outer Model Testing

Source: Research results, 2023

Figure 2. is the result of the outer model testing after all indicators on the variables of competence, work stress, workload, job satisfaction, and performance have an outer loading model value of > 0.7.

2. Proving Hypothesis

Table 1. Path Coefficient Values and Statistical T Values

Variables		Direct Effect	Indirect Effect	Total Effect
X1 →	Z	0.002	-	-
X2 →	Z	0.003	-	-
X3 →	Z	0.001	-	-

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X1 →	Y	*0.549*	*0.008*	*0.557*
X2 →	Y	*0.334*	*0.020*	*0.354*
X3 →	Y	*0.014*	*0.013*	*0.027*
Z →	Y	*0.000*	*-*	*-*

Source: Research results, 2023

Table 2. Statistical T Value

Variables		T Statistic	Hipotesis
X1 →	Z	*3.128*	*Accepted*
X2 →	Z	*3.020*	*Accepted*
X3 →	Z	*3.352*	*Accepted*
X1 →	Y	*0.599*	*Rejected*
X2 →	Y	*0.968*	*Rejected*
X3 →	Y	*2.468*	*Accepted*
Z →	Y	*4.247*	*Accepted*
X1 →	Z	*2.650*	*Accepted*
X2 →	Z	*2.334*	*Accepted*
X3 →	Z	*2.492*	*Accepted*

Source: Research results, 2023

D. Discussion of Research Results
1. The influence of competency on employee job satisfaction.

Based on the research results, it is known that the path coefficient value influences competence on the job satisfaction of employees PT Serasi Shipping Indonesia, East Kalimantan Province is 0.002 and the t statistical value is 3.128, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning that competency has a significant effect on the job satisfaction of employees PT Serasi Shipping Indonesia, East Kalimantan Province.

Supported by Khatimah's research (Khatimah, 2015) shows that competence influences employee job satisfaction. Research (Alhamdi, 2018) shows that there is an influence of competence on employee job satisfaction. Wulandari's research (Wulandari et al., 2022) shows that there is an influence of competence on employee job satisfaction. Likewise, Anggraini's research (Anggraini, Novita, Hermanto, 2022) shows that there is an influence of competence on employee job satisfaction.

These results imply that PT Serasi Shipping Indonesia East Kalimantan Province can retain employees who have good competence. Apart from that, you should always pay attention to and maintain employees so that they

always improve their competency, they must be synchronized with company conditions or facilities that can provide job satisfaction for employees so that the organization's goals can be realized. Khatimah (2015) gives the meaning that the higher a person's competence or expertise, the level of satisfaction at work will increase. It can also be argued that an employee who feels he has a low level of competence will easily feel dissatisfied with the working conditions he faces. Therefore, if employees want to have satisfaction at work, they need competence, because competence consists of skills, knowledge, and abilities. Employees who have good skills, knowledge, and abilities will be able to work well.

2. The effect of work stress on employee job satisfaction

Based on the research results, it is known that the path coefficient value of the influence of work stress on job satisfaction of employees PT Serasi Shipping Indonesia, East Kalimantan Province is 0.003 and the t statistic value is 3.020, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning work stress has a significant effect on job satisfaction of employees PT Serasi Shipping Indonesia, East Kalimantan Province. Supported by research by Rahmayuliani (2018) shows that there is an influence of work stress on employee job satisfaction. Muslim & Ilmi (2023) work stress has a significant influence on employee job satisfaction. Novaritpraja (2020) shows that there is a negative influence of work stress on employee job satisfaction. Safitri (2022) shows that there is an influence of work stress on employee job satisfaction. Likewise, Adawiyah's research (Robiatul Adawiyah, 2015) shows that there is an influence of work stress on employee job satisfaction.

Apart from that, work stress is related to job satisfaction, according to Handoko (2018), stress is a condition of tension that affects a person's thinking process, emotions, and condition. The result is that excessive stress can threaten a person's ability to deal with the environment and ultimately interfere with carrying out their duties, resulting in dissatisfaction. Therefore, the higher the level of stress, the lower the level of job satisfaction felt by employees. Likewise, the lower the level of stress, the higher the level of employee job satisfaction.

3. The effect of workload on employee job satisfaction

Based on the research results, it is known that the path coefficient value influences workload on the job satisfaction of employees of PT Serasi Shipping Indonesia, East Kalimantan Province is 0.001 and the t statistic value is 3.352, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning that workload has a significant effect on the job satisfaction of employees of PT Serasi Shipping Indonesia, East Kalimantan Province.

Supported by Muslim research (Muslim & Ilmi, 2023) shows that workload has a significant influence on employee job satisfaction. Kamil's research (Kamil, 2016)shows that there is a negative and significant influence between workload on job satisfaction. Safitri's research (Safitri, 2022) shows that there is an influence of workload on employee job satisfaction.

According to Kamil (2016) workload is some work targets or target results that must be achieved in a certain unit of time or the amount of work that must be carried out by a position or organizational unit and is the product of work volume and time norms. The Workload can be related to job satisfaction. stating workload is a very important thing to pay attention to. The workload received by employees is one of the factors in creating employee job satisfaction to actualize themselves. If the employee's workload is too high, it will cause pressure at work which will have the impact of reducing employee job satisfaction. Therefore, the higher the workload, the lower the level of job satisfaction felt by employees. Likewise, the lower the workload, the higher the level of employee job satisfaction.

4. The influence of competency on employee performance

Based on the research results, it is known that the path coefficient value influences competence on the performance of employees PT Serasi Shipping Indonesia, East Kalimantan Province is 0.549 and the t statistic value is 0.599, so the t statistic is <1.96, which means the hypothesis is rejected, meaning that competency has no significant effect on the performance of PT employees. Serasi Shipping Indonesia, East Kalimantan Province.

Supported by research by Julaili Ismi (2021)shows that competence does not affect employee performance. Khatimah's research (Khatimah, 2015) shows that competence has no direct effect and no significant effect on employee performance. Novriyanti's research (Novriyanti, 2019) shows that competency does not have a significant effect on the performance of Bank Muamalat BPRS Muamalat Harkat Kec employees. Sukaraja District.

Tohari (2017) defines competence as knowledge, skills, and abilities mastered by someone who has become part of himself so that he can carry out cognitive, affective, and psychomotor behaviors as well as possible. If competency is defined as the same as ability, then it can be interpreted as knowledge of understanding the purpose of work, knowledge of implementing effective tips for carrying out work correctly and well, and understanding how important discipline is in an organization so that all rules can run well. Based on this definition, it means that competence is part of a person's deep and inherent personality as well as behavior that can be predicted in various situations and work tasks based on the education a person has received.

5. The effect of work stress on employee performance

Based on the research results, it is known that the path coefficient value of the influence of work stress on the performance of PT employees. Serasi Shipping Indonesia, East Kalimantan Province is 0.334 and the t statistic value is 0.968, so the t statistic is <1.96, which means the hypothesis is rejected, meaning work stress has no significant effect on the performance of employees PT Serasi Shipping Indonesia, East Kalimantan Province.

Supported by previous research conducted by Elizar et al., (2020) shows that work stress harms employee performance. Afriza's research (Aidila Afriza, 2021) shows that work stress harms employee performance. Aidila Afriza (2021) explains that work stress does not have a significant effect on employee performance because employees have good work discipline and high motivation at work so even though they are stressed, employees still carry out their performance to the maximum.

6. Effect of workload on employee performance

Based on the research results, it is known that the path coefficient value influences workload on the performance of PT employees. Serasi Shipping Indonesia, East Kalimantan Province is 0.014 and the t statistic value is 2.468, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning workload has a significant effect on the performance of employees PT Serasi Shipping Indonesia, East Kalimantan Province.

Supported by Amir's research (Amir, 2021) shows that workload has a direct, negative, and significant effect on employee performance. Elizar's research (Elizar et al., 2020) shows that there is a relationship between workload and nurse performance. Larosa's research (Larosa, 2020) shows that workload has a positive and significant influence on performance. Qastalano (2019) shows that workload has a positive effect on work stress but workload has no effect on performance. Research of Safitri (2022) shows that workload influences employee performance mediated by job satisfaction. In line with Amir's research (Amir, 2021) states that workload has a direct, negative, and significant effect on employee performance, and there is a negative and significant indirect effect between workload and employee performance which is intervened by the stress variable.

Rindorindo et al. (2019) stated that some workers who have a high workload due to excess or fatigue completing work cause them to experience dissatisfaction at work. Employees who are not satisfied with what they do will only complete their tasks within the limits of their abilities and will not develop. This has an impact on the employee's performance.

7. The effect of job satisfaction on employee performance

Based on the research results, it is known that the path coefficient value influences job satisfaction on the performance of PT employees. Serasi Shipping Indonesia, East Kalimantan Province is 0.000 and the t statistic value is 4.247, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning that job satisfaction has a significant effect on the performance of PT employees. Serasi Shipping Indonesia, East Kalimantan Province. Supported by previous research conducted by Elizar et al. (2020) shows that there is a relationship between job satisfaction and performance. Muslim & Ilmi (2023) shows that job satisfaction has a positive and significant influence on employee performance. Larosa's research (Larosa, 2020) shows that job satisfaction has a positive and significant influence on performance.

Robbins (2018) states that satisfied employees are more likely to speak positively about the organization, help others, and perform their jobs beyond normal expectations. According to Handoko (2018) , state job satisfaction is also important for self-actualization. Employees who do not obtain job satisfaction will not reach psychological maturity which in turn will become frustrated. Usually, employees who are dissatisfied have low performance, are often absent, and do activities that have nothing to do with the work they have to do. Employees who receive job satisfaction usually have a good attendance record and have better work performance than employees who do not or have less job satisfaction.

8. Indirect effect of competency on employee performance with job satisfaction as a moderating variable.

Based on the research results, it is known that the path coefficient value of the indirect influence of competence on employee performance with job satisfaction is a moderating variable for PT. Serasi Shipping Indonesia, East Kalimantan Province is 0.008 and the t statistic value is 2.650, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning that competence has a significant indirect effect on employee performance with job satisfaction as a moderating variable at PT. Serasi Shipping Indonesia, East Kalimantan Province.

Supported by previous research conducted by Khatimah (2015) shows that competence has an indirect and significant effect on employee performance which is mediated by job satisfaction. Alhamdi's research (Alhamdi, 2018) shows that there is an influence of competence on employee performance and job satisfaction as a moderating variable at the Patra Semarang Convention Hotel. Research of Anggraini, Novita, Hermanto, (2022) shows that there is an influence of competence on employee performance through job satisfaction at the West Lombok Regency Population and Civil Registration Service.

According to Erisman (2015) , competence is defined as "basic characteristics possessed by someone that has a direct or indirect effect on performance". The higher the competency an employee has, the higher the satisfaction they want to get so that it can produce good performance, as employees who have high abilities who are then given rewards by the company will improve the employee's performance. Competency has a very important role because in general competence (Novriyanti, 2019) concerns a person's basic ability to do a job and is important for an individual's life because it is the ability to determine how an individual behaves in various situations. Therefore, the competencies possessed will have an impact on employee performance. Competence can be related to job satisfaction, which according to Munandar (2018) explains Lawler's theory that competency as a skill is part of the input factors that influence job satisfaction or dissatisfaction.

9. Indirect influence of work stress on employee performance with job satisfaction as a moderating variable.

Based on the research results, it is known that the path coefficient value of the indirect influence of work stress on employee performance with job satisfaction as a moderating variable PT. Serasi Shipping Indonesia, East Kalimantan Province is 0.020 and the t statistical value is 2.334, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning that work stress has a significant indirect effect on employee performance with job satisfaction as a moderating variable PT. Serasi Shipping Indonesia, East Kalimantan Province.

Supported by previous research conducted by Rahmayuliani (2018) ; (Elizar et al., 2020); shows that there is an influence of work stress on employee performance. Research of Aniversari & Sanjaya (2022) shows that there is an influence of work stress on employee performance with job satisfaction as a moderating variable. Research of Safitri (2022) shows that there is an influence of work stress on employee performance with job satisfaction as an intervening variable at PT. Ancol Terang Metal Printing Industry.

Hasibuan (2017) states that job satisfaction is something that can be interpreted as an adjustment of expectations between workers and what they get from the company. Basically, in job satisfaction itself there is stress management which uses abilities and effective human resources to overcome mental and emotional chaos or disorders that arise due to responses. Employees who are not satisfied with what they do will only complete their tasks within the limits of their abilities and will not develop.

10. Indirect effect of workload on employee performance with job satisfaction as a moderating variable.

Based on the research results, it is known that the path coefficient value of the indirect influence of workload on employee performance with job satisfaction as a moderating variable for PT. Serasi Shipping Indonesia, East Kalimantan Province is 0.013 and the t statistic value is 2.492, so the t statistic is > 1.96, which means the hypothesis is accepted, meaning workload has a significant indirect effect on employee performance with job satisfaction as a moderating variable PT. Serasi Shipping Indonesia, East Kalimantan Province.

Supported by previous research conducted by Muslim & Ilmi (2023), job satisfaction can mediate the effect of workload on employee performance. Research of Safitri (2022) shows that there is an influence of workload on employee performance with job satisfaction as an intervening variable at PT. Ancol Terang Metal Printing Industry.

As'ad (2018) stated workload is also something that can arise from interactions between the work environment where one works and is placed, task demands as well as behavior and perceptions as well as the skills possessed. Work overload is a big problem for all organizations or companies. Some workers experience stress due to excess or exhaustion completing work, and some may also experience dissatisfaction at work. It is very important for organizations need understand the needs of their employees and provide the best for their employees.

IV. CONCLUSION

1. Competency has a significant effect on the job satisfaction of employees at PT Serasi Shipping Indonesia, East Kalimantan province.
2. Job stress has a significant effect on the job satisfaction of employees at PT Serasi Shipping Indonesia, East Kalimantan province.
3. Workload has a significant effect on the job satisfaction of employees at PT Serasi Shipping Indonesia, East Kalimantan province.
4. Competency does not have a significant effect on the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan province.
5. Work stress does not have a significant effect on the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan province.
6. Workload has a significant effect on the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan province.

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7. Job satisfaction has a significant effect on the performance of employees at PT Serasi Shipping Indonesia, East Kalimantan province.
8. Competence has a significant indirect effect on employee performance with job satisfaction as a moderating variable at PT Serasi Shipping Indonesia, East Kalimantan province.
9. Job stress has a significant indirect effect on employee performance with job satisfaction as a moderating variable at PT Serasi Shipping Indonesia, East Kalimantan province.
10. Workload has a significant indirect effect on employee performance with job satisfaction as a moderating variable at PT Serasi Shipping Indonesia, East Kalimantan province.

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The Influence of Speed and Age on Crash Rate

Bambang Hermanto[1], Leksmono Suryo Putranto[1], dan Dadang M. Ma'soem[2]

[1]Program Studi Doktor Teknik Sipil, Universitas Tarumanagara, Jl. Let. Jend S. Parman No.1 Jakarta 11440

[2]Program Studi Doktor Teknik Sipil, Universitas Pendidikan Indonesia, Jl. Dr. Setiabudi No.229, Bandung, 40154

Corresponding Author*: bambang.328202003@stu.untar.ac.id, leksmonop@ft.untar.ac.id

ABSTRACT

Purpose: Accidents are one of the parameters that show whether the road safety condition is good or not. In Indonesia, the number of road accidents is still relatively high, so a serious handling of this matter is needed. There are many factors that influence road accidents, but this study will only involve two factors, namely age and speed. The accidents in this study are divided into two, namely minor accidents and serious accidents.

Design/methodology/approach: The method used in this study is a multinomial logit model using a two scenario modelling approach.

Findings: The results showed that the age variable tends to increase the risk of minor accidents compared to severe accidents. This indicates that the older a person is, the higher the risk of a minor accident. However, the speed variable is the opposite, tending to increase the risk of severe accidents when compared to minor accidents. This shows that the more often a person drives at a high speed tends to increase the risk of serious accidents that cause death. Both variables together contribute significantly to the increased risk of accidents.

Paper type: This paper can be categorized as research paper.

Keywords: Age, Accident, Multinomial Logit, Slight Accident, Severe Accident

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I. INTRODUCTION

Road safety is not only a national issue, but also a global problem. More than 1.2 million people die each year on the world's roads, and between 20 and 50 million suffer non-fatal injuries. In most regions of the world, this epidemic of road traffic injuries is on the rise. Tens of millions more victims are seriously injured or disabled each year. Victims who die or are severely injured/disabled will impact their personal and family lives for a long time, even forever. More than 90% of the world's fatalities occur on the roads of low- and middle-income countries, which have only 48% of the world's vehicles. Based on data from the Indonesian National Police, in 2020 there were 100,028 incidents. This figure is lower than in 2019. However, over the last 6 (six) years, there has been an increase in the number of incidents by 3% per year (Polri, Korlantas, 2020).

Many studies have linked the relationship between speed and age to crashes. However, almost all of these studies only stop at the conclusion that accidents or age have an effect on accidents. However, in this study, we will categorise accidents into minor and major accidents. What is meant by a minor accident in this study is an accident that only causes material losses, without human casualties. While what is meant by serious accidents in this study is an accident that causes human casualties, ranging from minor injuries or serious injuries or death.

This study is expected to provide an overview of the relationship between speed and age on crash rates. The accident rate is divided into two categories, namely minor accidents and serious accidents. The object of this research is public transport drivers and the samples in this study are AKAP (Inter-Provincial City-to-Province) drivers with routes or majors in DKI Jakarta from/to provinces in Indonesia with proportions according to the number of vehicles registered at the Ministry of Transportation.

A. Factors Causing Accidents

Based on the NTSC report, driving habits are the most common cause of accidents. As many as 40% of accidents caused by drivers are due to driving habits, 27% are due to driver competence and the third causal factor is 14% due to fatigue (KNKT, 2022).

The factors that cause accidents are divided into three groups, namely vehicle factors, road and environmental factors and human factors. One of the sources of human factors that cause accidents is driving behaviour. The six biggest factors in road traffic accidents are caused by behaviour, namely not being aware of traffic ahead, failing to maintain a safe distance, being careless when turning, being careless when overtaking, exceeding the speed limit, and ignoring the right of way of pedestrians. One of the behavioural causes of accidents is driving speed. Based on data from the Indonesian police, speed is one of the causes of accidents that contributes 8.64% (Polri, Korlantas, 2020).

In addition to the speed factor, the age factor also influences the accident process, although the form of the relationship between age and road accidents varies from one researcher to another (Ryan, Legge, & Rosman, 1998). found the results that age has an influence on the occurrence of accidents. In 2019, it was found that the number of accidents was 85,057 accidents, the three largest percentages of the age of the accident perpetrators were the 30-39 age group, the 40-49 age group, and the 17-21 age group. These three age groups are productive ages. The first rank is the 30-39 age group with a percentage involvement of 17.47% or 14,858. The second place is the perpetrators in the 40-49 age group, which is 15.87% or 13,500. And, the third place is the 17-21 age group with a percentage of involvement of 15.48% or 13,170 (Polri, Korlantas, 2020).

B. Literature Review

There are several previous studies that conducted research on the relationship between speed and age on accident rates. Most of these studies only relate the effect of age or speed on accidents, but in this study, accidents will be divided into two groups, namely minor accidents and severe accidents. (Hermanto, Putranto, & Ma'soem, 2022) found that the driver has a very important role in the process of accidents. According to him, accidents occur because the condition of the driver's ability is below the condition of the task demands faced by the driver. One of the contributing factors to the driver's ability condition is age. The relationship between age, speed and accidents is shown in Figure 1 below.
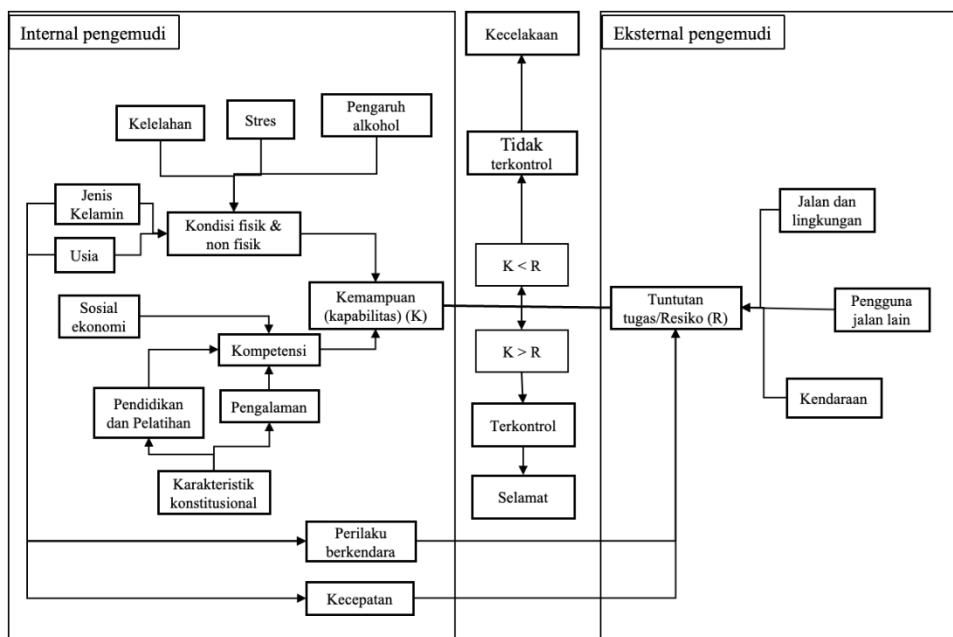
Figure 1. Relationship between Ability and Task Demands to accidents.

Source: (Hermanto, Putranto, & Ma'soem, 2022)

(Wang, Zhou, Quddus, Fan, & Shou'en, 2018) found that a 1% increase in average speed on urban arterial roads was associated with a 0.7% increase in total crashes, and greater variation in speed was also associated with an increase in crash frequency. (Mohanty & Gupta, 2015) conducted research into the causes of urban and rural crashes. In this study, the variables used consisted of age, gender, driving habits. For driving habits, the variable used was speed while driving. The results showed that for urban areas, the main causes of accidents were caused

by age, gender, speed, road conditions and lighting conditions. As for rural areas, the main cause of accidents is still dominated by speed.

(Danciu, Popa, Micle, & Preda, 2012) He said that older drivers (over 65 years old) are more likely to be dangerous, because at this age, misperceptions of traffic conditions are greater. In addition, aggressive drivers will increase the potential for accidents. (Parker, Reason, Manstead, & Stradling, 1995) concluded that *driving behaviour* has a positive effect on road traffic accidents. Making mistakes in driving tends to cause active accidents (respondents crashing into other vehicles). Driving experience and age will reduce the risk of accidents.

II. METHODS

The method used in this research is multinomial *logit analysis*, which is a logistic regression used when the response variable is polychotomous or multinomial, nominal and ordinal scales with more than two categories. Regression models for response variables that are more than two categories must pay attention to the measurement scale. In this study using a logistic regression model with nominal scale response variables. The multinomial logit model is technically almost the same as the binary logit model, which compares the probability of one response with another response. Because there are more than two response variables, there is one response value that is used as a reference and usually uses the smallest response value ($Y = 0$). By comparing two probability values, the *odds ratio* value will be obtained with the following equation:

$$Odd\ Ratio = \frac{P(y=1)}{1-P(=1)} = e^{g(x)} \tag{1}$$

The probability function of multinomial logistic regression with $Y = 0$ as the *reference category* for each category can be seen in the equation below.

$$\pi_0 = \frac{1}{1+exp g_1(x)+exp g_2(x)} \tag{2}$$

$$\pi_1 = \frac{exp g_1(x)}{1+exp g_1(x)+exp g_2(x)} \tag{3}$$

$$\pi_2 = \frac{exp g_2(x)}{1+exp g_1(x)+exp g_2(x)} \tag{4}$$

A. Sample

The number of samples in this study was 200 respondents. The data was collected by direct interview with the respondents and where the respondents were AKAP public transport drivers with a route to Jakarta. The time required for interviewing each respondent was around 10 to 15 minutes. The data obtained were recapitulated, then validity and reliability tests were carried out for the speed variable. All samples were used for the modelling process.

III. RESULTS AND DISCUSSION

Data was obtained through interviews between surveyors and respondents. The interviewed drivers were randomly selected for each route that had been determined. From the sample data results, for the age variable, the average age of the respondents was 44.17 years with a standard deviation of 8.64.

The speed variable was measured from the results of respondents' answers related to speed behaviour when driving. The tool they used to measure this variable was the DSQ *(Driving Style Questionaire)*. This questionnaire consisted of 15 questions of which 3 questions related to speed, 3 questions related to calmness, 2 questions related to social resistance, 3 questions related to focus, 2 questions related to trip planning and 2 trips related to deviant behaviour. The scale used is a *Likert* scale using 6 levels, namely 1 = very rarely/never; 2 = rarely; 3 = quite rarely; 4 = quite often; 5 = often; 6 = almost all the time/always.(French, West, Elander, & Wilding, 1993). A high crash variable score indicates that drivers tend to drive at high speeds and tend to break the speed limit. Low crash variable scores indicate the opposite. The statistical values for each variable are as shown in table 1 below.

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Tabel 1. Age and Speed Variable Statistics

No	Statistics	Age	Speed
1	Minimum	21	3
2	Maximum	62	16
3	Average	44,2	6,7
4	Standard Deviation	8,6	2,4

The dependent variable in this study was respondents' involvement in accidents over the past three years. Accident involvement is categorised into three groups. First, respondents who were not involved in any accidents during the last three years (Safety Driver). Second, respondents who during the last three years experiencedminor accidents that only caused material losses (Almost Dangerous Driver), such as damage to the vehicle and did not result in human casualties. While the third group is respondents who have experiencedserious accidents in the last three years that caused human casualties, either minor injuries, serious injuries or death (Dangerous Driver).

From the survey results, data was obtained for each group. The safety driver group is 46.5%, the almost dangerous driver group is 33% and the dangerous driver group is 27.5%. The percentage for each group is shown in table 2 below.

Tabel 2. Prosentasi Responden untuk Tiap-Tiap Kelompok.

Group	Frequency	%
Safety Driver	93	46,50
Almost Dangerous Driver	66	33,00
Dangerous Driver	41	20,50
Total	200	100,00

A. Logit Model Formation

The modelling process is carried out with two scenarios, the first scenario, the model is only formed from one independent variable. This step is to determine how much influence a single independent variable has on the tendency of potential accidents. The second scenario, the model is formed jointly by two independent variables, namely age and speed. With this scenario, the amount of influence of the independent variables on the potential for accidents will be obtained after being combined by two independent variables. In the process of model building, thereference group is the first group, namely *safety drivers*.

B. First Scenario

The first stage in the modelling process is theGoodness of Fit test. This stage is carried out to determine whether the *multinomial logit* model is appropriate or not. The null hypothesis used is that the model is fit. Based on table 3 below, it can be seen that both models for age and speed have a significance value of more than 5%, so it can be concluded that the model is suitable for use.

Tabel 3. Model Conformity Test

Statistic Test	Age			Speed		
	Chi-Square	df	Sig.	Chi-Square	df	Sig.
Pearson	78,2	72	0,29	29,6	24	0,19
Deviance	83,8	72	0,16	31,7	24	0,13

The model fit test can also be done by comparing the chi-Square between the model that only involves constants and the model that includes independent variables. The calculation results are shown in table 4 below. From the calculation results obtained for the age model is significant at the 10% error level while for the speed model is significant at the 5% error level. This indicates that the logit model can proceed to the next stage.

Tabel 4. Test Model (Simultaneous Test)

Model	Age				Speed			
	Model Fitting Criteria	Likelihood Ratio Tests			Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	183,79				94,22			
Final	174,61	9,18	2	0,01	83,26	10,96	2	0,04

To determine how much influence the variability of the independent variables had on the model, the *Pseudo R_Square* values were used as shown in Table 5 below. Based on this table, it can be seen that in both the age model and the speed model, the independent variables contribute less than 10%. This suggests that there are other independent variables that influence the model. Although both the age and speed variables contributed relatively little individually, this does not detract from the quality of the model.

Tabel 5. Pseudo R-Square Value

Statistics	Age	Speed
Cox and Snell	0,045	0,053
Nagelkerke	0,051	0,061
McFadden	0,022	0,026

To find out whether the independent variables should be included in the model, the chi-square test is used, namely by comparing the likelihood between the final model (model by including independent variables) and the *reduced model* (model without involving independent variables). The null hypothesis used is that there is no effect of independent variables on the model. Based on Table 6 below, it can be seen that for both the age variable and

speed variable models, both have significance values below 5%. It can be concluded that the independent variables individually influence the model.

Tabel 6. Free Variable Due Diligence Test

Effect	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
	Models For Ages			
Konstanta	183,73	9,12	2	0,01
Usia	183,73	9,12	2	0,01
	Models for speed			
Konstanta	104,60	21,34	2	0,00
Kecepatan	94,22	10,96	2	0,00

The last stage in the process of forming a logit model is to test the feasibility of the coefficients of the model. By using Wald test with the results as shown in table 7 below. For the age variable model, the results show that the constant (intercept) and the coefficient of the age variable are significant only in the *Almost Dangerous Driver* group equation or the group that tends to have the potential for minor accidents. As for the *Dangerous Driver* group equation, neither the constant(*intercept*) nor the coefficient of the age variable is significant.

For the speed variable model, the constant (*intercept*) is significant in both *almost dangerous driver* and *dangerous driver* equations. While the coefficient of the speed variable is only significant in the *dangerous driver* group.

Tabel 7. Parameter Estimation (Constants and Coefficients of Free Variables)

Group		B	Wald	Sig.	Exp(B)
	Models for Ages				
Almost Dangerous Driver	Constant	-2,56	7,79	0,01	
	Age	0,05	6,13	0,01	1,050
Dangerous Driver	Constant	-0,19	0,041	0,84	
	Age	-0,06	0,45	0,50	0,94
	Model for Speed				
Almost Dangerous Driver	Constant	-0,85	2,96	0,08	
	Speed	0,08	0,07	0,27	1,08

Constant	*-2,59*	*0,60*	*0,00*	
Dangerous Driver				—
Speed	*0,26*	*10,20*	*0,00*	*1,10*

Based on table 7 above, the logit equation for the model on the age variable there is only one equation formed, namely in the *dangerous driver* group as follows:

$$\pi_3 = -2{,}56 + 0{,}05(usia) \tag{5}$$

While in the model for the independent variable speed there are two equations formed, which are as follows:

$$\pi_2 = -0{,}85 \tag{6}$$
$$\pi_3 = -2{,}59 + 0{,}26(kecepatan) \tag{7}$$

C. Second Scenario

In the second scenario, the variables age and speed are included in the logit model. By entering them together, there will be a change in the interaction between the independent variables and the dependent variable as well as between the independent variables. This interaction will of course affect the logit model. The stages in the model building process are the same as in the previous scenario. The first is the model fit test (*Goodness of fit*). The null hypothesis is that the model is fit. Based on the chi-squared values, both *Pearson* and *Deviance*, both have a significance value greater than 5%, so it can be concluded that the model is suitable for use. The chi-squared values for both calculations are shown in Table 8 below.

Tabel 8. Model Conformity Test

	Chi-Square	df	Sig.
Pearson	*259,35*	*256*	*0,43*
Deviance	*268,50*	*256*	*0,28*

Apart from using table 8 above, the model test can also be done by looking at table 9 below. By using the null hypothesis that all independent variables have no effect. Based on the calculation results seen in table 9 below, the significance value is less than 5%. So it can be concluded that all independent variables have an influence on the logit model.

Tabel 9. Test Model (Simultaneous Test)

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	*Chi-Square*	*df*	*Sig.*
Intercept Only	*346,52*			
Final	*326,26*	*20,26*	*4*	*0,00*

To determine the amount of influence of the variability of the independent variables on the model, it can be seen in the *Pseudo R-Square* value shown in table 10 below. There are 3 (three) *Pseudo R-Square* values, the Nagelkerke value reads 0.11 which means that the independent variable contributes 11% variability to the model, as well as for the other two values.

Tabel 10. Nilai Pseudo R-Square

Statistics	Value
Cox and Snell	0,10
Nagelkerke	0,11
McFadden	0,05

After testing the model, we then tested the independent variables that should be included in the model. Firstly, a partial test was conducted to determine whether each parameter of the model has a significant influence on crash involvement. The null hypothesis is that each parameter has no influence on crash involvement. The hypothesis will be rejected if the significance value is greater than 5%. Based on table 11 below, it can be seen that all parameters have significance values below 5%, which means the null hypothesis is rejected. Therefore, it can be concluded that all parameters in the model have a significant influence on crash involvement.

Tabel 11. Partial Test for Logit Parameters

Effect	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Constant	338,99	12,73	2	0,00
Age	337,34	11,08	2	0,00
Speed	335,56	9,30	2	0,01

After going through the stages above, the logit model equation will be obtained. In this study, there are three categories, so there is one category that will be used as a *reference* category, namely the first category (*safety driver*). Based on the calculation results, the results are as shown in table 12 below.

Tabel 12. Parameter Estimation

Group		B	Wald	Sig.	Exp(B)
	Constant	-3,95	10,49	0,00	
Almost Dangerous Driver	Age	0,06	8,04	0,00	1,02
	Speed	0,14	3,39	0,06	0,99
	Constant	-2,89	4,79	0,03	
Dangerous Driver	Age	0,01	0,06	0,81	0,96
	Speed	0,26	9,87	0,00	1,10

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From table 12 above, two logit equations are obtained, where the reference is the first group *(safety drivers)*, with the following equation:

a. Kelompok kedua (Almost dangerous driver)

$$\pi_2 = -3,95 + 0,06\ (usia) + 0,14(kecepatan) \tag{8}$$

b. Kelompok ketiga (Dangerous driver)

$$\pi_3 = -2,89 + 0,26(kecepatan) \tag{9}$$

D. Discussion

Observations regarding the effect of age and speed on crash rates were made in two scenarios. In the first scenario, the model included only one independent variable. This scenario was conducted to determine how much influence the independent variables individually have on the increased risk of crashes for each crash level. The second scenario, the model is composed by two independent variables together. Including the two independent variables together will certainly give an effect caused by the interaction of the two independent variables. There are two types of effects in the model analysis, the first is a positive effect, which means that if the independent variable increases, the risk of accidents will decrease and vice versa. While the positive effect means that if the independent variable increases, the risk of accidents also increases. The analysis is more focused on the odds ratio value which in the parameter estimation table is shown in the exp (B) column.

Based on the model formed, the age variable individually only influences minor accidents. The older the age of a driver, the higher the risk of minor accidents. Indeed, the increase in the risk of accidents is only 0.05, but if a driver already has a high risk of accidents, then an older age will increase the risk of minor accidents by 1.05 times every additional 1 year of a driver's age. Some studies that include the age variable in their research give varying results. (Chu, Wu, Zhang, & Ozkan, 2019) found that as people get older, they are more likely to commit driving offences. This behaviour will certainly increase the risk of accidents. However, there are some researchers who have come to different conclusions, for example (Bucsuhazy, et al., 2020), concluded that the older a person is, the lower the risk of accidents. Findings with similar results were also obtained by (Lady, Rizqandini, & Trenggonowati, 2020) which concluded that with increasing age the risk of accidents decreases.

Previous studies only discussed the effect of age on accidents, but in this study, accidents are divided into two categories, namely light and heavy accidents. From the previous discussion, age has a positive effect on minor accidents, but in the third group*(dangerous drivers)*, the effect of age is negative with logit values of 0.94 (first scheme) and 0.99 (second scheme). This indicates that the older a person is, the lower the risk of serious accidents. However, in terms of significance, this conclusion is not significant. It is possible that if the sample is increased, it will give a different result.

The results above show that if in previous studies the effect of age on accidents varies, some are positive and some are negative, but the results of this study show that age has a positive effect on minor accidents and age has a negative effect on serious accidents.

Regarding the effect of speed on crash rates, based on the modelling results above, it can be seen that speed has a negative effect on the risk of minor crashes but a positive effect on serious crashes. The negative effect on minor crashes does not mean more safety, but more likely to increase severe crashes. This can be seen when the risk of severe accidents is compared to the risk of minor accidents with the following calculation:

$$\frac{P.Kecelakaan\ Ringan}{P.Tidak\ Celaka} = e^B = 0,99 \tag{10}$$

$$\frac{P.Kecelakaan\ Berat}{P.Tidak\ Celaka} = e^B = 1,10 \tag{11}$$

If equations (10) and (11) are substituted, we get:

$$\frac{P.Kecelakaan\ Berat}{P.Kecelakaan\ Ringan} = \frac{1,10}{0,99} = 1,11 \tag{12}$$

Equation 12 shows that the potential for serious crashes to occur is greater than that for minor crashes due to a driver's speed behaviour.

There have been several studies that have included the variable speed in relation to crashes and all results show that speed is positively correlated with crash occurrence. (Mohanty & Gupta, 2015) concluded that one of the causes of accidents outside the city is speed, even when combined with other factors. (Aarts & Van Schagen, 2006) stated that vehicles travelling faster than the surrounding speed have a high potential for accidents, the higher the difference, the higher the risk of accidents. (Elvik, 2005) found that changes in average speed can

increase crash risk and casualty severity. A 10 per cent change in average speed will increase the risk of fatality even more.

IV. CONCLUSION

A. Conclusion

Age and speed are two variables that strongly influence crashes. Their influence on crashes is not only linked individually but when combined they have a greater influence. Age has a different impact on minor and major crashes. The higher the age of a driver, the higher the risk of a minor crash. Whereas driving at a higher speed increases the risk of a serious crash. Speed will increase the potential for severe crashes more than minor crashes. However, the combination of both variables tends to increase crash risk. The difference in the effect of age and speed on the two types of accidents certainly gives different meanings in handling them. This suggests that speed in driving will increase the risk of death.

B. Suggestion

This research is a development of previous research related to the effect of age or speed on accidents. However, in this study, accidents are divided into two categories, namely minor accidents and severe accidents. This separation of accidents will make it easier to distinguish the tendency of a strong influence on the risk of death. However, due to the limited data available, this research is still lacking and in the future it is necessary to develop or expand both sample size and variable coverage, so that it will increase the strength of the model formed.

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The Influence of Speed and Age on Crash Rate
Bambang Hermanto[1], Leksmono Suryo Putranto[1], dan Dadang M. Ma'soem[2]

The Influence of Organizational Culture, OCB, Work Ethics on Employee Performance in PDAM Tirta Giri Nata Cirebon City

Tia Tamara, Wafa Salsabila, Lisa Harry Sulistiyowati

Management Study Program, Faculty of Economics and Business, Gunung Jati Independent University, Cirebon

Jl. Pemuda No. 32, Cirebon Jawa Barat, Indonesia

Corresponding Author*: tiatamara208@gmail.com, wafasalsabila80@gmail.com, lisaharry@ugj.ac.id

ABSTRACT

Purpose: This study investigates the influence of organizational culture, Organizational Citizenship Behavior (OCB), and Work Ethics on employee performance at PDAM Tirta Giri Nata Kota Cirebon.

Design/Methodology/Approach: This study uses quantitative research methods. With questionnaire and observation data collection techniques. The sample used in this study was 158 respondents. The sampling technique was carried out by purposive sampling. With data analysis techniques using validity tests, reliability tests, classical assumption tests in the form of normality tests, multicollinearity tests, heteroskedasticity tests, determination tests, and hypothesis tests. The analysis method used is the Statistical Product and Service Solution (SPSS) Version 16.0 method.

Findings: The findings show that organizational culture partially has no positive effect on employee performance, Organizational Citizenship Behavior (OCB) and Work Ethic partially have a positive and significant effect on employee performance. Simultaneously, the combined effect of organizational culture, OCB, and Work Ethic has a significant effect on the performance of PDAM Tirta Giri Nata Cirebon City employees with an influence of 36.3%.

Research Limitations/Implications: One limitation of this study is the focus solely on employees of PDAM Tirta Giri Nata Kota Cirebon, which may limit the generalizability of the findings. Future research could explore other organizational contexts to enhance the generalizability of the results.

Practical Implications: The findings suggest that fostering Organizational Citizenship Behavior (OCB) and nurturing a strong Work Ethics among employees can significantly enhance their performance in organizations such as PDAM Tirta Giri Nata Kota Cirebon.

Originality/Value: This study contributes to the existing literature by examining the combined influence of organizational culture, OCB, and Work Ethics on employee performance, particularly in the context of a public utility company like PDAM Tirta Giri Nata Kota Cirebon.

Paper Type: Research Paper

I. INTRODUCTION

" The influence of organizational culture, Organizational Citizenship Behavior (OCB), and work ethic on employee performance is a very interesting and important topic in the study of human resource management (Lubis, 2020). Understanding the dynamics behind these elements can provide deep insight into how an organization operates and how it influences individual performance (Muthmainnah, 2023).

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Organizational culture, in a deeper sense, is not just the rules and procedures written in company policy (Nova et al., 2023). This is the essence of a company's identity, which includes the values, norms, beliefs, and practices embraced and internalized by every member of the organization (NUR, 2023). When organizational culture has a strong and positive foundation, it can provide a solid foundation for employee performance (Arifiani & Rumijati, 2021).

An organizational culture that supports collaboration, innovation, trust, and individual growth tends to encourage employees to feel more motivated, engaged, and high performing (SAPUTRA, 2023). Collaboration supported by an inclusive culture helps create an environment where new ideas can develop and be well implemented (Novitasari & Askafi, 2023). The trust instilled by a positive organizational culture also provides a strong foundation for healthy and productive work relationships (Darsana & Koerniawaty, 2021).

Not only that, an inclusive and supportive organizational culture also plays an important role in creating a work climate that promotes employee psychological well-being (Maslina et al., 2023). When employees feel supported and appreciated, they tend to be more psychologically satisfied and have lower stress levels (Pratiwi, 2021). This can ultimately improve the overall well-being of employees and their contribution to organizational performance (Herawati et al., 2020).

Apart from organizational culture, Organizational Citizenship Behavior (OCB) also plays an important role in determining the quality of employee performance (Ramdan, 2022). OCB refers to voluntary behavior that is not included in one's primary duties but makes a positive contribution to the organization (Ulhaq, 2023). Employees who have high levels of OCB tend to do more than is expected of them (Zalfa et al., 2023), such as helping coworkers, sharing knowledge, and participating in organizational activities voluntarily (Renhoat et al., 2021). This behavior can improve the overall operational efficiency and effectiveness of the organization (Widyastuti & Budiharto, 2023).

Meanwhile, work ethic is also an important factor that influences employee performance (Hadiyan & Faisal, 2021). Work ethic includes the values, beliefs and attitudes that individuals hold towards their work and responsibilities in the organization (Fitri et al., 2022). Employees with a strong work ethic tend to have high internal motivation to achieve their goals and perform consistently (Asroti et al., 2022). Overall, the interaction between organizational culture, OCB, and work ethic creates a complex and diverse work environment that significantly influences employee performance (Permadi, 2023). Understanding the relationship between these elements is key to managing and improving overall organizational performance (Triliyani & Kuntadi, 2023).

Organizational Citizenship Behavior (OCB) also has an important impact on organizational performance. OCB refers to voluntary behavior performed by employees outside their primary job responsibilities (Naim et al., 2023). This could take the form of helping colleagues, contributing creative ideas, or actively participating in organizational activities (Hindun, 2023). Employees who engage in OCB tend to create a positive work environment, strengthen inter-individual relationships, and increase job satisfaction (Ukasyah et al., 2023). In the long term, OCB can help in building organizational capacity and creating a dynamic and inclusive work culture (Budiyarti et al., 2022).

Individual work ethic is also a very important factor in employee performance (Jatiawan et al., 2023). Work ethic reflects attitudes, values, and behavior that encourage employees to work hard, be responsible, and be dedicated to their work (Pebrianti et al., 2023). Employees with a strong work ethic tend to have high intrinsic motivation, a willingness to learn and develop, and the resilience necessary to face challenges in the workplace (Khoiriyah, 2023). Thus, a positive work ethic not only influences individual performance, but also strengthens organizational culture and OCB practices in the long term (Kurniawan, 2020). The influence of organizational culture, OCB, and work ethic on employee performance are interrelated and influence each other (Ardella & Suhana, 2023). Organizations that are able to build a supportive culture, encourage OCB practices, and promote a positive work ethic have the potential to create a productive, innovative, and high-performance work environment (Khoiriyah, 2023). Therefore, management must consider a holistic approach in managing these factors to achieve long-term competitive advantage and overall organizational success (Fadillah, 2022).

The discussion regarding the influence of organizational culture, Organizational Citizenship Behavior (OCB), and work ethic on employee performance at PDAM Tirta Giri Nata, Cirebon City reflects a complexity in organizational dynamics that can have significant implications for operational effectiveness and customer satisfaction. Organizational culture, OCB, and work ethic not only influence how employees behave in the workplace, but can also provide the foundation for achieving organizational goals and maintaining a healthy and productive work environment. The problems faced by PDAM Tirta Giri Nata can cover several aspects. First, there may be a mismatch between the organizational culture desired by management and the organizational culture internalized by employees (Zakiah, 2021). This can result in a mismatch in values, perceptions, and behavior between management and employees, which in turn can affect employee motivation and overall performance. PDAM Tirta Giri Nata may face challenges in encouraging and maintaining Organizational Citizenship Behavior (OCB) among employees (Dodi, 2022). Although OCB is a voluntary behavior that is important for organizational success, not all employees may be motivated to do so. Employees may not see enough incentives or appreciation

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for contributing beyond their primary duties. Apart from that, employee work ethic can also be a factor that influences performance at PDAM Tirta Giri Nata. If employees lack intrinsic motivation, responsibility, or discipline in carrying out their tasks, this can hinder overall efficiency and productivity.

The purpose of this research is to dig deeper into how organizational culture, OCB, and work ethic influence employee performance at PDAM Tirta Giri Nata. Through a better understanding of these factors, it is hoped that management can design more effective strategies to increase employee performance and improve overall organizational operations. The urgency of this research cannot be ignored. As a vital water service provider for the people of Cirebon City, PDAM Tirta Giri Nata must ensure optimal employee performance to maintain smooth operations and customer satisfaction. By understanding how organizational culture, OCB, and work ethic play a role in the PDAM's specific context, management can identify areas where improvement is needed and design appropriate interventions to improve employee performance. Thus, it is hoped that this research can make a significant contribution to the academic field by filling existing knowledge gaps regarding the factors that influence employee performance in the public service sector, especially in PDAM. In addition, this research also has high practical value by providing useful insights for PDAM Tirta Giri Nata management in their efforts to improve operational effectiveness and customer satisfaction.

A. Literature Review
1. Organizational culture

Organizational culture reflects the overall identity, values, norms and practices accepted and internalized by organizational members. It includes the way an organization interacts with its environment, both internal and external, as well as how members of an organization interact with each other (Schein & Hofstede,1980) (Mokoagow et al., 2022). Organizational culture sets the framework for individual behavior within the organization and influences employee attitudes, motivation, and behavior. Organizational culture can form organically over time through experience, or it can also be formed intentionally through policies, values, and practices adopted by organizational leadership. A strong and consistent organizational culture can be a valuable resource for an organization in achieving its strategic goals.

2. Organizational Citizenship Behavior (OCB)

Organizational Citizenship Behavior (OCB) refers to voluntary behavior carried out by employees outside of their specific or directly ordered duties. OCB includes actions such as helping coworkers, contributing to organizational activities, providing suggestions, and showing support for the organization (Organ & Bateman,1983) (Savitri et al., 2023). OCB behaviors expand the concept of employee performance beyond the achievement of their primary tasks, and tend to contribute to the overall effectiveness and well-being of the organization. OCB is usually not formally monitored or rewarded, but can have a significant impact on productivity, creativity, and the work atmosphere within an organization.

3. Work Ethic

Work ethic is a concept that refers to an individual's attitudes, values, beliefs and behavior towards the work and responsibilities they carry out. This includes how strongly a person is committed to their work, how diligent they are in completing tasks, how honest and disciplined they are in carrying out their duties, and how much attention they pay to the quality and results of the work produced (Wildani, 2023). Work ethic is not only related to a person's level of intrinsic motivation towards their work, but also includes time management skills, responsibility, cooperation and orientation towards clear goals. Individuals with a strong work ethic usually have high internal motivation to achieve success in their careers and tend to have higher levels of job satisfaction.

4. Employee performance

Employee performance is the result of the level of effectiveness, productivity and contribution made by an employee to organizational goals. This includes how well employees achieve set targets, how high the quality of the work they produce, how much innovation and creativity they bring to their work, how often they attend and participate in organizational activities, and how disciplined they are in carrying out their duties. (Kirana et al., 2022). Employee performance evaluation is an important process in human resource management that involves monitoring and assessing employee achievement of their performance goals. This allows managers to provide constructive feedback, support ongoing career development, provide appropriate recognition, and make decisions regarding promotion, rotation, or further employee development. Good employee performance is often an indicator of overall organizational success, because high-performing employees tend to make a significant contribution to achieving organizational goals.

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II. METHODS

A. Research design

This research will use a quantitative approach because it focuses on measuring certain variables numerically to determine the relationship between them (Kirana et al., 2022). A correlational research design would be the right choice because it allows to identify correlations between the variables studied, without causing excessive causal assumptions. Thus, this research will focus more on the relationship between organizational culture, OCB, and work ethic with employee performance rather than looking for factors that cause changes in the dependent variable.

B. Population and Sample

The population of this study were all employees at PDAM Tirta Giri Nata, Cirebon City. Taking into account time and resource limitations, sampling will be carried out simply randomly by sending questionnaires to a number of employees representing various departments and position levels in the organization. By using an appropriate formula to determine the required sample size, it is hoped that the sample will reflect the population as a whole well.

C. Data Collection Instrument

The research instrument will be a questionnaire specifically designed to measure organizational culture, OCB, work ethic and employee performance (Ermawati, 2023). The questionnaire will consist of items related to each variable, designed based on a conceptual framework that has been developed from related literature (Sitio, 2021). Before use, the questionnaire will go through a validation process by experts and trials to ensure the feasibility and applicability of the instrument.

D. Research variable

12. Independent Variables: Organizational culture, OCB, and work ethic. Organizational culture will be measured through aspects such as organizational values, norms and dominant practices at PDAM Tirta Giri Nata. OCB will be measured by looking at the extent to which employees engage in voluntary behavior that helps the organization. Work ethic will involve aspects such as intrinsic motivation, responsibility and discipline.
13. Dependent Variable: Employee performance, which can be measured through parameters such as productivity, work quality, attendance and customer satisfaction.

E. Data Collection Procedures

Data will be collected through an online survey which will be distributed to PDAM Tirta Giri Nata employees. The survey will come with clear guidance on how to complete it and the importance of participation. Apart from that, researchers can also conduct direct interviews with a number of employees to gain deeper insight into their experiences and perceptions related to the variables studied.

F. Data analysis

The collected data will be analyzed using appropriate statistical techniques, such as multiple linear regression (Baharuddin, n.d.). This analysis will help in identifying the relationship between the independent variables (organizational culture, OCB, and work ethic) and the dependent variable (employee performance). In addition, path analysis can also be used to understand direct and indirect relationships between variables.

G. Interpretation of Results

The results of data analysis will be interpreted carefully to draw valid and relevant conclusions. Research findings will be linked to relevant literature to strengthen the validity of the results. The practical implications of the research findings will be discussed, and recommendations will be submitted to PDAM Tirta Giri Nata management to improve employee performance.

H. Research Limitations

The study will consider potential limitations that may affect the validity and generalizability of the results. These include limitations in sample size, measurement instruments, as well as other factors that may influence the interpretation of findings.

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III. RESULTS AND DISCUSSION

A. Validity test

The aim of the validity test in this research is to organize the data from the variables studied. The research used a sample of 158 employees who were used as research objects, where df = (N-2) = 158 – 2 = 156, so the result of 156 with a significance of 0.05 was 0.1313. The results of the validity test in this study used the Corrected Item-Total Correlation validity test using SPSS Version 16.0 as follows:

Table 1. Organizational Culture (X1)

Item-Total Statistics

	Scale Mean if Item Deleted	*Scale Variance if Item Deleted*	*Corrected Item-Total Correlation*	*Cronbach's Alpha if Item Deleted*
X1.1	59.1456	28,915	,184	,723
X1.2	59.2911	27,163	,312	,711
X1.3	59.0696	26,880	,372	,704
X1.4	59.0570	27,672	,287	,714
X1.5	59.0380	27,553	,307	,711
X1.6	58.9557	28,297	,268	,715
X1.7	59.1709	27,162	,331	,709
X1.8	59.1772	25,943	,461	,693
X1.9	59.1519	25,697	,520	,687
X1.10	59.0823	27,006	,324	,710
X1.11	59.0443	28,476	,194	,723
X1.12	59.0380	27,999	,305	,712
X1.13	59.1266	28,239	,220	,721
X1.14	59.2405	27,305	,259	,718
X1.15	59.1076	25,383	,523	,686

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Based on the output above, it can be seen in the Corrected Item-Total Correlation column that the results of the validity test instrument for the statement of the organizational culture variable (X1) are presented in the table below:

Table 2. Organizational Culture Validity Test Measurement Results (X1)

Item No	R. count	R. table	Information
1	0.184	0.1313	Valid
2	0.312	0.1313	Valid
3	0.372	0.1313	Valid
4	0.287	0.1313	Valid
5	0.307	0.1313	Valid
6	0.268	0.1313	Valid
7	0.331	0.1313	Valid
8	0.461	0.1313	Valid
9	0.520	0.1313	Valid
10	0.324	0.1313	Valid
11	0.194	0.1313	Valid
12	0.305	0.1313	Valid
13	0.220	0.1313	Valid
14	0.259	0.1313	Valid
15	0.523	0.1313	Valid

Based on the results of data calculations, each statement has a calculated R value, so it can be stated that each statement for the organizational culture variable (X1) is valid. So it can be concluded that each statement of the organizational culture variable instrument (X1) is feasible and can be used for the subsequent data analysis process.

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Table 3. Organizational Citizenship Behavior (OCB)

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X2.1	51.2152	22,068	,397	,728
X2.2	51.3291	22,299	,431	,725
X2.3	51.4810	21,398	,368	,734
X2.4	51.1835	23,565	,228	,747
X2.5	51.1646	23,272	,254	,744
X2.6	51.1962	23,331	,282	,740
X2.7	51.3038	23,181	,271	,742
X2.8	51.1899	22,677	,395	,729
X2.9	51.3038	21,627	,491	,718
X2.10	51.3481	21,948	,477	,720
X2.11	51.2532	22,025	,433	,724
X2.12	51.2975	22,070	,450	,723
X2.13	51.3418	22,239	,351	,734

Based on the output above, it can be seen in the Corrected Item-Total Correlation column that the results of the validity test of the OCB variable statement instrument (X2) are presented in the table below:

Table 3. OCB Validity Measurement Results (X2)

Item No	R. count	R. table	Information
1	0.397	0.1313	Valid
2	0.431	0.1313	Valid
3	0.368	0.1313	Valid

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4	*0.228*	*0.1313*	*Valid*
5	*0.254*	*0.1313*	*Valid*
6	*0.282*	*0.1313*	*Valid*
7	*0.271*	*0.1313*	*Valid*
8	*0.395*	*0.1313*	*Valid*
9	*0.491*	*0.1313*	*Valid*
10	*0.477*	*0.1313*	*Valid*
11	*0.433*	*0.1313*	*Valid*
12	*0.450*	*0.1313*	*Valid*
13	*0.351*	*0.1313*	*Valid*

Based on the calculation results, the data shows that each statement has a value of rcount > rtable, so it can be stated that each statement for the OCB variable (X2) is valid. So it can be concluded that all OCB variable instrument statements (X2) are feasible and can be used for the subsequent data analysis process.

Table 4. Work Ethic (X3)

Item-Total Statistics

	Scale Mean if Item Deleted	*Scale Variance if Item Deleted*	*Corrected Item-Total Correlation*	*Cronbach's Alpha if Item Deleted*
X3.1	*42.5127*	*18,188*	*,564*	*,771*
X3.2	*42.7468*	*19,770*	*,383*	*,790*
X3.3	*42.6582*	*19,246*	*,365*	*,794*
X3.4	*42.6392*	*19,595*	*.403*	*,788*
X3.5	*42.7468*	*19,515*	*,392*	*,789*
X3.6	*42.7152*	*18,957*	*,474*	*,781*
X3.7	*42.6646*	*18,173*	*,550*	*,772*
X3.8	*42.7785*	*18,670*	*,500*	*,778*

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Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X3.9	42,5000	19,551	,442	,785
X3.10	42.6835	19,390	,435	,785
X3.11	42.6582	18,303	,507	,777

Based on the output above, it can be seen in the Corrected Item-Total Correlation column that the results of the validity test instrument for the Work Ethic variable (X3) are presented in the table below:

Table 5. Work Ethic Validity measurement results (X3)

Item No	R. count	R. table	Information
1	0.564	0.1313	Valid
2	0.383	0.1313	Valid
3	0.365	0.1313	Valid
4	0.403	0.1313	Valid
5	0.392	0.1313	Valid
6	0.474	0.1313	Valid
7	0.550	0.1313	Valid
8	0.500	0.1313	Valid
9	0.442	0.1313	Valid
10	0.435	0.1313	Valid
11	0.507	0.1313	Valid

Based on the calculation results, the data shows that each statement has a value of rcount > rtable, so it can be stated that each statement for the Work Ethic variable (X3) is valid. So it can be concluded that all statements of the Work Ethic variable instrument (X3) are feasible and can be used for the subsequent data analysis process.

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Table 6. Employee Performance Validity Test (Y)

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Y1	*35.1709*	*12,155*	*,375*	*,736*
Y2	*35.1772*	*12,032*	*,388*	*,734*
Y3	*35.0886*	*12,158*	*,409*	*,731*
Y4	*35.1772*	*11,433*	*,567*	*,707*
Y5	*35.3165*	*11,313*	*,465*	*,722*
Y6	*35.2025*	*11,895*	*,413*	*,730*
Y7	*35.1709*	*11,697*	*,468*	*,721*
Y8	*35.1203*	*12,170*	*,369*	*,737*
Y9	*35.2342*	*11,747*	*,407*	*,732*

Based on the output above, it can be seen in the Corrected Item-Total Correlation column that the results of the validity test instrument for the Employee Performance variable (Y) statement are presented in the table below:

Table 7.

Item No	R. count	R. table	Information
1	*0.375*	*0.1313*	*Valid*
2	*0.388*	*0.1313*	*Valid*
3	*0.409*	*0.1313*	*Valid*
4	*0.567*	*0.1313*	*Valid*
5	*0.465*	*0.1313*	*Valid*
6	*0.413*	*0.1313*	*Valid*
7	*0.468*	*0.1313*	*Valid*

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| 8 | 0.369 | 0.1313 | Valid |
| 9 | 0.407 | 0.1313 | Valid |

Based on the calculation results, the data shows that each statement has a value of rcount > rtable, so it can be stated that each statement for the Employee Performance variable (Y) is valid. So it can be concluded that all statements on the Employee Performance (Y) instrument are appropriate and can be used for further data analysis processes.

B. Reliability Test

Table 8. Organizational Culture (X1)

Reliability Statistics

Cronbach's Alpha	N of Items
,724	15

It can be seen that the Chronbach's Alpha value is > 0.7, namely 0.724 > 0.7, meaning that the organizational culture variable (X1) is reliable.

Table 9. OCB (X2)

Reliability Statistics

Cronbach's Alpha	N of Items
,747	13

It can be seen that the Chronbach's Alpha value is > 0.7, namely 0.747 > 0.7, meaning the OCB variable (X2) is reliable

Table 10. Work Ethic (X3)

Reliability Statistics

Cronbach's Alpha	N of Items
,799	11

It can be seen that the Chronbach's Alpha value is > 0.7, namely 0.799 > 0.7, meaning the Work Ethic variable (X3) is reliable.

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Table 11. Employee Performance (Y)

Reliability Statistics

Cronbach's Alpha N of Items

,751   9

It can be seen that the Chronbach's Alpha value is > 0.7, namely 0.751 > 0.7, meaning the Employee Performance variable (Y) is reliable.

C. Classic assumption test

Table 12. Normality test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		158
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	3.04315515
Most Extreme Differences	Absolute	,090
	Positive	,070
	Negative	-.090
Kolmogorov-Smirnov Z		1,134
Asymp. Sig. (2-tailed)		.153

a. Test distribution is Normal.

Based on the table above, it can be seen that the Kolmogrov-Smirnov normality test on the variables organizational culture (X1), OCB (X2), Work Ethic (X3) and Employee Performance (Y) results show that the residual variable data has an Asymp value. Sig. (2-tailed) is 0.153, which means it has a value <>0.05, so it can be concluded that all variables are normally distributed. This can also be seen from the following Normal PP Plot image:

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Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Y

Table 13. Multicollinearity Test

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	12,729	3,040		4,188	,000		
X1.1	,077	,060	.113	1,292	,198	,546	1,832
X2.2	,260	.071	,346	3,652	,000	,460	2,173
X3.3	,251	,097	,226	2,605	,010	,552	1,812

a. Dependent Variable: Y

1. Tolerance X1 value 0.546 > 0.100 and VIF 1.832 < 10.00
2. Tolerance X2 value 0.460 > 0.100 and VIF 2.173 < 10.00
3. Tolerance X3 value 0.552 > 0.100 and VIF 1.812 < 10.00

So it can be concluded that there are no symptoms of multicollinearity from the existing data, or it can be said that the data is good.

D. Heterosdecedasticity test with the Glejser test

The basis for making decisions on the Heterodecedasticity test using the Glejser method:

1. If the sig value is > 0.05 (no symptoms of heteroscedasticity occur)
2. If the sig value is <0.05 (heteroscedasticity symptoms occur)

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Table 14. Heterodecedasticity test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5,959	1,970		3,025	,003
	X1.1	-.101	,039	-.274	-2,598	,060
	X2.2	-.015	,046	-.038	-.332	,740
	X3.3	,068	,063	,115	1,094	,276

a. Dependent Variable: LNU2I

Statement that:
1. X1 sig value 0.060 > 0.05 means that there are no symptoms of heteroscedasticity
2. X2 sig value 0.740 > 0.05 means that heteroscedasticity does not occur
3. X3 sig value 276 > 0.05 means that heteroscedasticity does not occur

D. Multiple Regression Analysis

Table 15. Based on the table above, it can be formulated:

$$Y = a + b1X1 + b2X2 + b3X3$$

$$Y = 12.729 + 0.077X1 + 0.260X2 + 0.251X3$$

E. Coefficient of Determination R

Table 16. Coefficient of Determination R

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.602a	,363	,351	3.07265	2,008

a. Predictors: (Constant), X3.3, X1.1, X2.2

b. Dependent Variable: Y

Based on the data above, the R Square value is 0.363 or 0.36.3%, which is multiplied by 100% to 36.3%, which means that the influence of variables X1, X2, X3 on variable Y is 36.5% and the remaining is 26%. influenced by other factors not studied.

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F. Hypothesis testing
1. t Test (Partial)
a. Hypothesis testing of the influence of organizational culture (X1) on employee performance (Y)
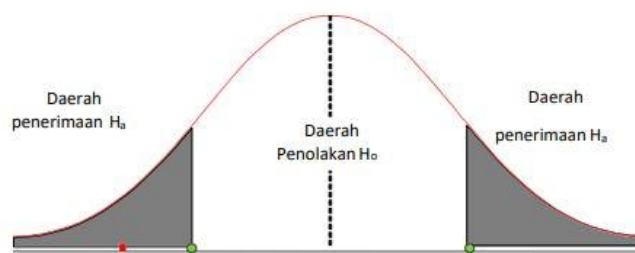
Partially testing the Organizational Culture variable on Employee Performance, the first hypothesis can be proposed as follows: Ho = There is no significant influence on the organizational culture variable on Employee Performance Ha = There is a significant influence on the Organizational Culture variable on Employee Performance Test criteria: If tcount > ttable then Ha is accepted and Ho is rejected. If tcount < ttable then Ha is rejected and Ho is accepted. As for calculating the size of the tcount number with $\alpha = 0.05$ and dk = n – 2 = 158 – 2 = 156 so ttable is 1.654.

Table 17. t Test

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	12,729	3,040		4,188	,000		
X1.1	,077	,060	.113	1,292	,198	,546	1,832
X2.2	,260	.071	,346	3,652	,000	,460	2,173
X3.3	,251	,097	,226	2,605	,010	,552	1,812

a. Dependent Variable: Y

It can be seen that the organizational culture variable has a calculated t value of X1 1.292 < t table 1.654, so Ha is rejected and Ho is accepted, which means there is no influence between variable

Tcount -1.292   Ttable 1.654 Tcount 1.292

So it can be concluded that organizational culture (X1) does not have a significant influence on employee performance (Y).

b. Hypothesis Testing the Effect of OCB (X2) on Employee Performance (Y)

Partial testing regarding the OCB variable on employee performance can propose the first hypothesis as follows:

It can be seen that the OCB variable has an influence on employee performance. This can be proven by obtaining a tcount value of 3.652 > 1.654 and a sig value of 0.000 < 0.05, so Ha is accepted and Ho is rejected. So it can be concluded that OCB has a significant effect on 156 employee performance. It can also be shown that the first hypothesis of OCB has been tested. This description can be described in areas of acceptance and rejection of the hypothesis with the following picture:

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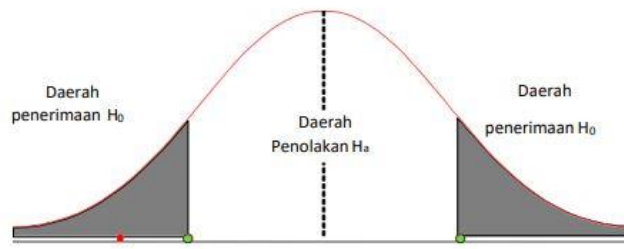
Tcount -3.652   Ttable 1.654 Tcount 3.652

c. Hypothesis Testing the Effect of Work Ethic (X3) on Employee Performance (Y)

Partially testing the Work Ethic variable on Employee Performance, the first hypothesis can be proposed as follows: "

It can be seen that the work ethic variable has an influence on employee performance. This is proven by the tcount value of 2.605 > 1.654 and the sig value of 0.01 < 0.05, which means that Ha is accepted and Ho is rejected. So it can be concluded that the work ethic variable has a significant effect on 156 employee performance. This shows that the first hypothesis regarding work ethic has been tested. This description can be described in areas of acceptance and rejection of the hypothesis with the following picture :

Tcount -2.605   Ttable 1.654 Tcount 2.605

2. Simultaneous significance test (F Test)

Provision:

The significant level = 0.05 and the degrees of freedom df1 are (number of variables/k–1 or 4-1=3). Then the degrees of freedom df3 are (number of samples/n-number of variables/k) or 156-4 = 152. Based on these provisions, the result obtained for FTable is 1.654.

Table 18. F Test

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	828,486	3	276,162	29,251	,000a
Residual	1453.945	154	9,441		
Total	2282.430	157			

a. Predictors: (Constant), X3.3, X1.1, X2.2

b. Dependent Variable: Y

Based on the table data above, it is known that Fcount is 29.251 with a significance level of 0.000. This value is then compared with Ftable 1.654. In this way, it can be concluded that the value of Fcount > Ftable is 29.251 > 1.654 and the significant value is 0.000 < 0.05 so that Ho is rejected and Ha is accepted, meaning that

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the variables organizational culture (X1), OCB (X2), Work Ethic (X3) simultaneously have an influence significant to employee performance (Y). The picture of the area of acceptance and rejection of the hypothesis is as follows:
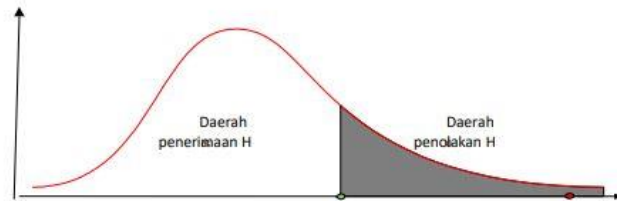
IV. CONCLUSION

Based on the research results, it was concluded that although organizational culture does not have a significant influence on employee performance ($\beta = 0.077$, $t = 1.292$, $p = 0.198$), Organizational Citizenship Behavior (OCB) ($\beta = 0.260$, $t = 3.652$, $p < 0.001$) and Work Ethic (X3) ($\beta = 0.251$, $t = 2.605$, $p = 0.010$) significantly contributes positively to employee performance. The results of the simultaneous significance test show that together, organizational culture, OCB, and work ethic significantly influence employee performance ($F = 29.251$, $p < 0.001$). These findings highlight the importance of OCB and work ethic in improving employee performance in the PDAM Tirta Giri Nata Cirebon City environment.

ACKNOWLEDGMENTS

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The Influence of Referral Marketing and Customer Trust on Purchasing Decisions Through Customer Satisfaction at PT. Dharma Lautan Utama Surabaya

Firman Dandy, Chandra Kartika, Soenarmi

Management Study Program, Faculty of Economics and Business, Wijaya Putra University Surabaya

Corresponding Author*: firmanantiek@gmail.com, chandrakartika@uwp.ac.id,
Soenarmi@uwp.ac.id

ABSTRACT

Purpose: This research is entitled "The Influence of Referral Marketing and Customer Trust on Purchasing Decisions through Customer Satisfaction at PT. Dharma Lautan Utama Surabaya". The purpose of this study is to describe referral marketing, customer trust, purchase decisions and customer satisfaction in the company, as well as to determine and analyze the influence of referral marketing and customer trust on purchasing decisions both directly and through customer satisfaction. This research is an explanatory research with a quantitative approach.

Design/Methodology/Approach: The population in this study is customers who are already customers of sea transportation companies and ferry crossings at PT. Dharma Lautan Utama Surabaya. The number of samples taken in this study was as many as 100 respondents from customers who had subscribed to the Marine Transportation Company and ferry crossings PT. Dharma Lautan Utama Surabaya is more than one year old and uses saturated sampling. Data collection was carried out using the questionnaire dissemination method. The variables studied in this study are purchasing decision as a dependent variable, referral marketing and customer trust as independent variables, and customer satisfaction as an intervening variable. The data analysis technique is SEM using Partical Least Square (PLS).

Findings: The results of the analysis show that referral marketing has a positive and significant effect on customer satisfaction. Customer trust has a positive and significant effect on customer satisfaction. Referral marketing has a positive and significant influence on purchasing decisions. Customer trust has a positive and insignificant effect on purchasing decisions. Customer satisfaction has a positive and significant effect on purchasing decisions. Referral marketing has a positive and significant influence on purchasing decisions through customer satisfaction. Customer trust has a positive and significant influence on purchasing decisions through customer satisfaction.

Paper Type: Research Paper

I. INTRODUCTION

PT. Dharma Lautan Utama is a company engaged in sea transportation that operates Ro-Ro / Ferry type ships, which carry passengers, goods and vehicles. Operating in almost all regions in Indonesia. In supporting the national economy, the role of the sea transportation industry is very important and irreplaceable. The territory of Indonesia which has more than 17,000 islands and more than 60% of its territory consists of water, so to ensure the smooth distribution of goods (logistics) and services throughout Indonesia is not an easy task, both for the government and the private sector Java Island and Madura Island are separated by a strait called Madura Strait. Since ancient times, the mobility of residents on the island of Madura to Surabaya and vice versa is connected by sea transportation modes, small boats or passenger ships (Ferry). Throughout the year transportation activities in the Madura Strait are so high, especially during the celebration of Muslim holidays. Gab theory in this study includes referral marketing or marketing from consumers to consumers is a marketing strategy that is free for a

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brand that is carried out consciously or unconsciously or marketing activities through person-to-person intermediaries either verbally, in writing, or electronic communication tools related to the experience of purchasing services or experience using products or services (Rizal, 2021). Referral marketing is a marketing strategy that is generally used in businesses and is a marketing strategy that is closely related to word of mouth marketing, which relies heavily on customer testimonials. Referral Marketing is one of the promotional strategies in marketing that does not cost much and is considered effective to have a direct effect on customers in marketing. Referral Marketing is personal communication about a product between potential buyers, neighbors, friends, family, and coworkers (Utama et al., 2022). Consumers who have used or purchased products from the company will become communicators, namely conveying what has been felt when using the product. This strategy spreads based on word-of-mouth talk activities from one individual to another that generate stimuli to know and even buy the product. In addition to referral marketing, the thing that must be considered to run a product business to run smoothly is to maintain consumer trust (customer trust). Consumer trust (customer trust) is consumer confidence that certain individuals have integrity, can be trusted, and trusted people will fulfill all obligations in carrying out transactions as expected (Sobandi & Somantri, 2020). Consumer trust (customer trust) is defined as the willingness of one party to accept the risk of the actions of another party based on the expectation that the other party will perform important actions for the party who trusts it, regardless of the ability to supervise and control the actions of the trusted party (Almamada, 2021). Trust is a person's willingness to depend on other parties involved in the exchange because he has confidence in the other party (Aini, 2020). Consumer trust is consumer knowledge of objects, attributes, or benefits, where trust is shared with attitudes and behaviors with product attributes (Suharlina & Ferils, 2022). Purchasing decision is the stage of evaluation from consumers of a preference or choice so as to form the intention of buying goods / services (Sobandi & Somantri, 2020). Purchasing decisions are activities carried out by consumers in choosing alternative choices of a product and are considered as actions to meet needs (Sugiyono, 2019). One of the purchase decisions occurs because consumers already have value to a brand. These values will represent how consumers remember brands with good, unique and strong values (Lutfianisa, F Ramdan & Jhoansyah, 2021).

Research Gap in this study is a research research conducted by (Rizal, 2021) with the title "The Effect of Service Quality, Price and Referral Marketing on Furniture Product Purchasing Decisions (Empirical Study at UD. Sumber Rejeki Surabaya)" stated that through data testing using SPSS analysis tool version 23.0 and multiple linear regression analysis that Referral Marketing partially has a positive and significant effect on purchasing decisions. In previous research conducted by oleh (Fitri & Nisa, 2022). entitled "The Effect of Trust, Referral Marketing and Repurchase Intention on Customer Satisfaction of the Millennial Generation of Street Boba Beverage Products" stated that through tests using survey methods, SmartPLS and SPSS showed that Referral Marketing had a positive and significant effect on customer satisfaction. Furthermore, Research Gap variable Customer Trust in research conducted by (Simanjuntak et al., 2020).

A. Problem Formulation

4. How is the description of referral marketing, customer trust, purchasing decisions and customer satisfaction at PT. Dharma Lautan Utama Surabaya ?
5. Does referral marketing directly affect customer satisfaction at PT. Dharma Lautan Utama Surabaya ?
6. Does customer trust directly affect customer satisfaction at PT. Dharma Lautan Utama Surabaya ?
7. Does referral marketing directly affect the purchase decision at PT. Dharma Lautan Utama Surabaya ?
8. Does customer trust directly affect the purchase decision at PT. Dharma Lautan Utama Surabaya ?
9. Does customer satisfaction directly affect the purchase decision at PT. Dharma Lautan Utama Surabaya ?
10. Does referral marketing indirectly affect purchasing decisions through customer satisfaction at PT. Dharma Lautan Utama Surabaya ?
11. Does customer trust indirectly affect purchasing decisions through customer satisfaction at PT. Dharma Lautan Utama Surabaya ?

B. Research Objectives

12. To find out the description description of referral marketing, customer trust, purchasing decisions and customer satisfaction at PT. Dharma Lautan Utama Surabaya
13. To find out and analyze referral marketing directly affects customer satisfaction at PT. Dharma Lautan Utama Surabaya
14. To know and analyze customer trust directly affects customer satisfaction at PT. Dharma Lautan Utama Surabaya
15. To find out and analyze referral marketing directly affects purchasing decisions at PT. Dharma Lautan Utama Surabaya
16. To know and analyze customer trust directly affects purchasing decisions at PT. Dharma Lautan Utama Surabaya

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17. To find out and analyze customer satisfaction directly affects purchasing decisions at PT. Dharma Lautan Utama Surabaya
18. To find out and analyze referral marketing indirectly affects purchasing decisions through customer satisfaction at PT. Dharma Lautan Utama Surabaya
19. To find out and analyze customer trust indirectly affects purchasing decisions through customer satisfaction at PT. Dharma Lautan Utama Surabaya.

C. Literature Review
1. Purchasing Decision
Purchasing decision is an action taken by a consumer in the form of an act of determining the selection of an alternative that is done logically so that the consumer really buys. (Cesariana et al., 2022)

Purchase Decision Indicators
The indicators used in measuring purchasing decisions according to (Cesariana et al., 2022) are as follows:
20. Problem recognition: The stage where consumers recognize the right brand to meet their needs.
21. Information search: Information about brands through various media supports consumers to know the advantages of a brand.
22. Alternative evaluation: It is the most suitable brand compared to other alternative brands.
23. Post-purchase behavior: There is a positive perception from consumers after using the product with the purchased brand.

2. Customer Satisfaction
Customer satisfaction is the customer's perception that his expectations have been met or exceeded (Gultom et al., 2020). Customer satisfaction means a comparison between what consumers expect and what consumers feel when using the product.

Customer Satisfaction Indicators
Indicators that affect customer satisfaction according to (Nurakhmawati et al., 2022) are:
24. Convenience
25. Merchandising
26. Site design
27. Security
28. Serviceability

3. Customer Trust
Customer trust is the willingness of one party to accept the risk of the actions of another party based on the expectation that the other party will take important actions for those who trust it, and control the actions of the trusted party (Aini, 2020).

Customer Trust Indicators
Customer trust indicators consist of three components (Sobandi & Somantri, 2020), namely:
29. Integrity is the perception of consumers and the belief that the company follows principles such as keeping promises, being honest, and behaving ethically.
30. Benevolence is based on the trust of partnerships that have the purpose and motivation to be the strength of the organization, when a new condition arises, namely a condition where commitment has not been formed.
31. Competence is the ability to solve consumer problems, and to meet all their needs.

4. Referral Marketing
Referral marketing or marketing from consumers to consumers is a marketing strategy that is free for a brand that is carried out consciously or unconsciously or marketing activities through person-to-person intermediaries either verbally, in writing, or electronic communication tools related to the experience of purchasing services or the experience of using products or services (Rizal, 2021).

Referral Marketing Indicators
There are 3 (three) Referral Marketing indicators according to (Fakhrudin et al., 2021), namely:
32. Talking with items positive experience, product quality,
33. Recommend with items of friends, family,
34. Encourage with items persuade friends, invite family

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II. METHODS

A. Types of Research

According to (Ubaidillah, 2020) Explanatory Research is a study that explains the position of the variables studied in a study. Explanatory research is research that aims to test hypotheses that have been formulated previously and the results of the study will be able to explain the causal relationship between variables by testing hypotheses.

B. Research Approach

In research on the Effect of Referral Marketing and Customer Trust on Purchasing Decisions through Customer Satisfaction at PT. Dharma Lautan Utama Surabaya. Researchers use quantitative methods. According to (Balaka, 2022) quantitative methods are research that has fulfilled scientific principles, namely concrete/empirical, objective, measurable, rational, and systematic. Quantitative methods are also called discovery methods, because with this method can be found and developed as new science and technology with research data in the form of numbers and statistical analysis.

C. Research Location

This research will be conducted at sea transportation and ferry crossing company PT. Dharma Lautan Utama Surabaya with address JL. East Perak No. 512 B7-8 Tanjung Perak Surabaya. The study will be conducted for 6 months from September 2023 to January 2024.

D. Definition of Population

According to (Nuha, 2019) the population is a whole set of elements that have a number of common characteristics, consisting of fields to be studied. Thus, the population is a whole set of elements that can be used to make some conclusions. The population in this study is as many as 100 customers, namely all passengers at PT. Dharma Lautan Utama Surabaya.

E. Sample Viewing Techniques

The sampling technique in this study was carried out using the Quota Sampling method. (Sugiyono, 2020) Quota sampling is a technique to determine a sample of a population that has certain characteristics to the desired number (quota).

F. Data Analysis Methods

Researchers used structural equation modeling analysis Smart PLS (Partial Least Square). Through the Smart PLS (variant-based) approach, it is assumed that all calculated variants are useful variants for explanation. The approach to estimating latent variables in Smart PLS (Partial Least Square) is as a linear combination of indicators, so as to avoid the problem of indeterminacy and produce the right component score. (Sugiyono, 2020).

III. RESULTS AND DISCUSSION

A. Results

Table 1. Bootstrapping Research Results (Direct Effects)

Path Coefficients

Mean, Stdev, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (Stdev)	T Statistics (|O/Stdev|)	P Values
Customer Trust (X2) -> Customer Satisfaction (Y1)	0,717	0,719	0,054	13,246	0,000

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	Original Sample (O)	Sample Mean (M)	Standard Deviation (Stdev)	T Statistics (|O/Stdev|)	P Values
Customer Trust (X2) -> Purchase Decision (Y2)	0,188	0,190	0,121	1,550	0,121
Customer Satisfaction (Y1) -> Purchase Decision (Y2)	0,455	0,455	0,111	4,109	0,000
Referral Marketing (X1) -> Customer Satisfaction (Y1)	0,194	0,195	0,069	2,829	0,005
Referral Marketing (X1) -> Purchase Decision (Y2)	0,216	0,218	0,086	2,513	0,012

Source : Data managed SmartPLS Ver 4.0, (2024)

Table 2. Bootstrapping Research Results (Indirect Effects)

Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (Stdev)	T Statistics (|O/Stdev|)	P Values
Customer Trust (X2) -> Customer Satisfaction (Y1) -> Purchase Decision (Y2)	0,326	0,327	0,082	3,980	0,000
Referral Marketing (X1) -> Customer Satisfaction (Y1) -> Purchase Decision (Y2)	0,088	0,089	0,039	2,251	0,024

Source : Data managed SmartPLS Ver 4.0, (2024)

B. Discussion

Hypothesis testing is carried out to determine whether there is a significant influence of the independent variable on the dependent variable. The following is a discussion of the results of research conducted at PT. Dharma Lautan Utama Surabaya.

1. The Effect of Referral Marketing on Customer Satisfaction

The results of research obtained from t-statistics can be concluded that referral marketing variables affect customer satisfaction. With a significant value of 0.005 (<0.05) and a coefficient of 0.194, it can be concluded that referral marketing has a positive and significant effect on customer satisfaction. The results of this study are supported by previous research conducted by (Utama et al., 2022) referral marketing is personal communication about a product between potential buyers, neighbors, friends, family and coworkers, if a consumer is satisfied then they will provide information about products or services to others, by recommending them.

2. The Effect of Customer Trust on Customer Satisfaction

The results of research obtained from t-statistics can be concluded that customer trust variables affect customer satisfaction. With a significant value of 0.000 < 0.05 and a coeisiens value of 0.717, it can be concluded that customer trust has a positive and significant effect on customer satisfaction. The results of this study are supported by previous research according to (Mahendra & Indriyani, 2018) if customer trust (customer trust) increases it will increase customer satisfaction. Customer trust arises because of the satisfaction obtained by customers from the results of products, services and services felt by customers of PT. Dharma of the Main Ocean.

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3. The Influence of Referral Marketing on Purchasing Decisions

The results of research obtained from t-statistics can be concluded that referral marketing variables affect purchasing decisions. With a significant value of 0.012 < 0.05 and a coefficient of 0.216, it can be concluded that referral marketing has a positive and significant effect on purchasing decisions. The results of this study are supported by previous research conducted by (Naharuddin et al., 2023) revealing that word-of-mouth communication or referral marketing strategies have a high possibility and effective tool to dominate in terms of purchasing decisions, by implementing a referral marketing strategy, it will influence customers to buy goods or services at sea transportation and ferry crossings of PT. Dharma Lautan Utama Surabaya informed.

4. The Influence of Customer Trust on Purchasing Decisions

The results of research obtained from t-statistics can be concluded that customer trust variables can influence purchasing decisions. With a significant value of 0.121>0.05 and a coefficient of 0.188, it can be concluded that customer trust has a positive and insignificant effect on purchasing decisions. This result is contrary to previous research conducted by (Solihin, 2020). The suggested that the higher the level of customer trust or customer trust, the higher the purchase decision.

5. The Effect of Customer Satisfaction on Purchasing Decisions

The results of research obtained from t-statistics can be concluded that customer satisfaction variables affect purchasing decisions. With a significant value of 0.000<0.05 and a coefficient of 0.455, it can be concluded that customer satisfaction has a positive and significant effect on purchasing decisions. The results of this study are supported by previous research conducted by (Simanjuntak et al., 2020).

6. The Influence of Referral Marketing on Purchasing Decisions through Customer Satisfaction

The results of research obtained from t-statistics can be concluded that referral marketing variables on purchasing decisions can affect customer satisfaction. With a significant value of 0.024 < 0.05 and a coefficient of 0.088, it can be concluded that referral marketing has a positive and significant effect on purchasing decisions through customer satisfaction. The results of this study are supported by previous research according to (Lubis et al., 2023) stating that customer satisfaction will have a major impact on referral marketing, namely by informing the goods or services used at PT. Dharma Lautan Utama Surabaya this will result in an increase in the level of purchasing decisions.

IV. CONCLUSION

A. Conclusion

1. Description of the variables studied at PT. Dharma Lautan Utama Surabaya is as follows: Based on the results of descriptive research, it is known that the average response of the majority of respondents is affirmative responses. This shows that most respondents already have a good perception of referral marketing (X1). Furthermore, based on the average response of the majority of respondents is affirmative responses. This shows that most respondents already have a good perception of customer trust (X2). On average, the majority of respondents responded in the affirmative. This shows that most respondents already have a good perception of customer satisfaction (Y1). Furthermore, the average response of the majority of respondents is affirmative responses. This shows that most respondents already have a good perception of purchasing decisions (Y2).
2. Referral marketing has a positive and significant effect on customer satisfaction at PT. Dharma Lautan Utama Surabaya
3. Customer trust has a positive and significant effect on customer satisfaction at PT. Dharma Lautan Utama Surabaya
4. Referral marketing has a positive and significant influence on purchasing decisions at PT. Dharma Lautan Utama Surabaya
5. Customer trust has a positive and insignificant effect on purchasing decisions at PT. Dharma Lautan Utama Surabaya
6. Customer satisfaction has a positive and significant effect on purchasing decisions at PT. Dharma Lautan Utama Surabaya
7. Referral marketing has a positive and significant influence on purchasing decisions through customer satisfaction at PT. Dharma Lautan Utama Surabaya
8. Customer trust has a positive and significant influence on purchasing decisions through customer satisfaction at PT. Dharma Lautan Utama Surabaya

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B. Suggestion

1. For PT. Dharma Lautan Utama Surabaya

The results of this research that have been carried out can be used as an input or consideration for sea transportation companies and ferry crossings PT. Dharma Lautan Utama Surabaya in making decisions related to promoting service products through referral marketing strategies with customer trust as the main key in running a business so as to increase customer satisfaction.

2. For Postgraduate of Wijaya Putra University Surabaya

The results of this research that have been carried out can be used as reference material for further researchers with material related to this study, namely the study of the influence of referral marketing and customer trust on purchasing decisions through customer satisfaction in sea transportation service products and ferry crossings of PT. Dharma Lautan Utama Surabaya.

3. For Other Researchers

The results of this study can be used as input or useful information, and become reference material for other researchers related to problems in research on referral marketing and customer trust on purchasing decisions through customer satisfaction at sea transportation and ferry crossings PT. Dharma Lautan Utama Surabaya.

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The Role of Owner's Consultant in the Planning and Design Phase of Government Building Construction

Suwandi[1], Sarwono Hardjomuljadi[2], Hendrik Sulistio[1]

Universitas Tarumanagara, Jl. Jl. Letjen S. Parman No.1 3, RT.3/RW.8, Tomang, Kec. Grogol Petamburan, Kota Jakarta Barat, Daerah Khusus Ibukota Jakarta 11440[1]

Universitas Mercu Buana, Jl. Raya, RT.4/RW.1, Meruya Sel., Kec. Kembangan, Jakarta, Daerah Khusus Ibukota Jakarta 11650[2]

Corresponding Author*: wandipati@gmail.com, h.muljadi@mercubuana.ac.id, sulistio@yahoo.com

ABSTRACT

Purpose: Many government infrastructure projects that fall into the complex category are organised by technical agencies, in this case the Ministry of Public Works and Public Housing (PUPR), however, there are also many construction projects that do not fall into the complex category and are specialised in nature that are handled by ministries or non-technical government agencies.

Design/Methodology/Approach: For complex work, the owner can use a construction management consultant (MK) as a companion, but for non-complex work the owner only uses a planning consultant, while the owner of a non-technical government agency needs an advisor in the technical planning process to help decide on design problems appropriately. This encourages owners or commitment-making officials (PPK) to use the services of experts as assistants during the technical preparation and planning process. This research examines the role of external personnel outside the planning consultant as a consultant to the owner (KPO) during the design process. Using the content validity ratio (CVR) method on the opinions of 15 experts in the field of design and construction services, 14 roles of the owner's assistant were obtained.

Findings: Through relative importance index (RII) analysis, it was found that the most important roles in the design stage are: ensuring terms of reference (KAK), providing standard design rules or guidelines, identifying owner's needs, documenting design decisions, assisting communication between owner and design team, controlling design schedule, reviewing own estimate price (HPS) and specifications, evaluating design proposals, ensuring value for money, suggesting design tools, identifying stakeholders, preparing selection documents, ensuring design decisions and getting the best performance of design consultants. Through independent t test , it is concluded that there is a significant difference in the mean value between the perception of the owner and design consultant regarding the role of KPO. The contribution of this research is to produce a validation of the role of KPO needed by non-technical government owners at the design stage to assist efforts to obtain quality design documents or detailed engineering design (DED).

Paper Type: Research Paper

Keywords: Briefing, Accompanying consultant owner, CVI, RII, Independent t test.

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I. INTRODUCTION

Some construction projects can be completed with few changes or variation orders, but there are also construction projects that experience many contract changes before the project is completed. Contract changes or change orders have an impact on reducing project performance (Sulistio & Wibowo, 2014) that occurred predominantly due to design changes (Hardjomuljadi, 2014). According to the study (Mahat & Adnan, 2018), Most of these design changes come from the owner's proposal, while the owner himself is the party involved in the design process.Design changes occur due to poor quality design documentation that causes project

inefficiencies (P. D. K. Agbaxode et al., 2023). The less than optimal role of the owner in the design briefing process is one of the factors causing the poor quality of design documents or detailed engineering design (DED).This is because the DED is prepared based on the owner 'sbrief and the design product is decided by the owner at each stage.

Government construction owners in Indonesia can generally be divided into two, namely government owners of technical agencies (OPIT), and government owners of non-technical agencies (OPNIT) or novice owners.OPIT includes technical ministries both at the central level, namely the Ministry of Public Works and Public Housing (PUPR) and at the regional level (To Dinas PUPR); while OPNIT includes owners other than ONIT whose organisations are not filled with construction personnel. In the conventional delivery system, design bid build, the design documents are finalised before physical works commence. This design document is prepared by a technical planning consultant (design) based on information data and needs from the projectowner (owner) as stated in the terms of reference (KAK) or project brief. For complex project categories, the owner can be assisted by a construction management (MK) consultant. Outside that category, the government owner can be accompanied by a technical team or manager as well as experts if needed. For OPNIT or novice owners, this assistance is necessary, considering that the organisation does not prepare professionals in the field of construction services, as is the case in ministries or technical agencies or OPIT, where most of the staff are recruited with an educational background in construction.

Owner assistance in construction project management is very important even though the goods/services provider (planning consultant) has been appointed through selection or tender. Assistance serves as a control over the implementation of contracts that require expertise, while the owner does not have in-house expert staff.This research will examine the role of the owner 's advisory consultant on non-technical government construction projects (OPNIT) that are not eligible to use MK consultants. For OPNIT, complex or not, construction is a complicated matter for them, so anexternal client adviser is needed in managing the project, especially at the planning anddesign stage (Fewings & Henjewele, 2019).

The competence of government owners or also called commitment-making officials (PPK) in Indonesia is still considered low (Hidayat, 2021). The requirement to appoint PPK is only seen from the managerial aspect and does not require technical aspects. This encourages PPK to be allowed to appoint external experts to assist with the technical aspects of construction (Per LKPP 12, 2021). The lack of control over the technical planning process has led to design decisions being made by the owner in a rush to expedite the tender process for physical construction, resulting in potential changes to the DED during the construction phase.

The design documentation or DED is prepared by the planning consultant through the collaboration of professionals recruited as needed such as architectural, structural, mechanical-electrical-plumbing (MEP), and others. In Indonesia, the quality of planning consultants is also considered low, with a limited number of experts, uneven distribution, quality not in accordance with certification, low salaries, and weak professional supervision. (Tamin et al., 2015). An indication of the tendency of consulting companies to gain profit by recruiting consultants who are still inexperienced, plus low competence in the technical aspects of the owner , it can be predicted that the design documentation or DED will be of low quality, so there is a very large potential for contract changes due to design changes. (Hardjomuljadi, 2016).

Therefore, the role of the owner 's assistant or advisor is needed, especially for OPNIT. The significance of this research is that no study has been found that discusses the role of the owner 's advisors, even though the vacuum of their role has led to the low quality of DEDs with all its implications. So far, research has focused more on the role of MK consultants, or planning consultants. Only a few researchers have examined the theme of the role of the owner and owner 's assistants in the non-technical government construction project environment (OPNIT). The benefits of this research are expected to be a theoretical basis related to the role of owner 's assistant consultants on non-technical government construction projects at the planning and design stage. The literature review related to the research topic will be discussed in the next paragraph.

A. Literature Review
1. Government Building Project

Government building construction projects have different characteristics from private projects. Government building objects have the aim of supporting services and become state property financed from the state revenue and expenditure budget (APBN). The process of organising government projects begins with technical planning activities followed by construction implementation (PP 16, 2021). Three characteristics of government projects are limited by many rules, must be accountable and financed by the state budget. Therefore, the commitment-making official or PPK as a government project manager must have knowledge and experience in the field of construction services procurement which is manifested in the form of competence (PerLKPP 7, 2021). Based on the research results, the performance of private project owners or PPKs is better than the performance of government project owners (Dwi Hatmoko & Khasania, 2016). In a study by Nagara, 2019, that Government projects experienced problems caused by two main reasons, namely the low quality of project supervisors and the

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competence of PPK. Based on BPK audit findings that PPK does not fully understand its duties and has a lack of technical aspects so that this is exploited by irresponsible implementers (Khoirul Huda, Jawa Pos 2017).

2. Project briefing and technical planning (design) stage

The success of the project is determined by the performance of the planning and design stage, as 80% of the information related to the project to be built is determined at this stage (Dimyati & Nurjaman, 2014). The effectiveness of the briefing or architectural programming process which aims to ensure all parties involved in defining the scope, collecting and analysing initial data for the design process to avoid redesign at a later stage needs to be strengthened (Cherry and Petronis, 2016). The quality of the final document produced in the form of detailed engineering and design (DED) will determine the success of the tender and construction stages. At this stage the project owner's task is very dominant in providing direction and information(briefing) to the design team assisted by the parties, especially the building user or end user (Pegoraroa & Carísio, 2017). Previous studies revealed that the briefing construction process was ineffective because it was not carried out in a planned manner and involved the right parties and limited time (Becermen et al., 2018; Jallow et al., 2014; Yu & Shen, 2013).

Briefing on government projects starts during the process of identifying needs by the owner until the determination ofrequirements for the design process. In non-technical government owners(novice owners), where the majority of staff are not construction personnel, there will certainly be confusion, so they need professionals who help the technical planning process. The appointment of a technical team or technical manager comes from the ministry in charge of construction. Based on observations and interviews with some government owners, the assistance of technical personnel has not been adequate in number and performance. Meanwhile, these personnel are indispensable for the process of organising construction using conventional methods. In Indonesia, research results reveal that most construction projects use a conventional delivery system, where the technical planning stage is completed at the beginning before the implementation stage (Firdausi et al., 2020).

The obligation of the project owner or owner is to prepare technical planning documents as materials for tender documents and work implementation documents. Technical documents in the form of DED are products of the design stage, part of the asset management life cycle (planning, acquisition, operation and maintenance, and disposal and replacement) and project life cycle (preparation, technical planning, construction implementation, technical supervision, and post-construction stages). The main actors in both cycles are the planning (design) consultant and the owner involving stakeholders includingend-users. Theowner prepares the KAK from the results of the needs identification, then proceeds with the preparation of the design proposal by the planning consultant. The design process goes through four phases from concept design, pre-design, design development and detailed design. The owner's role in these four phases is to provide data and information, review and approve and decide the results of each phase before proceeding to the next phase (PP 16 RI, 2021; UU, 2017).

3. DED quality predictor

Poor quality DEDs are a source of construction project inefficiencies (Tilley et al., 2002). This has an impact on contract changes which ultimatelydelay project completion and increase costs (cost overrun) (Jamaludin et al., 2014). Some researchers (Akampurira & Windapo, 2018; Emmanuel & Windapo, 2016) obtained 37 factors grouped into four latent variables that are assumed to affect the quality of design documentation, namely industry/external variables, client/owner, design firm, and design professional variables.

A more updated study by (P. Agbaxode et al., 2021) They obtained 109 factors that were grouped into five latent variables, namely design documentation factors, design consultant factors, owner/client factors, collaboration factors, and external factors. There are differences in the variables created by the two researchers. Windapo (2016, 2018) argued that design professionals are a separate variable from design consultants; whereas Agbaxode (2021) does not separate the two, but adds the variables of collaboration and design documentation. Collaboration reflects the communication process between teams involved in the design process, while design documentation reflects the results of the design writing process undertaken by the design team.

The grouping of variables in the context of the design process can actually be divided into the categories of the two main design actors, namely the owner and the design consultant. The owner variable in the two studies above is directly operationalised into several indicators. Likewise, industry or external variables are directly operationalised into several indicators. While the design consultant variable (Emmanuel & Windapo, 2016) separated with the design professional variable. This separation further confirms that the position of design professionals has a significant influence on the quality of design outcomes. Although they work under the coordination of the design consulting firm in the design process, the design professionals' position has a significant influence on the quality of the design outcome.

The core activity of the design process is the briefing process. The briefing process is a procedure to identify, uncover, clarify, articulate the owner's requirements and needs, which are presented during the initial design process of a construction project (Yu & Shen, 2015). Studi dan Dokumentasi Bangunan atau International Council for Research and Innovation in Building and Construction (CIB) (1997) defines briefing as the process of the

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owner informing others of his needs, aspirations and desires or ambitions, either formally or informally with the brief being a formal document containing detailed provisions of the owner's requirements. The briefing process is also known asarchitectural programming or defining theproject scope which is required before the design process becomes more detailed (Dicks et al., 2017; Gibson & Gebken, 2003). The briefing process is a critical phase in achieving a successful construction project, and the Owner has a dominant role in this briefing process. (Ahmad et al., 2011).

One of the problems in the briefing process is related to the lack of involvement of the owner in the process. The owner is often absent from the design process and/or appoints a representative who is not competent in the design process, so design decisions are often not finalised or delayed (Bowen et al., 1997). There are three attributes of the owner 's role in the design briefing process: the quality of the owner's representative, the briefing management effort and the owner's organisational commitment (Ahmad et al., 2011). The quality of the owner 's representative means the level of competence in organising and managing construction projects, especially in the briefing process. This depends on his knowledge and experience in construction projects. This competency level relates to briefing management, which is how the owner conducts the process of planning, organising, coordinating, documenting, communicating and monitoring the client requirements process. The owner 's knowledge in terms of the briefing process is generally at a low level, even some owners consider the briefing task to be part of the design consultant's duties. (Blyth & Worthington, 2010). Another owner attribute is the commitment of the organisation in its seriousness to implement the previous two attributes by preparing resources in the form of budget and time support. Therefore, strengthening the owner 's capacity is necessary for the success of the briefing process in an effort to obtain quality design documents.

Strengthening the owner in the design process, one of which helps the communication process between the owner and the design team carried out by an independent team / owner's assistant. This is in line with the condition of government construction projects in Indonesia where the quality of design consultants and owner competence is still low (Puspa Negara et al., 2019; Putut Marhayudi et.al, 2021). In addition, to assist the owner/PPK in the design and technical field, PPK can be assisted by an independent review team (Tilley et al., 2002) atau penasihat klien independen (RIBA, 2020). The focus of this research will examine in depth the role of this independent team in assisting the owner/PPK at the design stage in order to improve the quality of design documents..

4. Owner's Assistance Consultant

In the procurement of construction services, there are planning consultants, supervisory consultants, construction management consultants (MK), and parties who carry out construction work, namely contractors as construction service actors. (PP 16 RI, 2021). In the conventional delivery system, where the DED document must be ready before tendering, the owner appoints a planning consultant to prepare the DED. In non-technical government owners, external personnel are needed as advisors during discussions with planning consultants. One of them is by applying for the help of a technical team or technical manager from a technical ministry agency. Under certain conditions, it can appoint a team or experts in the technical planning process who have the competence and qualifications to help become a companion / advisor to the owner, which in this study is called an owner's advisory consultant.

In some countries, it is common to use professional advisors to strengthen the role of the owner, as the owner is at the centre of decision-making at every stage of the project, especially at the beginning of the project, the design stage. However, the owner has many wishes andrequirements for the building to be procured. For this reason, the owner must identify the real needs and determine the requirements and what kind of building needs to be built. The owner's tasks include determining technical specifications, budget requirements, procurement strategies, appointing the right design team, reviewing design products and approving each stage of the product and organising the working relationships of the project team. To do all this and for the owner to make the right decisions, the recommendation of professional advisors is essential (Riba PoW, 2020). A client adviser is needed at the project initiation stage to help develop a strategic brief before the design concept is implemented (Fewings & Henjewele, 2019).

In Indonesia, if identified, the party that plays a role such as a companion to the government owner is a technical team or technical management personnel (PP 16, 2021; Permen PUPR 22, 2018). In addition, the owner can also appoint an expert or team if needed (Per LKPP 12, 2021) or probity advisor team (Kep Deputi 4 LKPP, 2021). All of them fall into the category of personnel or consultants or owner's advisors who work independently and professionally and can communicate effectively like professional consultants.

5. Conceptual Framework and Hypothesis

This research tries to build a framework that the technical planning process by government owners, especially in K / L non-technical agencies, requires other parties to assist PPK in the design process. PPK can submit a request for assistance from a technical team, technical manager or probity advise to the government agency in charge, either the central or regional Ministry of PUPR or to the Government Goods / Services

Procurement Policy Agency (LKPP). Based on the researcher's observations, novice owners choose to use external experts with the consideration that they are independent, easy procedures, guaranteed availability and can choose according to their level of experience and ease of communication with PPK. The external experts, in this research, are called owner assistance consultants or KPOs.

Starting from the theoretical concept, two hypotheses are formulated to be answered in this research. Hypothesis one (H1): KPO has a very important role in improving the quality of engineering design (DED) documents. Second hypothesis (H2): There are different views between the PPK and the design consultant regarding the presence of KPO.

II. METHODS

A. Research design

The research approach chosen to prove these two hypotheses is a descriptive and verification quantitative approach (Creswell & Crewswell, 2018). Data were collected at one time or one-shot (cross-section) (Sekaran & Bougie, 2016), namely mid-2023. The research location is in the DKI Jakarta area. The research subjects were experts and practitioners of government construction projects as many as 11 sources/experts. Data collection techniques using survey techniques (Sekaran & Bougie, 2016). The research instrument was a questionnaire with close ended questions.

Data analysis techniques on the role of KPOs used three tools. Proving the first hypothesis (H1) using descriptive analysis, namely with Content Validity Ratio (CVR) (Lawshe, 1975; Aiken, 1985) to test the validity of KPO role indicators; and Relative Important Index (RII) (Sustiawan & Husin, 2011) to determine the ranking of KPO role indicators that have been validated with CVI. The proof of the second hypothesis (H2) uses verification analysis, namely by testing t for two samples(independent T test) (Jubilee Enterprise, 2014: Santoso, 2017) to determine the difference in perceptions between the PPK and the design consultant in relation to the role of KPO.

III. RESULTS AND DISCUSSION

A. Results
1. Demographic characteristics of interviewees/experts

The research subjects were 11 experts/practitioners of government construction projects. The characteristics of the 11 experts are summarised in Table 1.

Table 1 Expert Demographic Data

Demographic Data 11 Experts

Data Type		Frequency	Percent	Valid Percent	Cumulative Percent
Which organisation do you work for	*Construction company*	*7*	*63,6*	*63,6*	*63,6*
	Technical consultant	*2*	*18,2*	*18,2*	*81,8*
	Government (Bp2jk, dll)	*2*	*18,2*	*18,2*	*100,0*
	Total	*11*	*100,0*	*100,0*	
Position or Title as	*Directors*	*3*	*27,3*	*27,3*	*27,3*
	Manager	*6*	*54,5*	*54,5*	*81,8*

	Professional	*2*	*18,2*	*18,2*	*100,0*
	Total	*11*	*100,0*	*100,0*	
Academic Qualifications	*Undergraduate*	*4*	*36,4*	*36,4*	*36,4*
	Master	*6*	*54,5*	*54,5*	*90,9*
	Doctoral	*1*	*9,1*	*9,1*	*100,0*
	Total	*11*	*100,0*	*100,0*	
Discipline of Science	*Civil engineering*	*3*	*27,3*	*27,3*	*27,3*
	Architecture	*3*	*27,3*	*27,3*	*54,5*
	Electrical	*1*	*9,1*	*9,1*	*63,6*
	General management	*4*	*36,4*	*36,4*	*100,0*
	Total	*11*	*100,0*	*100,0*	
Length of Experience as per Field	*Less than 10 years*	*1*	*9,1*	*9,1*	*9,1*
	10-20 years	*8*	*72,7*	*72,7*	*81,8*
	Up on 20 years	*2*	*18,2*	*18,2*	*100,0*
	Total	*11*	*100,0*	*100,0*	
Have you ever been an Owner Assistance Consultant	*Ever*	*6*	*54,5*	*54,5*	*54,5*
	Never	*5*	*45,5*	*45,5*	*100,0*
	Total	*11*	*100,0*	*100,0*	
If so, what types of companionship have been experienced	*Never been a co-consultant*	*5*	*45,5*	*45,5*	*45,5*
	Technical Manager	*2*	*18,2*	*18,2*	*63,6*
	Probity Adviser	*1*	*9,1*	*9,1*	*72,7*
	Individual Consultant	*2*	*18,2*	*18,2*	*90,9*
	MK Consultant	*1*	*9,1*	*9,1*	*100,0*

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	Total	*11*	*100,0*	*100,0*	
Typical projects you handle	*Building*	*4*	*36,4*	*36,4*	*36,4*
	Infrastructure	*4*	*36,4*	*36,4*	*72,7*
	Building and infrastructure	*3*	*27,3*	*27,3*	*100,0*
	Total	*11*	*100,0*	*100,0*	

Source: Research results (2023)

Table 1 shows that most (63.6 per cent) of the resource persons/experts were those working in construction companies. 18.2 per cent of the interviewees/experts worked for technical consulting institutions, and the government (BP2JK, etc.). Their positions or titles are mostly (54.5 per cent) managers, the second position (27.3 per cent) is directors, and the rest (18.2 per cent) are professionals.

In terms of academic qualifications, most of the resource persons/experts (54.5 per cent) were master's level, followed by the second position (36.4 per cent) was undergraduate level, and the smallest (9.1 per cent) was doctoral level. In terms of discipline, the largest (36.4 per cent) was general management. The next 27.3 per cent were civil engineering and architecture. The smallest (9.1 per cent) was electrical.

Based on the length of experience in the construction field, most of the interviewees/experts (72.7 per cent) had between 10-20 years of experience. There were 18.2 per cent who had more than 20 years of work experience. Only a few (9.1 per cent) had less than 10 years of work experience. In relation to this work experience, most of the interviewees/experts (54.5 per cent) had been some kind of KPO. The rest (45.5 per cent) had never been a KPO.

The types of KPOs they have played (for interviewees/experts with KPO experience) are technical managers, and individual consultants at 18.2 per cent each. MK consultant, and probity adviser, 9.1 per cent each. When they acted as KPOs, the typical projects they handled were buildings (36.4 per cent), infrastructure (36.4 per cent), and buildings and infrastructure (27.3 per cent).

2. Validation test results with Content Validity Ratio (CVR)

By identifying parties outside the planning consultant who assist the owner in the briefing process to establish project requirements as a basis for design, several names were found, such as in Indonesia technical team, technical management personnel, experts, MK consultants, probity advisors, while abroad it is known as Riba Client Adviser, external Consultant, briefing consultant, facilitator and expert. This study uses the name of a companion consultant or owner's advisor which is abbreviated as KPO. As for the role of KPO from the literature, the following results were obtained, as presented in Table 2.

Table 2. KPO Role Based on Literature & Legislation

No	KPO's Role	Reference
1	*Assist in identifying the owner's needs for the building to be the best solution according to field conditions, vision & objectives of the organisation.*	*(1), (3), (5), (6), (7)*
2	*Assist in carrying out feasibility studies and selecting the best procurement system to achieve project objectives*	*(5), (8)*
3	*Assist in compiling components or packages of procurement of consultancy services and construction works and their cost allocation.*	*(1), (2)*

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4	*Assist in identification, coordination and consultancy with stakeholders in determining project requirements and terms of reference (KAK).*	*(7), (8), (9)*
5	*Assist in preparing selection documents, explanations, evaluations and draft contracts for planning or supervisory consultant services / MK*	*(1), (2)*
6	*Assist in reviewing KAK and HPS documents and project technical specifications*	*(1), (2), (4)*
7	*Help ensure a complete and clear (unambiguous) project brief or KAK is delivered and understood by the design team.*	*(7), (8), (10), (11)*
8	*Provides a list of provisions, standards, guidelines, rules that are updated and used in the design process including licensing.*	*(1), (12)*
9	*Evaluate design proposals and review stages of design products continuously to comply with KAK documents and project requirements.*	*(1), (2), (5), (11)*
10	*Document the results of discussions or briefing documents for design decisions and anticipate changes during design.*	*(11), (12)*
11	*Ensure design solution decisions are implemented by the owner based on the results of coordination and approval of stakeholders in a balanced/equal manner.*	*(2), (5), (11), (13)*
12	*Assist communication between the owner and the design team to get quick and best decisions in the design process.*	*(14)*
13	*Assist in ensuring value for money against proposals from design consultants using value engineering methods.*	*(13)*
14	*Advise design tools such as BIM, directions and critiques for problem solving that arise during the design stage.*	*(2), (5)*
15	*Assist in checking the completeness of construction tender documents and evaluating the performance of planning consultants.*	*(1), (4), (15)*
16	*Help get the best performance from design consultants under time, scope and budget constraints.*	*(5)*
17	*Ensure the PPK has the time and ability to carry out its role during the preparation of design documents.*	*(9)*
18	*Helps gain lessons learned from previous similar projects or post-occupation evaluation (POE).*	*(5)*
19	*Assist in schedule control of DED document procurement stages and analysis of key risks in achieving project objectives.*	*(2), (5)*

Description:
Source number: (1) PP 16, 2021; (2) Permen PUPR 22, 2018; (3) PerLKPP 11, 2021; (4) PerLKPP 12, 2021; (5) Riba Client Adviser, 2019; (6) Kep Deputi LKPP 2, 2021; (7) Designingbuildings.co.uk, 2020; (8) Riba, 2020; (9) CABE, 2003; (10) Vahabi et al, 2020; (11) Van Meel & Stordal, 2017; (12) Cherry & Petronis, 2016; (13) Yu et al, 2006; (14) Chun & Cho, 2018; (15) Jawaharnesan & Price (1997)

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Furthermore, the 19 indicators of the role of KPO were included in a closed ended questionnaire, which is a Content Validity Ratio (CVR) questionnaire. The questionnaire was distributed to 11 resource persons/experts through interviews. The validation results based on the CVR test, presented in Table 3.

Tabel 3 Test Results Content Validity Ratio (CVR)

Content Validity Ratio (CVR)

Indicator Code	Rates [(Number of Experts (M)]	Finding Judgment					Relevant and highly relevant (MP)	V (Raters=11, Rating Category = 4) = 0,79	CVR = 2*MP /M-1	Indicator Status (valid/invalid)
		Very Irrelevant (1)	Irrelevant (2)	Relevant (3)	Highly Relevant (4)	Information	(Relevant = 3, Highly Relevant = 4)			
PRN-1	11	0	1	3	7		10	0,79	0,8181	Valid
PRN-2	11	1	2	2	6		8	0,79	0,4545	Invalid
PRN-3	11	1	2	2	6		8	0,79	0,4545	Invalid
PRN-4	11	1	0	4	6		10	0,79	0,8181	Valid
PRN-5	11	0	0	3	7	*(one person does not fill)*	10	0,79	0,8181	Valid
PRN-6	11	0	0	1	9	*(one person does not fill)*	10	0,79	0,8181	Valid
PRN-7	11	0	0	2	9		11	0,79	1	Valid
PRN-8	11	0	0	3	8		11	0,79	1	Valid
PRN-9	11	0	1	3	7		10	0,79	0,8181	Valid
PRN-10	11	0	1	3	7		10	0,79	0,8181	Valid
PRN-11	11	0	1	6	4		10	0,79	0,8181	Valid

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PRN-12	*11*	*0*	*0*	*5*	*6*	*11*	*0,79*	*1*	*Valid*
PRN-13	*11*	*0*	*1*	*5*	*5*	*10*	*0,79*	*0,8181*	*Valid*
PRN-14	*11*	*0*	*1*	*5*	*5*	*10*	*0,79*	*0,8181*	*Valid*
PRN-15	*11*	*0*	*2*	*3*	*6*	*9*	*0,79*	*0,6363*	*Invalid*
PRN-16	*11*	*1*	*0*	*5*	*5*	*10*	*0,79*	*0,8181*	*Valid*
PRN-17	*11*	*2*	*1*	*4*	*4*	*8*	*0,79*	*0,4545*	*Invalid*
PRN-18	*11*	*0*	*3*	*2*	*5*	*7*	*0,79*	*0,2727*	*Invalid*
PRN-19	*11*	*0*	*0*	*5*	*6*	*11*	*0,79*	*1*	*Valid*

Sumber: Hasil penelitian (2023)

Referring to Table 3, the first column shows the codes of the 19 indicators. The second column is the raters (with the symbol M) which is the number of sources/experts who provide judgment, in this case 11 people. The next four columns are the expert judgment for each indicator. The 11 resource persons/experts were asked to validate the 19 KPO indicator items, by choosing four alternative options, namely: very irrelevant, irrelevant, relevant, very relevant. Only the choice of sources on relevant, and very relevant, is counted as validity approval on an indicator which in this study is symbolized by MP. Given that the number of sources (raters) (symbol M) is 11 people, and the alternative choices are 4 choices; then the value of V is the number of sources (raters) divided by the number of choices, the value of V = 0.79. This figure becomes the limit, if the CVR value of an indicator exceeds V, then the indicator is valid; and vice versa. Next, the CVR value was calculated, namely "(2 times MP)/ M-1" for each indicator. The results of the 19 indicators, 14 of which were declared valid, because they had a CVR value> V value (0.79). The remaining five indicators (PRN-2, PRN-3, PRN-15, PRN-17, and PRN-18) were declared invalid, because they had CVR values < V value (0.79).

3. Results of KPO role indicator levels with Relative Important Index (RII)

Based on the CVR test, 14 indicators of the KPO role have been obtained which were declared valid through the judgment of 11 sources/experts (raters). The next step is to know the level or ranking of the 14 indicators, so that the most important or influential indicators in the role of KPO can be identified to the least important indicators. The number used for the weight (W) is based on the average value of the answers of the sources/experts when they make a judgment on the CVR test. The RII value is calculated based on the formula, which has a value between 0-1 for each indicator ranked. The results of the level or ranking of KPO role indicators based on RII are presented in Table 4.

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Tabel 4 Test Results Relative Important Index (RII)

Relative Important Index (RII)

	Weight (W)	Highest Weight (A)	Number of Respondents (N)	RII = ΣW/(A x N)	Rangking
PRN-1	3,545454545	4	11	0,080578512	3
PRN-2	3,181818182	4	11	0,07231405	
PRN-3	3,181818182	4	11	0,07231405	
PRN-4	3,363636364	4	11	0,076446281	11
PRN-5	3,363636364	4	11	0,076446281	12
PRN-6	3,545454545	4	11	0,080578512	7
PRN-7	3,818181818	4	11	0,08677686	1
PRN-8	3,727272727	4	11	0,084710744	2
PRN-9	3,545454545	4	11	0,080578512	8
PRN-10	3,545454545	4	11	0,080578512	4
PRN-11	3,272727273	4	11	0,074380165	13
PRN-12	3,545454545	4	11	0,080578512	5
PRN-13	3,363636364	4	11	0,076446281	9
PRN-14	3,363636364	4	11	0,076446281	10
PRN-15	3,363636364	4	11	0,076446281	
PRN-16	3,272727273	4	11	0,074380165	14
PRN-17	2,909090909	4	11	0,066115702	
PRN-18	2,909090909	4	11	0,066115702	
PRN-19	3,545454545	4	11	0,080578512	6

Sumber: Hasil penelitian (2023)

Table 4 shows the ranking of the 14 KPO Role indicators based on RII. The KPO Role indicators ranked 1-5 are PRN-7, PRN-8, PRN-1, PRN-10, and PRN-12. KPO Role indicators ranked from 6 to 10 are PRN-19, PRN-

6, PRN-9, PRN-13, PRN-14. Meanwhile, the KPO Role indicators ranked 11-14 are PRN-4, PRN-5, PRN-19, and PRN-16. This ranking shows the order of KPO role indicators from the most important or most instrumental to the least instrumental in KPO.

4. Independent T- test results

The independent T test in this study is intended to compare the differences / similarities in perceptions of KPO between two groups of respondents, namely the owner group (PPK), and the design consultant group. The number of respondents (n) for the owner group (PPK) was 11 respondents, and for the design consultant group was 52 respondents. same). The results of the independent T test are presented in Table 5.

Table 5 Results of Test Statistics Group with Independent Sample T Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Konsultan Pendamping Owner (KPO)	*Equal variances assumed*	4.267	.043	1.986	61	.052	.50622	.25488	-.00343	1.01588
	Equal variances not assumed			2.875	26.477	.008	.50622	.17606	.14464	.86781

Sumber: Hasil penelitian (2023)

Based on the data processing results, it appears that the sig F-count for Equal Variance Assumed is 0.043 which means <0.05. This means that Ho is rejected, so the two population variances (Owner Group, and Design Consultant Group) are not identical (Equal Variance not Assumed). Given that in the first stage it was decided that Equal Variance Not Assumed, the basis for decision making for the second stage also uses Equal Variance Not Assumed, with the sig value of t count is 0.008, which means <0.05. This means Ho is rejected. This means that the two population means are not identical (the average level of perception of the two groups about KPO is different). This means that the level of perception of the two groups about KPO between the Owner Group (PPK) respondents and the Design Consultant Group respondents is different.

That there is a difference in perception between the owner / PPK and the design consultant, is also evident from the average value of the perceptions of the two parties on the 14 indicators of the role of KPO, as presented in Table 6.

Tabel 6 Owner's and Design Consultant's perception of KPO's role

No	Role KPO	Average rating	
		Owner/PPK	*Consultan*
1	*Project brief or KAK*	5,55	5,17
2	*Terms, standards, guidelines, rules*	5,73	5,19

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3	*Identify the owner's needs*	*5,73*	*5,21*
4	*Results of discussion or briefing document*	*5,64*	*5,02*
5	*Communication between owner and design team*	*5,55*	*5,12*
6	*Schedule control and risk analysis*	*5,45*	*5,04*
7	*KAK and HPS and technical specifications*	*5,73*	*5,10*
8	*Design proposal and product stage review*	*5,64*	*5,08*
9	*Value for money*	*5,36*	*5,08*
10	*Design tools like BIM*	*5,45*	*4,98*
11	*Coordination and consultation with stakeholders*	*5,55*	*5,00*
12	*Drawing up selection documents, explanations*	*5,55*	*4,85*
13	*Design solution decisions in a balanced/equal manner.*	*5,64*	*4,96*
14	*Best performance design consultant*	*5,36*	*5,04*
	Number of Average Values	*5,57*	*5,06*

Source: Research results (2023)

Table 6 shows the comparison of mean scores per indicator and in total, between the perceptions of the owner/PPK and the design consultant. The method in interpreting the average value on the Likert Scale (1-6), the following formula is used Table 6 shows the comparison of the average value per indicator and the total, between the perceptions of the owner / PPK and the design consultant. The method in interpreting the average value on a Likert Scale (1-6), the following formula is used (Riana, 2012):

I = R/K
Where:
I = Class intervals
K = Number of classes = 6 (Scale Likert 1-6)
R = Maximum value - the minimum value = 6 - 1 = 5
Class intervals in the scale of this study
I = R/K= 5/6= 0,83

Tabel 7. Interval Kelas dalam Likert 1-6

Class Intervals in Likert 1-6	*Meam (1)*
0,83- 1,66	*strongly disagree*
1,66 < X ≤ 2,49	*disagree*

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2,49 < X ≤ 3,23	*somewhat disagree*
3,23 < X ≤ 4,15	*somewhat agree*
4,15 < X ≤ 4,98	*agree*
4,98 < X ≤ 6	*strongly agree*

Sumber: Adopted from Riana (2012)

The total mean value of the owner/PK group respondents, as presented in Table 6, is 5.57 which, if referring to the class interval in Table 7, then the mean value is included in the strongly agree category because the mean value of 5.57 is in the interval 4.98 < X ≤ 6. Likewise, the mean value of the design consultant group respondents of 5.06 is in the same class interval. This means that both owner/PK group respondents and design consultant group respondents are in the category of strongly agreeing with the 14 roles of KPO. The difference is that the approval level of the owner/PK group respondents (with an average score of 5.57) is higher than that of the design consultant group respondents (with an average score of 5.57). This means that the two groups of respondents both need the role of KPO, it is just that the owner/PK group respondents feel a more urgent need for the role of KPO to help them, especially in the first two stages of the project life cycle, namely the preparation stage, and technical design/planning.

B. Discussion
1. The role of the co-consultant

If we look at the role of the owner's assistant obtained from the literature, then actually the assistant consultant or owner's advisor is already known and even many owners, especially private owners, use it. It's just that the names are different, some call them technical teams, technical management personnel, experts, client advisers, probity advisers, individual consultants, specialist consultants and others (Table 1). Of the 19 roles, there are five roles that experts consider inappropriate or irrelevant to the owner's assisting consultant, namely assisting feasibility studies, compiling procurement packages, checking the completeness of tender documents, ensuring PPK has time and helping lesson learn.

Feasibility studies on government building projects are not carried out as in private projects, but more towards the feasibility of meeting organizational needs to carry out tasks and functions (tusi). Procurement packages are prepared by the owner based on the name of the development activity, relatively easier and carried out one year before implementation. The completeness of the tender documents is checked by the goods/services procurement working group (pokja) team, not the accompanying consultant. Likewise, ensuring the PPK in allocating time for the design process and making lesson learned or post ocupation evaluation (POE), is considered by the resource person not the task of KPO.

The roles of the owner's advisory consultant identified from literature sources and laws and regulations are 19 roles, and validated by experts/resource persons of construction practitioners in Indonesia into 14 roles (Table 6) will be explained in the next paragraph.

Helping to ensure that the project brief or KAK is complete and clear and understood by the design team is the most prominent role among the roles of owner assistance consultants. The project brief is all directive information related to the project provided by the owner's team (PPK) to the design consultant team which becomes the basis of work reference in preparing the DED. Previous studies show that the briefing process did not go well, so a bridging role between the owner and the design consultant is needed.

Provide an updated list of provisions, standards, guidelines, rules to be used in the design process including licensing. This role provides valid assurance that what must be guided by regulations related to the project, so that the project is carried out without any violation of the law / regulations.

Help identify the owner's needs into the best solution according to field conditions, vision and goals of the organization. The real needs of the owner often need to be explored to get a solution that the organization really needs, whether it is a building with certain characteristics or quite simple. Sometimes the owner is trapped with an ambition that is not actually what is needed.

Documenting the results of discussions or briefing documents for design decisions and anticipating changes during design. This role is more of a backup to the reasons for design decisions, so that changes at the construction stage can be avoided if there is not enough reason.

Assist communication between the owner and the design team to get the best and quickest decision in the design process. Communication is the most important factor in the briefing and design process, which requires

each party to have the same perception and understanding, because discussions are difficult to reach agreement if one party does not understand, and persists with its arguments.

Help control the schedule of the DED document procurement phase and analyze the main risks in achieving project objectives. This role is a referee between the owner and the design team, because the design process is limited by time and cost, so the process needs to be controlled, including early detection of the worst risks to project implementation.

Assist in reviewing KAK documents, HPS and project technical specifications. Every product needs to be reviewed by experts. In this context, the assisting consultant is the owner's expert whose role is to ensure that products such as KAK, HPS and technical specifications are appropriate.

Evaluate the design proposal and review the design product stages continuously to make sure they are in accordance with the KAK document and project requirements. The design process goes through four stages starting from the proposal to the final DED. Each stage has an owner's assistant who helps review, then the owner approves and proceeds to the next stage. This is very important so that no errors occur until the detailed design level.

Helping to ensure value for money against the design consultant's proposal using value engineering methods. The principle on government projects is to account for value for money as much as possible. A design decision must be best in terms of value for money, so that the principle of economy is achieved.

Suggesting design tools such as building information modeling (BIM), directions and critiques for problem solving that arise during the design stage. The design process requires tools that can help solve design problems quickly and effectively. The owner's assistant in this context is expected to suggest based on his experience, so that the right design tools are selected.

Assist in identification, coordination and consultation with stakeholders in determining project requirements and KAK. Government project owners often consist of various parties ranging from PPK, building users, to the maintenance department, all of which must be involved in the design process to get quality DED products. The role of the facilitator integrates various parties to be able to sit together to provide suggestions and design solutions, so that the final building product meets the expectations of all parties or stakeholders.

Assist in preparing selection documents, explanations, evaluations and draft contracts for planning or supervisory consultant services / MK (Permen PUPR 22, 2018). Owners or PPKs who have repeated experience will be smoother in the design consultant selection process, but on the other hand, non-technical PPKs whose personnel are rotating will require the role of the owner's assistant in preparing selection documents to the evaluation process and construction project consultancy contracts.

Ensure that design solution decisions are implemented by the owner based on the results of coordination and balanced/equal stakeholder approval. There are several design issues related to the interests of several parties, this will be difficult if there is no bridging party. In this situation, the role of assistants as owner's consultants is expected to play an important role. (Van Meel, J. J., & Stordal, 2017).

Helping to get the best performance from design consultants is faced with time, scope and budget constraints. Service products are different from physical products, so supervision is done differently. Design consultants appointed from the selection results in reality need control in the design process because there are time and scope constraints that must be met. Therefore, the owner needs to appoint another party in this supervision (*RIBA_Client Advisers 2019_FINAL.Pdf*, n.d.). In certain package situations, usually complex projects are assisted by MK consultants, but non-complex packages handled by PPK non-technical agencies need assistants called owner's assistant consultants, instead of MK consultants.

2. Owner and consultant views

The presence of KPO in the design or pre-design (planning) process adds new actors from the existing main actors, namely the project owner and design consultant, while the MK consultant is not an actor for the non-complex project category. However, as we know, the categories of complex and non-complex projects are determined in general by one of the technical parameters, namely the number of floors of at least four levels, a minimum floor area of 5,000 m2 and categorized as a special building or not simple. Related to the OPNIT owner to understand the needs of building construction in general is limited, even though it is below four floors and even above. This limited experience and knowledge of the owner is expected to be overcome by the design consultant. Unfortunately, the fact is that design consultants in Indonesia face problematic conditions in the form of low quality consultant personnel. This is the main reason why design document products always undergo significant changes, because they are not in accordance with the owner's actual needs and field conditions. This problem results in project delays and overbudget.

The presence of KPO can be considered as helping both of them or burdening one of them, for example, the owner must pay a certain amount of money for KPO services. KPO financing for government projects is charged to technical agencies at the Ministry of PUPR, both at the central and regional levels, but honorarium and operational costs are charged to the owner or PPK of the work unit. The current condition, the provision of

technical management personnel by technical agencies that act as KPOs is very limited, so that the support of technical managers to assist work units in other ministries / government agencies is not sufficient. Considering the needs of some non-technical government owners, the owners still submit requests for technical manager support to the nearest technical agency. Related to the problem of limited personnel at technical agencies, some personnel are still seconded who act as technical personnel. Their function is to assist the owner/PPK, but assistance in the form of advice/input is limited.

Based on this experience, the idea arose to use KPO from professionals or external experts. This has been accommodated in a regulation, namely LKPP 12/2021 that the owner / PPK can request the assistance of an expert or team in carrying out their duties in part or all stages of PBJ. This is the type of KPO discussed in this study, namely KPO which is not limited to sources only from the technical ministry, but also from external professionals. So, in short, a KPO is a party outside the owner and outside the design consultant who assists the design process at the owner's expense, with the required role according to the identification results of this research.

Different views of owners and design consultants can be seen from the three biggest differences are perceptions of the role in helping to prepare selection and explanation documents, the role of helping to ensure design solution decisions by the owner based on the results of coordination and approval of stakeholders in a balanced / equal manner and the role of helping to review KAK and HPS documents and project technical specifications. As for the role with the smallest difference in view value between perceptions between the owner and the design consultant is to help ensure value for money against proposals from design consultants with value engineering methods, help get the best performance of design consultants faced with time, scope and budget constraints and help ensure a complete and clear (unambiguous) project brief or KAK is delivered and understood by the design team.

IV. CONCLUSION

A. Research novelty

The research novelty in this study is the discovery of 14 indicators of the role of KPO that are validated through the CVR method, and ranked the level of its role through the RII method. Another novelty of this research is that it found a comparison of perceptions between the owner/PK respondent group and the design consultant, which in the independent t test analysis found differences in perceptions between the two groups of respondents, but the difference was not far, because this was confirmed through the mean value analysis which found that the two groups of respondents both agreed on the importance of the presence of KPO. Thus, this study proves that there are parties who (should) play a very important role in the planning and design process of government construction projects, especially in non-technical government ministries/agencies that use conventional project delivery, design bid build. In this study, the party called the owner's assistant consultant empirically has a contribution in assisting the Government PPK. The survey results revealed that as many as 85.7% of respondents stated that non-technical government construction PPKs need to be accompanied by consultants/experts at the preparation and technical design/planning stages. Furthermore, this study examined the results of role identification from the literature study and narrowed down to 14 important roles required in assisting the owner / PPK at the construction planning and design stage. Although empirically there are different perceptions of the role of KPOs by owners and design consultants, both generally agree that KPOs are indispensable to owners/PPKs.

B. Research limitations and recommendations

This study has limitations in the sampling area, which only covers the DKI Jakarta area and the research subject is the owner and design consultant. In addition, this study is also limited to the initial phase of the construction project, namely the planning and design of government building projects.

It is recommended for future researchers, to be able to develop the results of this study by using a wider sample covering representative regions of Indonesia, and adding the contractor as a research subject. It is recommended that future research be more comprehensive, with the phases used can include planning, design, and implementation.

C. Conclusion

The success of a construction project is greatly influenced by the quality of the technical planning document or DED. The quality of this document is determined by the presence of the roles of the parties who compile it, especially the technical planning team and the owner. In government owners in K / L non-technical agencies with very limited availability of construction personnel, it is necessary to appoint parties outside the owner's organization to assist the owner's duties at the construction planning and design stage. Based on the research results, this role does not have to be prepared by technical personnel from government technical agencies but can

be from experts or professionals outside the government organization. The identification of roles was successfully presented into 14 roles required to assist the owner in the process of preparing DED documents. The three roles with the highest scores are helping prepare the project brief or terms of reference so that it is clearly accepted by the design team, providing a list of standard provisions and rules/guidelines in the design process and helping identify the owner's needs by involving end-users. These three are the most important cornerstones in the process of preparing the DED document.

There are differences in perceptions by owners and design consultants towards the role of KPO, but in general they agree that it is very important for the owner /PK Government in K / L non-technical agencies to get professional assistance in the form of a companion consultant or owner's advisor to help get quality design documents.

Recommendations for the government project management team to appoint professionals as assistants or advisors to the owner / PPK in the process of procuring construction services so that the success of construction projects can be achieved with a high level of certainty. The appointment of KPO is adjusted to the needs if the scope is quite simple, at least one person, but if it is very complex, several assistants / advisors are needed. The novelty of this research is that 14 KPO roles were validated through the CVR method, and can be ranked through the RII method. It is known through the independent t test that there is a difference in perception between the owner / PPK respondent group and the design consultant, but the difference is not far because it is confirmed by the average value of their perceptions that both require the presence of the KPO role. Another novelty is that this research can provide empirical evidence that the Government owner/PK must be accompanied by professional assistants outside the design consultant in the implementation of construction services procurement, especially at the design or technical planning stage.

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Suwandi[1], Sarwono Hardjomuljadi[2], Hendrik Sulistio[1]

The Effect of Enviromental Score, Social Score and Governance Score Toward Financial Performance

Laely Aghe Africa, Agustina Ratna Dwiati, Joicenda Nahumury

Accounting Department, Hayam Wuruk Perbanas University

Corresponding Author*: laely.aghe@perbanas.ac.id, agustina@perbanas.ac.id, joicendra@perbanas.ac.id

ABSTRACT

Purpose: This research aims to analyze the influence of Enviromental Score, Social Score and Governance Score on the Financial Performance in non Financial companies listed on the Indonesia Stock Exchange for the period 2019-2021

Design/methodology/approach: The sampling method used is purposive sampling method. Data analysis using SPSS 24.0 test tool by descriptive statistics, classic assumption test, multiple linear regression test and hypothesis test

Findings: The results showed that Enviromental Score, Social Score and Governance Score not significant to financial performance which measured with stock performance there are PER (Price Earning Ratio) and DPR (Devidend Payout Ratio). These considerations are expected to have a good information about Enviromental Score, Social Score and Governance Score to investor that has no effect to stock performance for.

Research limitations/implications: The limitation of this study is that there are many companies that have not fully implemented the ESG (Environmental, Social and Governance) report as a whole so that there is a lot of reduced data that has previously been selected as a research sample.

Practical implications: can be used by company management policies in determining what strategy to use in increasing ESG (Environmental, Social and Governance) scores and financial performance. And indirectly, an increase in ESG (Environmental, Social and Governance) and financial performance scores can increase the attractiveness of potential investors and investors so that companies can grow more rapidly and survive with a better level of health.

Originality/value: originality

Paper type: Research paper

Keywords: Enviromental Score, Social Score, Governance Score, Financial Performance

I. INTRODUCTION

The company has implemented sustainable financial products or a sustainability strategy in which there is an ESG (Environmental, Social and Governance) report which is the principles and standards of business and corporate management required by companies within the scope of the Company to maintain the stability of the Company. What is expected by the Company is that the implementation of sustainable finance can remain stable and planned. The strategy used by the company in obtaining a high ESG (Environmental, Social and Governance) score is to pay attention to environmental, social and governance conditions in order to maintain a balance in the application of ESG (Environmental, Social and Governance), one of which is implemented in financing policies as well as guidelines and financing procedures that explain specific provisions including the Company will not financing loans to prospective customers whose business can damage the surrounding environment and for

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prospective customers who have businesses on an industrial scale must attach an Environmental Impact Analysis (AMDAL) document.

ESG as a sustainability strategy provides a discourse that the higher the ESG (Environmental, Social and Governance) score obtained, the indication that many of the Company's activities related to ESG have been achieved. Based on Menicucci and Paoulucci (2022) finding that ESG (Environmental, Social and Governance) has a negative impact on operational and market performance in the Corporate sector indicates that Italian banks have not fully embraced strong sustainability. Gholami., et al (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance, George., et al (2022) stated that there is a strong relationship between ESG and financial performance. Jootae., et al (2022) stated that stating that ESG (Environmental, Social and Governance) affects financial performance. Research from Liu., et al (2022) states that there is a relationship between ESG and financial performance, Abdi., et al (2022) finds ESG (Environmental, Social and Governance) affects financial efficiency. Chen and Xie (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance..Yuen., et al (2022) found that ESG has a negative effect on profitability, because activities in ESG (Environmental, Social and Governance) cost money and reduce profitability. Buallay., et al (2020) found that ESG (Environmental, Social and Governance) has an effect on financial performance. The higher the company's ESG (Environmental, Social and Governance) score, the better the positive signal received by investors and potential investors so that it will improve the financial performance obtained by the company. And the composition of the board of directors is expected to strengthen the relationship between ESG (Environmental, Social and Governance) and financial performance. This argument is supported by stakeholder theory put forward by Freeman and Reed (1983), revealing that stakeholders are individuals or groups that can influence or be influenced by the company as a result of the activities carried out. The activities contained in the company's sustainability report can illustrate that the company has implemented provisions from Bank Indonesia that companies must provide benefits to the surroundings and not only focus on economic issues but in the environmental, social and governance spheres.

This research is motivated by the existence of a research gap related to the influence of ESG (Environmental, Social and Governance) on financial performance. The purpose of this study is to contribute to the literature related to measuring ESG by using each score in the company and to provide useful insights for practitioners and company policy makers regarding the provisions of the company's sustainability report which includes ESG (Environmental, Social and Governance) coverage and measurements for company financial performance. using proxies from the variable PER (Price Earning Ratio) and the DPR (Dividend Payout Ratio).

II. METHODS

A. Signaling Theory

Signaling theory is an action taken by company management that provides clues to investors about how management views the company's prospects (Brigham and Houston, 2019: 500). Signaling Theory in this study is used as a foundation in explaining whether scores on ESG results, namely Environmental Score, Social Score and Governance Score, can provide apositive signal to investors and potential investors to invest their shares in the company. The Company's sustainability strategy as outlined in the ESG (Environmental, Social and Governance) score can serve as a benchmark for investors and potential investors to invest and for the Company to improve the financial performance obtained.

B. Financial Performance PER (Price Earning Ratio)

Company performance is proxied by ratios related to stock performance, namely the PER (Price Earning Ratio) and DPR (Dividend Payout Ratio) variables.

C. ESG (Enviromental, Social and Governance)

ESG (Environmental, Social and Governance) measurements use scores from ESG (Environmental, Social and Governance), researchers use data taken from CESGS (Center for Environmental, Social, and Governance Studies) and the score results show that the higher the score, the more activities carried out by the Company as a strategy in increasing values in the Company's ongoing activities so that it has an impact on increasing investor confidence in the Company and can indirectly improve the financial performance obtained..

D. Enviromental Score, Social Score and Governance Score affect Financial Performance

Signaling theory is an action taken by company management that provides clues to investors about how management views the company's prospects (Brigham and Houston, 2019: 500). ESG measurements use scores from ESG (Environmental, Social and Governance), researchers use data taken from CESGS (Center for

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Environmental, Social, and Governance Studies) and the score results show that the higher the score, the more activities carried out by the Company as a strategy to increase value. -a value that is in the Company's ongoing activities so that it has an impact on increasing investo r confidence in the Company and can indirectly improve the financial performance obtained. Theactivities contained in the company's sustainability report can illustrate that the company has implemented provisions from Bank Indonesia that companies must provide benefits to the surroundings and not only focus on economic issues but in the environmental, social and governance spheres..

Based on Menicucci and Paolucci (2022) found that ESG (Environmental, Social and Governance) had a negative impact on operational and market performance in the corporate sector. Gholami., et al (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance, Giannopoulus., et al (2022) stated that there is a strong relationship between ESG (Environmental, Social and Governance) and financial performance. Kim., et al (2022) state that ESG (Environmental, Social and Governance) affects financial performance. Research from Liu., et al (2022) states that there is a relationship between ESG (Environmental, Social and Governance) and financial performance, Abdi., et al (2022) found ESG (Environmental, Social and Governance) affects financial efficiency. Chen and Xie (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance. Buallay., et al (2020) found that ESG (Environmental, Social and Governance) has an effect on financial performance.

A high environmental score indicates that the company's concern for the environment is very high and this can improve the performance of the company's shares and can attract investors and potential investors. A high Social Score shows the company's concern in the social field is very high and of course this can improve stock performance. A high Governance Score indicates that the company has implemented good governance based on existing Stock performance proxied by the two ratios, namely PER (Price Earning Ratio) and DPR (Dividend Payout Ratio), this is in accordance with the signal theory used because with this theory sustainable reports that can improve stock performance can give a positive signal to investors to add investment funds for companies or potential investors who will investegulations. The relationship between Environmental Score, Social Score and Governance Score influences PER (Price Earning Ratio) and DPR (Dividend Payout Ratio), and Governance Score is high, the value of the company's financial performance is also high.

E. Research and Methodology

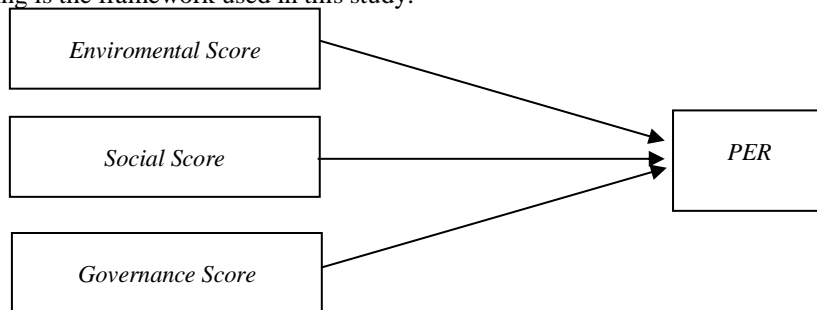The following is the framework used in this study:
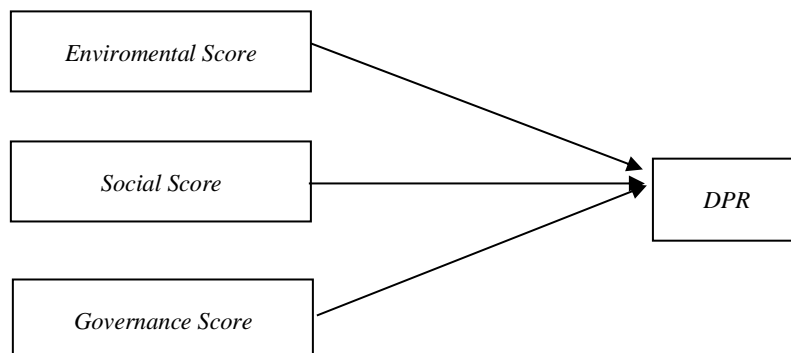

Figure 1. Research Framework

Figure 2. Research Framework

The hypotheses used in this study are as follows:

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H1 : Enviromental Score effect to PER (Price Earning Ratio).
H2 : Social Score effect to PER (Price Earning Ratio).
H3 : Governance Score effect to PER (Price Earning Ratio).
H4 : Enviromental Score effect to DPR (Devidend Payout Ratio).
H5 : Social Score effect to DPR (Devidend Payout Ratio).
H6 : Governance Score effect to DPR (Devidend Payout Ratio).

F. Population and Sample

This study uses data from 244 non-financial company financial report data per year which will be used for this research and the time period is from 2019 to 2021 and are companies that have not carried out mergers, acquisitions and restructuring during the current research period. Where in the use of Environmental Score, Social Score and Governance Score are 2019 and 2020 while for PER (Price Earning Ratio) and DPR (Devidend Payout Ratio) variables are 2020 and 2021 because the Environmental Score, Social Score and Governance Score data are data to predict the condition of company performance from the stock side. Using data from the financial statements of non-financial companies in Indonesia that are still active and have not experienced acquisitions, mergers or liquidations. In total there are currently 244 for four year that will be used for this research and the time period is from 2019 to 2021. This research uses secondary data and is a quantitative study. As for some of the characteristics of this quantitative design include research explanations in the form of detailed and descriptive descriptions, explanations of the relationships between variables used in research, the existence of research objectives and the existence of analytical hypotheses formed, the use of one statistical tool and the interpretation of the results of the analysis used as well as comparisons with several previous studies (Ghozali, 2018: 9). Secondary data is using information that has been collected by other people, and examples of several secondary data sources include books, journals, government publications, census data, abstracts, statistics, media, and annual reports from companies (Ghozali, 2018: 94).

III. RESULTS AND DISCUSSION

A. Results

Table 1. Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation
					Statistic	Std. Error	
Env.Score	244	1.00	.00	1.00	.4747	.01431	.22351
Social.Score	244	1.00	.00	1.00	.5496	.01377	.21516
Govern.Score	244	1.00	.00	1.00	.5267	.02292	.35804
Per (Price Earning Ratio)	244	968.99	-219.34	749.66	32.5606	6.89822	107.31107
Dpr (Devidend Payout Ratio)	244	4121.95	.00	4121.95	63.4683	31.53686	492.62156

Based on table 1 descriptive analysis for a minimum value of Environment Score of 0.00 and a maximum value of 1.00, this means that all companies included in the research sample have a score of 1 which means they have implemented sustainable activities in the field of environment, descriptive for a minimum value of Social Score of 0.00 and a minimum value of 0.00 a maximum of 1.00, this means that all companies included in the research sample have a score of 1 which means they have implemented sustainable activities in the Social field, descriptive for a minimum Governance Score of 0.00 and a maximum value of 1.00, this means that all companies included in the research sample have score 1 which means that it has implemented sustainable activities in the field of Governance. This indicates that all companies have carried out activities that support sustainability reports and show that the company is committed to complying with the rules set by the Financial Services Authority. As

for the PER (Price Earning Ratio) value, it is known that the minimum value is -219.34 and the maximum value is 749.66, and the DPR (Devidend Payout Ratio), it is known that the minimum value is 0.00 and the maximum is 4121.95. A negative PER (Price Earning Ratio) value indicates that there are companies that experience losses so that there is no dividend distribution and is indicated by the DPR (Devidend Payout Ratio) value of 0.00. In this case the distribution of dividends depends on the company achieving profit or loss. The higher the profit, the higher for distribution of DPR (Devidend Payout Ratio). In general, the financial performance condition of the companies in the research sample has good performance and can provide opportunities for potential investors to invest and investors to increase their investment so that the objectives of both companies and investors are achieved, namely good financial performance will provide high dividend.

1. Regression Analysis

Table 2. PER (Price Earning Ratio) as Dependend Variable

Model		B	Std. Error	Beta	t	Sig.
		Unstandardized Coefficients		*Standardized Coefficients*		
1	(Constant)	37.932	20.881		1.817	.071
	Env.Score	-14.831	37.814	-.031	-.392	.695
	Social.Score	3.027	39.273	.006	.077	.939
	Govern.Score	.038	19.825	.000	.002	.998

a. Dependent Variable: PER (Price Earning Ratio)

Table 3. DPR (Devidend Payout Ratio) as Dependend Variable

Model		B	Std. Error	Beta	t	Sig.
		Unstandardized Coefficients		*Standardized Coefficients*		
1	(Constant)	148.308	94.836		1.564	.119
	Env.Score	-165.605	172.223	-.075	-.962	.337
	Social.Score	-117.047	178.969	-.051	-.654	.514
	Govern.Score	110.315	90.327	.080	1.221	.223

a. Dependent Variable: DPR (Devidend Payout Ratio)

B. Discussion
1. Environmental Score has an effect on Financial Performance

Based on Menicucci and Paolucci (2022) found that ESG (Environmental, Social and Governance) had a negative impact on operational and market performance in the corporate sector. Gholami., et al (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance, Giannopoulus., et al (2022) stated that there is a strong relationship between ESG (Environmental, Social and Governance) and financial performance. Kim., et al (2022) state that ESG (Environmental, Social and Governance) affects financial performance. Social Score has an effect on Financial Performance Research from Liu., et al (2022) states that

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there is a relationship between ESG (Environmental, Social and Governance) and financial performance, Abdi., et al (2022) found ESG (Environmental, Social and Governance) affects financial efficiency. Chen and Xie (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance. Buallay., et al (2020) found that ESG (Environmental, Social and Governance) has an effect on financial performance.

Based on table 2, a significant value was found from the Environmental Score to PER (Price Earning Ratio) of 0.695, which means that Environmental Score has no effect on financial PER (Price Earning Ratio). Based on table 3 it is also found that the Environmental Score against the DPR (Devidend Payout Ratio) is 0.337, which means that the Environmental Score has no effect on DPR (Devidend Payout Ratio). This indicates that the high or low Environmental Score has no effect on financial PER (Price Earning Ratio) and DPR (Devidend Payout Ratio) is influenced by factors other than Environmental Score. And the application of the Environmental Score is still quite new so that it has not been fully implemented by companies and has not found its effect on increasing or decreasing company. Based on this explanation, the first hypothesis and the fourth hypothesis are not accepted. There is no effect of the environmental score on the financial performance of non-financial companies, possibly because the activities carried out related to the environment have not been able to contribute to the environment around the company. In this case it is better for companies to contribute more than before and maintain the quality of activities related to enviromental so that they can improve financial performance in the future.

2. Social Score has an effect on Financial Performance

Based on Menicucci and Paolucci (2022) found that ESG (Environmental, Social and Governance) had a negative impact on operational and market performance in the corporate sector. Gholami., et al (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance, Giannopoulus., et al (2022) stated that there is a strong relationship between ESG (Environmental, Social and Governance) and financial performance. Kim., et al (2022) state that ESG (Environmental, Social and Governance) affects financial performance. Social Score has an effect on Financial Performance Research from Liu., et al (2022) states that there is a relationship between ESG (Environmental, Social and Governance) and financial performance, Abdi., et al (2022) found ESG (Environmental, Social and Governance) affects financial efficiency. Chen and Xie (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance. Buallay., et al (2020) found that ESG (Environmental, Social and Governance) has an effect on financial performance.

Based on table 2, a significant value was found from the Social Score to PER (Price Earning Ratio) of 0.939, which means that Social Score has no effect on financial PER (Price Earning Ratio). Based on table 3 it is also found that the Social Score against the DPR (Devidend Payout Ratio) is 0.514, which means that the Social Score has no effect on DPR (Devidend Payout Ratio). This indicates that the high or low Social Score has no effect on financial PER (Price Earning Ratio) and DPR (Devidend Payout Ratio) is influenced by factors other than Social Score. And the application of the Social Score is still quite new so that it has not been fully implemented by companies and has not found its effect on increasing or decreasing company. Based on this explanation, the second hypothesis and the fifth hypothesis are not accepted. There is no effect of the influence of the social score on the financial performance of non-financial companies is probably due to the activities carried out related to social activities that have not been able to contribute to the environmental conditions around the company. In this case it is better for companies to contribute more than before and maintain the quality of activities related to social so that they can improve financial performance in the future.

3. Governance Score has an effect on Financial Performance

Based on Menicucci and Paolucci (2022) found that ESG (Environmental, Social and Governance) had a negative impact on operational and market performance in the corporate sector. Gholami., et al (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance, Giannopoulus., et al (2022) stated that there is a strong relationship between ESG (Environmental, Social and Governance) and financial performance. Kim., et al (2022) state that ESG (Environmental, Social and Governance) affects financial performance. Social Score has an effect on Financial Performance Research from Liu., et al (2022) states that there is a relationship between ESG (Environmental, Social and Governance) and financial performance, Abdi., et al (2022) found ESG (Environmental, Social and Governance) affects financial efficiency. Chen and Xie (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial performance. Buallay., et al (2020) found that ESG (Environmental, Social and Governance) has an effect on financial performance.

Based on table 2, a significant value was found from the Goverannce Score to PER (Price Earning Ratio) of 0.998, which means that Goverannce Score has no effect on financial PER (Price Earning Ratio). Based on table 3 it is also found that the Goverannce Score against the DPR (Devidend Payout Ratio) is 0.223 which means that the IGoverannce Score has no effect on DPR (Devidend Payout Ratio). This indicates that the high or low Goverannce Score has no effect on financial PER (Price Earning Ratio) and DPR (Devidend Payout Ratio) is influenced by factors other than Goverannce Score. And the application of the Social Score is still quite new so that it has not been fully implemented by companies and has not found its effect on increasing or decreasing

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company. Based on this explanation, the third hypothesis and the sixth hypothesis are not accepted. There is no effect of the influence of the governance score on the financial performance of non-financial companies is probably due to the activities carried out related to governance that have not been able to contribute to the environmental conditions around the company. In this case it is better for companies to contribute more than before and maintain the quality of activities related to governance so that they can improve financial performance in the future.

IV. CONCLUSION

A high environmental score indicates that the company's concern for the environment is very high and this can improve the PER (Price Earning Ratio) performance of the company's shares and can attract investors and potential investors. High Social Score Research from Liu., et al (2022) states that there is a relationship between ESG (Environmental, Social and Governance) and financial PER (Price Earning Ratio), Abdi., et al (2022) found ESG (Environmental, Social and Governance) affects financial efficiency. Chen and Xie (2022) found that ESG (Environmental, Social and Governance) has a positive effect on financial PER (Price Earning Ratio). Buallay., et al (2020) found that ESG (Environmental, Social and Governance) has an effect on financial PER (Price Earning Ratio). shows the company's concern in the social field is very high and of course this can improve stock PER (Price Earning Ratio). A high Governance Score indicates that the company has implemented good governance based on existing regulations. The higher the company's ESG (Environmental, Social and Governance) score, the better the positive signal received by investors and potential investors so that it will improve the financial PER (Price Earning Ratio) obtained by the company. And the composition of the board of directors is expected to strengthen the relationship between ESG and financial PER (Price Earning Ratio). This argument is supported by stakeholder theory put forward by Freeman and Reed (1983), revealing that stakeholders are individuals or groups that can influence or be influenced by the company as a result of the activities carried out. The activities contained in the company's sustainability report can illustrate that the company has implemented provisions from Bank Indonesia that companies must provide benefits to the surroundings and not only focus on economic issues but in the environmental, social and governance spheres. In this case based on descriptive analysis the distribution of dividends depends on the company achieving profit or loss. The higher the profit, the higher for distribution of DPR (Devidend Payout Ratio). In general, the financial performance condition of the companies in the research sample has good performance and can provide opportunities for potential investors to invest and investors to increase their investment so that the objectives of both companies and investors are achieved, namely good financial performance will provide high dividend. Based on this explanation, the first hypothesis to the sixth hypothesis is not accepted

Based on the results of research using the SPSS statistical tool with a benchmark value of 5%, it was found that the Environmental Score, Social Score and Governance Score had no effect on financial performance PER (Price Earning Ratio) as proxied by PER (Price Earning Ratio) and DPR (Dividend Payout Ratio). This indicates that the high or low scores of ESG (Environmental, Social and Governance) cannot improve financial performance PER (Price Earning Ratio) related to shares and dividend payout. The implications of this research can be used as a benchmark by companies that are in the non-financial sphere to be able to see that stock and dividend can be influenced by any factors other than the implementation of ESG implementation. The limitation of this study is that there are many companies that have not fully implemented the ESG (Environmental, Social and Governance) report as a whole so that there is a lot of reduced data that has previously been selected as a research sample.

Financial performance in this study is not influenced by conditions or activities carried out in the ESG (Environmental, Social and Governance) category and for further research can add other variables that can function as moderating variables and mediating variables. So that it is possible that the results of further research can contribute to a better literature review because it includes variables other than the independent variables and can be used by company management policies in determining what strategy to use in increasing ESG (Environmental, Social and Governance) scores and financial performance. And indirectly, an increase in ESG (Environmental, Social and Governance) and financial performance scores can increase the attractiveness of potential investors and investors so that companies can grow more rapidly and survive with a better level of health.

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Effect of Work Environment and Compensation on Employee Performance in PT. Cedefindo Bekasi

Yohanes Sugiyanta, Matthew Alessandro

Sekolah Tinggi Ilmu Ekonomi Mulia Pratama, Bekasi, Indonesia

Corresponding Author*: yohanessekar@gmail.com

ABSTRACT

Purpose: This study aims to test: (1) Effect of the work environment on employee performance PT PLN (Persero) Generation Implementing Unit Asam Asam. (2) Effect of compensation on employee performance PT. Cedefindo Bekasi (3) Effect of work environment and compensation on employee performance PT. Cedefindo Bekasi.

Design/Methodology/Approach: The design of this research is quantitative research. Populasi penelitian seluruh karyawan PT. Cedefindo Bekasi and a sample of 64 respondents. The data was obtained by distributing questionnaires about the work environment and compensation to 64 respondents. This study uses validity and reliability tests to measure validity and reliability, and using the classical assumption test, multiple linear regression analysis, F test, t test and coefficient of deremination (R2).

Findings: The results of the study show: (1) The work environment has a significant influence on employee performance. (2) Compensation has no significant effect on employee performance. (3) Work environment and compensation together have a significant influence on employee performance.

Paper Type: Research Paper

Keywords: Work Environment, Compensation, and Employee Performance.

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I. INTRODUCTION

To improve services in the company and win the competition in the field of sales of cosmetic products, companies need to develop human resources, because human resources give the organization a competitive advantage. The success of a company is greatly influenced by the performance of its employees. The success and performance of the organization can be seen from the performance that has been achieved by its employees, therefore the organization requires that employees display optimal performance because the good and bad performance achieved by employees will affect the performance and success of the company / organization as a whole (Sedarmayanti, 2009: 3)

The factor that affects employee performance is work discipline. Good discipline reflects the amount of a person's sense of responsibility towards the duties assigned to him. With high work discipline will be able to achieve maximum performance, be it time discipline, rules or regulations that have been set by the organization. Regulations are needed to provide guidance and counseling for employees in creating good discipline in companies / agencies where with good discipline, morale, work morale, efficiency and effectiveness of work / employee performance will increase (Hasibuan, 2012: 194).

Compensation is one of the main reasons and motivations why employees work. Compensation plays an important role for employees as individuals because the amount of compensation reflects a measure of employee value among the employees themselves, their families and the community. For this reason, compensation programs are important for companies because they reflect the company's efforts to retain its human resources. The role of compensation often gets serious attention from management in an effort to improve employee performance.

This is in accordance with the opinion of Moheriono (2012) said that the attachment between compensation and performance is very significant. The higher the compensation, the more it will increase employee motivation

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in achieving high performance as well. Adequate compensation will affect the performance displayed by employees. (Priansa, 2012:318).

This opinion is in accordance with Ediyatmo's (2013) research that compensation has a positive effect on employee performance. Related to its activities, employees of PT Cedefindo, one of the companies engaged in cosmetics are required to have high discipline, strong organizational commitment considering that the hospital is an organization that provides health services to the community. So the quality and performance of employees are required to be able to provide the best. They are required to arrive on time, especially for functional employees who are in direct service, because those served are people who really need help and are in contact with human lives. They must have a high commitment to serve and be willing to behave, behave and do their duties as well as possible, do not know the time, must be ready to work in 24 hours in continuous shifts.

Based on the results of the author's monitoring, currently the discipline of PT Cedefindo employees is still lacking, especially in parts that do not provide direct services to the community, this can be seen from coming to work not on time, there are still employees who are not present to carry out their duties, either without information or verbal permission. During working hours, there are still employees who leave the company environment to take care of personal needs. In terms of dress discipline, there are still employees who wear uniforms not in accordance with applicable regulations. There are also still PT Cedefindo employees who are less responsible for their main duties and functions, more concerned with work outside their responsibilities as employees of PT Cedefindo, and there are some employees who propose to move to work. There are also employees of PT Cedefindo who complain of dissatisfaction with the compensation received, because there is a gap between one part and another. Since the last six months there has been an increase in revenue in the department that provides direct services to consumers in accordance with its performance, but in other parts there has only been a slight increase.

From the opinions of experts and the results of previous research, it can be seen that work discipline has a positive influence on employee performance, meaning that high work discipline is needed to improve employee performance, because good discipline makes every employee orderly and responsible for his work. Similarly, research on employee commitment shows that organizational commitment has a positive influence on employee performance. Having commitment means having awareness and devotion at work, so that he has good performance. Compensation also has a positive effect on performance, because with good compensation and satisfying employees, it will be an encouragement to work better. This study aims to determine and analyze work discipline, organizational commitment and employee compensation, as well as its influence either jointly or partially on the performance of PT Cedefindo's employees.as a cosmetics company contributes greatly to the beauty industry and meets market demand both nationally and abroad, so the author in this study raised the title "Analysis of The Effect of The Work Environment and Compensation on Employee Performance at PT. Cedefindo Bekasi"

A. Problem Formulation

Based on the background of the above problem, the formulation of the problem in this study is as follows:
1. Does the work environment affect employee performance?
2. Does compensation affect employee performance?
3. Does the work environment and compensation together affect employee performance?

II. METHODS

A. Research Objectives

Based on the formulation of the problem above, the objectives of this study are:
1. To find out how much influence the work environment has on employee performance
2. To find out how much influence compensation has on employee performance
3. To find out how much influence the work environment and compensation have on employee performance

III. RESULTS AND DISCUSSION

A. Human Resource Management

According to Sutrisno (2017: 4) human resource management can be defined as a policy and practice needed by someone who runs the "people" or human resources aspect of a management position including recruitment, screening, training, rewarding, and assessment.

According to Sulistiyani and Rosidah (2013: 13) HRM is planning, organizing, directing, and supervising. For the procurement, development, compensation, integration, maintenance, and termination of labor relations with a view to helping achieve the goals of the organization and individual communities.

According to Sutrisno (2017: 5) in his duties human resource management can be grouped into three functions, namely:
1. Managerial functions: planning, organizing, directing, and controlling.
2. Operational functions: procurement, development, compensation, integration, maintenance, and termination.
3. The third function is the position of human resource management in achieving organizational goals in an integrated manner.

B. Work Environment

The work environment is everything, events, people and others that affect the way people work. The work environment is a collection of factors that are physical and non-physical, both of which affect the way employees work. The situation in the workplace is a non-physical work environment, while people or equipment is a physical work environment (Taiwo and Alan, 2013).

1. Work Environment (X1)

From the questionnaire that has been submitted to respondents regarding the work environment which is an independent variable of the study. The results of the percentage of respondents' answers can be seen in the table below:

Table 1. Respondents to the work environment.

	Work Environment Questions (X1)

	1		2		3		4		5		6	
	F	%	F	%	F	%	F	%	F	%	F	%
STS	1	1,6%	0	0,0%	1	1,6%	0	0,0%	0	0,0%	1	1,6%
TS	1	1,6%	4	6,2%	5	7,8%	2	3,1%	2	3,1%	1	1,6%
N	4	6,2%	15	23,4%	23	35,9%	12	18,8%	7	10,9%	4	6,2%
S	37	57,8%	36	56,2%	29	45,3%	37	57,8%	45	70,3%	37	57,8%
SS	21	32,8%	9	14,1%	6	9,4%	13	20,3%	10	15,6%	21	32,8%
Total	64	100%	64	100%	64	100%	64	100%	64	100%	64	100%

Source: data processed, 2023

C. Compensation

Compensation is all income in the form of money, direct or indirect goods received by employees in exchange for services provided to the company (Hasibuan, 2017). Compensation is the overall knowledge of providing remuneration for *employers* and *employess* both directly in the form of money and indirectly in the form of money (Martoyo, 2013).

1. Compensation (X2)

From the questionnaire that has been presented to respondents regarding compensation which is an independent variable of the study. The results of the percentage of respondents' answers can be seen in the table below:

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Table 2. Respondents to compensation

Compensation Questions (X2)

	1		2		3		4		5		6	
	F	%	F	%	F	%	F	%	F	%	F	%
STS	2	3,1%	1	1,6%	1	1,6%	1	1,6%	5	7,8%	2	3,1%
TS	3	4,7%	5	7,8%	3	4,7%	3	4,7%	4	6,2%	3	4,7%
N	11	17,2%	6	9,4%	5	7,8%	8	12,5%	13	20,3%	11	17,2%
S	33	51,6%	46	71,9%	41	64,1%	36	56,2%	26	40,6%	33	51,6%
SS	15	23,4%	6	9,4%	14	21,9%	16	25,0%	16	25,0%	15	23,4%
Total	64	100%	64	100%	64	100%	64	100%	64	100%	64	100%

Source: data processed, 2023

D. Employee Performance

Employee performance is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with responsibilities that given to him (Mangkunegara, 2017).

From the questionnaire that has been submitted to respondents regarding employee performance which is a dependent variable of the study. The results of the percentage of respondents' answers can be seen in the table below:

Table 3. Respondents to employee performance

Employee Performance Questions (Y)

	1		2		3		4		5		6	
	F	%	F	%	F	%	F	%	F	%	F	%
STS	1	1,6%	0	0,0%	0	0,0%	0	0,0%	0	0,0%	1	1,6%
TS	3	4,7%	0	0,0%	0	0,0%	3	4,7%	5	7,8%	3	4,7%
N	22	34,4%	16	25,0%	4	6,2%	18	28,1%	19	29,7%	22	34,4%
S	33	51,6%	44	68,8%	42	65,6%	37	57,8%	29	45,3%	33	51,6%
SS	5	7,8%	4	6,2%	18	28,1%	6	9,4%	11	17,2%	5	7,8%
Total	64	100%	64	100%	64	100%	64	100%	64	100%	64	100%

Source: data processed, 2023

E. Validity Test

Validity testing is carried out by comparing the calculated value with rtable. The application program used in this validity test is SPSS. For *degree of freedom (df)* = n-2, in this case n is the number of samples. In this case df can be calculated 64-2 or df = 62 with α 0.05, obtained rtable 0.246. Each question item can be said to be valid if it is greater than 0.246. The results of the data validity test in this study can be seen in the following table:

Table 4. Work Environment Validity Test (X1)

Question	rcalculate	Tableable	Information
X1.1	0,674	0,246	Valid
X1.2	0,583	0,246	Valid
X1.3	0,717	0,246	Valid
X1.4	0,597	0,246	Valid
X1.5	0,833	0,246	Valid
X1.6	0,674	0,246	Valid

Source: Primary Data Processing Results, 2023

Based on the work environment validity test table, all questions about the work environment in the research instrument are declared valid, because the calculation is greater than the table of 0.246.

Table 5. Compensation Variable Validity Test

Question	rcalculate	Tableable	Information
X2.1	0,819	0,246	Valid
X2.2	0,785	0,246	Valid
X2.3	0,628	0,246	Valid
X2.4	0,703	0,246	Valid
X2.5	0,603	0,246	Valid
X2.6	0,819	0,246	Valid

Source: Primary Data Processing Results, 2023

Based on the compensation validity test table, all questions regarding compensation in the research instrument are declared valid, because the calculation is greater than the rtable of 0.246.

1. Employee Performance Variable Validity Test (Y)

Table 6. Employee Performance Variable Validity Test

Question	rcalculate	Tableable	Information
Y.1	0,832	0,246	Valid
Y.2	0,608	0,246	Valid
Y.3	0,251	0,246	Valid
Y.4	0,682	0,246	Valid
Y.5	0,627	0,246	Valid
Y.6	0,832	0,246	Valid

Source: Primary Data Processing Results, 2023

Based on the employee performance validity test table, all questions regarding employee performance in the research instrument are declared valid, because the calculation is greater than the table of 0.246.

Therefore, from the results of data analysis in the tables above, it can be concluded that all questions are valid because all of these questions have a value greater than 0.246.

F. Reliability Test

The results of this reliability test were carried out using *Cronbach's Alpha* using the SPSS application program. The application program used in this reliability test is SPSS. A variable is said to be reliable if it has *Cronbach's Alpha* > 0.60 (more than 0.60). The reliability results can be seen in the following table:

1. Environmental Reliability Test

Table 7. Work Environment Rehabilitation Test

Cronbach's Alpha.	N of Items
760	6

Source: Primary Data Processing Results, 2023

Based on the work environment reliability test table, it can be seen that the work environment variable can be said to be reliable because the value of *Cronbach's Alpha* of the compensation variable is 0.760 more than 0.60.

2. Compensatory Reliability Test

Table 8. Compensatory Reliability Test.

Cronbach's	N of Items

Alpha	
.810	*6*

Source: Primary Data Processing Results, 2021

Based on the compensation reliability test table, it can be seen that the compensation variable can be said to be reliable because the value of *Cronbach's Alpha* of the compensation variable is 0.810 more than 0.60.

3. Performance Reliability Test

Table 9. Employee Performance Reliability Test

Cronbach's Alpha	*N of Items*
.728	*6*

Source: Primary Data Processing Results, 2021

Based on the employee performance reliability test table, it can be seen that the employee performance variable can be said to be reliable because the value of *Cronbach's Alpha* of the compensation variable is 0.728 more than 0.60.

G. Normality Test

The normality test aims to find out whether the residual value is normal or not. A regression model is good if it has normally distributed residual values. As for the normality test in this study using histogram graph analysis, normal graph analysis *P-Plot* and *Kolmogoriv Smirnov test.* The following is an explanation of the results of the analysis of these graphs:
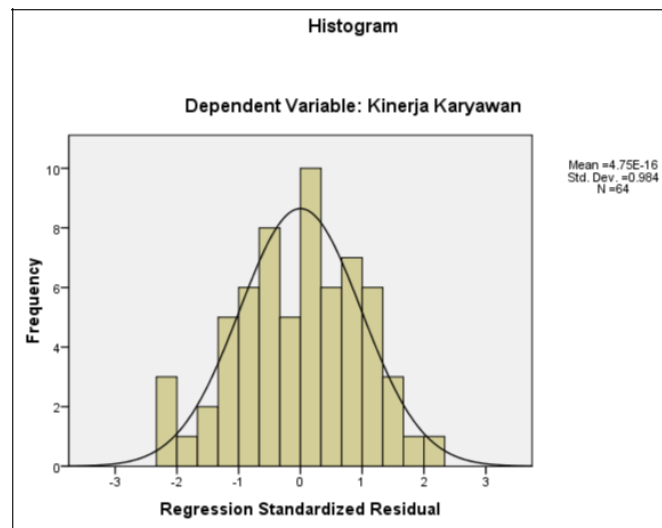
Figure 1. Histogram Graphics

Source: Primary Data Processing Results, 2023

Based on the histogram chart above, the residual data has shown a normal curve that forms a bell. It can be concluded that the data is distributed normally.
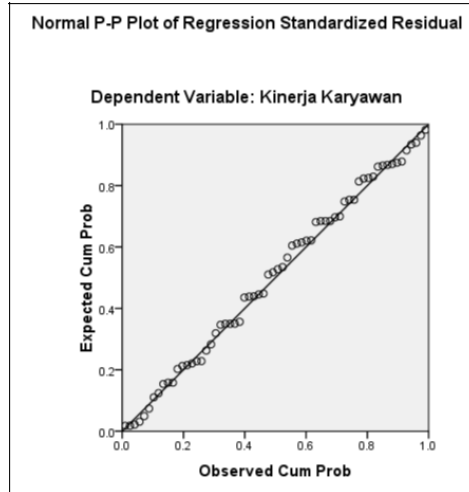
H. Graph Normal P-Plot

Figure 2. Graph Normal P-Plot

Source: Primary Data Processing Results, 20213

Based on the normal graph of *the p-plot* above, the distribution of data is located around the diagonal line and follows the direction of the diagonal line, so it can be concluded that the distribution of employee performance data is normal.

I. Kolmofuels Smirnov Test

In this *Kolmogoriv Smirnov Test*, if the significance value ≥ 0.05, then the residual value is normally distributed and if the signification value is ≤ 0.05, then the residual value is not normally distributed. Here are the test results of *Kolmogoriv Smirnov.*

Table 10. Uji Kolmoenergij Sminow

		Unstandardized Residual
N		64
Normal Parametersa	Mean	.0000000
	Std. Deviation	2.29747864
Most Extreme Differences	Absolute	.059
	Positive	.041

a. Test distribution is Normal.
Source: Primary Data Processing Results, 2021

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Based on the table above, it shows a significance of 0.977 more than 0.05. Thus the residual data is normally distributed and the regression model has satisfied the normality assumption.

J. Multicollinearity Test

The Multicollinearity Test is carried out to test whether in a regression model there is a correlation between independent variables. A good regression model does not have the problem of multicollinearity. To detect the presence or absence of multicollinearity problems by looking at the *Tolerance* and VIF values. If the Tolerance value is more than 0.10 and VIF is less than 10 then multicollinearity does not occur. The following are the results of the multicollinearity test:

Table 11. Multicollinearity Test

		Collinearity Statistics	
Model		Tolerance	BRIGHT
1	(Constant)		
	Work Environment	.998	1.002
	Compensation	.998	1.002

a. Dependent Variable: Employee Performance
Source: Primary Data Processing Results, 2021

Based on the multicollinearity test table above, it can be seen that the VIF value of each independent variable is less than 10 and the *tolerance* value is above 0.1. So it can be concluded that the regression model in this study did not occur multicollinearity.

K. Heteroscedasticity Test

The heteroscedasticity test is performed to test whether in a regression model there is an inequality of variance from the residuals of one observation to another. If a variant from the residual of one observation to another observation remains, it is called homoscedasticity and if the variant is different it is called heteroscedasticity. A good regression model is that heteroscedasticity does not occur.
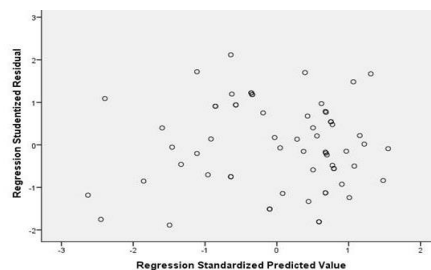
Dependent Variable Performance

Figure 3. Test graph heteroskedality.

Source: Primary Data Processing Results, 2023

From the graph above, it can be seen that the points spread randomly, do not form a certain clear pattern, and are spread well above and below the number 0 on the Y axis. This means that there is no heteroscedasticity problem in the regression model.

L. Multiple Linear Regression Test

This analysis is carried out to determine whether there is an influence between the work environment and compensation on employee performance. Multiple linear regression analysis in this study using the SPSS application program. The form of the equation is:

The results of processing the data can be seen in the following table:

Table 12 - Multiple Linear Regression Analysis Test

Coefficient

Model	B	Std. Error	Beta	t	Say.	Tolerance	BRIGHT
	Unstandard zed Coefficients		Standardized Coefficients			Collinearity Statistics	
1 (Constant)	10.389	2.846		3.651	.001		
Work Environment	.499	.098	.548	5.115	.000	.998	1.002
Compensation	.020	.075	.029	.270	.788	.998	1.002

a. Dependent Variable: Employee Performance
Source: Primary Data Processing Results, 2023

Based on the table of multiple linear regression analysis results above, the regression equation is obtained as follows:

$$Y = a + b1X1 + b2X2$$
$$Y = 10.389 + 0.499 - 0.020$$

From this equation, it can be explained as follows:
1. The constant coefficient of 10.389 means that if the work environment and compensation variables are 0, then the value of the employee performance variable (Y) will be at 10.389.
2. The regression coefficient X1 (work environment) from the calculation of multiple values obtained a *coefficients* value of 0.499, meaning that if the work environment increases by 1%, the volume of employee performance (Y) will increase by 0.499. Because the coefficient is positive, there is a positive relationship between the work environment and employee performance.
3. The regression coefficient X2 (compensation) from the calculation of multiple values obtained a *coefficients* value of 0.020, meaning that if compensation increases by 1%, the volume of employee performance (Y) will increase by 0.020. Because the coefficient is positive, there is a positive relationship between compensation and employee performance.

M. Hypothesis Testing

Testing this hypothesis there are two tests that will be carried out by researchers, including:

1. Uzi Simultan (F)

The F test is performed to test the effect of the independent variables (X1 and X2) together (simultaneously on the dependent variable (Y). This is the result of processing data that can be in the table below:

Table 13. Uzi Simultan F

ANOVA^b

Mode		Sum of Squares	df	Mean Square	F	Say.
1	Regression	143.898	2	71.949	13.198	.000a
	Residual	332.540	61	5.451		
	Total	476.438	63			

a. Predictors: (Constant), Compensation, Work Environment
b. Dependent Variable: Employee Performance
Source: Primary Data Processing Results, 2021

The stages to perform the F test are as follows:
1. Determining the hypothesis
   c. H0: Work environment and compensation simultaneously have no effect on employee performance.
   d. Ha: Work environment and compensation simultaneously affect employee performance.
2. Determining the significant level of significant increase using 0.05 (5%).
3. The number of Fhitung Fhitung is 13.198
4. Specifying Ftables
   Ftables are searched through statistical tables at a significant level of 5%, df 1= k-1 = 3-1 = 2 and df2 = n-k = 64-2 = 62. It was found that Ftable was 3.15.
5. Decision-making
   1) H0 is rejected and Ha is accepted if Fcalculate ≥ Ftabel
   2) H0 is accepted and Ha is rejected if Fcalculate ≤ Ftabel
6. Conclusion
   From the results of the F test, Fcalculate results were obtained at 13.198 ≥ Ftable 3.15 at a significance of 0.000 ≤ 0.05. Thus, it can be concluded that the work environment and compensation have a simultaneous effect on employee performance.

2. Partial Test (t)

The t test is performed to determine whether or not there is a partial influence of the independent variables (X1 and X2) on the dependent variable (Y).
The following are the results of data processing that can be seen in the table below:

Table 14 - Partial Test t

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.389	2.846		3.651	.001
	Work Environment	.499	.098	.548	5.115	.000
	Compensation	.020	.075	.029	.270	.788

a. Dependent Variable: Employee Performance

Source: Primary Data Processing Results, 2021

The stages to perform the t test are as follows:
1. Determining the hypothesis
   1) Hypothesis 1 (The effect of the work environment on employee performance)
   H0: the work environment has no partial effect on employee performance
   Ha: the work environment partially affects employee performance
   2) Hypothesis 2 (The effect of work compensation on employee performance)
   H0: Partial compensation has no effect on employee performance
   Ha: Compensation partially affects employee performance
2. Determine tcalculate
   Based on table 4.18, it is known that the calculated value for the work environment variable is 5.115 and work compensation is 0.270.
3. Determining the level of significance
   The significance level uses 0.05 (5%).
4. Define ttable
   The value of ttable is known through statistical tables at the level of 0.05 (5%).
   Df = n-k-1= 64-3-1 = 60 then obtained the value of ttable which is 1.671.
5. Decision-making
   1) H0 is rejected and Ha is accepted if tcount $\geq$ ttable
   2) H0 is accepted and Ha is rejected if tcount $\leq$ ttable
6. Conclusion
   The following is a conclusion obtained after knowing the value of thitung, ttabel and the value of significance.

   1) Work Environment
      Based on calculations for the work environment variable test on employee performance, a calculated number of 5.115 $\geq$ ttable of 1.671 was obtained, then H0 was rejected and Ha was accepted. That way it can be concluded that the work environment partially affects employee performance. It is also reinforced by significance values of 0.000 $\leq$ 0.05. So the work environment provided by PT Cedefindo Bekasi has a significant effect on employee performance.
   2) Compensation
      Based on the calculation for the compensation variable test on employee performance, a calculated number of 0.270 $\leq$ ttable of 1.671 was obtained, then H0 was accepted and Ha was rejected. That way it can be concluded that compensation partially has no effect on employee performance. This is also reinforced by significance values of 0.788 $\geq$ 0.05. So the compensation provided by PT Cedefindo Bekasi does not have a significant effect on employee performance.

N. Test Coefficient of Determination (R2)

The coefficient of determination (R^2) is carried out to determine the suitability or accuracy of the relationship between the independent variable and the dependent variable in a regression equation. The results of the determination test (R^2) can be seen in the following tabael:

Table 15 - Test Cooefficient of Determination (R2)

Model Summary[b]

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.550a	.302	.279	2.335

a. Predictors: (Constant), Compensation, Work Environment
b. Dependent Variable: Employee Performance
Source: Primary Data Processing Results, 2021

The table above shows that the coefficient of determination is 30.2%. This shows that 30.2% of PT Cedefindo Bekasi's employee performance is jointly influenced by work environment and compensation variables. While 69.8% were influenced by other variables that were not included by researchers in this study.

IV. CONCLUSION

A. Conclusion

Based on the results of research and discussion, the following can be concluded:

1. Work environment variables have a significant influence on the performance of PT Cedefindo Bekasi employees.
2. Compensation variables have an insignificant influence on the performance of PT Cedefindo Bekasi employees.
3. Work environment variables and compensation together have a significant influence on the performance of PT Cedefindo Bekasi employees.

B. Suggestion

Based on the research that has been done, the author suggests suggestions that it can provide benefits to parties related to this research. The suggestions that researchers can convey are as follows:

1. For Companies
   The results of work environment research show that it has a significant influence on the performance of PT Cedefindo Bekasi employees. So the researcher suggested to the company's management to continue to monitor the workplace environment such as room cleanliness and noisy places so that employees feel comfortable while working and the performance of PT Cedefindo Bekasi employees is even better.
   The results of compensation research have no significant effect on employee performance. Even though the compensation received by employees is good, PT Cedefindo Bekasi is expected to maintain and even improve its consistency in ensuring the welfare of its employees. Because employees are important assets to achieve company goals.
2. For Academics
   It is expected that the research conducted by researchers is useful and becomes reference material or literature for those who need information in the field of human resources.
3. For the Next Researcher
   For future researchers, the results of this study are expected to be useful as comparison and reference material for research and further develop this research by using different variables or indicators so that more complete information can be obtained.

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Affecting Factors Stock Price: Earnings Per Share as Moderating Variable

Ligia Ayu Putri, Rina Febriani, Mardiyani*

Department of Management, Faculty of Economics and Business, University of Swadaya Gunung Jati Cirebon

Corresponding Author*: mardiyani@ugj.ac.id

ABSTRACT

Purpose: Determine how financial measures affect stock prices using the Earnings Per Share mediation variable.

Design/methodology/approach: Research methodologies using quantitative techniques. The study population consisted of consumer cyclical companies listed on the Indonesia Stock Exchange between 2020 and 2022. Deliberate selection methods were used in the selection of these firms. The study used Moderated Regression Analysis Test using SPSS software version 29.

Findings: Earnings per share acts as a mediator between the stock price and the debt-to-equity ratio, however Earnigs Per Share cannot considerably alter the stock price or lessen the impacts of return on assets.

Research limitations/implications: Small sample, short periods, companies neglect operational assets.

Practical implications: The Effects of Stock Price and Earnings Per Share with a Moderate Debt to Equity Ratio.

Originality/value: Empirical evidence indicates that profits per share mediate between the influence of debt policy and stock prices.

Paper type: Research Paper

Keywords: Stock Price, Return on Asset, Debt to Equity Ratio, Earning Per Share.

I. INTRODUCTION

At the beginning of 2022, the world was shocked by the outbreak of war between Russia and Ukraine, although the COVID-19 pandemic has not fully subsided. The conflict that began in February 2022 has caused a significant impact on the global Gross Domestic Product, with a decline of US$2.8 trillion. The war has disrupted global supply chains, particularly in the food and energy sectors, increasing inflation rates in many countries. The economic impact of Russia's invasion includes rising commodity prices, the threat of a food crisis, stock market volatility, loss of corporate confidence, and slowing economic growth (Reditya, 2022).

In addition, at the end of 2022, the stock market on Wall Street experienced a significant decline, causing the worst monthly and annual losses since 2008. Wall Street is facing its most severe yearly decline since the 2008 financial crisis, triggered by losses in the tax market and concerns over the future of corporate profits and the performance of American consumers. According to Dow Jones market statistics, the S&P 500 had a four-week run of declines in a row, marking the longest run since May. The S&P 500 dropped by 0.1%, the Nasdaq dropped by 0.3%, and the Dow Jones fell by 0.2%. The three top indexes had their worst annual decline since the 2008 global financial crisis. In 2022, the Nasdaq, which technology companies mainly impact, plunged 33.1%, the S&P 500 sank 19.4%, and the Dow Jones fell 8.8%. The data reflects significant pressures on financial markets and creates concerns about economic conditions and investment prospects (Aflaha, 2022). So the global economic crisis can cause all sectors of the world market economy to collapse (emergency) and affect other sectors around the world (Sari & Salsabila, 2023).

The Consumer Cyclical sector, included in the latest sector classification of the Indonesia Stock Exchange as of January 2021, is directly related to economic growth. In 2021, the Consumer Cyclical sector showed a positive performance, being the main contributor to the strengthening of JCI by 3.55%. This could pique investors'

interest in investing and send a positive signal to them. Businesses operating in the Consumer Cyclical sector performed better that year. Factors including growth, profits per share, profitability, capital structure, debt policy, and firm size heavily influence the share price (Mahendra Dj et al., 2012).

Due to changes in the global economic environment and radical customer demand, business companies are also faced with intense competition intensity and uncertain operational environment, so companies cannot take action in the early phase of bankruptcy; this not only has a significant impact on shareholders, creditors, managers, and other stakeholders but also has an impact on a nation's social and economic stability. Companies in the consumer cyclical sector have demand patterns that are strongly influenced by the business cycle and face fierce competition in their domestic and global industries. Today's massive technology advancements have impacted many businesses in the consumer cyclical industry sector.

According to statistics from the Composite Stock Price Index for April 2023, which reached a level of 6,915 with a rise of 0.95%, the capital market growth in Indonesia is showing a declining trend. This figure is lower than the growth in 2022, which reached 4.09% and recorded the highest level on September 13, 2023, at 7,318. According to IDX data, the Composite Stock Price Index has dropped four times in the previous ten years: in 2013, 2015, 2018, and 2020. Despite the fluctuations, the Composite Stock Price Index managed to recover in 2014 with a significant increase of 22.29% after previously experiencing a decline of 0.98% in 2013 due to the Fed's interest rate policy, which negatively affected the Indonesian stock market (Binekasri, 2023a).

In 2019, the Composite Stock Price Index continued to grow by 1.70%, although this figure was lower than the previous year. However, the COVID-19 pandemic event in 2020 impacted the Composite Share Price Index, leading to a tremor in the company's performance and a 5.09% decline in the index. However, the following year, the Composite Stock Price Index recovered with a growth of 10.08%. The total stock market capitalization value at the end of 2021 reached IDR 8,255.62 trillion, showing an increase of 18.4% year on year. The Indonesia Stock Exchange has normalized stock trading hours starting April 3, 2023, after the impact of the pandemic. However, the effect of the policy has not been fully felt, as reflected in the Average Daily Transaction Value of IDR 8.45 trillion (Binekasri, 2023b).

Naturally, a firm with a high profitability ratio would pique the attention of investors more, and vice versa (Pratama et al., 2022). The results also demonstrate that the firm's management successfully manages its resources, gains investors' confidence, and increases the value of its shares (Yuliana et al., 2022).

The stock price increases with a more significant debt strategy, indicating that the corporation may save on taxes. But a high debt policy without the benefits gained from the use of debt will cause a decrease in stock prices because investors cannot trust the company.

Stockholders will benefit from increased earnings per share because they will profit more significantly. Investing interest among investors increases with earnings per Share, and considering that a company's high earnings per Share indicates its strong performance. Stock prices will undoubtedly rise as a result of this. Since investors have faith in the business (Haryanti et al., 2019).

This is because the increased availability of goods in the market due to the use of debt can generate higher profits (Janaina et al., 2022). Despite what some academics believe, debt policy does not influence stock prices since it does not influence investors' choices to invest in firms (Andriani et al., 2022). Meanwhile, other researchers state that the higher profitability the less profit is returned to investors (Laulita et al., 2022).

This is important to consider since earnings per Share shows what proportion of a company's net profit may be given to its shareholders. Typically, investors prioritize earnings per Share when analyzing companies and making investment decisions. Earnings Per Share can provide a comprehensive assessment of the return on capital for each stock and the company's overall performance. When profitability is considered about profits per Share, the impact on stock prices is more significant. This contrasts previous research that claimed Earnings Per Share might offset the effects of debt policy and profitability (Haryanti et al., 2019).

This paper uses earnings per Share as a mediating variable to investigate how debt policy and profitability affect stock prices. Earnings Per Share is an indicator that is most often taken into account by investors before making investment decisions because all the results that the company can achieve can directly impact the amount of profit obtained by the number of shares owned (Dina et al., 2013).

A. Signaling Theory

Signaling Theory is a concept in which the management of a company gives signals to investors about the prospects of the company (Brigham & Houston J. F, 2016). The capital market is informed that the firm's owners are interested in the diversification plan when company executives increase their shareholdings. Leaders of young companies conducting initial public offerings elect a board of directors of various prestigious groups to message potential investors about the company's legitimacy. It shows how a party can take action to provide an underlying quality signal to another party.

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B. Stock Price

To maximize shareholder wealth, the company's shares should be worth more. The average investor's projected cash flow is represented in the stock price at any given time, should they choose to buy the shares. Stock prices in the capital market are set by the stock exchange and are influenced by supply and demand for shares. Naturally, there are variations in stock prices throughout stock exchange trading hours (Hartono, 2017). Thus, the quantity of shares issued in the capital market within a certain period is called the "share price." This depends on the supply and demand for shares on the capital market, and the approximate amount of money investors are willing to spend to purchase shares.

1. The Effect of Debt Policy on Stock Prices

One of the most important aspects of a company's management's financial decisions is its debt strategy Riyanto (2011). This involves obtaining financial resources outside the company to support its operational activities. Investor attention is often focused on debt policy since excessive debt levels may lower investor confidence and the stock price of the firm, allowing investors to reduce their investment in the company progressively (Pratama at el., 2022). Debt policy indicates that the company's operations are financed by debt and that debt is productive, so as to increase stock prices (Anjayagni at el., 2020). The impact of debt policy on stock prices: As debt policy increases, the company's stock price may climb because of its debt management plan, which lowers tax obligations (Janaina at el., 2022). So, debt policy is very influential on stock prices. One of the most important instruments available to investors to assess the prospects of a business is its debt policy. Furthermore, debt policy helps businesses maximize the taxes they must pay.

H_1: Stock Prices Are Significantly Affected by Debt Policy

2. The Effect of Profitability on Stock Prices

An important factor in increasing the share price of a company is its profitability. A rise in stock prices is often correlated with improved profitability, as stated by Aisyah et al. (2023). Additionally, prior studies have shown that businesses with substantial assets can likely pay their debts (Alamsyah, 2019). Furthermore, different research claims that high-profitability businesses often draw investors, but low-profitability businesses may attract fewer investors (Pratama at al., 2022). A high degree of profitability paints a favorable image of the company's prospects by demonstrating the potential to create profits from forecasted equity (Lutfi Apriliana et al., 2021). As a result, profitability, particularly in the form of Return on Assets, significantly impacts share price as it shows how well management manages assets and wins over investors, both of which raise the company's share price.

H_2: Profitability Affects Stock Prices Significantly

3. The Effect of Debt Policy on Stock Prices with Earnings Per Share as a Mediation Variable

Higher debt-to-equity ratios indicate that the business is having more difficulty paying its debts, which might depress stock prices and worsen investor sentiment. Alternatively, a low debt-to-equity ratio may be a sign of brighter times to come and might attract investors and raise stock prices. This outcome is consistent with earlier studies that look at how the debt to equity ratio affects company prices, as shown by Novitasari & Prasetyo (2017), and Bailia et al. (2016). However, with earnings per share being a significant concern for shareholders, the level of debt-to-equity ratio can be suppressed, because the primary purpose of investment activities is to earn profits, and with high Earnings Per Share, companies can increase trust and profits for shareholders, thereby reducing the impact of high levels of Equity Ratio.

This study is consistent with earlier research by Janitra & Kesuma (2015). According to Janitra & Kesuma (2015), stock returns and earnings per share are significantly correlated. High earnings per share (EPS) ratio will also pique investors' interest in investing and raise stock prices, resulting in higher capital returns for investors. A high debt-to-equity ratio impacts stock returns. If there is a relationship between profits per share and the debt-to-equity ratio, then earnings per share could potentially significantly impact stock performance. Furthermore, prior study confirms similar results, as stated by Pratiwi et al. (2016), Widiawati & Ilat (2016), Endraswati & Noviyanti (2015), and Hunjra et al. (2014).

H_3: The impact of debt policy on stock prices is mitigated by earnings per share.

4. The Effect of Profitability on Stock Prices with Earnings Per Share as a Mediating Variable

Before investing, investors consider indicators like return on earnings per share and assets. A high return on assets indicates that the business uses its resources effectively. The net profit from each unit of money invested in all assets rises with a greater Return on Assets. A low return on assets indicates that the net return earned by each unit lf money invested in all assets could be better. Significant earnings have a substantial rate of return, which attracts investors. As a result, an increase in Return on Assets will boost Demand, increase Earnings Per Share, and ultimately improve the stock price. This investigation aligns with prior research endeavors conducted by Faidah & Wismar'ein (2021) and Kimberly (2021), It is said that earnings per share may control the impact of

profitability on stock prices. However, this research is negatively correlated with that carried out by Remigius et al. (2022) and Endraswati & Noviyanti (2015) which claims that profits per share cannot regulate the impact of profitability on stock prices.

H_4: *The impact of profitability on stock prices might be mitigated by earnings per share.*

II. METHODS

This research is a type of Causal Associative research, which is to obtain evidence of causal relationships (causal relationships). The associative method is a way of conducting research that involves looking at connections between multiple variables to build a theory that can be used to describe, estimate, and manage phenomena (Sugiyono, 2017), using quantitative research techniques since the information used is financial statement information reaped from the Indonesia Stock Exchange (IDX) and the business website. Quantitative research is a scientific method where data is gathered as numerical data that can be processed and examined by statistical or mathematical computations (Sekaran & Bougie, 2017).

The sample for this research consists of 151 Indonesia Stock Exchange-listed Consumer Cyclicals companies. The sampling strategy that is used is called the purposive sampling technique. Turner P. (2020) defines purposive sampling as a sampling strategy where the researcher chooses a sample according to specific standards relevant to the study's objective, ensuring that it contains people or things with attributes comparable to the studied object. Researchers choose samples according to specific standards, such as cyclical sector businesses registered on the Indonesia Stock Exchange, providing yearly financial statements, remaining suspended-free, and turning a profit over the observation period. These parameters allowed for selecting 25 businesses as a sample, collecting observational data throughout three periods, and acquiring up to 75 observational data points.

Table 1. Variable Operationalization

Variable	Measurement	Previous Research
Dependent: Stock Price	Closing Price Monthly Average	Ainun (2020) And Deitianan (2018)
Independent: Debt Policy	$DER = \dfrac{Total\ Liabilitas}{Total\ Ekuitas}$	Uzliawati et al. (2018) and Abidin et al. (2014),
Profitability	$ROA = \dfrac{EBIT}{Total\ Aset}$	Lutfi Apriliana & Yudiana Eka Fetria (2021)
Moderating: Earnings Per Share	$EPS = \dfrac{Net\ Income}{Share\ Out}$	Dina et al. (2013) dan Haryanti & Murtiasih (2019)

Source: Processed by Researchers, 2024

MRA is the data analysis method that is used. The term "moderated regression analysis" refers to a kind of mediated regression analysis that gives a framework for controlling the influence of mediating variables while maintaining sample integrity (Ghozali, 2018). Based on the model, this test uses SPPS (statistical product and service solution) software version 29 which will be used to conduct Moderated Regression Analysis on the data collected for this study. According to Purnomo (2016), the residual normality, multicollinearity, autocorrelation, and heteroscedasticity of regression models are assessed using traditional assumption tests. Moderated Regression Analysis is used to moderate the test. Here is the equation:

$$Stock\ Price = a + b1*DER + b2*ROA + b3\ DER*EPS + b4\ ROA*EPS + e$$

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Information:
a   : Constant
b1   : Regression coefficient for DER
b2   : Regression coefficient for ROA
b3   : Moderation variable coefficient
DER   : First independent variable
ROA   : Second independent variable
EPS   : Moderation variables
E   : Residual value

III. RESULTS AND DISCUSSION

A. Results
1. Classical Assumption Test Results

This research investigates the relationship between return on assets and the variable debt-to-equity ratio through predetermined sample criteria and how they affect stock prices. Testing traditional assumptions is the study's first stage. It takes classical assumption testing to ensure the data collected are bias-free, linear, and optimum. Traditional assumptions like normality, multicollinearity, heteroscedasticity, and autocorrelation must be tested before data regression. The table below displays the typical assumption test results:

Table 2. Classical Assumption Test Results

Test Type	Test Results	Criterion	Conclusion
Normality Test Monte Carlo	Value Monte Carlo 0.342	>0.05	Pass the Normality Test.
Multicollinearity Test	Tolerance DER value 0.950 and VIF DER value 1.053	Tolerance Value: >0.05	
	Tolerance ROA value 0.970 and VIF ROA value 1.031	Value VIF: >10	Passes Multicollinearity Test.
	EPS Tolerance Value 0.35 and VIF EPS Value 1.041		
Heteroscedasticity Test Glejser	DER Significance Value 0.490		
	ROA Significance Value 0.557	Significance Value >0.05	Pass the heteroscedasticity test
	EPS Significance Value 0.309		
The Autocorrelation Durbin Watson	Value DU = 1,7092	DU<DW<4-DU	
	Value DW = 1,983		Pass the Autocorrelation test.
	Value 4-DU = 2,2908		
	1,7092<1,983<2,2908		

Source: Data processed, 2024

The data could be regarded as normal according to the findings of the Monte Carlo normality test if the significance value of 0.342 is more than 0.05. Since all independent variables had tolerance values more than 0.05 and VIF values less than ten, within the permitted limits, the multicollinearity test likewise shows no problems. The absence of heteroscedasticity markers in the data was established by the Glejser heteroscedasticity test findings, which indicated that the significance value was more significant than 0.05. Ultimately, DW values within the range indicate the lack of autocorrelation in the Durbin-Watson technique's autocorrelation test.

2. Result Moderated Regression Analysis

In this research, the hypothesis is tested using modified regression analysis. "Moderated regression analysis," in which the regression equation accounts for interaction between two or more independent variables, is a novel use of linear multiple regression examining the relationship between independent and dependent variables while considering mediation factors that either increase or decrease the correlation is the aim of moderated regression analysis. After comparing the Moderated Regression Analysis test results with the following hypothesis framework, Table 3 below presents the test findings:
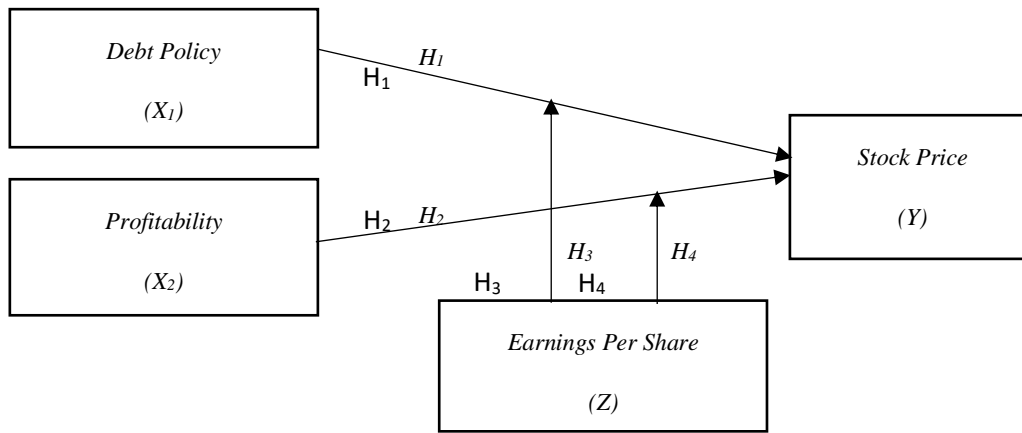

Figure 1. Hypothesis Framework

Source: Processed by Researchers, 2024

Table 3. Moderated Regression Analysis Hypothesis Test Results

Variable	P Value	Criterion	Result	Results
Debt Policy (DER)	0,011	>0.05 Has no significant effect <0.05 Has a Significant Effect	Significant Effect	H1 Accepted
Profitability (ROA)	0,973	>0.05 Has no significant effect <0.05 Has a Significant Effect	No significant effect	H2 Rejected
DER*EPS	0,008	>0.05 Has no significant effect <0.05 Has a Significant Effect	Significant Effect	H3 Accepted

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		>0.05 Has no significant effect		
ROA*EPS	0,829		*No significant effect*	*H4 Rejected*
		<0.05 Has a Significant Effect		

Source: Data processed, 2024

Results of a Moderated Regression Analysis are shown in Table 3, emphasizing the substantial influence of the variable Debt Policy (Debt to Equity Ratio) and its relationship to profits per share on stock prices. In this instance, the p-value Equity Ratio of 0.011 and the coefficient Return on Assets of 0.008 corroborate the study. Therefore, both are suitable. Nonetheless, as shown by the coefficient values with p-values of 0.829 and 0.973, there is no significant correlation between stock prices and the variables Earnings Per Share and Profitability (Return on Assets). His idea had to be disproved to satisfy the requirements of importance. Create the regression equation using the preceding table as a guide:

$$\text{Stock Price} = 2{,}378 - 1{,}920\,DER - 0{,}009\,ROA + 0{,}182\,DER*EPS + 0{,}005\,ROA*EPS + e$$

This study employed a linear regression model with moderated regression analysis to investigate the relationship between profitability (Return on Assets) and debt policy components (Debt to Equity Ratio) about the stock price. Return on asset and profits per share are related, as well as profits per share and the debt-to-equity ratio.

1. The company price will increase by 2.378% if the variables Debt to Equity Ratio, Earnings per Share and Return on Assets mediation are all constant, according to the coefficient value of 2.378.
2. The ratio to stock price for the Debt to Equity regression coefficient is b = -1.920. A negative number means the company's value will drop by 1.920% for every 1% rise in the debt-to-equity ratio and vice versa. The stock price and return on assets have a regression association of b = -0.009. For every 1% increase in Return on Assets, a negative number means that the company's value will drop by 0.009%, and vice versa.
3. The significant value of the debt-to-equity ratio is less than 0.05, however the variable's significance value indicates that the return on assets is meaningless (> value of 0.05). This suggests that although return on assets is impacted by stock price swings, the debt to equity ratio is not.
4. The link between DER, Return on Assets, and share price was also proven to be mediated by earnings per share. There is a 0.182 DER*EPS coefficient and a 0.005 ROA*EPS. Thus, reducing return on assets is not feasible; However, earnings per share can reduce the impact of the ratio to equity on share prices.

This finding illustrates the complexity of the interaction of these variables in influencing the value of a company's stock. The implication is that this research makes an important contribution to stakeholders and decision makers in the financial world, opening up opportunities for better risk management and the development of more optimal investment strategies.

B. Discussion
1. Effect of Debt to Equity Ratio on Stock Price

The investigation's findings demonstrate that debt significantly affects the stock price-to-equity ratio. Given the company's financial constraints, a low debt-to-equity ratio suggests a decline in share demand, which might lead to a decline in the share price. A decrease in the debt-to-equity ratio also reduces stock prices since short-term debt comprises the majority of debt. Conversely, a high debt-to-equity ratio shows that a large amount of creditor money has been used, which increases the expense and risk related to the company's equity. Even though financing a firm with debt may initially increase its value, over time, this expansion may decrease the company's worth. Changes in the debt-equity ratio, thus, impact investors' perceptions of the company's capacity to provide optimum returns and the share price, which in turn influences demand for the company's shares. This finding is in line with previous research, Estuari (2010), Absari et al. (2013) and Komala et al. (2013) in Indonesia. The findings of this investigation vary from Nguyen & Schubler (2013) in UK.

2. The Effect of Return on Assets on Stock Prices

The analysis's findings indicate that a decline in the company's earnings might lower the price of its shares, which is usually caused by a low Return on Assets because the company has not effectively utilized its assets. A company's return on assets may decline even if it has a lot of assets and its revenue is poor. Firm value is unaffected by both high and low levels of profitability; contradictory evidence indicates that return on assets has little effect

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on stock prices. This is because it raises concerns about the company's capacity to employ its assets efficiently since having more assets sometimes means having more revenue. Even with solid profits, the retained earnings ratio is lowered if the firm has a large debt load. As a result, the company cannot maximize its equity, which affects its restricted capital and production capacity. In addition, investor interest is also reduced so that the stock demand will decrease. Despite the recovery, investors do not see profitability as a significant factor in share purchase decisions in the sector. The findings support previous research. Hidayat & Khotimah (2022), which confirms that investors are more likely to pay attention to other aspects during crisis situations, consequently, the degree of profitability has little bearing on how much stock prices are valued.

3. Earnings Per Share in Mediating Debt Policy to Stock Prices

Earnings per share may attenuate the relationship between share price and debt-to-equity ratio. The extent to which the firm relies on debt to support its operations is shown by its high debt-to-equity ratio. Risk may be associated for shareholders when debt takes the role of equity as the company's primary funding source. Nonetheless, the degree of Debt to Equity Ratio might be decreased with the backing of Earnings Per Share, which is regarded as the main viewpoint of shareholders. The main goal of investing is to make money. A stock split may result in the issue of more shares due to the relation between earnings per share and the debt-to-equity ratio.

Consequently, an increase in debt may cause the stock price to fall; yet, if earnings per share are strong, an increase in debt may drive the share price to climb, suggesting that the company may be able to save on taxes. If a heavy debt plan had no advantages, investors would lose faith in the firm, lowering the stock price. Previous studies have shown that the link between debt policy and stock prices significantly impacts investors' decision-making ability. Thus, profits per share may increase the effect of the debt-to-equity ratio on stock price. Janitra & Kesuma (2015) assert that there is a substantial association between stock returns and earnings per share, which is supported by earlier studies. An elevated figure of Earnings Per Share has the potential to stimulate investor enthusiasm, elevate stock prices, and eventually augment investors' financial gains.

4. Earnings per share in mediating profitability against share price

The Earnings per share analysis results show positive, though not significant, value results in moderating the impact of profitability (Return on Assets) on stock prices. A high return on asset rate indicates that the business can make enough money to support operations in the future, which may lead to a rise in stock prices. However, the profit is not fully distributed to shareholders because of the company's other obligations to reduce profits to be distributed. When a company makes a profit, a portion of that profit should be received by shareholders through earnings per share. However, there are retained earnings due to the company's obligation to reduce earnings per share because the company focuses more on asset management than distributing profits to shareholders. This leads to lower earnings per share, mainly if the company's profits drop. Consequently, in a low-stock market, EPS cannot mitigate the impact of return on assets. According to an earlier study by Remigius et al. (2022) and Endraswati & Noviyanti (2015), profits per share are unable to lessen the effect that profitability has on stock values. This conclusion is consistent with their findings. Furthermore, this study supports the findings of Rusdiyanto & Tjaraka (2020) study, which found no relationship between stock returns and earnings per share. This situation is shown by the declining profits per share value, which results from fluctuations in earnings income but a constant number of outstanding shares. However, these results contradict studies by Kimberly (2021) and Mukhtasyam (2020) which claim that profits per share might mitigate profitability's impact on investors' stock prices.

IV. CONCLUSION

The Retrun On Asset component has no bearing on company prices, but the debt-to-equity ratio does. While the debt-to-equity ratio may not have a big effect, profitability has a big influence on share prices that is not lessened by profits per share. One way to increase the debt-to-equity ratio's influence on stock returns is to use the earnings per share variable. Thus, businesses must maximize cost utilization, exercise prudent debt management, restrict growth, and effectively raise working capital to boost profitability.

This study had some limitations, such as using a small sample and a short research period. In addition, the companies studied pay less attention to using assets in their operational activities. It is anticipated that the business would be able to enhance value for shareholders and financial performance by taking into account the findings of this research and strategically controlling the variables influencing the stock price.

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Ligia Ayu Putri, Rina Febriani, Mardiyani*

Designing Standard Operating Procedures (SOP) with PDCA Method on Kaconk Flasher Gadget Repair

Achmad Fatahilah, Prima Vitasari

Faculty of Industrial engineering, National Institute of Technology (ITN) Malang, Indonesia

Jl. Sigura - Gura No.2, Sumbersari, Kec. Lowokwaru, Kota Malang, Jawa Timur 65152, Indonesia

Corresponding Author*: achmadfatahilah@gmail.com, primavitasari@yahoo.com

ABSTRACT

Purpose: This research aims to find solutions to the causes of problems in terms of quality experienced and produce business process SOP for Kaconk flasher services.

Design/methodology/approach: The draft SOP comes from operating standards that have been agreed upon through FGD and is revised based on the results of the known improvement plan, so that the draft SOP is more perfect before being frozen into a written SOP. Validation of the draft SOP document was carried out by giving questionnaires to customers with a sample size of 13 respondents, namely kaconk flasher customers who visited one week after the implementation of the draft SOP to be tested.

Findings: The results of this research show that: Designing SOPs for the kaconk flasher business process, a number of SOPs can be formed which are grouped into several stages, including KF-SOP-01 regarding customer reception services, KF-SOP-02 regarding gadget repair, KF-SOP-03 regarding unit storage in the warehouse, and KF-SOP-04 regarding unit pick-up services.

Research limitations/implications: The limitations in this research are the basis for recommendations for future researchers to further develop improvements to the SOP that has been formed from the problems experienced. The limitations of this research are only to find out the root of the problem and its repairs and form an SOP from the results of repairs that have been carried out at the kaconk flasher counter.

Practical implications: All SOPs were implemented successfully and were able to overcome the root of the problem at the Kaconk flasher service center.

Originality/value: The research carried out by the researcher states that this research is the result of his work and is the first time at Konter Kaconk Flasher with the title of the research being researched, except for quotations from several summaries, all of which the researcher has explained the source.

Paper type: Research paper

Keywords: *Standart Operating Procedures (SOP), Service Quality, Gadget Repair, Customer Satisfaction.*

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I. INTRODUCTION

Indonesia is included in the list of 10 countries with the most gadget sales in the world, among others ranked first is Brazil with 47 million sales and 38.2 million new users, Indonesia with 46 million sales and 39.8 million new users, Russia with 31 million sales and 21 .4 million new users, Japan with 30 million sales and 22.9 million new users, Mexico with 23 million sales and 16.3 million new users, Germany with 22 million sales and 12.2 million new users, France with 18.7 million sales and 11.21 million new users, and lastly the UK with 17.7 million sales and 8.24 million new users (Iskandar, 2014) in (Alifiani et al., 2019).

According to the e-Marketer market research institute, active gadget users in Indonesia will grow from 55 million people in 2015 to 100 million people in 2018. As the use of gadgets continues to increase, more and more service businesses in gadget repair are operating. In the process of developing a business, customer satisfaction is

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the main factor in maintaining and increasing market share in the gadget repair services industry. Customer satisfaction has long been a key factor in the success and survival of businesses in various industrial sectors. In an increasingly competitive and rapidly changing business environment, maintaining and increasing customer loyalty is more important than ever (McNeil & Young, 2019). The two main elements that significantly contribute to customer satisfaction are the quality of service and the quality of the products provided by the company (Aghamohammadi-Bosjin et al., 2019).

Service quality covers all interactions between the company and the customer, from the first time the customer interacts until after the sale or service is provided (Chang et al., 2021). Factors such as ease of communication, responsiveness, speed of service, and willingness to help play an important role in creating a positive experience for customers in providing quality service (Supriyanto et al., 2021). Customers tend to feel more satisfied when they feel they are treated well and the service provided meets or even exceeds their expectations (Hidayati, 2022).

On the other hand, product quality refers to the product's ability to meet customer needs and expectations (Mahesa, 2022). A quality product will have features that function well, are durable, and provide the promised benefits. And product quality refers to the reliability of repairs performed, the durability of the device after repair, and the end result that meets customer expectations (Cao & Zhang, 2020). When customers feel that the products they receive are of high quality, they will feel more satisfied and tend to become loyal customers (Li et al., 2020).

Based on an initial survey at the Kaconk Flasher service center in developing its business, there was a decrease in the number of incoming customers due to a decrease in customer satisfaction. The following is the number of customers who entered to repair gadgets on Kaconk flashers.
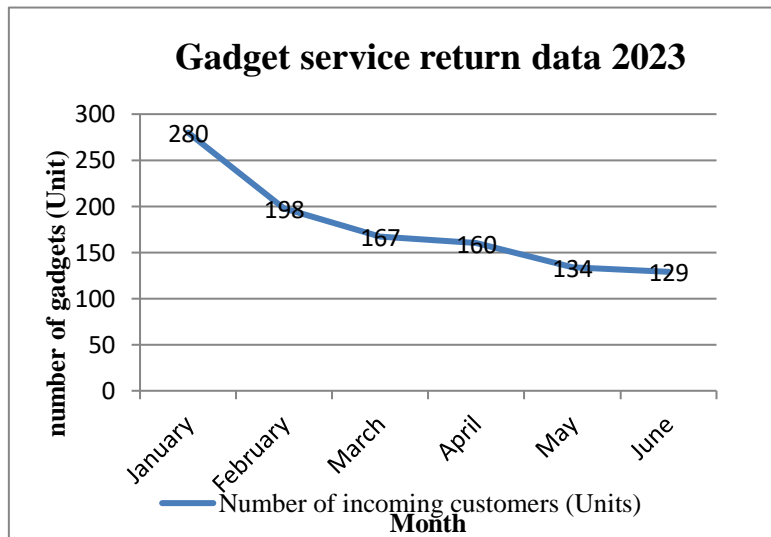

Figure 1. Customer data entering Kaconk Flasher 2023

Based on the data above in Figure 1, it is known that the number of customers each month has decreased. From January to June the number of customers, which was originally 280 people, became 129 people. After conducting an initial survey, there were several things that caused the number of customers to decrease every month, this was the lack of customer satisfaction with the service and results of gadget servicing provided by Kaconk Flasher.

The service provided by Kaconk Flasher employees is still not optimal, even the results of gadget servicing that has been carried out often result in the same damage occurring again. This problem arises because there is no quality control system for the services and repairs carried out by Kaconk Flasher. To guarantee and control quality in the kaconk flasher service business process, a continuous quality control system is needed in the kaconk flasher business process activities. Kaconk flasher still does not have standard operating procedures that can be applied properly, so employees only carry out service and repair procedures based on experience. This causes variations in procedures among employees. The development and use of SOP can minimize output variations and improve quality through consistent implementation of processes or procedures within the organization (Teplov et al., 2019). Planning SOP that are applied to the kaconk flasher business process, it is hoped that this service business

will have a guideline to be able to implement good business processes, so that it can produce quality services and repair processes.

From the above background, the researcher formulated the problem to be studied, namely how to design a Standard Operating Procedure (SOP) for the kaconk flasher business process using the plan, do, check, act (PDCA) approach so that it can increase customer satisfaction. The PDCA stages start from planning improvements, implementing improvement plans, checking plan results and corrective action on the results obtained in the form of standardizing business process procedures in the form of Standard Operating Procedures (SOP) which can be implemented at the Kaconk flasher (Rahmaningtias & Hati, 2020). Standard Operating Procedure (SOP) is basically a guideline that contains standard operational procedures within an organization which are used to ensure that all decisions and actions as well as the use of process facilities carried out by people within the organization run effectively and efficiently (Wagner, 2020). The aim of this research is to find a solution to the causes of problems in terms of service quality and gadget repair, to produce an SOP for the kaconk flasher service business process through the PDCA approach so as to increase customer satisfaction.

II. METHODS

The sampling used to test the implementation of the SOP was customers who entered when the draft SOP was implemented on Kaconk Flaher, namely on 01 – 09 December 2023, totaling 13 customers. The sampling technique used is systematic sampling, namely selecting samples in a structured way, for example by taking each person from a customer list which is sorted chronologically or alphabetically (Arisa, 2019).

Research instruments are tools used to collect data in a study (Lin et al., 2021). The instruments used in this research include: 1. Questionnaire: These questions were designed in the form of a questionnaire and evaluated using a Likert scale which has a value ranging from 1 to 5. The values on this Likert scale have the following meanings: 1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Neutral, 4 = Satisfied , and 5 = Very Satisfied. 2. Interview text. 3. Documentation. 4. Observation.

The data collection methods used in the research were interviews with owners, employees and 13 Kaconk Flasher customers to obtain information relating to the data that will be used in the research, analyzing documents or data recordings that already exist on the Kaconk Flasher, observing directly in situations that exist. observed to obtain data, carry out quality improvements using the PDCA approach.

Researchers use the plan, do, check, act (PDCA) method to analyze the root of the problem and improvements to be made. The PDCA stages start from repair planning, implementing the repair plan, checking the results of the plan and corrective action on the results obtained in the form of standardizing business process procedures in the form of a Standard Operating Procedure (SOP) which can be implemented at the Kaconk flasher service center.

III. RESULTS AND DISCUSSION

A. Results
1. Working procedures with FGD

A focused discussion group (FGD) was carried out which was attended by the owner and employees. FGD are carried out to collect accurate data and information regarding service problems complained about by customers through group discussions (Yulianti, 2021). The aim of conducting an FGD on kaconk flashers is to obtain a joint work procedure that is agreed upon by all related parties (Yunita, 2019).

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Topics discussed	FGD results
Stages of customer reception service	a. Customer service must be friendly and smiling. b. Administration records the completeness of the unit/goods with any damage c. The technician estimates the cost of damage according to the price of spare parts and service costs d. The technician will repair the unit if there has been confirmation regarding the customer's ability to pay for the costs. e. QA is responsible for the quality of units that have been repaired before entering the warehouse f. If there is a discrepancy in the repair results, QA is obliged to return it to the technician along with a note of the discrepancy. g. The warehouse sorts after repair units according to the date of entry.
Stages of gadget repair	a. The technician checks the unit for damage using the PSU that has been provided to measure how many amperes the unit is performing. b. Check the damaged components after identifying the damaged area using an avometer. c. Technicians are required to record component damage and the size of the damaged component for replacement. d. QA/QC checks the technician's work again for normality of the unit after repair. Must validate repair results in the repair validation book e. The warehouse officer places the repaired units according to the date of entry and combines them with the receipt. f. After repairs are completed, technicians are required to maintain the 5S culture. And responsible for the tools provided. g. The blower temperature must be maintained at 340 degrees Celsius and the solder temperature at 375 degrees Celsius..
Stages of storing the unit in the warehouse	a. After the unit has been checked and validated by QA, the unit is then recorded in the entry book along with its completeness. b. The warehouse neatly arranges the units that have been serviced on the table shelves provided and classifies them based on the receipt date. c. The warehouse ensures that every unit in the warehouse must be in the off position.
Stages of unit pickup service	a. Customer service must be friendly and smiling. b. Administration checks the receipt and confirms warehouse assignment c. Warehouse officers are required to check the goods that have been taken from the warehouse. d. QA is responsible for the quality of the unit that has been repaired before it is handed over to the customer e. If there is a discrepancy in the repair results, QA is obliged to return it to the technician along with a note of the discrepancy. f. Admin officers are required to match unit equipment and receipts as well as costs incurred by the customer. g. The cashier must provide a receipt and proof of the customer taking the unit h. The cashier fills in the service unit expenditure list data on the computer.

Figure 1. Results of FGD Business operation procedures at Kaconk Flasher

2. SOP results and respondent's response

No	Activity	Executor				Standard quality			Note
		CS	Admin	QA/ warehouse	Technician	Completeness	time	output	
1.	Customers come, Customer Service officers are obliged to welcome and serve them. Ask about needs and complaints about damage to gadget units.						1 minute	Know the purpose of customers who come	
2.	The attitude of officers in providing customer service must be polite, friendly and smiling.							Customers are not disappointed	
3.	Analyze damage, estimate damage costs according to spare part prices and service costs, provide estimated repair time					Gadget units	5 minute	Find out the damage to the gadget unit, determine the service price and service time	
4.	Officers are required to record the completeness of the gadget unit and its damage in the customer's book and receipt					Pattern/pin, accessory unit	1 minute	Incoming customer data is registered in the administration system	
5.	Enter the customer's gadget unit data into the RMB Kaconk flasher application.					Name, whatsapp number	2 minute	Send notification to customers that the unit has entered the repair process	
6.	Ensure customers get receipts						1 minute	proof that the unit was serviced at Kaconk flasher.	
7.	Confirm with the customer the estimated time required to repair the unit.							Customers understand the estimated time promised	
8.	Say hello and thank the customer when the service is complete							Customer satisfied	

*Figure 2. Draft SOP for customer reception service stages*

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No	Activity	Executor				Standard quality			Note
		CS	Admin	QA/ warehouse	Technician	Completeness	time	output	
1.	Mark the name on the unit using sticky paper				▢		1 minute	There is no error on the customer unit	
2.	Check the unit for damage				▢	PSU, Ampere detector device	2 minute	Know the initial indications of damage to which part	
3.	Check for damaged components using an avometer				▢	Avometer	30 minute	Find out damage to gadget units, service prices and service times	
4.	Record component damage and size of damaged components for exchange				▢		1 minute	Issuance of spare parts regularly and recorded	
5.	When removing SMD type components, you can adjust the temperature and wind settings on the existing blower according to your needs				▢		3 minute	Speed of component removal	
6.	When installing IC technicians are required to use a blower with a temperature of 340° wind 15				▢		5 minute	The IC does not overheat which causes the IC to die	Settings according to IC conditions
7.	You must pay attention to the processing time with the estimated time that has been promised to the customer.				▢			There was no delay	If there are problems, please confirm them immediately with the customer
8.	Use tin with a temperature of 168° for CPU IC and EMMC. And 138° for other components and IC				▢			So that the components can be strong when installed	
9.	Check the work again for normality of the unit after repair. Must validate repair results in the repair validation book			▢			1 minute	The unit must be in normal condition	If there are problems, return it to a technician
10.	After the repairs are completed, it is mandatory to maintain the 5S culture. And responsible for the tools provided				▢		5 minute	Always neat and clean	

Figure 3. Draft SOP for repair stages

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No	Activity	Executor				Standard quality			Note
		CS	Admin	QA/ warehouse	Technician	Completeness	time	output	
1.	The unit is recorded in the warehouse entry book along with its equipment.			□			1 minute	Warehouse income data is more controlled	
2.	Arrange neatly the units that have been serviced on the table shelves provided and classify them based on the receipt date			□			2 minute	Neat and organized according to date	
3.	Make sure every unit in the warehouse is in the off position			□			1 minute	Units are safe	

Figure 4. Draft SOP Stages of unit storage in the warehouse

No	Activity	Executor				Standard quality			Note
		CS	Admin	QA/ warehouse	Technician	Completeness	time	output	
1.	Customer service must be friendly and smiling	□						Customers are not disappointed	
2.	Questioned need.	□						Know the customer's goals	
3.	Check the note and confirm	□					1 minute	So that there are no mistakes	Admin and warehouse confirmation
4.	Ensure the unit is still available and complete			□			1 minute	According to the note	Checklist that has been taken
5.	Responsible for the quality of the unit that has been repaired before it is handed over to the customer			□			2 minute	No damage	If there is any damage, return it to a technician
6.	The officer is obliged to match the unit equipment and receipts as well as the costs incurred by the customer.		□				1 minute	No mistake	Write down the unit pickup history
7.	Must provide a receipt		□				1 minute	Proof of collection	Input retrieval data in RBM
8.	Say hello and thank the customer when the service is complete	□						Customers are satisfied	

Figure 5. Draft SOP for unit pick-up service stages

Table 6. respondents' responses regarding satisfaction with the Kaconk flasher

Factor	Statement	STP	%	TP	%	N	%	P	%	SP	%
Service	Kaconk flasher staff's friendliness	0	0,00	0	0,00	1	7,69	3	23,08	9	69,23

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	Service responsiveness to customers	0	0,00	0	0,00	2	15,38	2	15,38	9	69,23
	Kaconk flasher staff communications	0	0,00	0	0,00	1	7,69	2	15,38	10	76,92
	Speed of resolution of cellphone repair problems	0	0,00	0	0,00	1	7,69	1	7,69	11	84,62
	Solutions provided by Kaconk flasher for unit problems	0	0,00	0	0,00	2	15,38	2	15,38	9	69,23
	The quality of the unit after repair is as expected	0	0,00	0	0,00	2	15,38	8	61,54	3	23,08
	Durability of spare parts provided by Kaconk flasher	0	0,00	0	0,00	1	7,69	9	69,23	3	23,08
service results	Quality of replacement product (if any)	0	0,00	0	0,00	2	15,38	7	53,85	4	30,77
	HP performance after repair	0	0,00	0	0,00	0	0,00	8	61,54	5	38,46
	Quality of cellphone accessories offered	0	0,00	0	0,00	1	7,69	7	53,85	5	38,46
	Price paid	0	0,00	0	0,00	1	7,69	8	61,54	4	30,77
	Comparison of price with the quality of service received	0	0,00	0	0,00	0	0,00	10	76,92	3	23,08
price	Service cost transparency	0	0,00	0	0,00	0	0,00	11	84,62	2	15,38
	Service package payment options by kaconk flasher	0	0,00	0	0,00	1	7,69	12	92,31	0	0,00
	Price of accessories used to complete the unit	0	0,00	0	0,00	0	0,00	13	100,00	0	0,00
	Waiting time to get an appointment for service	0	0,00	0	0,00	0	0,00	4	30,77	9	69,23
	The speed of the service process for the unit provided	0	0,00	0	0,00	1	7,69	2	15,38	10	76,92
time	Kaconk flasher's compliance with the promised deadline	0	0,00	0	0,00	2	15,38	0	0,00	11	84,62
	The estimated repair time that Kaconk flasher provides	0	0,00	0	0,00	0	0,00	1	7,69	12	92,31

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is maximum, depending on the difficulty of the damage to the unit									
Kaconk flasher service schedule flexibility	0	0,00	0	0,00	0	0,00	6	46,15	7	53,85

B. Discussion

Improvement plans are then made by preparing SOP in the PDCA cycle, where PDCA is planning followed by action and providing feedback to standardize the most effective method (Mahmud, 2019).

4. Plan
    a. Identify the root of the problem with FGD and improvement

The results of the Focus Group Discussion with 4 employees who attended on January 16 2024 discussed the problem of decreasing service quality from the Responsiveness factor which was caused by several things, namely humans, systems, machines and methods (Pranadipta, 2020). The results of the discussion on identifying the root of the problem can be detailed as follows:

3) Human factors

The root of the problem from human factors related to the lack of fast service provided by the kaconk flasher counter can involve various aspects, including:
    e. Lack of employee skills and training
    f. Inability to assess and diagnose problems
    g. Lack of communication with customers
    h. Lack of motivation
    i. Insufficient current knowledge
    j. Inability to resolve customer complaints
    k. High workload

To address the root of the problem, kaconk flasher counters can strengthen employee training, improve communication with customers, and ensure that employees are always updated with the latest developments in the world of gadget technology. Apart from that, it is also necessary to pay attention to aspects of employee motivation and manage workload wisely.

4) System factors

The root of the problem from system factors related to the lack of fast service provided by the kaconk flasher counter can involve various aspects, including:
    l. Inefficient queuing system
    m. Inability of recording and monitoring systems
    n. Lack of automation system

Addressing the root of system-related problems requires evaluation and improvement in the design, implementation and maintenance of the system used by the kaconk flasher counter. Technology updates, good system integration, regular maintenance, can help increase efficiency and speed of service.

5) Machine factor

The root of the problem from machine factors related to the lack of fast service provided by gadget service counters can involve several technical aspects, including:
    o. The machine's inability to handle high volumes of work
    p. Lack of engine reliability
    q. Insufficient equipment
    r. Hardware incompatibility with the latest technological developments
    s. Lack of machine maintenance

To overcome the root of problems related to machine factors, it is necessary to evaluate and update the hardware, carry out regular maintenance, and invest in technology that is in line with the latest needs and developments. Thus, the flasher counter can increase the speed and efficiency of technical services to customers.

6) Method factors

The root of the problem from method factors related to the lack of speed of service provided by the kaconk flasher counter involves various aspects in operational and management methods, including:
    a. Inefficient service processes

b. Lack of standardization of procedures
c. Too much use of manual methods
d. Lack of customer prioritization strategy
e. Lack of innovation in service methods

To overcome the root of the problem related to method factors, kaconk flasher counters need to carry out a thorough evaluation of their operational processes, implement clear standard procedures, update methods with the latest technology.

b. Draft SOP

The SOP design originates from the results of improvements made to the responsiveness factor which is then described through a workflow which aims to speed up employee performance in providing fast service (Freeman, 2021). The following is the service workflow for the Kaconk flasher:
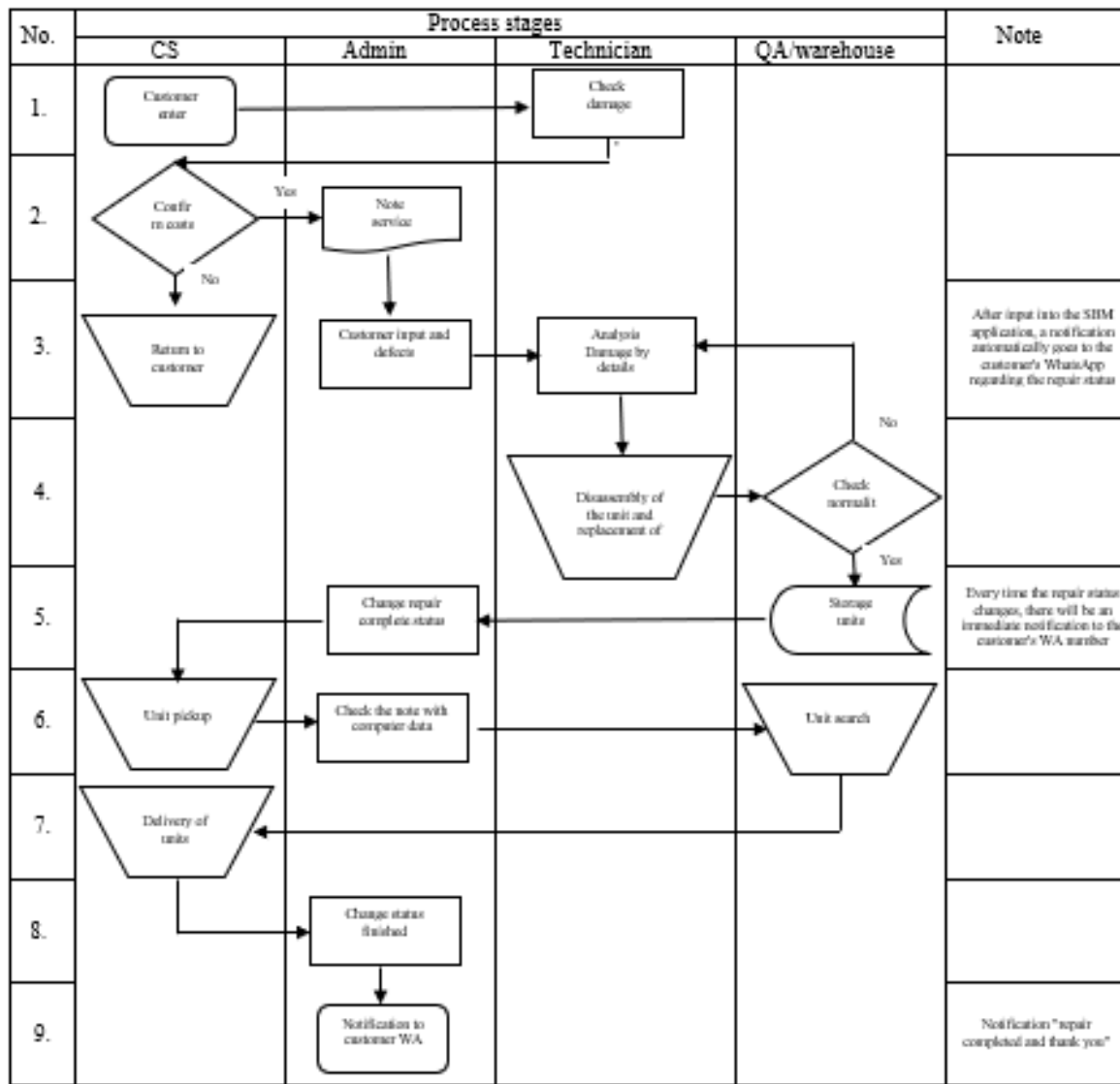
Table 7. Service workflow at the Kaconk flasher counter

c. Do

After the plan stage, the next step in PDCA is the do stage. In this stage, a trial of the procedure that has been established by Kaconk Flasher is carried out in the next few days. The procedure used is the initial design of the kaconk flasher service business process procedure which was previously prepared at the plan stage. This trial will be carried out at Kaconk Flasher on 01 - 09 December 2023 involving all Kaconk Flasher employees.

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From the results of testing Kaconk flasher business process procedures, in general the initial SOP design which includes customer reception service stages, gadget repair stages, unit storage stages in the warehouse, unit pickup service stages, environmental cleanliness stages and spare part purchasing stages can be implemented at the Kaconk service center flasher. Everything ran smoothly and normally as usual without any problems.

d. Check
The evaluation is carried out in 2 stages, including:
7) Checklist
This evaluation is carried out by using a checklist in the form of a monitoring card. If there is a match between the trial and the SOP design, it is marked (√). This monitoring card is filled in by the officer carrying out the procedure in question (Isniah et al., 2020). The entire evaluation results can be seen in the attachment. The following is a recap of the results of the monitoring card which is used as a tool for evaluating each stage of the business process in Kaconk Flasher:

Table 8. Evaluation of Trial Procedures

MONITORING WORK PROCEDURES KACONK FLASHER COUNTER	
Objective: Obtain good work procedures for smooth business processes	
Procedure	Check mark
Stages of customer reception service	√
Stages of gadget repair	√
Stages of storing the unit in the warehouse	√
Stages of unit pickup service	√
information : √ = procedure is carried out x = the procedure was not carried out O = procedure missed	
Note : In general, at the trial stage, the initial draft SOP has been implemented.	

From the results of the monitoring checklist in the trial implementation of SOP design in the Kaconk flasher, it can be concluded that all procedures can be carried out in the field without any problems.

e. Alidate the draft SOP that has been implemented
Questionnaires were distributed to customers who visited one week after the implementation of the draft SOP to be tested, namely from 01 - 09 December 2023. There were 13 samples of the same respondents from 25 samples of customers who visited Kaconk Flasher in 1 week.
Based on table 6 on respondents' responses regarding satisfaction with kaconk flasher services, out of a total of 13 respondents, 76.92% of respondents in the service factor chose Very Satisfied (SP), namely 10 respondents, then 61.54% of respondents in the service results factor chose satisfied (P), namely 8 respondents, 84.62% of respondents on the price factor chose satisfied (P), namely 11 respondents, 76.92% of respondents on the time factor chose the response Satisfied (P), namely 10 respondents. So the conclusion of the respondent's response regarding satisfaction with the kaconk flasher service regarding all factors is that they are satisfied.
So it can be concluded that the service offered by Kaconk Flasher when testing the customer SOP design was good, customers were satisfied with the service provided. This shows that the SOP design that has been created has succeeded in increasing customer satisfaction.

IV. CONCLUSION

The root cause of the decline in service quality is the responsiveness factor, namely that there are five main causes of low service including a lack of employees, employee work negligence, lack of employee training, absence of a system to speed up work. From the results of the FGD, the management team and employees then designed SOP using PDCA. The results of PDCA that have been carried out to improve quality are as follows: The plan includes identifying the root of the problem and repairing it, and drafting a kaconk flasher SOP. Do includes testing procedures within a period of one week, check includes evaluation of the SOP draft that has been tested and act includes preparing the SOP document. The results of the draft SOPs that have been frozen are grouped into several stages, including KF-SOP-01 regarding customer reception services, KF-SOP-02 regarding gadget repairs, KF-SOP-03 regarding unit storage in warehouses, KF-SOP-04 regarding unit pickup services. In its implementation, all SOP were implemented successfully and were able to overcome the root of the problems at the Kaconk flasher service center. This assessment is based on the SOP implementation checklist carried out by employees, as well as the results of the questionnaire in the final survey which shows that respondents' responses to Kaconk Flasher service satisfaction for all aspects show satisfaction. For further research, it is hoped that an in-depth analysis of each stage of the kaconk flasher business process will be carried out to ensure that each activity is covered in the SOP. Develop ongoing monitoring and evaluation mechanisms to ensure the effectiveness and achievement of SOP objectives.

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The Role of BRIspot Application in Improving Performance in Achieving Credit Targets with Process Speed as a Mediator at BRI Mojokerto

Triadi Wiranto*, Arasy Alimudin

Master Program in Management, Narotama University, Surabaya, Indonesia

Jl. Arief Rachman Hakim 51, Sukolilo, Surabaya, Indonesia

Corresponding Author*: triadiwiranto@gmail.com*, arasy.alimudin@narotama.ac.id

ABSTRACT

Purpose: This study aims to examine the role of the BRISpot application in improving the performance of achieving credit targets at the BRI Mojokerto Branch, with process speed as a mediator. This research examines the influence of debtor data accuracy, ease of use of BRISpot, and BRISpot accessibility on the speed of the credit disbursement process and the performance of achieving credit targets.

Design/Methodology/Approach: The analysis method uses descriptive and inferential statistics, as well as Structural Equation Modeling - Partial Least Squares (SEM-PLS) to examine the relationships between variables. The hypothesis testing results show that the speed of the credit disbursement process through BRISpot has a significant effect on the performance of achieving credit targets. Debtor data accuracy and BRISpot accessibility also have a significant effect on the speed of the process and the performance of achieving credit targets, while the ease of use of BRISpot only significantly affects the speed of the process.

Findings: Based on these findings, it is recommended that companies improve debtor data accuracy, enhance the ease of use and accessibility of BRISpot, and pay attention to the speed of the credit disbursement process to improve the performance of achieving credit targets. Subsequent research could consider additional variables and delve into the factors influencing the ease of use of the BRISpot application and its impact on customer satisfaction and overall banking performance.

Paper Type: Research Paper

Keywords: BRISpot, Performance of Achieving Credit Targets, Speed of Credit Disbursement Process, Debtor Data Accuracy, Ease of Use of Application, Application Mobility.

I. INTRODUCTION

The banking industry in Indonesia has experienced rapid growth in recent decades. Along with economic and technological developments, banking has become one of the most dynamic sectors. This development not only occurs in conventional banking but also in the Islamic banking sector. BRI Mojokerto Branch, as one of the financial institutions operating in this region, must understand how important it is to achieve credit targets in the face of increasingly fierce competition. It is important to emphasize that the banking industry has a very significant role in supporting a country's economic growth. One of the instruments used to achieve this goal is credit. By providing credit to customers, banks help support investment, business growth, and the development of the real sector of the economy. Therefore, achieving credit targets is a top priority for banks, including BRI Mojokerto Branch, to play an effective role in regional and national economic growth.

However, achieving credit targets is not always an easy thing in the banking industry. The main challenges faced by banks are how to manage credit risk, maintain credit quality, and at the same time meet credit portfolio growth targets. The achievement of credit targets is a reflection of the extent to which banks can understand and manage credit risk well. In this context, the role of BRISPOT (credit information and monitoring system) becomes

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very important. BRISPOT is a system specifically designed to assist banks in monitoring and managing their credit portfolios. The system allows banks to monitor credit quality, identify credit risks, and take necessary steps to mitigate risks that may arise.

BRI Mojokerto Branch, as one of the branches of BRI operating in this area, is also faced with the same task. This branch must maintain the quality of its credit portfolio, optimize the achievement of credit targets, and at the same time, ensure the satisfaction of its customers. It is in this context that the role of BRISpot becomes very important because this system can assist branches in monitoring credit performance and taking necessary actions to improve or maintain credit quality.

Therefore, this study aims to further understand how BRISpot's role in improving the performance of achieving credit targets at the BRI Mojokerto Branch. With a deeper understanding of the role of this information system, it is hoped that this branch can optimize its use to achieve the credit targets set, as well as provide the best service to customers. Thus, this research is expected to provide valuable insights into strategy and policy development at the BRI Mojokerto Branch, as well as contribute to economic growth in the region. The performance of achieving credit targets is the main variable in this study. This performance refers to the ability of a financial institution, in this case BRI Mojokerto Branch, to achieve and maintain the credit target that has been set. The performance of achieving credit targets reflects the extent to which the branch has managed to maintain the quality of its credit portfolio, minimize credit risk, and meet credit growth targets according to strategic plans. This performance can also be measured by indicators such as NPL (Non-Performing Loan) ratio, credit portfolio growth, and loan disbursement success rate according to the set target.

The speed of the credit disbursement process determines credit performance. The speed of the crediting process refers to variables that act as intervening factors in the relationship between exogenous variables (Data Accuracy, Ease of Use, and Accessibility) and endogenous variables (Performance of achieving credit targets). The speed of the lending process in this context refers to the extent to which the process of using BRISpot in the branch is efficient, fast, and unhindered. Process Speed will mediate the influence of exogenous variables on Credit Target Achievement Performance. Good Process Speed can facilitate the optimal role of BRISpot in achieving credit targets.

Data accuracy, ease of use, and accessibility are inherent characteristics of BRISpot which are expected to support the speed of the process and the achievement of credit performance. Data Accuracy refers to the level of accuracy and correctness of the information available in BRISpot. In this case, the accuracy of debtor data includes the extent to which the credit data entered into this system is by the reality of the customer and credit portfolio in the field. High accuracy of debit data will result in reliable information, which in turn will support the right decision-making in credit management.

The ease of use of the application refers to the extent to which BRISpot is easy to use by credit staff at the BRI Mojokerto Branch. Ease of Use includes aspects such as an intuitive user interface, adequate training, and good technical support. The easier BRISpot is to use, the more likely it is that staff will use it efficiently, which will ultimately contribute to the achievement of credit targets.

Accessibility refers to the extent to which BRISpot supports accessibility and flexible access. Accessibility includes aspects such as the ability to access BRISpot from multiple locations, use axial devices, or run credit processing in the field. Good accessibility allows credit staff to be more responsive to customers and facilitates the credit approval process more efficiently.

The above variables are important in this study because they can significantly affect the use of BRISpot and, as a result, can affect the performance of achieving credit targets at the BRI Mojokerto Branch. Therefore, this study aims to understand the relationship between these variables, taking into account the role of the speed of the crediting process as an intervening factor.

Several studies relevant to the topic have been conducted. The research is A'yun et al. (2022); Maulidya & Afifah (2021); Sudibyo (2021); Tua et al. (2022); Purwokoaji et al. (2020); Islami et al. (2021); Su et al. (2023); Agyekumhene et al. (2018); Chamboko dan Guvuriro (2021); Ebong dan Babu (2020); and Li et al. (2022).

Based on the background description that has been submitted, the general problem formulation in this study can be conveyed, namely: How does the accuracy of debtor data, ease of application use, and BRISpot accessibility affect the performance of achieving credit targets at BRI Mojokerto Branch with the speed of the lending process as an intervention?. The detailed problem formulation that can be proposed in this study is:

1) Is there any influence on the accuracy of BRISpot debtor data on the speed of the BRI Mojokerto Branch crediting process?
2) Is there any effect of the accuracy of BRISpot data on the performance of achieving the credit target of the BRI Mojokerto Branch?
3) Does the BRISpot ease of use affect the speed of the BRI Mojokerto Branch credit-giving process?
4) Is there any effect of the ease of use of BRISpot on the performance of achieving the credit target of the BRI Mojokerto Branch?
5) Is there any effect of BRISpot accessibility on the speed of the BRI Mojokerto Branch lending process?

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6) Is there any effect of BRISpot accessibility on the performance of achieving BRI Mojokerto Branch credit targets?
7) Is there any effect of the speed of the lending process through BRISpot on the performance of achieving the credit target of BRI Mojokerto Branch?

A. Literature Review

1. Performance of Credit Target Achievement

Performance of achieving credit targets refers to the extent to which an institution or individual has succeeded in achieving the goals or objectives that have been set in terms of lending or lending (ADB, 2022). It is commonly used to evaluate the extent to which a financial institution or lender meets their targets and expectations related to the loans they provide to borrowers.

The performance of achieving credit targets is important in the business of banking and other financial institutions because it can affect their profitability and risk (Witzany, 2017). If an institution or individual can reach or even exceed their credit targets, this can have a positive impact on their financial results and reputation. Conversely, if they fail to reach targets, this can lead to financial problems and higher credit risk. Therefore, continuous evaluation of the performance of achieving credit targets is very important in credit management and overall financial business.

Performance assessment of credit target achievement includes the following factors (Almarzoqi et al., 2015; Balkenhol & Schutte, 2011; Tuavila, 2023):
1) Fulfillment of the Loan Amount: Whether the institution or individual has succeeded in providing the loan amount by the predetermined target. This can involve targeting the loan amount that must be given to the borrower in a certain period.
2) Borrower Quality: The extent to which borrowers granted credit meet the criteria and standards set by the financial institution. The quality of the borrower can affect the credit risk faced by the institution.
3) Rate of Return: The rate of timely repayment of credit or payment by the borrower. Success in collecting payments on schedule can be an indicator of achieving credit targets.
4) Credit Portfolio Quality: Evaluation of the overall quality of the credit portfolio held by a financial institution. It includes the extent to which the portfolio is healthy and performing well.

2. Speed of the Editing Process

The speed of the lending process refers to the extent to which a financial institution or lender can complete the procedures and requirements needed to provide credit to a prospective borrower (Odonkor, 2018). The lending process includes assessing the eligibility of the borrower, determining the loan amount, setting interest rates, as well as all other administrative stages needed before the credit is approved and funds are distributed to the borrower (Lailiyah, 2014).

Speed in the lending process is an important factor in the financial industry because it can affect the ability of financial institutions to serve customers efficiently, as well as provide loans promptly. Slow processes can hinder borrowers' ability to meet their financial needs or take advantage of business opportunities.

The speed of the lending process can have a positive impact on customer relationships, enable financial institutions to respond quickly to customers' financial needs, and assist in seizing business opportunities that may be time-sensitive. However, it is also important to note that speed must be balanced with careful risk assessment so as not to result in an uncontrolled increase in credit risk.

Important aspects in the speed of the lending process include (Lailiyah, 2014; Setiyono et al., 2021):
1) Borrower Eligibility Evaluation: A quick assessment of the borrower's eligibility to ensure that they can repay the loan successfully.
2) Application Processing: Efficiently processing and verifying credit application documents to reduce the time required to make a decision.
3) Credit Agreement: Steps to determine the amount and conditions of credit, as well as final agreement.
4) Payment of Funds: Disbursement of funds to borrowers after credit approval.

3. Accuracy of Debtor Data

Accuracy of debtor data refers to the extent to which information and data related to a debtor or borrower (a person or entity who borrows money or takes credit) is true, complete, and reliable. This debtor data includes a variety of information, such as credit history, personal information, financial information, and payment records relating to their financial obligations. The accuracy of debtor data is very important in the financial and banking industry as inaccurate or incomplete data can result in serious problems.

Inaccuracies or inaccuracies in debtor data can hurt the credit decision-making process, such as the refusal of credit that should have been approved or the provision of credit with higher interest rates due to misidentified

risks. Therefore, financial institutions and credit agencies need to ensure that the debtor data they manage is accurate and reliable so that the credit granting and credit risk evaluation process runs well.

Some examples of information that must be accurate in debtor data include:

1) Payment History: Information about whether borrowers have paid their loans or credit on time, late, or not at all. Inaccurate payment history can affect credit risk assessment.
2) Personal Identity: Data such as name, address, telephone number, and other personally identifiable information must be correct for the identification and communication process with the debtor to run properly.
3) Financial Information: Data on the debtor's income, assets, and liabilities must be accurate to determine their eligibility as a borrower.
4) Amount of Debt: Information about the amount of debt the debtor owes, including loans, credit cards, and other financial obligations, must be precise and complete.
5) Credit Records: Data about previous credit records, including loans and credit cards you have owned, as well as payment history, must be accurate and current.

4. Ease of Use of Applications

Application ease of use refers to the extent to which a software or computer program is designed to be used easily, intuitively, and efficiently by users. The goal of ease of use is to ensure that users, including beginners or users who are not very experienced in technology, can quickly and comfortably interact with the application to achieve their goals.

An app's ease of use is critical because it can affect user adoption and retention. Difficult-to-use apps tend to frustrate users and increase the risk of abandonment. Conversely, an easy-to-use app can increase user satisfaction, expand the user base, and create a positive experience. Therefore, application designers and software developers strive to ensure ease of use as one of the top priorities in application development.

Factors that contribute to the ease of use of the app include:

1) User Interface (UI): The design of the application interface should be clear, clean, and easy to understand. Buttons and menus should be logically placed, and icons and text should describe the functions of the app well.
2) Intuitive Navigation: Users should be able to easily find the menus, options, and features needed. The navigation menu should be well-structured and quickly accessible.
3) Guides and Help: Apps should provide easily accessible guidance or help if users are having trouble or need guidance.
4) Responsive: Apps should respond quickly to user actions, reduce wait times, and provide clear feedback related to actions taken by users.
5) Consistency: Consistency in app design and behavior across different parts makes using it easier because users can rely on the experience they gained in one part of the app to use in another.
6) Adaptability: Apps need to be adaptable to different devices and screen sizes to ensure smooth use across multiple platforms.
7) Deep Learning Curve: Apps should be designed to have a low learning curve so that users can start using the app quickly and don't have to learn too many things before they can use its functions.

5. Application Accessibility

Application accessibility refers to the ability of a software or application to be accessed, used, and operated on a variety of mobile devices, such as smartphones, tablets, and other mobile devices. This concept focuses on the adaptability and availability of applications to be used practically and efficiently in various situations and locations, especially when users are on the go or moving around.

The success of a mobile app often depends on the extent to which it can offer good accessibility. Today's users increasingly rely on their mobile devices for a variety of daily activities, and apps that are easy to use and reliable in a variety of mobile situations will have greater appeal. Therefore, app developers often focus on accessibility as an important part of developing and improving their apps.

Important factors in an app's accessibility include:

1) Multi-Platform Availability: Apps that have accessibility should be available on multiple platforms, such as iOS (Apple), Android, and even on some other mobile operating systems. This condition allows users to access the application on different types of devices.
2) Responsive Resolution and Display: The application must be able to adapt well to different screen sizes and device resolutions. This ensures that the user interface remains visible and works properly across different devices.
3) Mobile Connectivity: Apps must be capable of operating in different mobile network conditions, including 3G, 4G, or 5G data networks. In addition, applications must be able to manage transitions between networks without interruption.

4) Location and Location-Related Services: Many apps have location-based features that utilize mobile device GPS. The app's accessibility allows users to use these features on the go.
5) Mobile Security: Apps should consider security-related aspects of accessibility, including data protection when users connect to mobile networks that may be vulnerable to security threats.
6) Offline Capability: App accessibility also includes the ability to be used in offline mode when an internet connection is not available. This allows users to still access important data and functions without depending on the network.

6. BRISpot

Amid intense competition in the banking industry, Bank Rakyat Indonesia (BRI) responded to this challenge by launching the BRISpot application. This application is a digital breakthrough that aims to speed up the process of providing microcredit, making it more efficient, paperless, and digital-based. With BRISpot, loan applications can be approved in a very fast time, even in just a matter of hours. This is different from the conventional process where applying for credit at a bank can take a long time due to the administration and analysis required.

BRISpot not only provides convenience for customers but also for BRI Mantri. Mantri, which is the name of marketing and micro-analysis, is a BRI staff responsible for credit and deposit affairs. This application allows BRI Mantris to work more flexibly and process loan applications without having to go to the office. This has a positive impact on the productivity of BRI Mantri which can be monitored directly based on GPS location. As a result, their productivity increases significantly.

With the use of BRISpot, the productivity of marketers increases by up to 30 percent. Currently, almost 100 percent of marketers in the micro segment use BRISpot. Previously, BRI Mantris used physical documents to process credit applications and report their daily productivity. With BRISpot, BRI can monitor the productivity of each Mantri in real time based on GPS location. This creates efficiency and ease in the management of the microcredit process.

BRI focuses on the Micro, Small, and Medium Enterprises (MSMEs) segment and helps MSME players access People's Business Credit (KUR) more easily and quickly through the BRISpot application. The application process until credit disbursement can be completed in one day, as long as the required documents are complete. Previously, this process could take up to a week.

The use of the BRISpot application makes the process of lending to MSME customers faster. This helps MSME players access funds more easily, allowing their businesses to grow faster. The BRISpot application reflects BRI's commitment to supporting and advancing the MSME sector by providing efficient and responsive digital solutions.

7. Conceptual Framework

A conceptual framework is used to illustrate the relationship between the variables involved in the study. In this study, the conceptual framework describes the relationship between variables that play a role in influencing the Performance of Credit Target Achievement at the BRI Mojokerto Branch. The main variable in this study is Credit Target Achievement Performance, which reflects the extent to which the branch can achieve and maintain its credit target. This performance is influenced by the Process Speed variable, which acts as an intervention or intermediary factor. Process Speed refers to the extent to which the process of using BRISPOT in the branch is efficient and unhindered.

Exogenous variables that affect Credit Target Achievement Performance include Data Accuracy, Ease of Use, and Accessibility. Data Accuracy refers to the level of accuracy of credit data in BRISPOT, which affects the quality of information available for credit decision-making. Ease of Use covers the extent to which credit staff can easily use BRISPOT, including an intuitive user interface and adequate training. Accessibility includes flexibility in accessing and using BRISPOT, including the ability to access it from multiple locations.

Within this conceptual framework, Process Speed acts as an intervention factor mediating the relationship between exogenous variables (Data Accuracy, Ease of Use, and Accessibility) and endogenous variables (Performance of Credit Target Achievement). In other words, Process Speed plays an important role in correlating the extent to which exogenous variables affect credit performance in the branch. Therefore, this study will examine the effect of exogenous variables on Process Speed and the effect of Process Speed on Credit Target Achievement Performance.
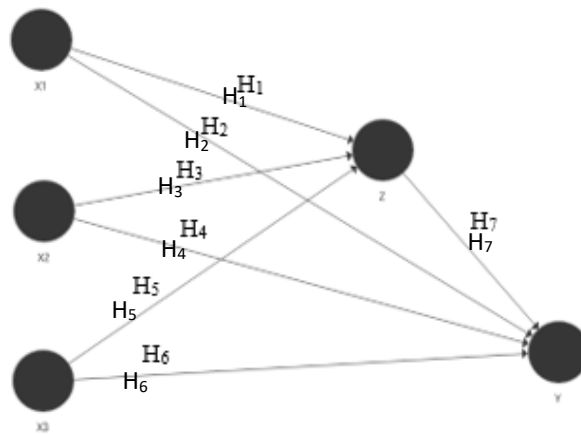
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Figure 1 Conceptual framework

Thus, this conceptual framework helps to understand the complex dynamics involved in achieving credit targets at BRI Mojokerto Branch, taking into account the role of BRISPOT and the factors that influence its use.

The hypotheses proposed in this study are:

1. The effect of data accuracy on process speed

In credit management, accurate data is key (Bogin &; Shui, 2020). The accuracy of credit data is the basis for making the right decision in the crediting process (Witzany, 2017). When the data entered into BRISpot is accurate, credit staff will have reliable information to analyze credit applications, assess risk, and make decisions quickly. This will directly affect the speed of the credit termination process.

When the credit data available on BRISpot is accurate, credit staff no longer need to spend valuable time verifying information from other sources. This saves time previously spent searching, validating, and ensuring data accuracy. As a result, the credit termination process will be faster.

The accuracy of BRISpot Data allows credit staff to conduct credit analysis quickly and efficiently. When the data used to measure risk and determine credit approvals is accurate, decisions can be made more quickly. This will speed up the credit approval process and credit termination.

With good Data Accuracy in BRISpot, credit staff will be able to focus on analytical and decision-making tasks instead of spending time on data corrections. This will increase the productivity of the credit staff, which in turn will speed up the process of credit termination.

High Data accuracy in BRISpot also contributes to the reduction of credit risk. Accurate data allows banks to better identify credit risk, and avoid giving credit to borrowers who have a high-risk profile. Thus, the effect of BRISpot Data Accuracy on the Speed of the lending process also has an impact on reducing risks that can arise in the bank's credit portfolio.

Therefore, the hypotheses proposed in this study are:

H$_1$: The accuracy of BRISpot Data has a significant effect on the Speed of the BRI Mojokerto Branch crediting process.

2. The Effect of Data Accuracy on the Performance Process of Achieving Credit Targets

Data accuracy is very important in determining the quality of credit decisions (Mileris, 2012). Accurate data will help credit staff in evaluating customer eligibility and better identify credit risk (Bazarbash, 2019). This will help them in making better credit decisions, which in turn will contribute to the quality of the credit portfolio. Accurate data also helps in reducing credit risk. With high Data Accuracy, branches can identify potential credit risks early, so preventive measures can be taken to mitigate them. This will help in maintaining the quality of the credit portfolio and minimizing credit risk.

The accuracy of BRISpot Data allows branches to better manage credit. They can track payments, identify customers at risk, and take necessary action. With accurate data, credit management will be more effective, which will have a positive impact on Credit Target Achievement Performance. Data Accuracy helps in planning proper credit growth. Accurate data allows branches to identify customer segments that have growth potential, as well as customers who need more attention. Thus, credit growth can be planned according to the set target.

Customers will have more trust in financial institutions that have accurate data. Data accuracy will increase customer trust in branches, and they are more likely to transact or apply for loans. This will help branches better achieve credit targets.

Therefore, the hypotheses proposed in this study are:

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H₂: The accuracy of BRISpot Data has a significant effect on the Performance of Achieving the BRI Credit Target Mojokerto Branch.

3. The Effect of Application Ease of Use on Process Speed

BRISpot has an intuitive user interface, so the credit staff will more easily and quickly understand how to operate it. They will not spend a lot of time understanding the system or searching for the necessary information (Purwokoaji et al., 2020). This convenience will help speed up the credit termination process. BRISpot's ease of use will ensure that credit staff can use the system efficiently. They will not face technical obstacles or difficulties in navigating the system (Islami et al., 2021). This means they can process credit applications faster and make decisions more efficiently.

The ease of use of BRISpot also relates to effective training. If the training for the use of BRISpot is thorough and easy to understand, credit staff will be more quickly skilled in using it. They will be able to make better use of BRISpot's features, which will increase the Speed of the credit termination process. With the Ease of Use of BRISpot, the possibility of human error in filling in data or processing credit applications will be reduced. This error can slow down the credit process if it needs to be fixed. With good Ease of Use, the credit termination process will be smoother and more efficient. If credit staff can easily access and use BRISpot, they will be more responsive to credit requests from customers. This means customers can be served faster, and credit requests can be processed more efficiently.

Therefore, the hypotheses proposed in this study are:

H₃: The ease of use of BRISpot has a significant effect on the speed of the BRI Mojokerto Branch lending process.

4. The Effect of Ease of Use on the Performance Process of Achieving Credit Targets

BRISpot's ease of use means credit staff can use the system more efficiently. They won't spend a lot of time understanding how to use or deal with technical obstacles. With more efficient use, they can focus more on their work, including credit termination. Ease of Use will allow credit staff to quickly access the information they need to make credit decisions (Antonio Bahillo et al., 2022). They don't have to spend long hours in the process of data input or complicated navigation. This will help in cutting the time required to make credit decisions.

Ease of Use will facilitate in training new staff (Venkatesh, 2000). They can quickly learn how to use BRISpot and start contributing to credit termination. This will allow branches to have teams ready more quickly, which will have a positive impact on achieving credit targets. Ease of Use will help in avoiding human error in the use of BRISpot. With an intuitive interface and clear procedures, credit staff will make fewer mistakes in filling data or processing credit applications. This will have a positive impact on the quality of the credit portfolio. Credit staff who find it easy to use BRISpot will be more satisfied with their work tools. This can improve their motivation and performance. A satisfied and high-performing staff will be more likely to contribute to the achievement of credit targets.

Therefore, the hypotheses proposed in this study are:

H₄: The Ease of Use of BRISpot has a significant effect on the Performance of Achieving BRI Credit Target Mojokerto Branch.

5. How Application Accessibility Affects Process Speed

BRISpot accessibility includes the ability to access the system from multiple locations, not just from branch offices. This means credit staff can access BRISpot when they are in the field or meeting with customers. With this capability, the credit termination process will not be limited to a specific location, which will increase the flexibility and speed of the process (Rehman et al., 2020). BRISpot accessibility allows credit staff to respond more quickly to customer credit requests. They can directly process credit applications or access the necessary information at the right place and time. This will help cut the time required for credit termination (CFPB, 2012).

For credit applications involving field surveys or property inspections, BRISpot Accessibility will be very beneficial. Credit staff can use axial devices to fill in data and send it to BRISpot in real time. This reduces the delay that usually occurs when data must be entered after a field survey. BRISpot accessibility allows for better coordination between credit staff of different locations. They can communicate and share information more easily, without having to be in the same office. This will minimize confusion and allow for better collaboration in credit termination. With BRISpot Accessibility, credit staff can quickly access customer data and credit history in the field. They don't need to go back to the office to access this information. This will speed up the credit evaluation process and decision-making.

Therefore, the hypotheses proposed in this study are:

H₅: BRISpot accessibility has a significant effect on the speed of the BRI Mojokerto Branch lending process.

6. The Effect of Application Accessibility on the Performance Process of Achieving Credit Targets

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BRISpot accessibility allows credit staff to access the system from multiple locations. They are not limited to working in branch offices only. With flexible access, staff can respond faster to customer requests and manage credit applications efficiently, even when they are in the field. Accessibility allows credit staff to be more responsive to customer needs (Dudovicz, 2023). They can directly access credit application data and processes when meeting with customers. This provides a better and faster service experience to customers, which can increase customer satisfaction and positively affect the achievement of credit targets.

Accessibility allows direct monitoring of credit processes in the field (Wesselink, 2015). Credit staff can supervise credit applications and decide faster. This will minimize the time required for credit approval, which in turn will contribute to the achievement of credit targets. BRISpot accessibility allows credit staff to conduct site visits more efficiently. They can access important data and records when meeting with prospective customers or conducting field assessments. This will help in making more informed and quick decisions. Good accessibility can also help in improving the quality of a credit portfolio. With effective monitoring and rapid response, credit staff can identify risks early and take necessary measures. This will help in maintaining credit quality.

Therefore, the hypotheses proposed in this study are:

H6: BRISpot accessibility has a significant effect on the Performance of BRI Mojokerto Branch Credit Target Achievement.

7. The Effect of Process Speed on Credit Target Achievement Performance

The speed of the credit termination process means that the credit approval process can be completed faster (Thonabaue, 2014). This means that credit staff can make faster decisions about whether a credit application should be approved or rejected. This speed has a positive impact on the time it takes to complete the credit process. With a good processing speed, branches can disburse credit to customers faster. This has a positive impact on the growth of the credit portfolio. The sooner the credit is approved and disbursed, the faster the branch can reach its credit target.

Process Speed allows credit staff to more efficiently manage credit risk (Deloitte, 2017). They can quickly handle applications that require special attention or risk mitigation measures. This will help in maintaining the quality of the credit portfolio. Speed in the credit process can also increase the motivation of credit staff. They feel satisfied when they see the results of their hard work in achieving credit targets. This will positively affect their performance and contribute to the achievement of credit targets.

Customers will get a better experience if the credit process is faster. They don't have to wait too long to find out the results of their credit application. This will increase customer satisfaction and may generate more business in the future.

Therefore, the hypotheses proposed in this study are:

H7: The speed of the lending process through BRISpot has a significant effect on the Performance of Achieving BRI Mojokerto Branch Credit Targets.

II. METHODS

The research conducted is included in the category of quantitative research with causal methods. Murthy and Bhojanna (Murthy &; Bhojanna, 2011) explain that causal research is research that discusses the cause and effect of relationships between variables. This research is categorized as causal research because it looks for the effect of BRISpot data accuracy, BRISpot ease of use, and BRISpot accessibility on process speed and credit improvement performance at the BRI Mojokerto Branch.

Population is a generalized area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then draw conclusions (Hamdi &; Bahruddin, 2014). The population in this study is all employees who can use and access the BRISpot application. Details of employees using the BRISpot application at BRI in Mojokerto Regency are:

Table 1 Research Population

No	Category	Sum
1	Pemrakarsa	152
2	Pemutus	23

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	Total	175

Source: Company Internal Data (2023)

The total population in this study was 175 people.

Next is to determine the research sample. The sample is a portion or representative of the population studied so that the results of the study can be generalized (Hamdi &; Bahruddin, 2014). The sampling technique used is saturated sampling, which is a sampling technique if all members of the population are used as samples in research (Anshori, 2020). The number of samples in this study was 175 research respondents.

Zulfikar and Budiantara (2014) say that variables are attributes of a person or object that have variations between one person and another person or one object with another object. There are three types of variables studied in this study, namely exogenous variables, endogenous variables, and mediator variables. An exogenous variable is an independent variable that affects the dependent variable. In the SEM model, *exogenous* variables are shown by the presence of arrows derived from these variables to endogenous variables (Santoso, 2011). The exogenous variables in this study were the accuracy of BRISpot data, the ease of use of BRISpot, and the accessibility of BRISpot.

Next is the endogenous variable. Endogenous variables are dependent variables that are influenced by independent (exogenous) variables. In the SEM model, endogenous variables are indicated by arrows leading to these variables (Santoso, 2011). The endogenous variable in this study was credit enhancement performance.

The last is the mediator or intervening variable, which is a variable that mediates or mediates the influence of exogenous variables on endogenous variables (Santoso, 2011). Variables that fall into the category of mediators or intervening are variables of the speed of the crediting process.

Each of these variables needs to be operationalized to facilitate variable measurement. The operational definition of variables is the understanding of variables operationally, in practice, in real terms, in real terms within the scope of the object of research or the object under study (Zulfikar &; Budiantara, 2014).

The operational definition of research variables can be seen in Table 2.

Table 2 Operational Definition of Research Variables

Variable	Definition	Indicator	Statement items	Measurement Scale
Performance of credit target achievement	The extent to which an institution or individual successfully achieves the goals or objectives that have been set in terms of lending or lending	Fulfillment of Loan Amount	The amount of the loan assigned matri fulfilled	Likert 1-5
		Borrower Quality	Borrowers meet the criteria and standards in BRI	
		Rate of Return	Return of loans returned by debtors on time	
		Credit Portfolio Quality	The quality of BRI's credit portfolio is good	
Speed of the crediting process	The extent to which a financial institution or lender can complete the procedures and requirements necessary to provide credit to a prospective borrower	Borrower Qualification Evaluation	Assessment of the borrower's eligibility is carried out quickly and accurately	Likert 1-5
		Application Processing	Credit application documents are verified quickly and effectively	

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Variable	Definition	Indicator	Statement items	Measurement Scale
		Credit Consent	Credit approval is carried out within the appropriate time	
		Payment of Funds	The distribution of funds to borrowers is carried out according to schedule	
		Payment History	Information about payment on time, late, or not at all is available and accurate	
Accuracy of debtor data in BRISpot	The extent to which information and data related to a debtor or borrower is true, complete, and reliable	Personal Identity	Personally identifiable information is always up-to-date and precise	Likert 1-5
		Financial Information	The debtor's financial data is always updated and well-documented	
		Amount of Debt	Data on the amount of debt or debt is always up-to-date	
		Credit Note	Data regarding loan and credit card payment history is always current and accurate	
		User Interface	The app's interface is easy to use	
		Intuitive Navigation	The navigation menu allows quick access to relevant features	
Ease of use of BRISpot	The extent to which a software or computer program is designed to be used easily, intuitively, and efficiently by users	Guides and Help	Apps provide easily accessible guidance or help if users are having trouble or need guidance	Likert 1-5
		Responsive	The app provides a responsive user experience	

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Variable	Definition	Indicator	Statement items	Measurement Scale
BRISpot Accessibility	The ability of a software or application to be accessed, used, and operated on a variety of mobile devices, such as smartphones, tablets, and other mobile devices	Consistency	Apps are consistent in app design and behavior across different parts	Likert 1-5
		Adaptability	The application can adapt to various devices and screen sizes	
		Deep Learning Curve	It doesn't take long to understand and use the app smoothly	
		Multi-Platform Availability	The app is available on multiple platforms	
		Resolution and Responsive Display	The app adapts well to different screen sizes and device resolutions	
		Mobile Connectivity	The app can be used on different mobile network conditions, such as 3G, 4G, or 5G	
		Location and Location-Related Services	The app makes use of the GPS feature of mobile devices to enhance the user experience	
		Mobile Security	The app keeps user data safe while connected to a mobile network	
		Offline Capabilities	The application can be used in offline mode	

Source: Processed by researchers (2023)

Data analysis techniques in this study are divided into two, namely descriptive statistics and inferential statistics. Descriptive statistics includes various techniques used to summarize and describe numerical data for easy interpretation, using both graphical and computational methods. Meanwhile, inferential statistics includes various methods where decision-making regarding populations or statistical processes is based solely on observed samples (Kazmier, 2012).

a. Descriptive statistics

Descriptive statistics are used to describe the identity of respondents and respondents' answers to statements related to the variables studied, for respondents' identities in the form of gender, age, education, name of the company where they work, position in the company, and length of work in the company, presented in the identity table, both absolute and relative numbers.

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While respondents' answers to statements related to research variables are presented in the form of frequency distribution and average values of indicators and variables. The explanation of frequency distribution and mean is as follows (Kazmier, 2012):

1) Frequency Distribution

   A frequency distribution is a table containing values grouped into classes, and several observed values belonging to each class are recorded.

2) Mean

   Mean is the number of values in a data group divided by the number of values.

b. SEM-PLS

The stages in PLS analysis are as follows (Ghozali, 2013):

1) Construction of the Model

   After the conceptual framework of research is formed, where it is known that the measurement model (outer model) contains indicators and structural models (Inner Model) that explain the relationship between latent variables.

2) Evaluation of the Outer model

   The measurement model describes the specification of the relationship between latent variables and indicators, also called the measurement model. The next stage in the outer model evaluation is to conduct convergent validity, discriminant validity, and Composite Reliability tests. The description is as follows:

   a. Convergent Validity

   Convergent validity is used to measure in determining whether each estimated indicator validly measures the dimensions of the concept being measured. A scale measuring a weight value greater than 0.50 is considered valid.

   b. Discriminant Validity

   Discriminant validity is a measurement of indicators with latent variables. The discriminant validity measurement is assessed based on the AVE (Average Variance Extracted) value where the AVE value must be greater than 0.50.

   c. Composite Reliability

   Composite Reliability is a degree that indicates common latent (unobserved), so it can show block indicators that measure internal consistency and construct-forming indicators. The accepted limit value for the composite reliability level is 0.60.

3) Inner Model Evaluation

   The evaluation of the Inner Model is done by evaluating the goodness-of-fit of the Inner Model. R Square can evaluate the Inner Model. R Square defines the diversity of endogenous constructs that can be described by exogenous constructs simultaneously. Meanwhile, to measure the construct model, Q-square predictive relevance is used. Q-square can measure how well the observation values are produced by the model and also estimate the parameters. If the Q-square > 0, then the model has predictive relevance, conversely if the Q-square value < 0 indicates the model lacks predictive relevance. A Q-square value greater than 0 (zero) indicates that the model has a predictive relevance value and the model is said to be feasible, while a Q-square value less than 0 (zero) indicates that the model lacks predictive relevance.

4) Hypothesis testing

   The next stage is to conduct a hypothesis test. In this study used significant level (α) = 0.05. The influences discussed in this study are direct influences and indirect influences. The conditions for the acceptance of the Hypothesis are as follows:

   f. If the significance value of the t-test < 0.05, then the research hypothesis is accepted.

   g. If the significance value of the t-test > 0.05, then the research hypothesis is rejected.

III. RESULTS AND DISCUSSION

A. Research Results

Here is a brief description of the research variables:

1) Credit Performance (Y): This variable reflects how effectively BRI Branch Mojokerto achieves the predetermined credit targets. It influences not only the bank's business strategy success but also indicates the level of customer trust in the bank.

2) Process Speed (Z): Determines how quickly the bank can respond to credit requests from customers. This speed is crucial as it can affect customer satisfaction and operational efficiency.

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3) Data Accuracy in BRISpot (X1): An important factor in credit decision-making processes. Accurate data enables the bank to perform risk analysis more accurately, thereby reducing the likelihood of credit risks.
4) Ease of Use of BRISpot (X2): This aspect affects the productivity of bank staff in the credit application process. The easier the application is to use, the more efficient the process and the better the service provided to customers.
5) Accessibility of BRISpot (X3): Determines how flexible bank staff are in performing their tasks related to credit issuance. Accessibility includes not only the ability to access various devices but also the ability to conduct credit issuance processes in different locations.
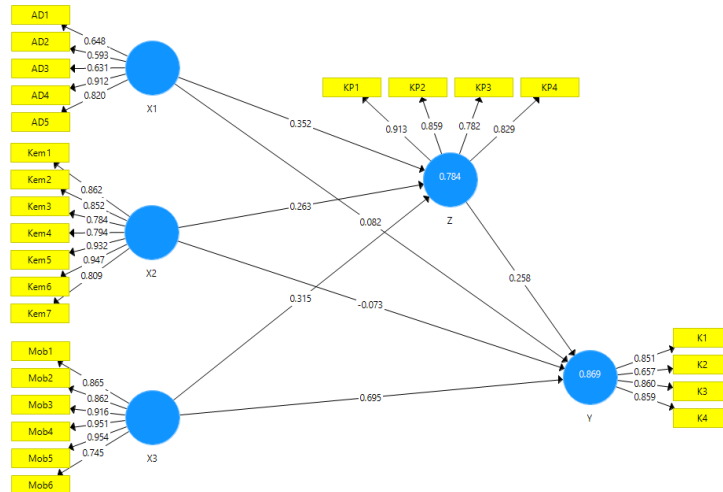

Figure 2 Model Construction

Based on the construction of the above model, the following equation can be made:

$Z = 0,352X_1 + 0,263X_2 + 0,315X_3$

$Y = 0,082X_1 - 0,073X_2 + 0,695X_3 + 0,258Z$

Information:
Y = Credit Performance
Z = Process Speed
X_1 = Data Accuracy
X_2 = Ease of Use
X_3 = Accessibility

Here is a summary of the validity and reliability test results:
1) Construct Validity
   The analysis indicates that all variables meet the construct validity criteria with loading values greater than 0.5 and p-values less than 0.05. All indicator variables significantly influence the measured constructs, such as Data Accuracy, Process Speed, Ease of Use, Credit Performance, and Accessibility. Thus, it can be concluded that all indicator variables validly influence the measured constructs in the model used.
2) Construct Reliability
   All variables demonstrate good reliability based on two criteria, Composite Reliability and Cronbach's Alpha, with values above 0.70. This indicates that each construct in this model can be relied upon.
3) Average Variance Extracted (AVE) Values
   The AVE scores for the Data Accuracy, Process Speed, Ease of Use, Credit Performance, and Accessibility variables all exceed 0.50, indicating good convergent validity for these variables.

Therefore, the validity and reliability test results indicate that the model used in this study is reliable, and its variables are valid for further analysis.

In assessing structural models with PLS, it can be seen from the R Square value for each endogenous latent variable as the predictive power of the structural model where the R Square values are 0.75 (Strong), 0.50 (Medium) and 0.25 (Weak) (Sugiono, 2018; Alimudin et al., 2022). To see if the model meets the model fit criteria, where the model viewed with an SMSR score must be less than 0.1 (Backer et al, 2018; Alimudin et al., 2022).
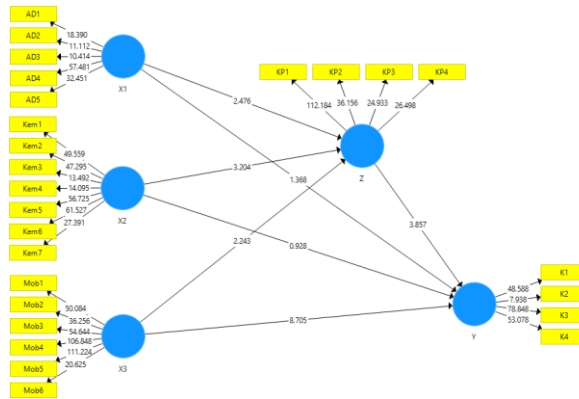
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Figure 3 Inner Model

1) R Square

It can be seen that the magnitude of the influence of data accuracy, ease of use, and accessibility on process speed with an R Square value of 78.4% and an R Square Adjusted value of 78.1%, while the magnitude of the influence of data accuracy, ease of use and accessibility on credit performance with an R Square value of 86.9% and an R Square Adjusted value of 86.6%, where the model in this study is categorized as High (Backer et al, 2018; Alimudin et al., 2022).

Table 3 R Square Score

Exogenous Variables	R Square	R Square Adjusted
Process Speed	0.784	0.781
Credit Performance	0.869	0.866

Source: Data processed 2024

2) Fit Model

Indicates an SMSR value of 0.093 where the value is greater than 0.1 and an NFI value of 0.707 is less than 1 which means the model meets the model fit criteria.

Table 4 Fit Model

	Model Saturated	Estimation Model
SMSR	0.093	0.093
d_ULS	2.709	2.709
d_G	0.969	0.969
Chi-Square	555.365	555.365
NFI	0.707	0.707

Source: Data processed 2024

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3) Research Hypothesis Testing

Table 5 Testing Hypothesis Research

Influence of variables	Coefficient	P values	Limit Value
Data Accuracy -> Process Speed	0,352	0,012	0,05
Data Accuracy -> Credit Performance	0,082	0,162	0,05
Process Speed -> Credit Performance	0,258	0,000	0,05
Ease of Use -> Process Speed	0,263	0,001	0,05
Ease of Use -> Credit Performance	-0,073	0,370	0,05
Accessibility -> Process Speed	0,315	0,025	0,05
Accessibility -> Credit Performance	0,695	0,000	0,05

Source: Data processed 2024

Table 5 presents the results of hypothesis testing in this study, where the influence between the variables studied is evaluated based on the p-value. The p-value is used to determine the statistical significance of the relationship between variables. In this context, the effect that is considered significant is when the p-value is less than the previously set limit value, which is 0.05. The test results showed that there was a statistically significant influence between several pairs of variables.

1. The first hypothesis, BRISpot Data Accuracy has a significant effect on the Speed of the BRI Mojokerto Branch crediting process.
   Data accuracy has a significant influence on the speed of the process (p-value = 0.012 < 0.05), hence the first hypothesis is accepted which means that the level of data accuracy has a positive and significant impact on the speed of the crediting process. For the coefficient value of 0.352 which means that if the accuracy of the data increases by one unit, the process speed will increase by 0.352 with the record of other variables fixed.
2. The second hypothesis, BRISpot Data Accuracy has a significant effect on the Performance of BRI Credit Target Achievement Mojokerto Branch
   Data accuracy does not have a significant effect on credit performance (p-value = 0.162 > 0.05), which shows that data accuracy does not have a significant effect on credit performance because the coefficient value is very small at 0.08.
3. The third hypothesis is that the ease of use of BRISpot has a significant effect on the speed of the BRI Mojokerto Branch lending process.
   Ease of use has a significant influence on the speed of the process (p-value = 0.001 < 0.05), hence the third hypothesis is accepted which means that the level of ease of use has a positive and significant impact on the speed of the crediting process. For the coefficient value of 0.263 which means that if the ease of use increases by one unit, the process speed will increase by 0.263 with the record of other variables fixed.
4. The fourth hypothesis, the Ease of Use of BRISpot has a significant effect on the Performance of Achieving the BRI Credit Target Mojokerto Branch.
   Ease of use does not have a significant effect on credit performance (p-value = 0.370 > 0.05), which indicates that ease of use does not have a significant effect on credit performance because the coefficient value is very small and negative at -0.07.
5. Hipótesis kelima, Aksesbilitas BRISpot berpengaruh signifikan terhadap kecepatan proses pemberian kredit BRI Cabang Mojokerto.
   Accessibility has a significant influence on the speed of the process (p-value = 0.025 < 0.05), hence the fifth hypothesis is accepted which means that accessibility has a significant impact on the speed of the crediting process. For the value of the coefficient of 0.315 which means that if accessibility increases by one unit, the process speed will increase by 0.315 with the record of other variables fixed.

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6. The sixth hypothesis, BRISpot Accessibility has a significant effect on the Performance of BRI Credit Target Achievement Mojokerto Branch.
   Accessibility has a significant influence on the achievement of credit targets (p-value = 0.000 < 0.05), hence the sixth hypothesis is accepted which means that accessibility has a significant impact on the performance of achieving credit targets. For the coefficient value of 0.695 which means that if accessibility increases by one unit, the achievement of the target will increase by 0.695 with the record of other variables fixed.
7. The seventh hypothesis, the speed of the lending process through BRISpot has a significant effect on the Performance of Achieving BRI Credit Target Mojokerto Branch.
   The speed of the process has a significant influence on the performance of achieving the credit target (p-value = 0.000 < 0.05), hence the seventh hypothesis is accepted which means that the speed of the process has a significant impact on the performance of achieving the credit target. For the coefficient value of 0.258 which means that if the process speed increases by one unit, the achievement of the target will increase by 0.258 with the record of other variables fixed.

Table 6 Indirect influence

Influence	The value of the path coefficient	P values	Limit Value
Data Accuracy -> Process Speed -> Credit Performance	0,091	0,037	0,05
Ease of Use -> Speed of Process -> Credit Performance	0,068	0,044	0,05
Accessibility -> Process Speed -> Credit Performance	0,081	0,035	0,05

Source: Data processed 2024

Table 6 shows the indirect influence of data accuracy, ease of use, and accessibility variables on credit performance through intermediary variables of process speed. The value of the path coefficient indicates how much indirect influence the initial variable has on the final variable through the intermediate variable. In this case, the value of the path coefficient indicates the magnitude or magnitude of the influence.

Based on the table, it can be observed that there is a significant indirect influence of the variables of data accuracy, ease of use, and accessibility on credit performance through process speed. It is characterized by a p-value that is smaller than the previously set limit value, which is 0.05. That is, the indirect influence of these three variables on credit performance through process speed is considered statistically significant. For example, the indirect effect of data accuracy on credit performance through process speed has a path coefficient of 0.091 with a p-value of 0.037, which indicates statistical significance because the p-value is below the set limit value. The same is true of the indirect effect of ease of use and accessibility on credit performance through process speed. Therefore, it can be concluded that the variables of data accuracy, ease of use, and accessibility have a significant indirect influence on credit performance through the speed of the process at the BRI Mojokerto Branch.

Table 7 Total influence

Influence	The value of the path coefficient	P values	Limit Value
Data Accuracy -> Process Speed	0,352	0,012	0,05
Data Accuracy -> Credit Performance	0,173	0,008	0,05
Speed of Process -> Credit Performance	0,258	0,000	0,05
Ease of Use -> Process Speed	0,263	0,001	0,05
Ease of Use -> Credit Performance	-0,005	0,955	0,05

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Accessibility -> Process Speed	*0,315*	*0,025*	*0,05*
Accessibility -> Credit Performance	*0,776*	*0,000*	*0,05*

Source: Data processed 2024

Table 7 presents the total effect of the variables studied on credit performance at the BRI Mojokerto Branch. This total effect includes the direct and indirect influence of these variables on overall credit performance. In the explanation of this table, we will pay attention to the value of the path coefficient and the p-value to assess the statistical significance of the influence.

From the table, it can be seen that several variables have a significant total influence on credit performance. First, the data accuracy variables had a significant total influence on process speed (path coefficient = 0.352, p-value = 0.012 < 0.05) and credit performance (path coefficient = 0.173, p-value = 0.008 < 0.05), indicating that data accuracy directly affects both process speed and credit performance. Furthermore, the process speed variable also significantly influenced credit performance (path coefficient = 0.258, p-value = 0.000 < 0.05), indicating that the faster the crediting process, the better the credit performance.

Then, the ease-of-use variable also had a significant total effect on process speed (path coefficient = 0.263, p-value = 0.001 < 0.05), but was not shown to have a significant effect on the credit performance (path coefficient = -0.005, p-value = 0.955 > 0.05). This shows that although ease of use contributes to increased process speed, it has no direct effect on credit performance.

Finally, accessibility variables also had a significant total influence on process speed (path coefficient = 0.315, p-value = 0.025 < 0.05) and credit performance (path coefficient = 0.776, p-value = 0.000 < 0.05), indicating that accessibility plays an important role in improving both the speed of the lending process and the performance of achieving credit targets at BRI Mojokerto Branch.

B. Discussion
1. The accuracy of BRISpot Data has a significant effect on the Speed of the BRI Mojokerto Branch crediting process

Data accuracy has a significant influence on the speed of the process (p-value = 0.012 < 0.05), which means that the level of data accuracy has a positive and significant impact on the speed of the crediting process. For the coefficient value of 0.352 which means that if the accuracy of the data increases by one unit, the process speed will increase by 0.352 with the record of other variables fixed. Based on the table, data on the remaining debt and loan history of BRI and others are also considered to be always updated both in amount and date, as shown by the mean value reaching 4,257 which is in the high category which affects the speed of the process.

In the daily operations of a bank branch, especially in the process of providing credit, data accuracy is very important. For example, when a customer applies for a loan, a bank branch needs to check the loan history and the remaining debt of that customer to determine eligibility and the amount of loan that can be granted. If data regarding loan history and remaining debt is inaccurate or not updated, the lending process can be slow and potentially hamper branch operational efficiency.

In this case, if the accuracy of BRISpot data is high, it means that information about the loan history and remaining debt of BRI customers is available precisely and up-to-date. This will make it easier for bank officers to conduct loan feasibility assessments and calculate the amount of loans that can be approved quickly and accurately. Conversely, if the accuracy of the data is low, bank officers may need to spend longer verifying the information, causing delays in the crediting process.

Thus, the results of the analysis that show a significant influence between the accuracy of BRISpot data and the speed of the lending process reflect the importance of data quality in supporting bank operational efficiency, which in turn can affect the speed and responsiveness in serving customers.

2. The accuracy of BRISpot Data does not have a significant effect on the Performance of BRI Credit Target Achievement Mojokerto Branch

Data accuracy does not have a significant effect on credit performance (p-value = 0.162 > 0.05), which shows that data accuracy does not have a significant effect on credit performance because the coefficient value is very small at 0.08. In the Variable Description table, the performance of achieving the credit target, the BRISpot indicator can help meet the target loan amount that has been set, having a value of 4,469, so data accuracy does not have a significant effect because BRISpot is not only a matter of data accuracy, but more on the ability of intuition from decision holders.

In bank operations, especially in achieving predetermined credit targets, data accuracy is one of the factors considered. However, in this case, the results of the analysis show that the accuracy of BRISpot data does not

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have a significant influence on the performance of achieving credit targets. Although the data obtained from BRISpot is accurate, the performance of achieving credit targets does not depend entirely on the accuracy of the data alone. For example, branch management's ability to plan effective marketing strategies, manage customer relationships, and credit risk assessment are also very important factors in achieving the credit targets set.

BRI Mojokerto Branch has a good team in managing credit portfolios and ensuring that customers meet the credit criteria that have been set. Therefore, while data accuracy is important, overall credit performance is also heavily influenced by management capabilities and other operational practices. Thus, the results of the analysis that show that the accuracy of BRISpot data does not have a significant influence on the performance of achieving credit targets reflect the complexity of other factors that affect credit performance in the field, apart from data accuracy alone.

3. The ease of use of BRISpot has a significant effect on the Speed of the BRI Mojokerto Branch lending process

Ease of use has a significant influence on the speed of the process (p-value = 0.001 < 0.05), hence the third hypothesis is accepted which means that the level of ease of use has a positive and significant impact on the speed of the crediting process. For the coefficient value of 0.263 which means that if the ease of use increases by one unit, the process speed will increase by 0.263 with the record of other variables fixed. In the description table of the BRISpot Ease of Use Variable, it does not take long to understand and use the BRISpot application smoothly and is indicated by a value of 4,394. This application is a system that is easy to learn and practice quickly.

The ease of use of BRISpot has a significant impact on the speed of the lending process at the BRI Mojokerto Branch. With a p-value of 0.001 < 0.05, the third hypothesis is accepted, showing that the level of ease of use contributes positively and significantly to the speed of the crediting process. A coefficient value of 0.263 indicates that each one-unit increase in ease of use will increase the processing speed by 0.263, with the other variables fixed.

In the real context of the field, this is reflected in the experience of bank officers who found that using the BRISpot application does not take long to understand and master. A concrete example is bank officers who can quickly and smoothly access customer data, fill out application forms, and carry out verification processes efficiently using BRISpot. Thus, the ease of use of BRISpot not only speeds up the crediting process but also helps increase productivity and efficiency in the branch.

4. The Ease of Use of BRISpot has a significant effect on the Performance of Achieving BRI Credit Target Mojokerto Branch

The ease of use of BRISpot has a significant effect on the speed of the lending process at the BRI Mojokerto Branch. The results of the analysis showed that ease of use had a positive and significant impact on the speed of the process (p-value = 0.001 < 0.05), so the third hypothesis was accepted. The value of the coefficient obtained is 0.263, which means that every one-unit increase in ease of use will increase the speed of the process by 0.263, provided that other variables are fixed. The Ease of Use variable of BRISpot indicates that this application can be learned and used smoothly in a short time, with a value of 4,394, signifying its ease of use.

The ease of use of BRISpot has a significant impact on the performance of achieving credit targets at the BRI Mojokerto Branch. This can be explained logically by the fact that with the ease of using the BRISpot application, the crediting process can be done more quickly and efficiently. For example, bank officers can easily access customer data and input the necessary information without significant technical obstacles, thus speeding up the credit approval process.

Another example is, with the intuitive and user-friendly features in BRISpot, bank officers do not need to spend a lot of time learning or understanding how to use the application. As a result, they can focus on increasing productivity and achieving credit targets set by branch management.

Thus, the ease of use of BRISpot not only speeds up the lending process but also helps improve branch performance in achieving predetermined credit targets. This shows that user-friendly technology applications such as BRISpot can make a significant contribution to achieving business goals and improving operational efficiency in the field.

5. BRISpot accessibility has a significant effect on the speed of the BRI Mojokerto Branch lending process

The accessibility of BRISpot has a significant effect on the speed of the lending process at the BRI Mojokerto Branch. The fifth hypothesis is accepted because the p-value of 0.025 < 0.05, indicates a significant impact. A coefficient value of 0.315 indicates that every one-unit increase in accessibility will increase the speed of the process by 0.315, with other variables fixed. The variable description of the speed of the crediting process shows that credit application documents are verified quickly and effectively through BRISpot, with respondents' answer scores of 4,394. This shows that BRISpot can adapt to different screen sizes and device resolutions (value 4,269), as well as keep user data safe when connected to the same mobile network (4,269). These conditions strengthen the influence of BRISpot accessibility on the performance of achieving credit targets at the branch.

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The accessibility of BRISpot has a significant impact on the speed of the lending process at the BRI Mojokerto Branch. This can be explained by the logic that the easier it is for bank officers to access and use BRISpot, the faster the crediting process can be carried out. For example, with BRISpot accessible through various devices and adapting to different screen sizes, bank officers can easily access the app wherever they are, without being constrained by the device they are using.

In addition, the speed of the crediting process can also be increased because BRISpot allows credit application documents to be verified quickly and effectively. A concrete example is that bank officers can easily check and validate customer data in real time through BRISpot, without having to rely on time-consuming manual processes.

Thus, conditions in the field show that good BRISpot accessibility has a significant impact on the performance of achieving credit targets in the branch. This reinforces the importance of ensuring that the application is easily accessible and used by bank officers to speed up the lending process and improve operational efficiency.

6. BRISpot Accessibility Has a Significant Effect on the Performance of BRI Credit Target Achievement Mojokerto Branch

Accessibility has a significant influence on the achievement of credit targets (p-value = 0.000 < 0.05), hence the sixth hypothesis is accepted which means that accessibility has a significant impact on the performance of achieving credit targets. For the coefficient value of 0.695 which means that if accessibility increases by one unit, the achievement of the target will increase by 0.695 with the record of other variables fixed.

BRISpot accessibility has a significant influence on the performance of achieving credit targets at the BRI Mojokerto Branch. With a p-value of 0.000 < 0.05, the sixth hypothesis is acceptable, indicating a statistically significant impact. A coefficient value of 0.695 illustrates that every one-unit increase in accessibility will result in an increase in target achievement of 0.695, with other variables fixed.

A concrete example of the effect of BRISpot accessibility on the achievement of credit targets can be found in the daily practice of the branch. For example, with easy and fast access to BRISpot, bank officers can more efficiently manage the lending process, including the credit application, assessment, and approval process. Thus, branches can be faster and more effective in achieving credit targets set by management.

Thus, the reality on the ground shows that BRISpot accessibility has a significant role in supporting the achievement of credit targets at the BRI Mojokerto Branch. This confirms the importance of an easily accessible and usable technology infrastructure to improve the efficiency and overall performance of the branch in achieving its business goals.

7. The speed of the lending process through BRISpot has a significant effect on the Performance of BRI Mojokerto Branch Credit Target Achievement

The speed of the lending process through BRISpot has a significant impact on the performance of achieving credit targets at the BRI Mojokerto Branch. With a p-value of 0.000 < 0.05, the seventh hypothesis is accepted, indicating a statistically significant impact. A coefficient value of 0.258 indicates that every one-unit increase in process speed will increase the achievement of the target by 0.258, with the other variables fixed. In practice, the process of assessing the eligibility of borrowers through BRISpot can be carried out quickly, as seen in the Variable Description of Speed of the lending process table. The speed of this assessment process affects the level of achievement of credit targets, as reflected by the high respondent answer score of 4,234. Thus, the speed of the lending process through BRISpot not only helps speed up the process but also contributes to the achievement of the credit targets set by the branch.

In real situations on the ground, the process of assessing the eligibility of borrowers through BRISpot can be completed quickly. For example, bank officers can easily access customer data and assess borrower eligibility efficiently using the BRISpot application. The speed in this assessment process then affects the branch's ability to achieve the set credit target. As a result, customer satisfaction levels increase as the lending process becomes smoother and more responsive to their needs. Thus, the speed of the lending process through BRISpot not only speeds up the operational process but also directly contributes to the achievement of the credit targets set by the branch.

IV. CONCLUSION

Based on the results of hypothesis testing in this study, we can draw the following conclusions:

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1) There is a statistically significant influence between the accuracy of BRISpot debtor data on the speed of the lending process at BRI Mojokerto Branch (p-value = 0.012 < 0.05). That is, the higher the level of data accuracy, the faster the crediting process is carried out.

2) The effect of BRISpot data accuracy on the performance of achieving credit targets at BRI Mojokerto Branch is not statistically significant (p-value = 0.162 > 0.05). This shows that there is no significant relationship between the accuracy of BRISpot data and the performance of achieving credit targets.

3) There is a significant influence between the ease of use of BRISpot on the speed of the lending process (p value = 0.001 < 0.05). This indicates that the easier it is to use the BRISpot application, the faster the crediting process will be carried out.

4) The effect of BRISpot's ease of use on the performance of achieving credit targets is not statistically significant (p-value = 0.370 > 0.05). This shows that the ease of use of BRISpot does not significantly affect the performance of achieving credit targets.

5) There is a significant influence between BRISpot accessibility and the speed of the lending process (p-value = 0.025 < 0.05). This indicates that BRISpot accessibility plays an important role in increasing the speed of the lending process.

6) BRISpot accessibility also has a significant influence on the performance of achieving credit targets (p-value = 0.000 < 0.05). This shows that BRISpot's accessibility positively affects the performance of achieving credit targets.

7) The speed of the lending process through BRISpot has a significant influence on the performance of achieving credit targets (p-value = 0.000 < 0.05). This shows that the faster the crediting process, the better the performance of achieving its credit targets.

Based on the conclusions of the results of hypothesis testing in this study, several suggestions can be given both for companies and subsequent research:

Advice for Companies:

1) Companies are advised to further improve the accuracy of BRISpot debtor data by periodically evaluating and improving the data management system used. This will help increase efficiency in the crediting process by ensuring the data used is accurate and reliable.

2) Focus efforts to improve the speed of the lending process by considering the ease of use factor of the BRISpot application. Companies can improve the application interface to ensure users can easily access and use the features provided so that the crediting process can be done more quickly and efficiently.

3) BRISpot accessibility also needs to be considered as an important factor in increasing the speed of the lending process. Companies may consider developing or improving features that support the use of BRISpot applications across multiple platforms and network conditions, thus enabling easier and faster access for users.

Suggestions for Next Research:

1) Further research may involve other variables that may also affect the performance of achieving credit targets in the company, such as the level of education of debtors, income levels, or the level of consumer confidence in banking technology.

2) Learn more about the factors that affect the ease of use of the BRISpot application and how these factors can have an impact on the performance of achieving credit targets.

3) Further research on how the use of axile-based banking technologies, such as BRISpot, can contribute to the improvement of overall banking services and performance, as well as their impact on customer satisfaction.

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