
EXAMINATION OF CURRENT ISSUES IN THE FIELD OF SOCIAL SCIENCES WITH NEW APPROACHES

2

Editors

Prof. Dr. Iskandar MUDA
Leonora Bruçaj- KEKA, PhD. Cand.
Malinda Sari Sembiring, S.E. M.Si
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CHAPTER 1

Analysis of Business Intelligence and Expert Systems on Utilization of Academic Information Systems at Universitas Bhayangkara Jakarta Raya, Jakarta

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ABSTRACT

Higher education requires efficient management of academic information. Integration between Business Intelligence (BI), Expert Systems (SP), and Academic Information Systems (AIS) can be an effective solution. BI collects, analyzes, and explores information from various data sources for decision-making. Expert Systems use expert knowledge to provide solutions and recommendations within a certain domain. An AIS is a system for managing academic information in tertiary institutions.

The integration of these three systems can increase the efficiency and effectiveness of academic management, such as student registration, class schedule management, curriculum management, and grading management. However, there are technical challenges, data complexity, privacy, and security that need to be encountered. Careful planning and implementation are required.

Keywords: Business Intelligence, Expert Systems, Academic Information Systems

INTRODUCTION

There are three distinct areas of information technology developed to address specific needs and challenges in various industries. These are Business Intelligence (BI), Expert Systems (SP), and Academic Information Systems (AIS). These three areas require continuous improvement.

Business Intelligence is a collection of methodologies, technologies and practices for the collection, integration, analysis, and presentation of business information. The primary purpose of BI is to provide actionable insights to decision-makers on key business metrics such as sales, revenue, customer behavior, and market trends. BI tools and techniques can help organizations identify growth opportunities, reduce costs, and improve operational efficiency (Rudiawan, 2021).

Business Intelligence has become an essential component of modern business operations, especially in industries such as finance, retail, and healthcare, where the amount of data generated every day is enormous. BI solutions can help organizations make more informed decisions by providing access to data in real time and enabling them to analyze and interpret data more effectively. BI tools such as data visualization, dashboards, and predictive analytics are becoming increasingly irreplaceable for businesses seeking to gain a competitive advantage in a rapidly changing business landscape (Faeni, 2016).

A good BI must be supported by an Expert System (SP). This is the computer-based programs that use artificial intelligence (AI) techniques to replicate the decision-making abilities of human experts in a given domain. SP can automate complex tasks that require specialized knowledge and skills, such as medical diagnosis, financial analysis, and legal research. It is expected that SP can increase the speed and accuracy of decision-making and can help organizations reduce costs and increase productivity.

Expert system has been widely used in various industries, including health, finance, and legal services. In the health sector, SP can assist doctors in making an accurate diagnosis. In finance, SP can assist financial analysts in making investment decisions. In the legal field, SP can assist lawyers in conducting legal research and preparing legal documents. By automating repetitive and time-consuming tasks, SP can free up human experts to focus on more complex and creative tasks, increasing productivity and efficiency.

Academic Information System (AIS) is a software application designed to support academic institutions in managing administrative and academic functions. It includes student information systems, course management systems, and learning management systems, which are used to manage student records, class schedules, assignments, and assessments. AIS can help institutions optimize administrative processes, increase student engagement, and increase the effectiveness of teaching and learning.

An AIS can also assist institutions in collecting student data, including information on academic performance and study behavior. The generated data can be used to improve teaching and learning by providing more detailed information about students' progress, their strengths and weaknesses, and their learning styles. In addition, AIS can also assist institutions in making strategic decisions regarding campus management, financial management, and the development of new academic programs. AIS has become an integral part of the operations of modern academic institutions. More academic institutions are currently adopting integrated information systems to increase their operational efficiency and effectiveness. By combining various administrative and academic functions in one system, AIS can help institutions reduce costs, increase productivity, and improve the quality of teaching and learning.

Overall, BI, SP, and AIS are three areas of information technology that are very important for organizations in various industries. Each of these areas can help organizations improve

operational efficiency, increase productivity, and make more informed decisions. In this increasingly digital era, the adoption of information technology such as BI, SP, and AIS is the key to the success and sustainability of businesses and academic institutions.

THEORIES AND CONCEPT

Business Intelligence

Business intelligence is a process based on technology and applications that can be applied to help analyze and represent data in a company's business. Business intelligence aims to make data interpretation and representation easier. Thus, companies can implement effective strategies for long-term business stability.

Vasarla (<https://praneethvasarla.com>) asserts that there are at least six benefits of business intelligence. These include (the summary is provided in Figure 1):

1. Obtain Customer Information/Insights. Effective business intelligence enables businesses to understand their customers by analyzing their buying patterns and creating user profiles. This helps companies create new products and a better user experience.
2. Obtain Actionable Information/Insights. One of the most important things in making a business decision is having enough data to support that decision. The information/insights obtained from business intelligence are accurate metrics to be used to make any decision.
3. Increase Business Operations Visibility. Companies that implement business intelligence have better visibility into what is happening within the organization. That way, companies will be more aware of the process and more responsive in correcting existing errors.
4. Increase Efficiency. A business intelligence system is useful for increasing the efficiency of the company as a whole. By making data accessible to all teams within the company, BI could reduce the waiting time for report requests. As a result, the team can increase its productivity and get enough information to make certain decisions.
5. Provide Real-time Data. The business intelligence system provides real-time data at any time. This helps reduce the risk of possible errors that will occur when preparing any reports of critical data.
6. Making Better Marketing Strategy. Business intelligence can also provide key metrics needed for campaign strategies, such as customer acquisition cost (CAC), cost per lead (CPL), click-through rates (CTR), and many others.

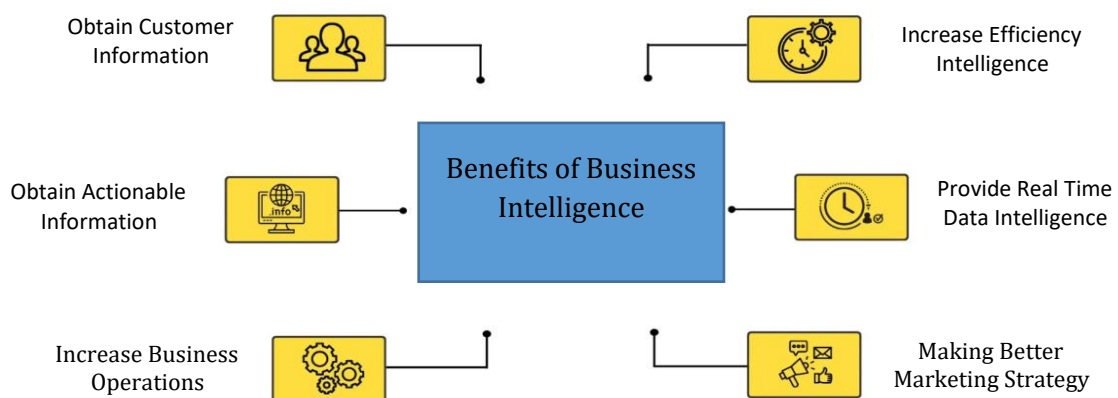


Figure 1. Benefits of Business Intelligence

According to Glassdoor (<https://www.glassdoor.com>), business intelligence duties and responsibilities include:

1. Analyze data for market patterns and trends.
2. Design a data collection model to better collect information.
3. Leverage company resources to curate data.
4. Conduct data profiling.
5. Make weekly and monthly reports regarding past and current market trends.
6. Coordinate with the IT team to implement the new model.
7. Develop protocols regarding how to filter and get the best variant.
8. Ensuring the team gets enough information and performs tasks properly

Expert Systeem

The importance of expert system (ES) has been put forward long time ago, for example Liebowitz (1998) or Metaxiotis and Psarras (2003). It has been used in various organization, for example in manufacturing (Wong et al., 1994) or administrative decisions (Fahim, 2019). The ES is one of several problem domains or areas of Artificial Intelligence (AI) and is an intelligent computer program that utilizes knowledge and inference procedures to solve quite difficult problems and it requires special expertise from humans (Budiharto & Suhartono, 2016). The ES can also be interpreted as a computer program or information system that contains some knowledge from one or more human experts related to a field that tends to be specific (<https://www.sekawanmedia.co.id/>).

An ES has the ability to recommend a series of actions or user behavior to be able to run a correct and accurate correction system. This system also utilizes the capability of reasoning process to be able to reach conclusions based on existing data and facts.

According to Lestari (2012), there are 10 general categories of ES, namely:

1. Interpretation, making a conclusion or description of a set of data that is still raw (raw data).
2. Prediction, the ability to project the consequences of certain situations and conditions.
3. Diagnosis, the ability to detect malfunctions in complex situations.
4. Design, the ability to determine and design system component configurations that match organizational goals.
5. Planning, planning a series of actions according to the original purpose.
6. Monitoring, the carrying out observations based on an expected condition.
7. Debugging, preventing malfunctions or failures in certain features.
8. Repair, carry out to plan self-improvement on an ongoing basis.
9. Instruction, detecting the level of deficiency in understanding the subject domain.
10. Control, having the expertise to regulate behavior patterns in an environment.

Table 1. The Benefits and Weaknesses of Expert Systems

No	Benefits	Weaknesses
1.	Allows ordinary people to do the work of experts.	The cost required to create, maintain, and develop it is very expensive.
2.	Can do the process repeatedly automatically	Difficult to develop, this is closely related to the availability of experts in their fields and expertise is very difficult to extract from humans because it is not easy for an expert to explain their steps in dealing with problems.
3.	Storing the knowledge and expertise of experts.	SP is not 100% correct because someone involved in creating SP is not always correct. It needs to be re-tested carefully before use.
4.	Able to retrieve and preserve the expertise of experts (especially those including rare skills).	The approach by each expert to a situation or problem can be different, even though they are both correct.
5.	Does not require a fee when not in use, while human experts require a daily fee.	Knowledge transfer can be subjective and biased.
6.	Can be duplicated (multiplied) as needed with minimal time and little cost	Lack of user trust can hinder SP usage.
7.	Can solve problems faster than human ability with records using the same data.	
8.	Save time in decision making.	
9.	Improve quality and productivity because it can provide consistent advice and reduce errors.	

The SP development is decomposed by several components or structures that form a comprehensive information system. These are seven components of IS development.

1. User Interface, Interface is a mechanism used as a means to communicate and interact with users (users). The interface will receive information from the user and will convert it into instructions that can be received by the system.
2. Knowledge base, contains an understanding of the formulation and problem-solving schemes.
3. Knowledge acquisition, is the process of accumulation, transformation, and transfer of each expertise to be able to solve problems from sources of knowledge, into a computer system. At this stage, an engineer's job is to absorb all knowledge to be sent to the knowledge base (insight).
4. Inference Engine or Motor, a reasoning mechanism and mindset used by experts to be able to solve a problem well. The inference engine itself is a computer program to provide existing methodologies in the workplace, and will later be processed into a conclusion.
5. Workplace/Blackboard, is an area of working memory collection that is used to record every event that occurs, including making temporary decisions.

6. Explanation facilities are included in additional components to increase the use of SP, as well as tracking responses and results of explanations regarding behavior in expert systems interactively.
7. Knowledge Improvement, good analytical skills to improve performance. This ability consists of expertise in computerized learning. Thus, the program can distinguish between success and failure, based on knowledge that is still relevant for future application.

Business Intelligence and Expert Systems for Academic Information Systems

Business Intelligence and AIS are two things that are related because they both deal with the collection, processing and analysis of data. AIS is an information system designed to meet administrative needs in the academic field, such as managing student data, class schedules, assessments, and so on. AIS collects data from various sources and processes it to produce useful information for decision-makers in academic institutions.

Meanwhile, BI is an information system used to collect, analyze, and manage business data. BI processes data from various sources, including AIS, to produce useful information for business decision makers.

In the context of AIS, BI can be used to analyze academic data, such as student performance, attendance or academic achievement. The resulting information can assist decision makers in academic institutions in planning more effective and efficient programs or activities.

In addition, BI can also assist AIS in improving system performance and efficiency. For example, BI can be used to monitor and improve business processes within an AIS, such as the student registration process or assessment process. Thus, there is a close relationship between BI and AIS in the management and analysis of data in an academic environment. The use of BI in AIS can help improve efficiency, performance, and decisions in academia.

The AIS of Universitas Bhayangkara Jakarta Raya (UBJ-AIS) is a service that can be used by all academics in managing the academic field. The UBJ-AIS is a system used to manage academic, administrative and operational information within Bhayangkara University Jakarta. This AIS aims to provide efficient and integrated services for students, lecturers, and university staff in managing various academic aspects such as student registration, class schedule management, curriculum management, grade management etc.

The features found in UBJ-AIS include:

1. Student Registration: AIS allows students to register in their desired study program, fill in personal data, select courses to be taken, and make tuition payments.
2. Management of Class Schedules: AIS provides information regarding the latest class schedules, including class schedules, examination schedules, and other academic activity schedules.
3. Curriculum Management: AIS allows students to view information about the curriculum of the study program followed, including details of the courses to be taken and the order in which the courses are taken.
4. Grade Management: AIS provides facilities for inputting and managing student grades, including grade announcements, submission of grade revisions, and grade point calculations.

5. Academic Information: AIS provides access to university students, faculty, and staff to view academic information such as information about courses, graduation requirements, academic procedures, and other important information.
6. Online Services: UBJ-AIS can be used as a means to carry out various online services such as applying for academic leave, submitting certificates, and so on.

In addition, UBJ-AIS can also be integrated with other systems at the university, such as financial systems, library systems, and other administrative systems, to provide better and more efficient integration in the overall management of academic information.

It is important to remember that the UBJ-AIS must pay attention to the security and privacy of student data and involve regulations and policies that apply to protect data in the system. Efficient, integrated and safe AIS can help increase the efficiency and effectiveness of academic management at UBJ.

CONCLUSION

The BI and ES are two concepts in information technology that can be used in the context of AIS to help improve the performance and efficiency of academic management. The use of BI and ES in AIS can provide benefits in increasing the efficiency and effectiveness of academic management. With careful data analysis through BI, academic administrators can make better, evidence-based decisions to improve study program management, curriculum management, and management of academic resources. Meanwhile, the use of an ES can assist in providing fast and accurate solutions or recommendations for AIS users, thereby saving time and effort in making decisions. The importance of integration between BI, ES, and AIS as an integrated whole. This integration can enable BI data analysis to be used as input in ES to provide smarter, data-driven recommendations. On the other hand, the output of an ES such as recommendations or solutions can be consumed by BI to produce more complete and comprehensive reports or information.

The use of BI and ES in AIS also requires serious attention to aspects of data security and privacy. Academic data processed in BI or used in ES must be kept confidential and comply with applicable regulations and privacy policies. It is important to ensure that the data used in BI and ES is managed securely and only accessed by authorized parties.

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CHAPTER 2

Profitability Analysis (ROE) of PT. Campina Ice Cream, Tbk, During Covid-19 Pandemic in 2019 – 2022

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ABSTRACT

The Covid-19 pandemic (2019-2022) in Indonesia has had a profound impact on various aspects of society, including the business sector. This study focuses on the effects of the pandemic on PT. Campina Ice Cream Industry, Tbk, a prominent ice cream brand known for its Campina products. The implementation of lockdowns, social distancing measures, and a decline in consumer spending have significantly impacted the demand for Campina ice cream. The closure of restaurants, cafes, and ice cream parlors, which constitute a substantial market for Campina, has further contributed to the decline in sales. Moreover, disruptions in supply chains due to transportation and production challenges have resulted in increased costs and reduced operational efficiency. Nevertheless, the pandemic has also presented opportunities for Campina to explore e-commerce and home delivery services, capitalizing on the growing trend of online shopping among consumers. Consequently, the impact of COVID-19 on the Campina ice cream industry has been a mix of challenges and opportunities.

This study aims to assess the financial viability of PT. Campina Ice Cream Industry, Tbk by examining its profitability ratio, specifically the Return on Equity (ROE). Evaluating the company's ability to generate profits during challenging times caused by the Covid-19 pandemic is crucial for understanding its resilience and potential strategies for recovery.

Keywords: Profitability Analyst, The DuPont Model, Ice Cream Industry, Campina Ice Cream

INTRODUCTION

Every business activity the company carries out has its strategy and procedures for running its business to achieve company goals, namely generating profits for the common good (the interests of all stakeholders). Management, conveyed by M. Karebet (2003) in (Purnomo & Astuningsih, 2021), is an applied art that is directed to manage specific functions and values for activities that are arranged so that it is carried out correctly. Management operational is the process of planning, organizing, directing, and controlling resources (both people and tools) to achieve organizational goals effectively and efficiently. This includes making decisions about manufacturing products or services, operating systems, managing inventory, and managing human resources (According to Heizer and Rander (2009:4).

Discuss Ice Cream in Indonesia; of course, we cannot be separated from Campina Ice Cream, which has been establishing in Indonesia on 22 July 1972. Establish for the first time under the CV.Pranoto is the name of the founder of Campina ice cream. This Ice Cream business started as a small business by Darmono Hadipranoto, selling cup-shaped ice cream in his garage. Campina began to be recognized and accepted in the community. Due to the demand for ice cream products that shot up, in 1976, a machine development was held by turning the whole house into an Ice Cream factory. In 1984, Campina moved the factory location to Rungkut Industri II, No.15-17, Surabaya – East Java which is still used to produce Ice Cream. Then along with the development of the Ice Cream Industry in 1984, Campina products became the number one product in Indonesia. Because of this, several ice cream manufacturer competitors appeared in Indonesia with various variations, brands, packaging, and product quality. Campina Ice Cream Products marketed in Indonesia include:

In 2019, Indonesia's population reached 270 million people, which became a great market share for PT Campina Ice Cream Tbk. The opportunity to generate a large Profit Margin was very open at that time; it's just that suddenly the world was shocked by the arrival of the Covid 19 Pandemic (Pandemic Covid 19 was coming to Indonesia in early 2020) . The Covid 19 pandemic also hit Indonesia and resulted in a fairly severe economic shock. The restrictions/Lockdown that was regulated by the government of the Republic of Indonesia to limit the transmission of Covid 19 have had a very dire impact due to the closure of restaurants, eateries, and small shops and also the decline in the purchasing power of the Indonesian people. Most of the manufacturing Industry sector was also affected. The hit on the manufacturing and service industry sector, which resulted in a lot of unemployment, clearly impacted the sales of Ice Cream in Indonesia, including Campina Ice Cream Products. On the other hand, Campina still has to compete with several competitors who also produce Ice Cream, such as PT Unilever Indonesia with Walls Ice Cream Products, PT Alpen Food Industry with AICE Ice Cream, and also PT Diamond Cold Storage Indonesia with Diamond ice cream products.

For a company such as Campina, financial statements are critical as a means of communicating essential financial information to parties outside the company, which contain the results of the accounting process that can be used as a means of communicating financial data and or activities of a company and parties with interest in the data or activities of a company (Norkamsiah et al., 2017).

The development of the business world today makes the level of competition in the business world even higher. A company's financial report measures how a company can survive and sustain in the future. This financial report will later be able to predict whether or not a company

will be able to survive the next era (Zilfana, 2021). The purpose of financial reports is to provide company information regarding the company's financial position, financial performance, and changes in the company's financial position, and financial reports can also be prepared suddenly according to the needs of the company or periodically. (Pongoh, 2013). Financial reports are also the basis for determining or assessing the company's financial position by conducting an analysis (Fahmi, 2012). The results of these analyses show the use of economic resources, obligations that must be fulfilled, and capital owned by the company, as well as the results that the company has achieved. A company's financial performance can be measured and seen through financial statements by analyzing financial statements.

Below is one table to see the company's performance of PT. Campina Ice Cream Industry, Tbk. by comparing Net Sales from 2019 - 2022.

Table 1. Net Sales, PT. Es Cream Campina Tbk from 2019 to 2022.

No	Item and Year	Total Net Sales (Rp.)
1	Net Sales Year 2019	1.028.952.947.818
2	Net Sales Year 2020	956.634.474.111
3	Net Sales Year 2021	1.019.133.657.275
4	Net Sales Year 2022	1.129.360.552.136

Source : <https://www.campina.co.id/id/laporan-keuangan/>

The first year of the Covid 19 Pandemic (2020) it forced the company to make an outstanding breakthrough in order to maintain the sales level of ice cream products amid the sluggishness of the Indonesian economy.

This process is difficult because most Indonesians prefer to stay home rather than travel out or visit entertainment venues or open spaces. Thanks to the hard work of all section, from the Supply Chain, Marketing, Finance and also the sales force, in the second year of the Covid 19 Pandemic (in 2021) Campina's ice cream net sales can touch a fantastic figure and can still grow compared to the same period in the previous year.

LITERATUR REVIEW

Financial Report

Financial reports are an essential tool for obtaining information regarding the financial position and operating results that have been achieved by the company concerned. The definition of financial statements, according to Harahap (2011: 105), is that financial reports describe the financial condition and results of a company's operations at a certain time or period. According to Kasmir (2013: 7), financial reports are reports that show the organization's current financial condition or within a certain period. According to Munawir (2010: 2), financial reports are the result of an accounting process that is used to communicate between financial data and activities of a company and parties with an interest in the data or activities of the company.

Based on the several opinions above, it can be concluded that financial statements are reports that describe and inform the details of a company's financial information during a certain period of time.

Purpose of Financial Statements

The purpose of making financial statements, shown by Hans (2012: 126), is to provide data about the position of the financial statements, the performance of the financial statements, and the development of the entity's cash flow which is valuable for most clients who will use financial statements in determining their economic decisions. As shown by Fahmi (2012: 5), the purpose of making reports on finance is to provide data to those who need it about the state of the organization from the perspective of numbers in financially related units, Kasmir (2011: 11), reveals that the purpose of making financial reports is intended to:

1. Providing information about the types of assets and the number of assets (assets) currently owned by the company.
2. Providing information about the types of liabilities and capital and the amount of liabilities and capital currently owned by the company.
3. Providing information about the types of expenses and the revenue earned in a certain period from the company.
4. Providing information about changes in the amount of costs incurred and the types of expenses incurred by the company in a certain period.
5. Providing information about changes to the company's assets, liabilities, and capital items in a certain period.
6. Providing information about the company's management performance development in a certain period.
7. Providing information about the records of the financial statements made in a certain period.

Types of Financial Statements In general, financial statements consist of:

Balance Sheet

The balance sheet is an essential financial report that provides information about the financial position (assets, liabilities, and equity) of the company at a specific time (Prastowo, 2011: 15). The balance sheet is a systematic report on the assets, debts and capital of a company at a specific time (Munawir, 2010: 13).

Profit and loss statement

A profit and loss statement is a company's financial report containing three primary financial information at a specific time period: income, expenses, and profit or loss. According to Munawir (2010,26), the profit and loss statement is a periodic report on costs, income, and profit loss obtained by a company in a certain period.

Statement of changes in capital

The statement of changes in the capital is a report that contains the amount and type of capital owned by the company then also in this report explains the causes of the change (Kasmir, 2011: 9). According to Hery (2014: 5), the statement of changes in the capital is a financial report that presents a description of changes in the equity items of a company during a specific period. During this period, changes in shareholders' equity can be caused by the issuance and

repurchase of shares, as well as reinvestment of the remaining net profit (after dividend distribution) into the company.

Cash Flow Statement

According to Darsono and Ashari (2005: 91), cash flow is a report that contains information about the sources and uses of the company's cash during a certain period, for example, one month or one year. The cash flow report is a report that provides information about all aspects of the company's activities related to cash, both those that have a direct effect or not. The cash flow statement is used by management to evaluate ongoing operational activities and to plan future investment and funding activities. Lenders (creditors) and investors (investors) use data from the cash flow statement to evaluate the level of liquidity and potential to generate profits.

Profitability Analyst

Profitability is a ratio to measure the company's ability to earn profits; in other words, using profitability ratios will show the company's efficiency. Harahap (2015: 304) defines that the ratio describes the company's ability to earn profits through all existing sources such as sales activities, cash, capital, number of employees, number of branches, etc. Hanafi & Halim (2016:81), the profitability ratio is "a ratio that measures the company's ability to generate profits (profitability) at a certain level of sales, assets, and share capital." Meanwhile, Fahmi (2012:212) states, "Profitability is the ratio of how the company can manage its foreign capital to earn profits and repay its debts." Sutrisno (2012: 217), "Profitability will show how much profit the company can get." The main goal to be achieved by the company is to obtain maximum profit. By obtaining the maximum profit that has been targeted, the company can improve the welfare of owners, employees, as well as improve product quality and make new investments. Management is required to meet the targets that have been set. Profitability ratios have goals and benefits for the company and investors, especially those who have an interest in the company.

Kasmir (2011: 196), the purpose of using profitability ratios for companies and parties outside the company are:

- 1) To measure or calculate the profit earned by the company in a certain period
- 2) To assess the company's profit position in the previous year with the current year
- 3) To assess profit development over time
- 4) To assess the amount of net profit after tax with own capital. Benefits of profitability ratios
- 5) To find out the amount of profit earned by the company in one period.
- 6) To compare the company's profit in the previous year with the current year.
- 7) To know the progress of profit from time to time.
- 8) To compare net profit after tax with own capital.
- 9) To determine the effectiveness of the funds used, both foreign capital and own capital.

There are several types of profitability ratios that can be used to measure the company's ability. The types of liquidity ratios that companies can use to measure ability (Kasmir, 2012: 197) are:

- a) NPM (Net Profit Margin)
- b) ROE (Return on equity)
- c) ROI (Return on investment)
- d) EPS (Earning Per Share)

Return On Equity (ROE).

Kasmir (2011:115), return on equity (ROE), or profitability of own capital, is a ratio that measures net profit after tax with own money and generates net profit available to owners or investors. ROE shows the success or failure of the management in maximizing the return on investment of shareholders and emphasizes the return on income about the amount invested. ROE measures shareholders' return on investment using the formula for net income available to common shareholders divided by the number of common equity shares. Another name for ROE is own capital rentability (RMS), rate of return on stockholders' investment and rate of return on net worth. Kasmir (2011:118) says that the higher the profitability ratio of own capital, the better because this shows the amount of own money in generating several profits, primarily net profit after tax.

On the contrary, the smaller the profitability ratio of own capital means that the capital invested as operating cost only produces a small or low net profit after tax. Return on equity (ROE) is a profitability ratio from the investor's point of view, not from the company's point of view. Return on equity (ROE) is a ratio to measure net profit after tax with own capital and generate net income available to owners or investors (Kasmir, 2011: 115). The calculation of ROE is obtained by dividing net profit after tax by own capital. Using return on equity (ROE) in this study is because ROE is an important measurement to determine how efficiently a company will use the money they invest in generating net income. Return on equity (ROE) measures the rate of return on investment from shareholders (Brigham & Houston, 2016: 78).

ROE is the company's ability to generate profits by using its capital. ROE is also called the rate of return on the company's owner's equity; owner's equity is the company's total net assets. Thus, ROE measures the company's ability to earn profits available to shareholders of the company. Shareholders highly consider this ratio because shareholders prefer high ROE. In other words, the higher the ROE, the higher the use of own capital owned by the company can generate net income, the more investors will invest their funds (Wardjono, 2010: 58). Harahap (2015: 68) ROE shows the net profit percentage when measured by the owner's capital. Another definition of ROE is to measure the company's ability to obtain profits available to the company's shareholders. This ratio is also influenced by the size of the company's debt, and if the proportion of debt is more significant, then this ratio will also be even greater. In other words, ROE shows management's success in maximizing the return rate to shareholders. The higher this ratio, the better because it provides a greater rate of return to shareholders.

CONCEPTUAL FRAMEWORK

In this discussion, the author wants to know about the Profitability of PT Campina Es Cream Industry Tbk, both before the Covid 19 pandemic, during the Covid 19 Pandemic, and after the end of the Pandemic 19. The method used measures NPM, ROA and ROE from the financial report period (publicized) in 2019, 2020, 2021 and 2022.

Research Question

Based on all of the arguments, according to some citations in the literature review section, this study aims to investigate the following research questions :

Research Question 1: Does the Covid 19 Pandemic in Indonesia affect the Profitability of PT Campina Ice Cream Industry Tbk?

Research Question 2: Is the NPM, ROA, and ROE Ratio in the 2019-2022 period above the average of similar industries?

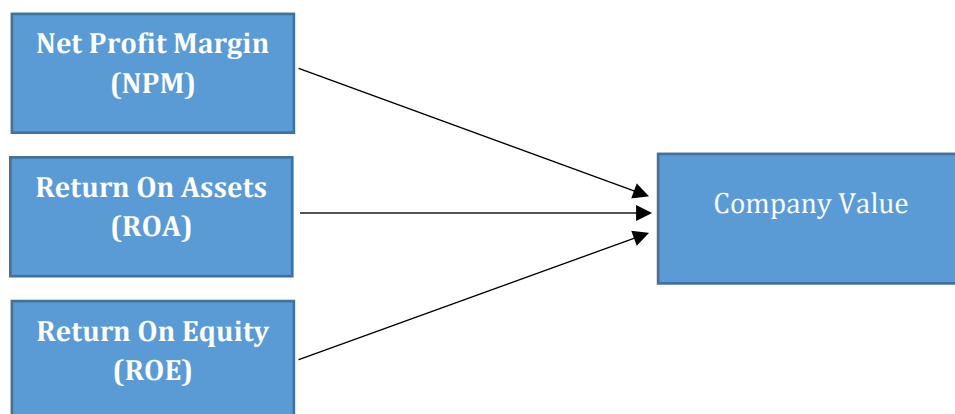
Research Question 3: After the Covid 19 Pandemic, did the NPM, ROA, and ROE ratios return to be better?

Research Question 4: Can the NPM, ROA and ROE Ratio Analysis results provide a conclusion that PT. Campina Ice Cream Industry, Tbk still provides profits above the average of similar industries?

METHODOLOGY

This study is a causality research which designed to test correlation between profitability and company value. Research samples are manufacturing companies listed in Indonesia Stock Exchange 2009-2014. Criteria used to determine the sample are:

Figure 1: Conceptual framework



The concept above can be illustrated that the better the NPM, ROA and ROE of a company will increase the Company's Value in the eyes of Shareholders and the general public.

From the Conceptual Framework above, we can measure it with The DuPont Analyst as follows:

Figure 2 : Profitability Analyst, DuPont Model

Net Profit Margin (NPM) :	$\frac{\text{Net Income}}{\text{Sales}}$
Return On Assets (ROA) :	$\frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}}$

$$\text{Return On Equity (ROE)} : \frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Assets}} / \left(1 - \frac{\text{Total Debs}}{\text{Total Assets}}\right)$$

And based on the financial statements (publicized), PT Campina Ice Cream Industry, Tbk from the 2019-2022 period can be seen the following analysis results:

Table 2. Profitability Analyst (NPM, ROA and ROE), Period 2019-2022

Financial Perspective	Year				Average (2019-2022)	Average Industry	Balance Score Card < Average Industry : -1 = Average Industry : 0 > Average Industry : 1	Rating
	2019	2020	2021	2022				
NPM	7.46%	4.60%	9.74%	10.74%	8.14%	3.92%	1	Good
ROA	7.26%	4.05%	8.66%	10.58%	7.64%	5.98%	1	Good
ROE	8.21%	4.58%	9.67%	12.88%	8.83%	8.32%	1	Good

Source : Financial Report PT. Campina Ice Cream Industry Tbk (Publised)

As mentioned above, in this research, the financial statement data of PT Campina Ice Cream Industry Tbk was obtained from the PT Campina Ice Cream Industry, Tbk website in the form of profit and loss financial statements during 2019-2022. Then the data from the financial statements, profit & loss Statement of PT Campina Ice Cream Industry Tbk will be analyzed to assess the company's financial performance using the DuPont Model method and added to the Balanced Scorecard by using the calculation of four ratios, namely Net Profit Margin (NPM), Return on Asset (ROA) and Return On Equity (ROE).

The results of the profitability analysis using the DuPont Model from a financial perspective show that the Net Profit Margin (NPM) of PT Campina Ice Cream Industry Tbk in 2019 amounted to 7.46%, **in 2020 amounted to 4.60%**, in 2021 amounted to 9.74%, in 2022 amounted to 10.74%, an average value of 8.14% was obtained, meaning that the company's performance in getting a return on assets has a good average, exceeding the industry standard set at 3.92% so that it is given a score of 1. However, it can be seen that in year 2020 (the first year of the covid 19 pandemic), the Net Profit Margin dropped very significantly when compared to the same period in the previous year (2019).

While for the Return On Asset (ROA) using DuPont Model from a financial perspective shows that the Return On Asset (ROA) of PT Campina Ice Cream Industry Tbk in 2019 amounted to 7.26%, **in 2020 amounted to 4.05%**, in 2021 amounted to 8.66%, in 2022 amounted to 10.58%, an average value of 7.64% was obtained, meaning that the company's performance in securing return on assets has a good average, exceeding the industry standard set at 5.98% so that it is given a score of 1. However, it can be seen that in year 2020 (the first year of the covid 19 pandemic), the Net Profit Margin dropped very significantly when compared to the same period in the previous year (2019). Again, Pandemic Covid 19 in Indonesia was given significant impact to Ice Cream Industry, including PT. Campina Ice Cream Industry, Tbk.

Meanwhile, the Return On Equity (ROE) of PT Campina Ice Cream Industry Tbk in 2019 amounted to 8,21%, **in 2020 amounted to 4.58%**, in 2021 amounted to 9.67%, and in 2022 amounted to 12.88%, then an average value of 8.83% was obtained, meaning that the company's performance in obtaining a return on equity has a good average, exceeding the industry standard set at 5.98% so that it is given a score of 1.

Based on Table 3, the total score of the three ratios used to assess the financial performance of PT Campina Ice Cream Industry Tbk is **3 (Overall is Good)**. Furthermore, the total score obtained will be given a predicate based on Mulyadi Syarifah's Rating Scale, Anwar, M. Ilham Wardhana H (2022). Fair Value: Scientific Journal of Accounting and Finance. Vol. 5 No. 2 September 2022 P-ISSN: 2622-2191 E-ISSN: 2622-2205 962 (2001).

The predicate of the total score is divided into three. Namely, the company's performance is said to be "Fair," "Average," and "Good." The following is a picture of the company's performance scale:

Figure 3 : Balance Score Card

Fair	Average	Good
-1	0	1

CONCLUSION

After determining the rating scale obtained from Table 2, it can be seen that based on the Balanced Scorecard method carried out in assessing the financial performance of PT Campina Ice Cream Industry Tbk; the performance results are obtained with a sufficient predicate based on the total criteria. This shows that the financial performance of PT Campina Ice Cream Industry Tbk is in a good position because the ratio (NPM, ROA, and ROE) is above the Industry Standard. It's just that it is very visible that in the first year, the Covid-19 pandemic had an impact on the decline in the ratio caused by the decline in the company's revenue due to a large number of restaurants, cafes, entertainment venues that were closed by restrictions lockdown that the Government proposed to reduce the transmission of Covid 19.

However, in 2021, there has been an increase in the profitability ratio because the restrictions imposed by the Government have begun to be relaxed and outdoor activities have started to bustle again.

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CHAPTER 3

The Effect of Application of Information Technology, Dissemination of Tax Regulations and Public Trust on Taxpayer Compliance (Study on Individual Taxpayers in the North Bekasi Region)

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ABSTRACT

The purpose of this study relates to empirical testing of the effect of using e-filing information technology, tax socialization and public trust in taxpayer compliance in North Bekasi. This type of research is quantitative correlation, using purposive sampling with a sample of 100 respondents determined using the slovin formula. Data were obtained using questionnaires which were distributed directly to the respondents. The results of the study concluded that (a) the application of e-filing information technology has a positive and significant effect on taxpayer compliance. (b) Tax socialization has a positive and significant effect on taxpayer compliance. Public trust has a positive and significant effect on taxpayer compliance. The implication of the research is to have a positive influence on the government, especially the Directorate General of Taxes, taxpayers and the public in the context of fulfilling tax rights and obligations. Taxpayer compliance is a psychological and economic problem, therefore research related to the topic of taxpayer compliance must be carried out over time. Because of that, it is necessary to carry out further research by expanding the scope of research by linking it to culture, social norms and tax inclusion. Taxpayer compliance is a psychological and economic problem, therefore research related to the topic of taxpayer compliance must be carried out over time. Because of that, it is necessary to carry out further research by expanding the scope of research by linking it to culture, social norms and tax inclusion.

Keywords: Use Information Technology, Dissemination Taxation, Public Trust and Compliance Taxpayers

1.1 Introduction

Taxes play an important role for the Indonesian economy because the taxes are the main source of the Indonesian state to finance the Government Revenue and Expenditure Budget (APBN). Tax revenue is one of the largest sources of state revenue, the taxes obtained are used by the government to finance national development. Even though it has great potential in developing the country, taxes must also be accompanied by awareness of the taxpayer. Taxpayer compliance in Indonesia is still relatively lacking, so that it has the impact of not receiving taxes that have not reached the target, therefore this has an effect on not receiving taxes that do not reach the target (Solekhah, 2018).

The role of tax revenue is very important because it is one of the sources of state revenue which makes a sizable contribution to financing state spending and development and must be paid to the state budget or the state revenue and expenditure budget (Marcori, 2018). It is clear that tax revenue is state revenue which makes a large contribution. From the table above it can be seen that the percentage of tax compliance is still fluctuating. In 2018 the percentage of taxes to the State Budget was 78%, then in 2019 it had increased by 79%, in 2020 it had decreased by 78% and in 2021 it was 77%. State revenue from the tax sector can be maximized if it is supported by a high level of taxpayer compliance in fulfilling their tax obligations. The current taxation process in Indonesia uses a self-assessment system, which means that the State as a tax collector entrusts the process for registration, calculation, payment and reporting of its tax obligations to be carried out by taxpayers independently. Because of this, the factor of taxpayer compliance is also very important to increase tax revenue by the State.

Based on the report on the realization of taxpayer compliance registered at KPP Pratama Bekasi Utara in 2022 in reporting Annual Tax Returns (SPT) and paying taxes there has tended to be an increase in the last five years. The Directorate General of Taxes (DGT) noted that the ratio of taxpayer compliance in reporting annual tax returns will reach 81% in 2022, with 96,000 reported SPT reports out of 511,000 taxpayers. If you look at the past five years, in 2018 the compliance ratio was 72%. In 2019 registered taxpayers experienced an increase but their compliance ratio was still the same as the previous year, which was 72%, taxpayer compliance in reporting tax returns increased again in 2020 with a tax ratio of 77% with a total number of reported SPTs of 59 thousand people .

According to (Rita JD Atarwaman, 2020) taxpayer compliance can be interpreted as an attitude or behavior of a taxpayer who carries out all his tax obligations and feels all his tax rights in accordance with the provisions of the applicable laws and regulations. Factors that trigger taxpayer compliance can come from the facilities provided by the Directorate General of Taxes, for example, such as the implementation of e-filing which is not understood by taxpayers, therefore, with tax socialization it can make taxpayers understand and understand that the Directorate General of Taxes has tried to improve services and conduct education so that taxpayers comply with their rights and obligations regarding taxation, so that taxpayers have confidence in the government in managing taxes. In both developed and developing countries, the problem of taxpayer compliance is a significant problem because if taxpayers do not comply it will lead to tax evasion, embezzlement, and smuggling which ultimately leads to reduced state tax revenue (Diantimala, 2018). One of the reasons for the not yet

optimal tax revenue in Indonesia is the low level of taxpayer compliance. Taxes can be contributed by taxpayers using a self-assessment system. The self-assessment system is a reform carried out by the Directorate General of Taxes (HR Handayani & Setianingrum, 2022). One of the reasons for the not yet optimal tax revenue in Indonesia is the low level of taxpayer compliance. Taxes can be contributed by taxpayers using a self-assessment system. The self-assessment system is a reform carried out by the Directorate General of Taxes (HR Handayani & Setianingrum, 2022). One of the reasons for the not yet optimal tax revenue in Indonesia is the low level of taxpayer compliance. Taxes can be contributed by taxpayers using a self-assessment system. The self-assessment system is a reform carried out by the Directorate General of Taxes (HR Handayani & Setianingrum, 2022).

The self-assessment system is a system where taxpayers are entrusted with calculating and self-reporting the taxes owed by the taxpayer. While the tax officer himself is in charge of overseeing it. This means that the success or failure of this system is largely determined by the voluntary compliance of taxpayers and optimal supervisors from the tax authorities themselves. This system is very dependent on taxpayer awareness in fulfilling their tax obligations, there are still many taxpayers who do not comply to report and pay taxes (Handayani & Setianingrum, 2022). The Directorate General of Taxes always strives to provide the best service to taxpayers to make it easier for them to fulfill their tax obligations. The Directorate General of Taxes has made changes to its reporting and payment system, According to (Diantini et al., 2018) E-filing is a way of submitting SPT or notification letters that can be done online and in real time through online media. Based on a decision issued by the General of Taxes Number Kep-88/PJ/2004 namely the launch of e-filing to facilitate taxpayers, e-filing is a tax reporting system that is carried out online with internet media, there is a tax reporting system using e-filing can make it easier for taxpayers to report SPT for 24 hours, 7 working days or holidays with the hope that taxpayers can report their obligations effectively and efficiently. In addition, the existence of e-filing can reduce costs arising from the use of paper. However, the fact is that there are still many taxpayers who do not fully understand how to report SPT online.

This study aims to discuss how the role of information technology or e-filing which is used as a media for taxpayers can encourage taxpayer compliance in fulfilling their obligations. Based on previous research (Diantini et al., 2018) the application of e-filing has a positive and significant effect on individual taxpayer compliance. This is not in line with research (Solekhah, 2018) that the application of the e-filing system does not affect individual taxpayer compliance. The second factor that can affect taxpayer compliance is tax socialization. The Directorate General of Taxes continues to socialize the importance of paying taxes. The Director General of Taxes, Sigit Priadi Pramudito explained that the government's still not maximal tax revenue is not solely the fault of the people. Sigit admitted that his party also did not work optimally. Sigit revealed that the minimal knowledge of taxpayers was due to the lack of socialization from the Directorate General of Taxes. DGT admitted his mistake. From this description it can be said that the non-compliance of the public or taxpayers in paying taxes which causes the tax revenue to not be maximized is not solely due to the taxpayer's fault,

Tax socialization has an important role in increasing taxpayer compliance because with tax socialization, both directly and indirectly, taxpayers will gain understanding and information

regarding tax provisions so that taxpayers understand or understand and are aware of their obligations to deposit and report their tax obligations online. routinely, the importance of holding socialization related to the implementation of the online tax system in payment and tax reporting that is currently in force is one of the ways that the Directorate General of Taxes needs to do to provide information and guidance to taxpayers about everything related to taxation (Ni Made Lisa Rusmayani, 2017). Based on research results (Pratiwi & Jati, 2020) that tax socialization has a positive effect on individual taxpayer compliance. However, different results were found by research (Ainul, 2021) showing that tax socialization has no effect on individual taxpayer compliance. Then the level of trust in the government is also something that can be a driver of taxpayer compliance. Trust is a general opinion held by individuals or social groups that the tax authority is good and works for the good of society at large. Trust can also be a driver of tax compliance. According to (Dewi & Diatmika, 2020) trust is the general belief of individuals or social groups that the tax authority is good and works for the good of many people. Public trust in the government can affect taxpayer compliance Low tax knowledge leads to low public awareness of tax reporting and payment, so that lower tax compliance increases. Because people still consider taxes as mandatory taxes rather than their own participation. Because they see no real benefit for the country or society. Therefore, it is important for the government to be transparent about the amount of tax revenue and what it is used for, and that all tax-related government agenda items are open to the public (Kirchler et al., 2008). Based on the research results (Dewi & Diatmika, 2020) the level of trust has a positive effect on individual taxpayer compliance, this is different from the results of research conducted (Pradhani)

1.2 Problem Formulation

Based on this background, the formulation of the problem in this study is;

1. How does the application of information technology affect individual taxpayer compliance
2. How does the socialization of tax regulations affect individual taxpayer compliance
3. How does public trust influence individual taxpayer compliance

2.1 Attribution Theory

Attribution is a process of impression formation. Attribution refers to how people explain the causes of other people's behavior or themselves, the reason for choosing this theory is the taxpayer's compliance with tax obligations related to the taxpayer's perception in making an assessment of the tax itself. A person's perception of making judgments about something is strongly influenced by the internal and external conditions of that person. (Sudrajat & Ompusunggu, 2015) Behavior that is caused internally is behavior that is believed to be under the personal control of the individual himself, while behavior that is caused externally is behavior that is influenced from outside, meaning that the individual will be forced to behave because of the situation or environment.

2.2 Compliance Theory

Compliance theory was coined by Stanley Milgram (1963). In this theory it is explained about a condition in which a person obeys the orders or rules that have been set. Compliance theory is a theory that explains a condition in which a person obeys the orders or rules given. Taxpayer compliance is a behavior that is based on the condition of awareness of the taxpayer towards his tax obligations while remaining based on the established laws and regulations.

2.3 Taxpayer Compliance

According to (Agnys & Robiyanto, 2017) tax compliance or tax compliance is related to activities to comply with all tax regulations, including: administration, bookkeeping, tax withholding/collection, deposit, reporting, providing data for tax audit purposes and so on. In general, tax regulations will be complied with by taxpayers if the compliance cost is relatively low. Taxpayer compliance is an important aspect considering that the taxation system in Indonesia adheres to a self-assessment system in which the process absolutely gives trust to taxpayers to calculate payments and report their obligations. Furthermore, according to (Henny Zurika Lubis & M. Arief Hidayat, 2019) obedience is one that is motivated by the hope of reward and efforts to avoid punishment. Tax compliance is obedience, compliance, and submission, and implementing tax provisions. Become a taxpayer who is obedient and obedient and carries out tax obligations in accordance with the provisions of tax laws and regulations (Fitria, 2017). In line with the opinion (Nasution et al., 2019) a taxpayer is said to be tax compliant if he complies with all tax obligations and uses his tax rights. According to (Marcori, 2018) taxpayer compliance is absolutely enforced to maximize the efficiency of tax revenue for the Unitary State of the Republic of Indonesia. According to (Hartini & Sopian, 2018) several indicators are needed to measure the level of tax knowledge, namely: 1) Taxpayer knowledge of tax functions, 2) Taxpayer knowledge of tax regulations, 3) Taxpayer knowledge of registration as a taxpayer,

2.4 Application of Information Technology (E-Filing)

The application of information technology such as E-Filing is a way of submitting Annual Tax Letters or Extended Annual Tax Returns electronically which is done online in real time through the website of the Directorate General of Taxes (Directorate General of Taxes, 2009). The application of e-filing is part of the modernization of the taxation system which can affect the level of taxpayer compliance, with e-filing making it easier for taxpayers to report their Annual SPT online and in real time via the internet on the Directorate General of Taxes website. The e-filing system is an administrative system that is used to submit SPT electronically, This system is one of the innovations carried out by the Director General of Taxes so that taxpayers can report SPT more quickly and whenever taxpayers perceive that this system provides benefits for themselves, this will form a positive attitude from taxpayers which will further increase taxpayer compliance. individual in reporting SPT (Agustiningsih

& Isroah, 2016). According to (Rizky Amalia & Wahjoe Hapsari, 2018) states that e-filing indicators are as follows: 1) Security and confidentiality is how strong technological devices are to maintain the security and confidentiality of taxpayer data, 2) Information technology readiness is a collection of organizational information resources, the role of its use, as well as the management who runs it, is it competent in its field,

2.5 Dissemination of Tax Regulations

Tax socialization is an effort carried out by the Directorate General of Taxes in providing understanding, conveying information and fostering the public to be able to understand the importance of taxes for the state. With this socialization, it is hoped that it will be able to encourage public awareness as taxpayers to register, pay taxes and report their tax dependents based on applicable tax laws. In addition, tax socialization can also be an alternative form of communication between the government and taxpayers to consult issues regarding the obligation to pay and report their taxes so as to encourage the growth of trust to manage the taxes they pay and report them to the government. Tax socialization is needed so that taxpayers know universally the important role of taxes for the development of the State so that they are able to participate in developing the State by paying taxes. In addition, tax knowledge is needed so that taxpayers know tax procedures so that implementation in terms of carrying out their tax obligations is in accordance with applicable laws (Sudrajat & Ompusunggu, 2015), then Tax Socialization is measured using indicators according to (Pratiwi & Jati, 2020) is : 1) Socialization is carried out openly and directly, 2) Socialization helps the public, especially taxpayers, in understanding tax advantages for the state, 3) The public or taxpayers understand the applicable tax regulations,

2.6 Public Trust

In the Big Indonesian Dictionary, 2018 belief is a belief or assumption of something that is believed to be real or true. Trust is something that is expected from an honest and cooperative attitude that is based on sharing various values and norms that have the same meaning. Trust in the government is a measure of what the taxpayer expects from the government system and the current law that is based on existing values and norms. This means that the higher the trust in the government, the compliance tends to increase taxpayers. The amount of taxpayer confidence in the government is shown by the belief that the government can carry out development at this time because the people obey paying taxes, the government can manage tax collection results well, the government corrects programs that can prosper the people, the government is very serious about eliminating corruption and is confident with the current government's performance. "Trust is a process of calculating (calculative process) between the costs incurred and the results obtained" (Mardiasmo 2011). "Taxpayers who are satisfied with the services provided tend to carry out their tax obligations in accordance with applicable rules and regulations" (Anggraeni et al., 2013). Tax is a knowledge that must be possessed by every taxpayer and tax apparatus. Furthermore, the level of trust of taxpayers is measured according to research (Purnamasari et al., 2018) 1. Trust in the government, 2. Trust in the legal system, 3.

2.7 Hypothesis Development

2.7.1 Application of Information Technology and Taxpayer Compliance

The application of e-filing is part of the modernization of the taxation system which can affect the level of taxpayer compliance, with e-filing making it easier for taxpayers to report annual tax returns online and in real time via the internet on the Directorate General of Taxes website. Research conducted by (Kusumayanthi & Suprasto, 2019) also obtained the result that e-filing has a positive effect on taxpayer compliance. This is because using the e-filing system can provide benefits and convenience in carrying out tax obligations. The use of the e-filing system can provide comfort, convenience and satisfaction for taxpayers so that compliance will increase, with the ease of using e-filing and taxpayers feel satisfied and comfortable, it will make individual taxpayers more obedient in reporting their taxes. Based on the literature and the results of previous research, the hypothesis proposed in this study is as follows:

H1: Application of information technology has a positive effect on Taxpayer Compliance

2.7.2 Dissemination of Tax Regulations and Taxpayer Compliance

Socialization of taxation which is an important role of the government, especially the Director General of Taxes to become a means of information, knowledge and understanding of taxes to taxpayers. According to (Wardani & Wati, 2018) tax socialization is carried out as an effort to teach or train a human being or group so that they have tax-related knowledge. Thus, to increase knowledge about taxation of taxpayers, it is necessary to carry out tax socialization. Because, if the taxpayer is not given socialization regarding taxation, then the taxpayer will find it difficult to fulfill his tax obligations. Socialization of taxation becomes the belief of taxpayers (individuals) to motivate them to become tax compliant. In previous research conducted by Handayani, HR, & Setianingrum, TD (2022). found that tax socialization has a positive effect on individual taxpayer compliance. Based on the literature and the results of previous research, the hypothesis proposed in this study is as follows:

H2: Dissemination of Tax Regulations Has a Positive Effect on Taxpayer Compliance

2.7.3 Public Trust and Taxpayer Compliance

Trust is something that is expected of honesty and cooperative behavior based on the norms and rules that apply. The taxpayer's perception of his trust in the government is the reason for the action that can influence the taxpayer in making decisions regarding taxpayer compliance in carrying out his tax obligations. The level of trust is an influential factor in the level of compliance with the implementation of state powers in order to fulfill state interests based on trust in the government in the field of taxation between state institutions so that people's welfare can be realized in accordance with applicable laws. The results of the study (Dewi & Diatmika, 2022) show that the level of trust in the government system has a significant positive effect on compliance with paying taxes. That is, when taxpayers have confidence in the government system and applicable laws, taxpayer compliance in paying taxes will also increase. Based on the literature and the results of previous research, the hypothesis proposed in this study is as follows:

H3: Public Trust has a positive effect on Taxpayer Compliance

2.8 Thinking Framework

Based on the background of the problem, the theoretical basis and the explanation above, the conceptual framework that describes the effect of the independent variable on the dependent variable is regarding the effect of implementing e-filing, tax socialization and the level of trust in the government on individual taxpayer compliance (study on wpop at KPP North Bekasi Pratama). The conceptual framework can be described as follows:

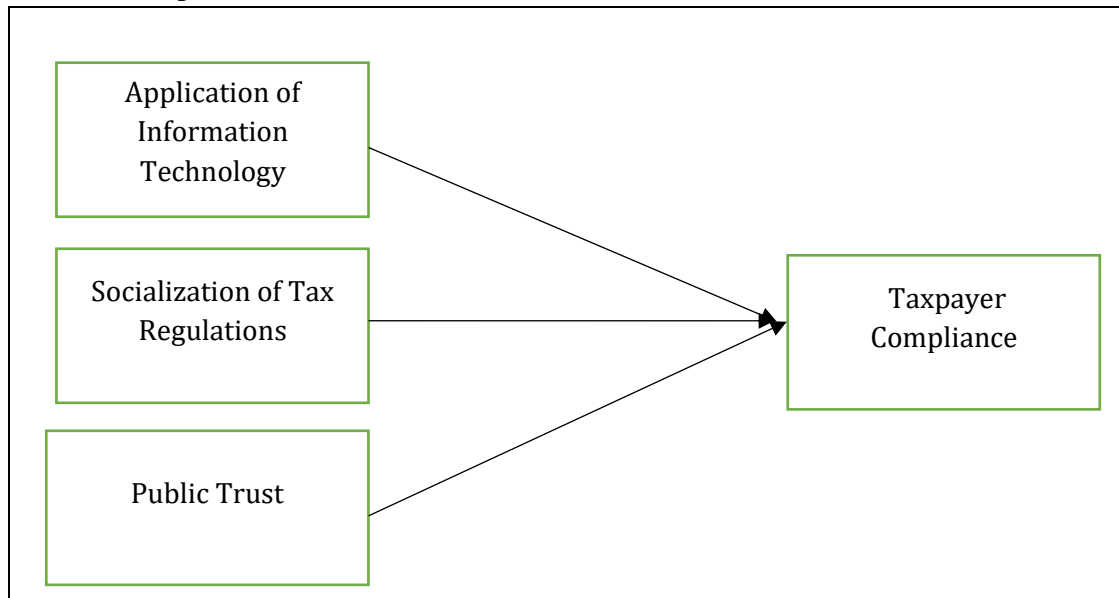


Figure 2. 1 Thinking Framework

3.1 Research Conceptual Model

Conceptual model this study shows the effect of independent variables on the dependent variable. The independent variables in this study are the application of e-filing, tax socialization, and the level of trust in the government while the dependent variable in this study is taxpayer compliance. The basis of this study uses data from the results of distributing questionnaires to individual taxpayers at North Bekasi

Table3. 1 Variable Operationalization

Variable	Definition operational	Indicator	No Questionnaire
Application of E-Information Technology Filing (X1) (Widiasti & Retnani, 2021) (Wirat, 2018)	E-Filing is a means or facility for submitting information on tax obligations	ease of use E-Filing	1
		e-user satisfaction Filing	2
		Security and secrecy	3
		Service quality and efficiency in the use of E-Filing	4
		Taxpayer personal data security	5

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Socialization of Tax Regulations (X2)	Tax socialization is an effort to	Implementation of Tax Socialization	6
(Wardani Wati, 2018)	give information regarding taxation.	Media utilization socialization in tax socialization	7 & 8
		Provides reporting deadline information	9
		Benefits of Tax Socialization	10
Public Trust (X3) (Handayani et al., 2020)	Trust in the government is a measure of what is expected by the taxpayer from the applicable government system.	Taxpayer confidence in performance Directorate General of Tax	11, 12 & 13
		Directorate General of Tax will be fair to society	14,15
		Taxpayers believe the results obtained from taxes will be managed properly	16
Taxpayer Compliance (Y) (Wardani & Wati, 2018)	Taxpayer compliance is a condition in which taxpayers fulfill their tax obligations and implement them tax rights	Compliance taxpayer registration	17 & 18
		Compliance to report SPT	19
		Understand statutory provisions taxation	20
		Administrative compliance periodically	21

3.3 Sampling Method

Primary data collection was carried out using a survey method using a media questionnaire (questionnaire). A number of statements were submitted to the respondent and then the respondent was asked to answer according to their opinion and the respondent was expected to be able to return the questionnaire to the researcher within the allotted time. To measure the respondents' opinions, a five-point Likert's scale was used, starting with number 5 for strongly agree opinion and number 1 for strongly disagree opinion.

Answer Scale	Mark
Number 1	Strongly Disagree
Number 2	Disagree
Number 3	Neutral
Number 4	Agree
Number 5	Totally Agree

Table 3. 2 Sampling Methods

3.4 Study Population

The definition of population according to (Sugiyono, 2017: 115) is a generalization area consisting of objects/subjects that have certain qualities and characteristics set by researchers to study and then draw conclusions. The population in this study are people who are registered as taxpayers in the North Bekasi area.

3.5 Research Sample

The population in this study are all individual taxpayers who are registered at KPP Pratama North Bekasi with the criteria of individual taxpayers having an NPWP, and reporting their annual SPT to KPP Pratama North Bekasi. In determining the number of samples the author uses the calculation formula using slovin So it can be concluded that the sample to be tested by researchers is 100 respondents.

Table 3. 3 Sampling Criteria

No.	Criteria
1.	Individual Taxpayers are registered at KPP PratamaNorth Bekasi
2.	Taxpayers who have NPWP
3.	Taxpayers participating in filling out the questionnaire

3.5 Multiple Linear Regression Analysis

A relationship dependent dependent variable / Y) with two or more independent variables. So it can be interpreted that the multiple linear regression test is the independent variable affecting the dependent variable so that a functional relationship occurs between the independent variable and the dependent variable. The multiple linear regression equation can be formulated as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e \dots\dots\dots$$

Information :

Y = Individual
 Taxpayer Compliance a = Constant
 X₁ = Application of E-filing
 X₂ = Tax Socialization
 X₃ = Level of Trust in
 Government b₁ b₂ b₃ = Regression
 Coefficient
 e = Standard Error

4.1 Research Results

4.1.1 Characteristics of Respondents

Characteristics		Amount	Percentage
Gender	Man	40	40%
	Woman	60	60%
	Total	100	100%
Age	<20 Years	1	1%
	20-25 Years	70	70%
	26-30 Years	16	16%
	>30 Years	13	13%
	Total	100	100%
Education	High School/Equivalent	45	45%
	S1	43	43%
	S2	1	1%
	Other	11	11%
	Total	100	100%
Work	Employee	67	67%
	Businessman	16	16%
	Other	17	17%
	Total	100	100%
NPWP	YES	100	100%

Table 4. 1 Characteristics of Respondents

4.2 Validity Test

This validity test was carried out to determine the validity of the questionnaire that had been distributed. The validity in question is the result of the questionnaire that has been distributed capable of measuring what should be measured. The questionnaire can be said to be valid, if the respondents' answers to the statements contained in the questionnaire are consistent or stable from time to time. Validity test can be done by comparing the value of r count with r table.

Table 4. 2 Validity Test Results

Indicator (X1)	r Count	r Table	Information
1	0.729	0.196	Valid
2	0.762	0.196	Valid
3	0.766	0.196	Valid

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4	0.769	0.196	Valid
5	0.758	0.196	Valid
Indicator (X2)	r Count	r Table	Information
1	0.823	0.196	Valid
2	0.792	0.196	Valid
3	0.793	0.196	Valid
4	0.789	0.196	Valid
5	0.815	0.196	Valid
Indicator (X3)	r Count	r Table	Information
1	0.712	0.196	Valid
2	0.771	0.196	Valid
3	0.731	0.196	Valid
4	0.748	0.196	Valid
5	0.727	0.196	Valid
6	0.768	0.196	Valid
Indicator (Y)	r Count	r Table	Information
1	0.772	0.196	Valid
2	0.757	0.196	Valid
3	0.744	0.196	Valid
4	0.759	0.196	Valid
5	0.801	0.196	Valid

Source: Data has been processed by researchers

Based on table 4.3 above, it can be seen that the r count of all the indicators tested there are 21 valid statements or have a value greater than the r table in this study which is stated to be valid.

4.3 Reliability Test

Reliability test is a tool to measure a questionnaire which is an indicator of the variable. Reliability can be interpreted as the accuracy of measurement. The reliability test is carried out to see how far the consistency of the results of a study is carried out repeatedly, the higher the level of reliability, the more reliable the research can be (Ghozali, 2016)

- If the Cronbach Alpha value is > 0.70 , the data to be tested is declared reliable.
- The Cronbach Alpha value < 0.70 means that the data to be tested is declared unreliable.

Table 4. 3 Reliability Test

Variable	Alpha Cronbach	Information
Implementation of E-Filing (X1)	0.809	Reliable
Tax Socialization (X2)	0.862	Reliable
Level of Trust in Government (X3)	0.835	Reliable
Taxpayer Compliance (Y)	0.824	Reliable

on the table 4.3 shows that Cronbach's Alpha value or E-Filing Implementation variable is 0.809, Tax Dissemination is 0.862, Level of Trust in Government is 0.835 and Taxpayer Compliance is 0.824. Thus it can be concluded that the statements in this questionnaire are reliable because they have a Cronbach Alpha value of > 0.70 .

4.4 Multiple Linear Regression Test

Multiple Linear Regression Analysis is an analysis used to determine the linear relationship between two or more independent variables on the dependent variable. This analysis can be used to predict the value of the dependent variable if the value of the independent variable has increased or decreased, and to determine the direction of the relationship between the independent variable and the dependent variable, whether each independent variable has a positive or negative relationship. Based on the calculation of multiple regression analysis carried out through statistical tests using the SPSS version 25 program, the following results were obtained:

Table 4.4 Multiple Linear Regression Test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	8.281	.790		.000
	PENERAPAN E-FILING (X1)	.188	.043	.273	.000
	EDUKASI PERPAJAKAN (X2)	.389	.036	.608	.000
	TINGKAT KEPERCAYAAN PADA PEMERINTAH (X3)	.069	.031	.136	.028

a. Dependent Variable: KEPATUHAN WAJIB PAJAK (Y)

Source: SPSS Output 25

Based on table 4.5 above, the regression equation is obtained as follows: $Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + e$

$$Y = 8.281 + 0.188 (X_1) + 0.389 (X_2) + 0.069 (X_3) + e$$

Where:

- Y = Individual Taxpayer Compliance a = Constant
 X₁ = Application of E-filing
 X₂ = Tax Socialization
 X₃ = Level of Trust in Government b₁ b₂ b₃ = Regression Coefficient
 e = Standard Error

From the regression equation above it can be explained as follows:

1. The constant regression coefficient value is 8,281 thus without the influence of independent variables, namely the application of e-filing, tax socialization and the level of trust in the government, the value of individual taxpayer compliance (Y) is 8,281.
2. E-Filing Implementation Coefficient (X₁) = The coefficient value of e-filing implementation is 0.188, meaning that every 1% increase in X₁ will cause an increase in the value of taxpayer compliance (Y) of 0.188.
3. Tax Socialization Coefficient (X₂) = Tax socialization coefficient value of 0.389 means that every X₂ increases by 1% and causes an increase in the value of taxpayer compliance (Y) of 0.389.
4. The coefficient on the level of trust in the government (X₃) = 0.0 means that every X₃ increases by 1% and causes an increase in the value of taxpayer compliance (Y) by 0.069.

4.5 Hypothesis Testing

Partial test (t test) is used to determine the magnitude of the influence of the independent variables namely the Application of E-Filing, Tax Socialization and the Level of Trust in the Government as independent variables partially affect the dependent variable namely Taxpayer Compliance with other independent variables constant, the t test is used to test partially each variable. The results of the t test can be seen in the coefficients table in the sig (significance) column. The basis for decision making is as follows:

Table 4. 5 Test Results t

Coefficients ^a					
		Unstandardized Coefficients		Standardized Coefficients	
Model		B	Std. Error	Beta	Sig.
1	(Constant)	8.281	.790		.000
	PENERAPAN E-FILING (X ₁)	.188	.043	.273	.000
	SOSIALISASI PERPAJAKAN (X ₂)	.389	.039	.608	.000
	TINGKAT KEPERCAYAAN PADA PEMERINTAH (X ₃)	.069	.031	.136	.028

a. Dependent Variable: KEPATUHAN WAJIB PAJAK (Y)

Source: SPSS Output 25

Based on table 4.7 above the results of the t test or hypothesis partially with ttable of 1,985 it is known that:

- a. The variable of implementing e-filling (X1) on taxpayer compliance (Y) has a significance of $0.000 < 0.05$ and has tcountworth 4390 which is greater than ttablewhich means that the implementation of e-filling affects complianceindividual taxpayers (WPOP) at KPP Pratama Bekasi Utara.
- b. The tax socialization variable (X2) on taxpayer compliance (Y) has a significance of $0.000 < 0.05$ and has tcountworth 9,969 which is greater than ttablewhich means that tax socialization has an effect onindividual taxpayer compliance (WPOP) at KPP Pratama Bekasi Utara.
- c. The variable level of trust in the government (X3) on taxpayer compliance (Y) has a significance of $0.028 < 0.05$ and has tcountworth 2,229 which is greater than ttablewhich means that the level of confidence inthe government influences the compliance of individual taxpayers (WPOP) at KPP Pratama Bekasi Utara.

4.6 Determinant Coefficient (R2)

The coefficient of partial determination (R2) is used to measure the factors that have the most influence on the independent variable compared to the dependent variable. A high R2 value indicates that the independent variable has the greatest influence on the dependent variable. The purpose of calculating the coefficient of determination (R2) is to find the independent variable that is more dominant than the dependent variable. The following is the result of the coefficient of determination test.

Table 4. 7 Determination Coefficient Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.888 ^a	.788	.781	.79677
a. Predictors: (Constant), TINGKAT KEPERCAYAAN PADA PEMERINTAH (X3), SOSIALISASI PERPAJAKAN (X2), PENERAPAN E-FILING (X1)				

Based on the table above, it shows that the coefficient of determination R is 0.788. Based on this value, it shows that individual taxpayer compliance is influenced by 78.8% by the variables of e-fiing implementation, tax socialization and the level of trust in the government, while the remaining 28.2% is influenced by other variables.

4.7 Discussion of Research Results

Based on the results of the research that has been done, the following research results are obtained:

4.7.1 Application of Information Technology on Taxpayer Compliance

Based on the results of the hypothesis testing that has been carried out, it is obtained that the significance value of the e-filing application is 0.000, which means that it is smaller than the value $\alpha = 0.05$ and tcount 4.390 is greater than ttable 1.985 so that Ha1 is accepted. By accepting Ha1, it can be seen that the e-filing implementation variable has a positive and significant effect on individual taxpayer compliance (WPOP) at KPP Pratama Bekasi Utara. The better the application of E-Filing the system will provide convenience and satisfaction to taxpayers so that they are more motivated to complete their tax obligations, can be used anywhere and are flexible so that there is no reason for taxpayers to report their obligations. This research is in line with research conducted by (Kusumayanthi & Suprasto, 2019) and (Diantini et al., 2018) that the application of e-filing has a positive effect on taxpayer compliance, because the use of the e-filing system provides benefits and convenience in carrying out obligations the taxation. The e-filing system that is implemented tends to make it easier for taxpayers to report taxes. With e-filing, taxpayers no longer need to wait in long queues at Dropbox or Tax Service Offices (KPP) locations. This is one of the new breakthroughs in SPT reporting rolled out by the DGT to make it easier and more convenient for taxpayers to carry out their tax obligations, and increase taxpayer compliance.

4.7.2 Effect of Tax Socialization on Taxpayer Compliance

Based on the results of the hypothesis testing that has been carried out, it is obtained that the significance value of tax socialization is 0.000, which means that it is smaller than the value $\alpha = 0.05$ and tcount 9.969 is greater than ttable 1.985 so that Ha1 is accepted. By accepting Ha1, it can be seen that the tax socialization variable has a positive and significant effect on individual taxpayer compliance (WPOP) at KPP Pratama Bekasi Utara. Tax socialization is related to efforts to change the perception of taxpayers to become more obedient than before, with socialization giving directions to taxpayers that the tax reported will be received by taxpayers in the form of facilities such as construction of roads, hospitals, cheap education so that the taxes paid by the taxpayer do not reduce the taxpayer's income and can even increase the welfare of the taxpayer and other communities. This is supported by research conducted by (Wardani & Wati, 2018) and (Miftahul Romdhona et al., 2021) that tax socialization has a positive effect on taxpayer compliance. This is because the results of this study indicate that taxation socialization is an important matter that must always be improved by the Directorate General of Taxes, because taxation socialization is able to convey information about taxation to taxpayers so that it can affect taxpayer compliance in fulfilling their tax obligations so that it will increase taxpayer compliance. This is supported by research conducted by (Wardani & Wati, 2018) and (Miftahul Romdhona et al., 2021) that tax socialization has a positive effect on taxpayer compliance. This is because the results of this study indicate that taxation socialization is an important matter that must always be improved by the Directorate General of Taxes, because taxation socialization is able to convey information about taxation to taxpayers so that it can affect taxpayer compliance in fulfilling their tax obligations so that it will increase taxpayer compliance. This is supported by research conducted by (Wardani & Wati, 2018) and (Miftahul Romdhona et al., 2021) that tax socialization has a positive effect on taxpayer compliance. This is because the results of this study indicate that taxation

socialization is an important matter that must always be improved by the Directorate General of Taxes, because taxation socialization is able to convey information about taxation to taxpayers so that it can affect taxpayer compliance in fulfilling their tax obligations so that it will increase taxpayer compliance.

4.7.3 The Effect of Public Trust on Taxpayer Compliance

Based on the results of the hypothesis testing that has been carried out, it is obtained that the significance value of tax socialization is 0.028, which means that it is smaller than the value $\alpha = 0.05$ and t count 2.229 is greater than ttable 1.985 so that Ha1 is accepted. By accepting Ha1, it can be seen that the variable level of trust in the government has a positive and significant effect on individual taxpayer compliance (WPOP) at KPP Pratama Bekasi Utara. The level of trust in the government, in this case the taxpayer considers that the government in its services has not managed its taxes properly so that trust in the government is weak, therefore the Directorate General of Taxes must continue to strive to improve and improve services to increase taxpayer compliance.

Through previous research conducted (Dewi & Diatmika, 2020) and (Jones M et al., 2020) have the same results that the level of trust in the government has a positive effect on individual taxpayer compliance. This means that the higher the trust in the government, the more likely it is to increase taxpayer compliance. The high trust of taxpayers in the government is represented by the belief that the government can carry out development at this time because the people obey paying taxes, the government can manage the results of tax collection well, the government establishes programs that can prosper the people, the government is very serious about eradicating corruptors and believes in current government performance.

5. CONCLUSION

Based on the analysis and discussion of the research results, it can be concluded that (a) the application of e-filing information technology has a positive and significant effect on individual taxpayer compliance (WPOP) at KPP Pratama Bekasi Utara. (b) Tax socialization has a positive and significant effect on individual taxpayer compliance (WPOP) at KPP Pratama Bekasi Utara. Public trust has a positive and significant effect on individual taxpayer compliance (WPOP) at KPP Pratama Bekasi Utara. The research results have positive implications for the government, especially the Directorate General of Taxes, taxpayers and the public in the context of fulfilling tax rights and obligations. Taxpayer compliance is a psychological and economic problem, therefore research related to the topic of taxpayer compliance must be carried out over time. Because of that, it is necessary to carry out further research by expanding the scope of research by linking it to culture, social norms and tax inclusion.

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CHAPTER 4

Analysis of Customer Relationship Management (CRM) implementation at BCA

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ABSTRACT

Business intelligence (BI), expert systems, and customer relationship management (CRM) are three main concepts used in the banking business. BCA Bank utilizes these three concepts to increase operational efficiency, improve decision-making, and enhance the quality of services provided to customers. BI is the process of analyzing data to generate information that is useful to the business. Bank BCA uses BI to gain insights into customer behavior, business performance, and market trends. BI helps Bank BCA to improve operational efficiency and provide better services to customers. Expert systems are artificial intelligence (AI) systems that mimic human decision-making capabilities. Bank BCA uses expert systems to accelerate the decision-making process in various aspects of the business, such as customer complaint resolution, credit applications, and fraud detection. Expert systems enable Bank BCA to improve efficiency and accuracy, and provide faster and more effective services to customers. CRM is a business strategy that aims to improve customer relationships and increase customer loyalty. Bank BCA uses CRM to understand customer needs, preferences, and behavior. CRM helps banks to improve service quality, personalize products and services for customers, and build long-term relationships with customers. These three concepts are important aspects of BCA's business operations. By using BI, expert systems, and CRM, BCA can increase operational efficiency, improve decision-making, and enhance the quality of services provided to customers.

Keywords: Business intelligence, expert system, customer relationship management

INTRODUCTION

Business intelligence analysis involves the use of data analysis tools and techniques to extract insights from the large volumes of data generated by bank operations. This process helps banks make data-driven decisions, understand customer behavior, and optimize their operations to improve performance. Banks use various BI tools such as data visualization software, data mining, and predictive analytics to make sense of their data. Expert systems are AI-based systems that mimic the decision-making capabilities of human experts (Faeni, 2022).

BCA Bank uses expert systems to automate various processes such as fraud detection, loan approval, and customer service. The system helps the bank to improve efficiency, reduce errors, and provide faster service to customers. Customer relationship management (CRM) is a strategy that focuses on building and maintaining strong relationships with customers. Bank BCA uses CRM to understand customer needs, preferences, and behavior. This helps Bank BCA to customize its products and services to meet the specific needs of each customer, improve customer satisfaction, and increase customer loyalty.

In short, Bank BCA uses BI analytics, expert systems, and CRM to improve its operations, make data-driven decisions, automate processes, and provide excellent customer service.

Quantitative Methods

The quantitative method that can be used to evaluate the implementation of CRM (Customer Relationship Management) at BCA (Bank Central Asia) is to use surveys and statistical data analysis. Here are the steps to conduct research with quantitative methods:

1. Determination of population and sample: The intended population is BCA customers who use banking services. From this population, a representative sample is taken and can be used as a reference in research.
2. Questionnaire development: A questionnaire was developed to collect data on customer perceptions of CRM implementation at BCA. The questionnaire must be designed in such a way that it can provide clear and measurable answers.
3. Survey implementation: The questionnaire is distributed to respondents who have been selected as a sample. The survey can be conducted online or through direct interviews with respondents.
4. Data processing: Data that has been collected from the questionnaire is analyzed using statistical methods, such as descriptive analysis, validity test, reliability test, regression test, and hypothesis test.
5. Interpretation of results: The results of the data analysis are interpreted to determine how effective the CRM implementation is at BCA and provide recommendations for improvement if necessary.

In conducting research with quantitative methods, it is necessary to pay attention to methodological aspects such as validity, reliability, and generalizability of the data produced. This can increase the credibility of the research and confidence in the results obtained.

THEORIES AND CONCEPT

Business Intelligence

Business Intelligence can help organizations to improve the quality of decision making, increase operational efficiency, and improve customer satisfaction. The author also points out that BI can be used in various business areas, such as marketing, finance, and operations, (Bano et al., 2021). Business Intelligence has also been used to improve business sustainability. These authors point out that BI can help organizations to gain insight into the social and environmental impacts of their business operations, as well as enable them to make more sustainable decisions, (Abdullah et al., 2021).

Business Intelligence can be used to improve risk management in business. These authors point out that BI can help organizations to identify risks, monitor risks, and take appropriate actions to mitigate risks, (Mijatović and Grčić, 2021). Business Intelligence has also been used to improve business effectiveness through predictive modeling and prescriptive analysis. These authors point out that BI can help organizations to predict customer behavior, improve operational performance, and enhance decision-making, (Abo-Hammour et al., 2021).

Overall, recent research shows that BI continues to be a key focus in modern business and is constantly evolving to meet increasingly complex business needs. In the context of banking, BI can help banks to gain insights into customer behavior, improve operational efficiency, and provide better services to customers, making it very important to develop and use.

Expert System

In research, expert systems are used to diagnose skin diseases in patients. The author points out that expert systems can help doctors diagnose skin diseases more accurately and quickly, and can improve proper treatment, (Raza et al., 2021). Expert Systems can be used to improve production quality in the manufacturing industry.

These authors show that expert systems can help in decision making, machine maintenance, and new product development, (Kamsin et al., 2021). Expert Systems are also used in financial analysis. These authors show that expert systems can help financial analysts in predicting stock performance, estimating investment risks, and making better investment decisions, (Li et al., 2021). Expert Systems can be used to improve the quality of customer service in the retail industry. These authors showed that expert systems can help provide customers with the right advice and solutions, as well as increase customer satisfaction, (Zhu et al., 2021).

Overall, recent research shows that expert systems continue to grow and be used in various fields, and continue to improve service quality, efficiency, and effectiveness in business operations. In the context of banking, expert systems can help banks identify customer needs, provide appropriate advice and solutions, and improve customer satisfaction. Therefore, expert systems are very important to be developed and used in the banking industry.

CRM (Customer Relationship Management)

CRM is used to increase customer satisfaction in the banking sector. The author points out that CRM can help banks strengthen relationships with customers, increase trust, and provide a better experience, (Ali et al., 2021). CRM can be used to increase customer loyalty in the

hospitality industry. The authors point out that CRM can help hotels understand customer needs, provide better services, and strengthen relationships with existing customers, (Kek et al., 2021).

CRM is also used in online sales. These authors point out that CRM can help online sellers understand customer preferences, strengthen interactions with customers, and improve sales effectiveness, (Wang et al., 2021). CRM can be used to improve customer satisfaction in the retail sector. These authors point out that CRM can help retail stores strengthen relationships with customers, increase loyalty, and provide a better experience, (Li et al., 2023).

Overall, recent research shows that CRM continues to evolve and become more important in improving customer satisfaction and loyalty across different business sectors. In the context of banking, CRM can help banks understand customer needs, improve customer experience, and strengthen relationships with existing customers. Therefore, CRM is essential to be developed and utilized in the banking industry.

CRM Implementation at BCA

Bank Central Asia (BCA) is one of the largest banks in Indonesia that has implemented Customer Relationship Management (CRM) in its operational activities. The following are some examples of CRM implementation at BCA:

1. BCA has an effective and efficient service system through mobile banking and internet banking applications that allow customers to conduct banking transactions without having to come to a branch office.
2. BCA also provides responsive customer service via telephone, email, and social media, so that customers can easily contact the bank to obtain information or resolve problems.
3. BCA has an integrated CRM system that assists customers in conducting various transactions and accessing information related to their accounts. This system allows the bank to obtain detailed and accurate information on customer profiles, allowing the bank to provide more personalized and satisfying services.
4. BCA uses sophisticated data analysis systems to monitor customer behavior and make better business decisions. This data is used to understand customer needs and provide appropriate solutions, enabling BCA to strengthen customer relationships and increase customer loyalty.
5. BCA also utilizes chatbot technology to make it easier for customers to get information and solve problems without having to wait long or queue at branch offices.

By implementing effective CRM, BCA can provide more personalized and satisfying services to its customers. This can increase customer trust and loyalty, which in turn can help the bank maintain its position as one of the largest banks in Indonesia.

The stages in the CRM implementation process at BCA Bank are as follows:

1. Identification of customer needs: Bank BCA identifies customer needs through surveys and data analysis of customer behavior. Thus, the bank can find out the preferences and needs of customers and provide appropriate solutions.

2. Collection of customer data: Once customer needs are identified, Bank BCA collects customer data through various sources, such as mobile and internet banking applications, as well as transactions at branch offices.
3. Data analysis: Bank BCA conducts data analysis using advanced analytics technology to understand customer profiles more deeply, look for patterns in customer behavior, and find new business opportunities.
4. Data utilization: Data obtained from analysis is used to provide more personalized and satisfying services to customers, such as the development of new products and improvement of existing services.
5. Implementation: Bank BCA implements the solutions found through data analysis and integrates them into its existing CRM system. These solutions include customer service, mobile and internet banking applications, and chatbot technology.
6. Evaluation: Bank BCA conducts regular evaluations to ensure that the implemented solutions are working well and providing benefits to customers. The results of these evaluations are used as input to improve performance and enhance existing services.

By implementing this CRM implementation process, Bank BCA can provide more personalized and satisfying services to its customers, increase customer trust and loyalty, and maintain its position as one of the largest banks in Indonesia.

Benefits of CRM at BCA

CRM (Customer Relationship Management) is a business strategy that aims to build long-term relationships with customers by understanding their needs and wants and providing the best service. The benefits of CRM at BCA include:

1. Increase customer loyalty: By understanding customer needs and wants, BCA can provide the best service and provide a pleasant experience for customers. This can increase customer loyalty to BCA.
2. Acquire new customers: By conducting appropriate and effective marketing, BCA can attract new customers and increase market share.
3. Improving operational efficiency: By effectively managing customer relationships, BCA can obtain accurate and relevant customer data, thereby improving operational efficiency.
4. Improving customer retention: By using CRM, BCA can identify customers who are at risk of leaving the Bank and take preventive action to retain these customers.
5. Increase profitability: By increasing customer loyalty, acquiring new customers, improving operational efficiency, and retaining customers, BCA can increase the profitability of its business.

Expert System Analysis on CRM Implementation at BCA

An expert system is a computer system that uses knowledge and inference to solve problems that usually require human expertise. CRM implementation at BCA Bank can be said to be a problem that requires human expertise, because it involves many factors such as customer data, data analysis, and selecting the best solution for customer needs. In this case, an expert system can help Bank BCA in obtaining more accurate and faster solutions in implementing CRM.

Expert systems can utilize AI and machine learning technology to identify customer behavior patterns and recommend the most appropriate solution for each customer. Expert systems can also help Bank BCA provide better customer service by providing fast and accurate answers to customer questions, as well as helping customers choose the right product or service according to their needs. In addition, expert systems can also help Bank BCA improve efficiency and productivity. By automating routine tasks such as data collection and analysis, BCA staff can shift their focus to tasks that require human expertise, such as providing appropriate advice and solutions to customers.

However, implementing an expert system also comes with several challenges, such as ensuring data integrity, guaranteeing customer privacy, and ensuring system security. Therefore, BCA Bank needs to carefully consider all the factors involved before deciding to implement an expert system in their CRM implementation.

Overall, the use of expert systems in BCA's CRM implementation has great potential to improve customer service, increase efficiency and productivity, and provide a competitive advantage for the bank.

Weaknesses of CRM implementation at BCA according to Expert systems

Although the application of expert systems in the implementation of CRM at BCA has many advantages, there are some disadvantages that need to be considered. Here are some of the disadvantages of implementing CRM at BCA according to expert systems:

1. Depends on the quality of incoming data: Expert systems require accurate and structured data to provide accurate recommendations. If the incoming data is unstructured or inaccurate, then the recommendations generated by the expert system will also be inaccurate.
2. High cost: Expert system implementation is costly as it requires experts to develop and implement the system. In addition, expert systems also require adequate technological infrastructure.
3. Inflexibility: Expert systems can only provide recommendations based on the knowledge that has been entered into the system. Therefore, if there is a change in policy or business strategy, the expert system must be changed manually.
4. Limitations in handling unexpected situations: Expert systems cannot handle unexpected situations or situations that have never happened before. Therefore, it needs to be balanced with human expertise in handling complex situations.
5. Potential errors in inference: Expert systems can make inference errors if the rules that have been entered into the system are inaccurate or incomplete. Therefore, it is necessary to conduct regular testing and evaluation to ensure its accuracy and effectiveness.

When implementing CRM at BCA, it is important to remember that expert systems are not the only solution that can be used. It is necessary to evaluate and use various methods and technologies to ensure the success of CRM implementation. Therefore, it is necessary to conduct a careful analysis and evaluation before applying an expert system in BCA's CRM implementation.

CONCLUSIONS

Based on the analysis of expert systems, the implementation of CRM at BCA using expert systems has significant advantages in improving service quality and customer experience. However, it should be noted that the application of expert systems in CRM also has some disadvantages that need to be considered.

Some of the advantages of implementing an expert system in CRM at BCA are its ability to provide accurate recommendations based on the data and knowledge that has been entered into the system. In addition, expert systems can also improve efficiency and productivity by automating some tasks and processes.

However, there are some drawbacks that need to be considered, such as depending on the quality of the incoming data, requiring high costs, limitations in handling unexpected situations, and potential errors in conclusion making. Therefore, it is necessary to conduct a thorough analysis and evaluation before implementing an expert system in the CRM application at BCA. Overall, the implementation of expert systems in BCA's CRM application can improve the efficiency and effectiveness of customer service and provide a better customer experience. However, it is necessary to evaluate and use various methods and technologies to ensure the success of CRM implementation.

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CHAPTER 5

Case Study at Pt. Budi Manunggal in Diy: Analysis of Supply Control of Materials and Supplemental Materials on Production Volume

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ABSTRACT

The goal of this study is to evaluate the effectiveness of PT Budi Manunggal's planning for raw material inventory. This study employs quantitative approaches and probability sampling strategies. A random sample of up to 101 respondents was taken. This study makes use of the Smart PLS 3.0 software, measurement (outer model), namely validity and reliability tests, evaluation (inner model) of the structural model, namely coefficient of determination or R-Square (R²), predictive relevance (Q²), and Model Fit Test (Goodness Of Fit) and hypothesis testing, namely t and F tests. According to this study's findings, Production Volume is positively and significantly impacted by the Raw Material variable. Production Volume is positively and significantly impacted by the Auxiliary Material variable. The findings from the concurrent analysis of the variables for Raw Materials and Supporting Materials have a favorable and significant impact on Production Volume.

Keywords: Production Volume, Supporting Materials, and Raw Materials.

INTRODUCTION

Typically, businesses are founded in order to turn a profit. Contrary to service providers, who only offer their services to clients in order to make a profit, businesses that produce goods work to turn raw materials into finished or semi-finished products in order to turn a profit. Therefore, in this company, the efficient production process is greatly influenced by the purchase of raw materials (Faeni, 2016).

Raw materials are the most efficient component for carrying out the production process. The business will produce a product that is prepared for consumer sale by processing raw materials that are transformed into completed items. In order for the business to continue existing and making a profit, it is necessary that this be done consistently. Therefore, a company must manage raw materials in a controlled way to ensure a smooth production process.

Generally speaking, the acquisition of raw material inventory will differ for each firm, both in terms of the quantity of raw material inventory held by the company and in terms of the management of raw material inventory held by the company. Depending on the determination of each Raw Material purchase period (for example: every week, month, or year), the corporation will import or acquire the raw materials over a period of time (Faeni, 2020).

Inventory control is crucial since raw material inventory is one of the company's assets that plays a significant role in business operations. This is due to the fact that the issue of utilised raw material inventory has a number of potential solutions.

On the one hand, businesses want to retain enough raw materials on hand to instantly complete all manufacturing processes, but doing so is neither practical or efficient because it will raise storage costs, cause products to go bad, and expose them to the possibility of price drops at any time. However, if there is a persistent shortage or exhaustion of raw material inventory, this condition will halt production. Companies want to try to cut costs by lowering the level of raw material inventory on hand, specifically raw material inventory already in the warehouse. Because of the potential for manufacturing to be interrupted due to a scarcity or exhaustion of raw materials, there will be an abrupt rise in purchasing costs. Additionally, if the raw materials used in the production process arrive improperly, the business will have to hold an unexpected supply of raw materials and assume the risk and additional expenses associated with obtaining these supplies, which will reduce business profits (Faeni, 2015)

Here, the task at hand is controlling the raw material inventory, specifically doing so in a way that avoids both excess and shortages of raw material supplies while keeping the price of these supplies to a minimum. Therefore, it is important to properly manage the inventory of raw materials to ensure that it is available in the proper quantity and at the proper time, preventing interruptions in the production process and lowering the costs of raw material inventory.

Given the significance of raw material inventory and the costs that must be allocated, the company must manage raw material inventory both for the production process and for planning the next production process. This is necessary to ensure that raw material inventory is neither too large nor too small, which could lead to higher inventory costs and the occurrence of shortages or out-of-stock situations. The proper number of raw materials will be purchased on

schedule and in the right amount as a result of this raw material inventory control. (2008) (Nugraha et al.)

THEORIES AND CONCEPT

Materials, Raw

It will be joined together or the manufacturing material will merge with the finished items to generate finished goods, which is what raw material does. Additionally, because raw materials and auxiliary materials have a significant impact on both the production process and the end product, they cannot be separated in a business. In 2023, Hanggana et al. According to the definition of raw materials given above, raw materials are the essential components that a corporation uses to produce or create a product.

Large-scale business owners should be aware of the price of raw materials. This is because a company's development will be based on the price of raw materials. Therefore, the investment of raw material costs is essential for business owners.

Every person will gain from raw materials that can be transformed into final products, especially when doing daily tasks. Thus, in order to continue producing finished goods and satisfy the needs of each individual, businesses must maintain the stability of raw materials. In 2023, Hanggana et al.

Auxiliary Materials

Auxiliary materials are materials that are used in the production process, but are not part of the main raw materials for the product being produced. Usually, auxiliary materials are used to complement the function, improve efficiency, and safety of the product. Thus, the absence of these materials will only reduce the effectiveness of the product without eliminating the function of the product itself.

Auxiliary materials are also often equated with indirect materials. In simple terms, the absence of indirect raw materials can disrupt the production process. Meanwhile, without auxiliary materials, the production process can still run but can reduce product quality and efficiency. The auxiliary materials of PT Budi Manunggal are: thread, sateen seal, magic tape, crest, vinyl tape, ball marker.

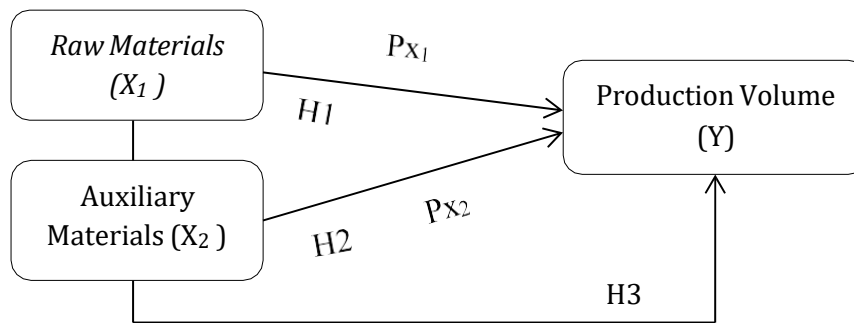
Quoting Article 1 paragraph (3) of Minister of Industry Regulation 21 of 2021, auxiliary materials are materials that are used as a complement in the production process to produce products that function perfectly according to the expected product parameters. (Natalia et al., 2022)

Manufacturing Volume

Production volume is the amount of product that a company should create in a certain time frame. Planning for capacity, area, and production volume aims to achieve an adequate and balanced flow by controlling the amount of work orders arriving from the work centre. In 2009, Prasetya et al.

Framework and Hypothesis

Figure 1 Conceptual Model



Source: Primary Data, 2023

Hypothesis:

- $H1$: Raw materials have a positive and significant effect on the production volume of PT Budi Manunggal.
- $H2$: Auxiliary materials have a positive and significant effect on the production volume of PT Budi Manunggal.
- $H3$: Raw materials, auxiliary materials simultaneously have a positive and significant effect on the production volume of PT Budi Manunggal.

RESEARCH METHODOLOGY

The subjects of this study are the PT Budi Manunggal employees in Yogyakarta. The study was carried out between November 1, 2022, and January 24, 2023. Because I used online sampling, I was able to conduct this research in a location that was very accommodating for respondents to complete my questionnaire at any time and from anywhere.

Research Explanation:

The two factors that make up this study variable are as follows:

The existence of endogenous (bound) variables can be changed or caused by independent factors. Three exogenous variables—Raw Materials (X_1), Supporting Materials (X_2)—are present in this study.

Inherent Variable

The dependent variable is another name for this endogenous variable. The dependent variable is the one that is impacted or has an impact when an independent (exogenous) variable is present. Production Volume (Y) is the dependent (endogenous) variable in this study.

Operating Parameters

It is vital to explain the researched factors in order to ensure that everyone understands them equally. The variables included in the formulated hypothesis are the variables operationalized in this study. The definition of characteristics that give an overview of observations serves as the foundation for operations. Operational definitions frequently give the details required to measure the study's variables. According to the theoretical studies that have been examined, the

variables, dimensions, indicators, and instruments employed in the research, as well as the measurement scale, are as follows:

Table. 1. Operational Variables

VARIABLES	DIMENSIONS	INDICATOR	INSTRUMENTS	SCALE
Variables Independent (X)	Raw Materials (X1)	1. Raw Material Inventory Control Uses Production raw materials Benefits of Production Raw Materials Importance of Production Raw Materials	The production process can run smoothly, there is no shortage of inventory and minimal inventory costs are obtained (X1 ,P1) To produce finished goods (X1 ,P2) Increase the quantity of goods or services (X1 ,P3) Raw materials play an important role in the process of production and distribution of a product (X1 ,P4)	Likert 1-5
Independent Variable (X)	Auxiliary Materials (X2)	Benefits Uses of Production Auxiliaries	Complementing functions, improving efficiency and product safety (X2 ,P1) Used as a complement in the production process to produce products whose functions are perfect (X2, P2)	Likert 1-5
Dependent Variable Performance (Y)	Production Volume(Y)	Productivity Product Quality Efficiency	Successful increase in production every year (Y1, P1) Can make products with maximum quality (Y1, P2) Efficiency in working in accordance with expectations and time set by the company	Likert 1-5

Individuals and Sample

The term "population" refers to a category of things or persons that have been given certain attributes and characteristics by researchers for the purpose of study and subsequent inference. The population is a collection of all measurements, items, or people being researched, according to the aforementioned opinion. The sample, meanwhile, reflects the size and characteristics of the population.

In this study, a total of 50 employees were included in the population, which was chosen at random from among other employees or employees. The Slovin formula was used to calculate the sample size. The number of samples used in this investigation was determined using the formula below:

$$n = \frac{N}{1+N(e)^2}$$

Description:

n : Number of samples
 N : Total population
 e : Error rate

From the total population of 50, the sample (n) was obtained as follows:

50

$$n = 1 + 50 (0,2)2$$

$$50$$

$$n = 21$$

$$= 2.3 \text{ or rounded to } 2$$

Thus the number of samples in this study were 25 respondents

Data Collection Techniques and Types

A questionnaire was used to collect data, which is a method that involves giving each responder a list of statements to choose from. The survey method was used to collect the data for this study, and a closed questionnaire tool with two parts was used. The first part of the tool asked for the respondent's personal information, and the second part collected information on the dimensions of the construction that was developed for the study. The respondent had to select one of the alternative answers, which were intervals.

Test for Model Fit

A model fit test is performed to determine whether the data collected is consistent and fits the model. If the model doesn't match the data, it's important to identify the model's flaws and figure out how to fix them for a better match. According to the Goodness Of Fit principle, the model is correct and good if it matches the data. The following table provides a summary of model measurements in PLS:

Table 2: Model fit test

Measurement Model	Criteria
SRMR	< 0.08 (Henseler, 2014)
NFI	> 0.90 (Lohmöller, 1989)
Theta rms	< 0.12 (Lohmöller, 1989)

Source: Gozali's Smart PLS Book, 2015

Research and Test Instrument Valid statements are used as the basis for testing. The calibre of the collected data can be used to determine the validity and dependability level. Additionally, it can be said that the criteria used to make a statement are valid and have a respectable reliability value.

Table 3. Rule of Thumb Evaluation of Measurement Model (Outer Model)

Validity	Parameters	Rule of Thumb
Convergent Validity	Loading Factor	> 0.70 for confirmatory research. > 0.60 for exploratory research.
	Communality	> 0.50 for confirmatory and exploratory research.
	AVE (Average Variance Extracted)	> 0.50 for confirmatory and exploratory research.

discriminant Validity	Cross Loading	> 0.70 for each variable.
	Square Root of AVE and correlation between latent constructs	AVE square root > correlation between latent constructs

Validity Exam

When a measurement scale performs as intended and takes the appropriate measurements, it is said to be valid. If the measurement scale is flawed, it will not measure the data or perform the intended function, making it useless to the researcher. A measuring device with high reliability will have a low error variance, or, to put it another way, the test fulfils its objective by yielding results that are consistent with it. so that the information gathered is accurate. The degree to which a measuring device measures what it intends to measure is known as validity (Kuncoro et al., 2003).

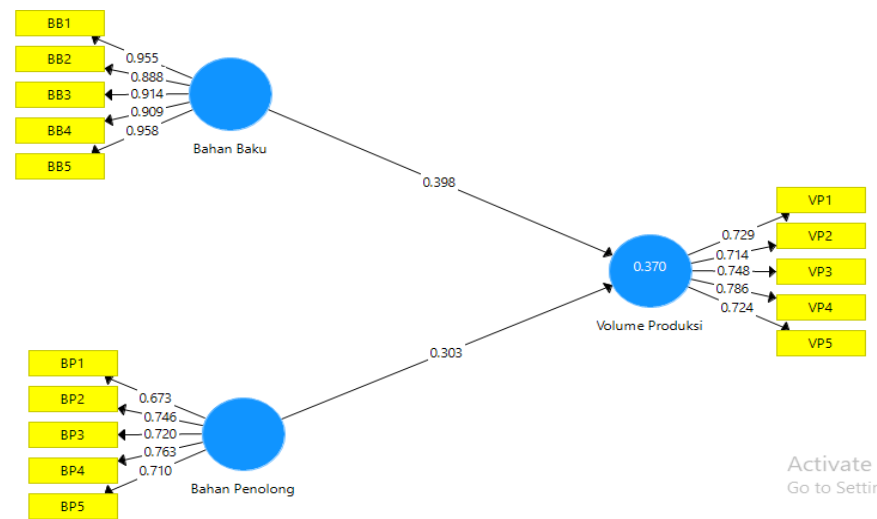
Test of Reliability

The reliability test is conducted to see if the data collecting tool exhibits the level of precision, accuracy, stability, or consistency of the tool in disclosing specific symptoms from a group of people despite it being conducted at various periods. When a symptom is measured multiple times and the results are consistent, the tool is said to be trustworthy (Nasution et al., 2003).

The measurement model's (outer model) evaluation

A measurement model evaluation looks at how variables, constructs, and their indicators relate to one another. By using the PLS Algorithm process in SmartPLS Software, it is possible to obtain the measurement model for the validity and reliability test for the equation model. The display results of the PLS Algorithm process are shown in Figure 1. below:

Figure 1. *Outer model image*



Results of Validity Tests

Convergent validity and discriminant validity are the two criteria that can be used to judge the validity test in SmartPLS 3.0. The value of the loading factor can be used to assess convergent

validity, whereas the value of the Average Variance Extracted (AVE), its square root, and cross loadings can be used to assess discriminant validity.

Table 4. Convergent validity test (Loading factor)

Statement Number	Testing Results	Validity Description
<i>Raw Material Statement</i>		
X1 .1	0.955	Valid
X1 .2	0.888	Valid
X1 .3	0.914	Valid
X1 .4	0.909	Valid
X1 .5	0.958	Valid
<i>Auxiliary Material Statement</i>		
X2 .1	0.673	Invalid
X2 .2	0.746	Valid
X2 .3	0.720	Valid
X2 .4	0.763	Valid
X2 .5	0.710	Valid
<i>Production Volume Statement</i>		
Y1 .1	0.729	Valid
Y1 .2	0.714	Valid
Y1 .3	0.748	Valid
Y1 .4	0.786	Valid
Y1 .5	0.724	Valid

Table 4's convergent validity test results indicate that the indicators are pronounced valid because the value is > 0.5 , allowing for all of them to be processed.

Table 5 Average Variance Extracted (AVE) Value

Variable/Construct	Average Variance Extracted (AVE) (>0.5)
<i>Raw Materials (X1)</i>	0.856
<i>Auxiliary Materials (X2)</i>	0.523
Production Volume (Y)	0.549

Table 5 shows that each variable has an AVE value over 0.5, indicating that it is considered to be discriminately valid based on AVE.

Table 6. Reliability Test Results for Each Variable.

Variable/Construct	Testing Results		Reliability Description
	<i>Cronbach Alpha</i> ()	<i>Composite Reliability</i> ()	
<i>Raw Materials</i> (X1)	0.958	0.968	Reliable
<i>Auxiliary Materials</i> (X2)	0.772	0.845	Reliable
Production Volume (Y)	0.796	0.859	Reliable

According to Table 6, which shows that each variable's Cronbach's alpha value is greater than 0.7 and that each variable's composite reliability is greater than 0.5, it can be said that all of the constructs used in this study are trustworthy.

Structural Model Evaluation (*Inner Model*)

Inner model or structural model testing is carried out to see the relationship between variables / constructs, the significance value of the research model.

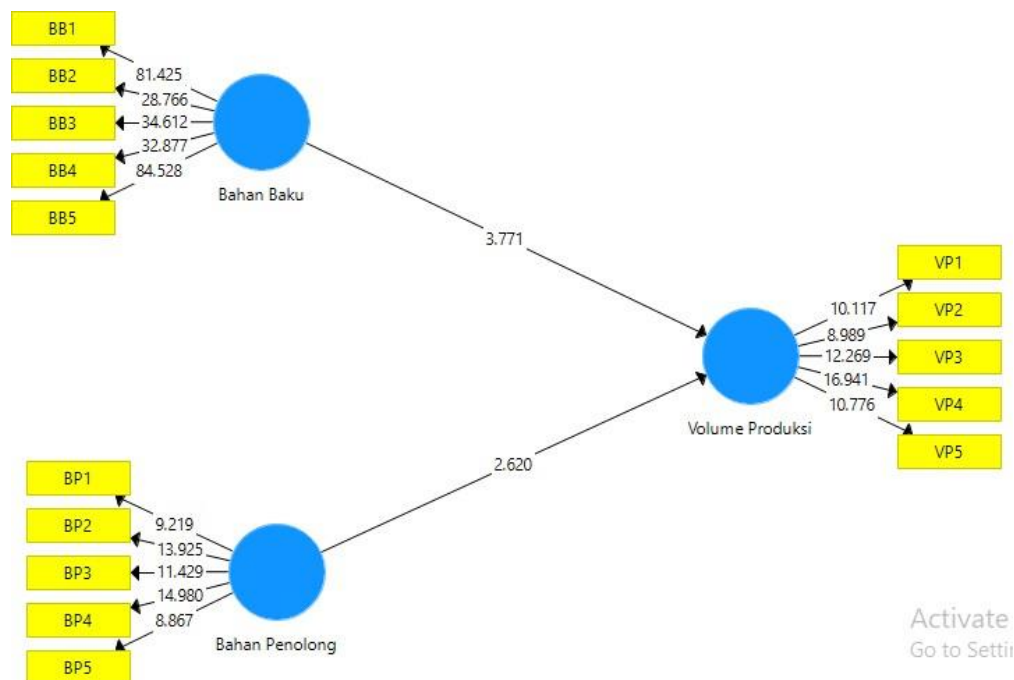


Figure 2. *Inner Model* Image

Table 7. Significance Test Results

Variable Construct	Indicator		T-Statistic	P-Values	Significance
Raw Materials (X1)	X1 .1	Control of <i>raw material</i> inventory is carried out so that there is no shortage or excess.	78.402	0.000	Significant
	X1 .2	Inventory control optimization is measured by the minimum total cost in a certain period.	30.924	0.000	Significant
	X1 .3	<i>Raw material</i> procurement has a huge impact on the smooth running of the process.	35.176	0.000	Significant
	X1 .4	Inventory Control in a good way is important for Inventory Control	33.798	0.000	Significant
	X1 .5	The main <i>raw material</i> used by PT Budi Unggul is sheepskin.	83.466	0.000	Significant
Variable Construct	Indicator		T-Statistic	P-Values	Significance
Auxiliary Materials (X2)	X2 .1	<i>Auxiliary Materials</i> are used as a complement in the production process	8.636	0.000	Significant
	X2 .2	Some of PT Budi Unggul <i>auxiliary materials</i> are still imported from Japan.	14.073	0.000	Significant
	X2 .3	The cost of <i>auxiliary materials</i> has a very important role in the production process of PT Budi Unggul.	11.226	0.000	Significant
	X2 .4	Thread is one of PT Budi Unggul <i>auxiliary materials</i> to make golf gloves.	15.441	0.000	Significant

	X2 .5	The absence of <i>auxiliary materials</i> can reduce the effectiveness of PT Budi Unggul products.	9.226	0.000	Significant
Variable Construct	Indicator		T-Statistic	P-Values	Significance
Production Volume (Y)	Y1 .1	PT Budi Unggul <i>production volume</i> is always increasing every year.	9.105	0.000	Significant
	Y1 .2	PT Budi Unggul <i>production volume</i> changes every year.	8.520	0.000	Significant
	Y1 .3	Production planning is in accordance with the <i>Production Volume of</i> PT Budi Unggul.	12.201	0.000	Significant
	Y1 .4	The number of purchases in 2004 was the highest from 2002 to 2006.	17.477	0.000	Significant
	Y1 .5	The company only produces when there is an order	9.892	0.000	Significant

The table shows that every T-statistic indicator has a value more than 1.96, indicating that all indicators of the variables pertaining to school facilities, the caliber of teachers, and instructional methods are significant.

Table 8. Significance Test Results from Variable to Variable (Inner Model)

Variable/Construct	T-Statistic	P-Values	Significance
<i>Raw Materials</i> □ <i>Production Volume</i>	3.771	0.000	Significant
<i>Auxiliary Materials</i> □ <i>Production Volume</i>	2.620	0.000	Significant

Based on Table 8, it is clear that advertising and sales products have a significant impact on worker performance and compensation has a significant impact on performance. The t-statistic value for advertising and sales products exceeds the significance threshold in the outer model evaluation rule of thumb table in Table 4.

Table 9: Model fit test

Measurement Model	Criteria Table	Testing Results	Description
SRMR	<0.08 (Henseler et, al 2014)	0.089	Model Fit
NFI	> 0.90 (Lohmöller, 1989)	0.572	Model Fit
Rms Theta	< 0.12 (Lohmöller, 1989)	0.287	Model Fit

The SRMR, NFI, and rms Theta values are known to match the specified requirements based on the test findings in Table 9, which suggests that the data obtained is consistent and fits the model according to Goodness of Fit.

Table 10. Original Sample

Variable/Construct	Original Sample
<i>Raw Materials</i> (X1)	0.398
<i>Supporting Materials</i> (X2)	0.303

Table 9 demonstrates that every variable has a positive value. The impact of raw materials on supporting materials is 0.398, while the impact of supporting materials on PT Budi Unggul production volume is 0.303.

Table 11. R Square and Adjusted R Square

Endogenous Variable	R Square	Adjusted R Square
Production Volume	0.370	0.357

Based on data research findings, the R-square value for Production Volume is 0.370. In order to determine the coefficient of determination, which illustrates how exogenous variables affect endogenous variables, the R-square value can be employed.

According to the calculation's findings, the coefficient of determination is 37%, which indicates that the exogenous variables used in the model, namely Raw Materials (X1), can only fully explain the endogenous variables of Helping Materials by 37%; the remaining 63% is explained by factors unrelated to this research. A 37% impact of the variable Raw Material (X1) on PT Budi Unggul production volume in JAKARTA.

Additionally, the original sample estimate and t-statistic are used to determine the hypothesis test's results. The evaluation of each claim is as follows:

1. Partial effects of Raw Material Variables (X1) on Production Volume (Y)

H1: The impact of raw materials on performance is favourable and significant. According to the test results in Table 9, the original sample has a positive value of 0.398, and Table 9 demonstrates that the T-Statistic value of 3.267 is greater than 1.96 in accordance with the 5%

significance threshold, allowing it to be deemed significant. According to the test results, Raw Materials positively affect Performance by 0.398 in a substantial way. These findings support the conclusion that H1 is accepted.

2. Auxiliary Material Variables' (X2) Partial Effect on Production Volume (Y)

H2: The influence of auxiliary materials on production volume is favourable and significant. Table 8 demonstrates that the T-Statistic value of 2.620 is greater than 1.96 in accordance with the 5% significance level so that it can be deemed significant based on the test results in Table 10, which demonstrate that the original sample of auxiliary materials has a positive value of 0.303. It is clear from the test results why Auxiliary Materials have a considerable positive impact on Production Volume of 0.303. These findings support the notion that H2 is acceptable.

CONCLUSIONS AND SUGGESTIONS CONCLUSIONS

According to the study's findings, the following conclusions may be made about the impact of PT Budi Manunggal's inventory control of raw materials and auxiliary items:

1. Production Volume is partially and significantly influenced by Raw Materials.
2. Production Volume Is Partially Affected Favourably and Significantly by Auxiliary Materials
3. The Production Volume is Affected by Raw Materials and Supporting Materials at the Same Time Variable

ADVICE

Following are some recommendations that may be made regarding the Inventory Control of Raw Materials and Supporting Materials to the Production Volume of PT Budi Manunggal in DIY based on the research and some of the conclusions above:

1. Given that the research's findings indicate that the raw material variable is the key factor influencing the effectiveness of PT Budi Manunggal's inventory control and production volume in DIY, it is hoped that the company will always pay close attention to the amount of raw material inventory in the warehouse.
2. In order to prevent stock outs during the manufacturing of golf gloves, PT Budi is expected to pay closer attention to the quantity of auxiliary materials in its inventory.
3. It is preferable to include additional factors that can affect purchasing decisions in future research because, according to this study, only 37% of purchasing decisions are influenced by factors like price, trust, and promotion, with the remaining 63% being influenced by factors other than those under study by the researchers, such as product quality.

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CHAPTER 6

Analysis of The Work from Home (WFH) Program and The HR Competencies on Employee Performance During The Covid-19 Pandemic

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ABSTRACT

The purpose of the study was to learn how remote work and HR expertise affected workers' productivity during the COVID-19 epidemic. The statistical method of probability sampling was used for this investigation. This study used a census sampling technique in which all 30 of the Financial Technology Company's Jakarta-based workers were included in the sample. This study uses Smart PLS 4.0 software and performs tests, specifically data analysis methods (descriptive and testing), evaluation of measurement models (external models), specifically: testing validity and reliability, evaluating structural model (internal model), namely coefficient of determination or R-Square (R²), predictive goodness of fit (Q²) and testing relevance model and hypothesis testing, namely t-test and F-test. Human resource capability was found to have a favorable and statistically significant effect on performance. There was no beneficial, statistically significant effect of working remotely on productivity. Results for the HR competency variable found at the same time had a positive and statistically significant effect on productivity.

Keywords: Workload, Work Discipline, Employee Performance

INTRODUCTION

As coronavirus continues to spread throughout Indonesia, authorities at both the national and provincial levels have begun taking preventative steps to halt its spread. The advent of remote work is one example. Competence is crucial for productive and successful business operations. Competence, as defined by Wibowo (2010: 324), is the possession or demonstration of the knowledge, skills, and work attitudes necessary for successful job performance. An organization or government agency expects employees to perform well. With more high-performing employees, your entire organization will be more productive, helping you meet and deliver on your goals (Faeni, 2022). Employees need not only to work formally in the office, but also to enjoy and feel their work so that they are not bored and are more active and diligent in their work. With the above background in mind, the basis of the author's consideration is to examine my Human Resources (HR) related issues during the Covid-19 pandemic with the title "Analysis Of The Work From Home (Wfh) Program And The Hr Competencies On Employee Performance During The Covid-19 Pandemic"

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Work From Home (WFH)

Work from home is a policy that can have an influence on employee performance and employee expertise, so this policy carried out by a company or an organization can have positive and negative effects (Faeni et al., 2021).

When you work remotely, you get compensated to accomplish your job largely from home (20+ hours per week). Employees will be able to better strike a work-life balance if they have the option to work from home. On the other side, it has advantages for the business (Crosbie & Moore, 2004).

Due to the global spread of the Covid-19 epidemic and the subsequent lockdown of all afflicted locations, many businesses began implementing work-from-home (WFH) policies.

Human Resource Competencies

Competence is the possession of the skills, knowledge, and work ethic necessary to carry out or perform a job or task successfully. Thus, competency demonstrates the high level of expertise and knowledge that defines a professional in a given subject (Wibowo, 2007).

Based on these and other considerations, the researcher believes that competence is the employee's demonstrated capability to carry out the duties of their position with proficiency. needs, in order to complete tasks successfully and efficiently.

Employee Performance

The willingness of an individual or group to carry out tasks or improve skills in accordance with their obligations and produce the desired outcomes is an example of good performance. Performance is the outcome accomplished by an individual in light of the standards relevant to the position being filled. Meanwhile, Rivai (in Sandy, 2015) explains that performance, or one's

level of success in one's work over a given time period, is measured against a number of possible outcomes, including predetermined standards, targets, goals, and criteria (Afandi, 2016).

The performance of an individual or group within an organization is defined as the degree to which their work is completed within a specified time frame, within the bounds of their assigned duties and responsibilities, in furtherance of the organization's stated goals, and in a manner that is both lawful and ethical (Soemohadiwidjojo, 2015).

On the basis of studying the work efficiency of some of the above experts, the researcher concludes that the work performance of employees has a close relationship with a person's work results in the workplace. organization, company or agency, the outcome of this work can be related to quality, quantity and timeliness.

Framework of Thought

This theoretical framework theoretically connects variable X or exogenous variables, namely WFH (X_1), HR Competence (X_2) to variable Y or endogenous variable, namely employee performance.

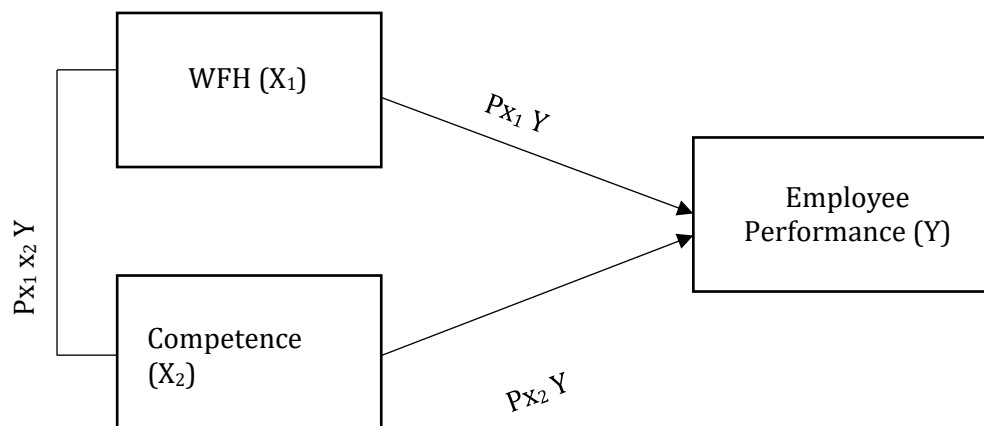


Figure 2.1 Framework of Thought

Source: Primary Data, 2022

Hypothesis

The hypothesis is a stopgap measure for answering research questions. Because the data used to back up the conclusions reached are still lacking, it is only considered a temporary solution (Sugiyono, 2005).

Based on the formulation of the problem that the author has previously described, the following hypothesis can be put forward:

- H_1 It is suspected that WFH has a positive effect on employee performance during the Covid-19 pandemic
- H_2 It is suspected that HR competence has a positive effect on employee performance during the Covid-19 pandemic
- H_3 It is suspected WFH, HR competence has a positive effect on employee performance during the Covid-19 pandemic

Research Methods

Population and Sample

According to Sugiyono (2005), a population is a "generalization area" made up of items or individuals with predetermined attributes and characteristics from which researchers can derive conclusions. Thirty people who work at Financial Technology Company made up the sample for this investigation.

Samples are defined as part of the population that is the actual source of data, in other words, samples are part of the population. The goal of sampling from it is to ensure that the results are generalizable to the full population. Since there were only 30 workers, the authors of this study used the census approach, which involves sampling from the entire population, so the authors made all employees the source of data and used a Likert scale (Singarimbun, 1995).

Data Collection Methods

This research makes use of both primary and secondary sources for its data collecting. Questionnaires, field notes, and reviews of existing literature are all viable options for gathering information. Interviews are an example of an interactive approach of data collecting, while documentation is an example of a non-interactive method. Gathering relevant information for a study is what data collecting is all about.

Variable Operationalization

Variable Definition

Exogenous Variable

Endogenous (dependent) variables can only alter or exist in response to the presence of exogenous (independent) variables. There are three exogenous variables, namely WFH (X_1), HR competence (X_2).

Endogenous Variable

The dependent variable is an endogenous variable. When an independent (exogenous) variable is present, it is the dependent variable that is said to be influenced or to have an effect. Employee performance (Y) serves as the endogenous dependent variable in this analysis.

Operational Definition

Operational is based on the definition of characteristics that provide a description of observations. Operational definitions often provide the information needed to measure the variables under study. Based on the theoretical studies considered, the study components consisting of variables, dimensions, indicators and means and the measurement scales used in this study are:

Table 3.2 Operational Definition of Variables

Variables	Dimensions	Indicator	Instrument	Scale
Work From Home (WFH)	1. Work Environment 2. Mental Health 3. Physical Health 4. Creativity and Productivity	1. State level of work environment 2. Level of distress generated	1. WFH can improve employee performance (X_1 P1) 2. Work stress disorder caused by constraints (X_1 P2)	Ordinal

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		3. The resulting level of health and work balance 4. Creativity and productivity levels generated	3. WFH can maintain Health in maintaining work balance (X ₁ P3) 4. WFH can increase creativity and productivity (X ₁ P4)	
HR Competency	1. Knowledge 2. Expertise 3. Attitude	1. Knowledge level of the job at hand 2. Level of technical expertise possessed 3. Level of initiative in helping coworkers	1. mastering the field of work can improve performance (X ₂ P1) 2. Expertise that benefits the company (X ₁ P2) 3. have a good attitude and behavior in the company (X ₁ P3)	Ordinal
Employee Performance	1. Work result 2. Performance Quantity 4. Work discipline	1. Quality level of performance produced 2. Quantity level of work delivered 3. Level of work discipline on the job	1. good work quality can improve performance (Y,P1) 2. provide optimal performance results (Y,P2) 3. work discipline can improve performance (Y,P3)	Ordinal

Source: Primary Data 2022

Data Analysis Method

Descriptive Analysis

Without making comparisons or drawing conclusions, descriptive analysis is a research technique used to establish the presence of independent variables or on one or more variables (free). This descriptive analysis aims to get an overview of the characteristics of each type of research. With this descriptive analysis using software, namely Microsoft Excel 2019 to tabulate data obtained from questionnaires and characteristics of respondents as well as explanations of other data besides the results of statistical software. In conducting this analysis, a discussion is carried out regarding how of WFH and HR competencies on employee performance after the COVID-19 pandemic, with the following formula:

Average count (mean)

Mean is a group definition technique based on the average value of the group. Mean has the following formula:

$$\bar{x} = \frac{\sum x_i}{n}$$

Description:

\bar{x} = Mean (Average)

$\sum X_i$ = Number of X values i to n

N = Number of samples or lots of data

Standard Deviation

The standard deviation or standard deviation of data collected in a frequency distribution table or grouped data can be calculated as:

$$s = \frac{\sqrt{\sum f_i (x_i - x)^2}}{(n - 1)}$$

Description:

S = Standard Deviation

X_i = X values i to n

X = Average score

n = Number of samples

Evaluation of the Measurement Model (outer model)

Validity and Reliability Test

The data processed in this survey are respondents' responses to a specific questionnaire. Data from questionnaires should first be tested for validity and reliability. A measuring device is good when it does what it's supposed to do and measures what it's supposed to measure. A measuring device is useless if it claims to be invalid because it cannot be measured or cannot be measured.

Reliability tests determine whether data collection tools have a level of accuracy, precision, or consistency for revealing specific symptoms from groups of people despite being given different times. is performed to determine The degree of validity and reliability can be read from the quality of the data obtained. Criteria used to determine statements or questions are said to be valid and authoritative.

Structural Model Evaluation (inner model)

There are a number of metrics that can be used to evaluate the internal model, such as:

1. Coefficient of Determination or R-square (R^2)

Analysis of the effect of external factors on endogenous factors. $R^2 = 0.75$ which is very strong; 0.50 which is moderate; and 0.25 which is very weak (Ghozali and Latan, 2020).

2. Predictive Relevance (Q^2)

R-squared between endogenous latent variables can be used as a metric, providing an interpretation similar to regression. Q-Square The extent to which the model and its parameter estimations produce positive observed values is a measure of the model's predictive significance as a structural tool. If the Q-square value is more than zero, then the model can be used for prediction; if it is less than zero, then it cannot. The formula for calculating Q-square is:

$$Q^2 = 1 - (1 - R_1^2) (1 - R_2^2) \dots (1 - R_p^2)$$

Where R_1^2 , R_p^2 is the R-Square of endogenous variables in the equation model (Maulidya, 2020).

3. Model Fit Test (Goodness Of Fit)

To assess whether the data collected is consistent and fits the model, a model fit test is conducted. If the model does not fit the data, it is necessary to find the cause in the model, and find a way to modify the model to obtain a better fit to the data. According to the goodness of fit, a right and good model is one that successfully accounts for all of the available data. The following table provides a concise overview of the PLS model measurements:

Table 3.4 PLS Model Fit Test

Measurement Model	Criteria
SRMR	< 0.08
NFI	> 0.90

Source: Dawam, 2019

By inverting the sample covariance matrix and the estimated covariance matrix into a correlation matrix, the standard root mean square residual (SRMR) can be utilized as a measure of the absolute value of the mean covariance residual. The SRMR is calculated by subtracting the model-implied correlation matrix from the actual correlation matrix. So, the absolute measure of criterion (model) fit can be calculated as the average magnitude of the difference between the observed and expected correlations. The numbers are below 0.10 and 0.08. RMR has been introduced as a PLS-SEM compliant matrix that can be used to avoid errors in model identification.

Insufficient information is provided by the Normed Fit Index (NFI), which computes the χ^2 value for the proposed model alone. To calculate the Normed Fit Index (NFI), subtract the χ^2 statistic from the statistic for the null hypothesis. Therefore, the NFI returns a value somewhere between zero and one. The greater the fit, the closer the NFI is to 1. If the NFI is greater than 0.90, the fit is excellent; else, it is marginal.

Research Results

Evaluation of the Measurement Model (outer model)

The link between variables/constructs and their indicators is assessed through a measurement model evaluation. Using the PLS Algorithm method in SmartPLS Software, the measurement model for the validity and reliability test for the equation model may be obtained, as shown in Figure 4.1.

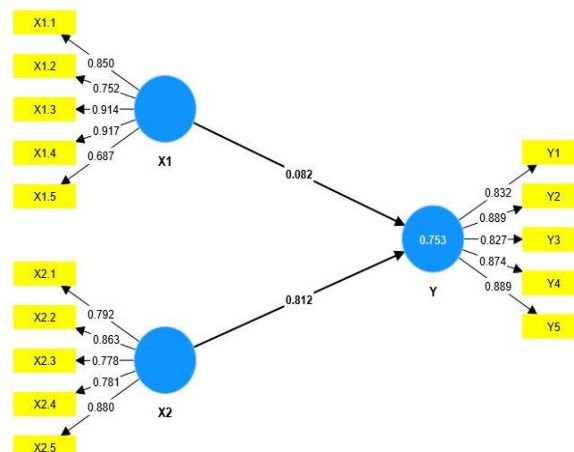


Figure 4.1 Display of Measurement Model (*Outer Model*)

Source: own data processed in 2023

Validity Test

Validity test in *SmartPLS 4.0* can be seen from two things, namely *convergent validity* and *discriminant validity*. For *convergent validity*, it can be measured from the *loading factor* value, while *discriminant validity* can be measured from the *Average Variance Extracted* (AVE) value, *square root of AVE* and *cross loadings*.

The *loading factor* illustrates how much the indicators are related to each variable. The *loading factor* value that must be met in order to be said to be valid in accordance with the *Rule of Thumb* table for Evaluation of the Measurement Model (*Outer Model*) in Table 3.2 is above 0.7, but the *loading factor* value can still be said to be valid even though it is 0.5 for early stage research. The following is an analysis of the *loading factor* of each indicator:

Table 4.7 Convergent Validity Test (*Loading Factor*)

Statement Number	Testing Results	Validity Description
<i>Work From Home</i> Statement		
X ₁ .1	0.850	Valid
X ₁ .2	0.752	Valid
X ₁ .3	0.914	Valid
X ₁ .4	0.917	Valid
X ₁ .5	0.687	Valid
<i>HR Competency</i> Statement		
X ₂ .1	0.792	Valid
X ₂ .2	0.863	Valid
X ₂ .3	0.778	Valid
X ₂ .4	0.781	Valid
X ₂ .5	0.880	Valid
<i>Performance</i> Statement		
Y.1	0.832	Valid
Y.2	0.889	Valid
Y.3	0.827	Valid
Y.4	0.874	Valid
Y.5	0.889	Valid

Source: own data processed in 2023

Table 4.7 displays the results of a convergent validity test, which show that all indicators may be processed with confidence because their value is more than 0.5.

Next, analyze the *discriminant validity* value based on the *Average Variance Extracted* (AVE) value. Based on the *Outer Model Evaluation Rule of Thumb* table in Table 5, the *Average Variance Extracted* (AVE) value that must be met in order to be said to be valid is above 0.5. The AVE value of the research results can be seen in Table 4.8 below:

Table 4.8 Average Variance Extracted (AVE) Value

Variable/Construct	Average Variance Extracted (AVE) (>0.5)
<i>Work From Home</i> (X ₁)	0.687
<i>HR Competence</i> (X ₂)	0.672
Performance (Y)	0.744

Source: own data processed in 2023

Discriminant validity based on AVE is demonstrated by the fact that all of the AVE values in Table 4.8 are more than 0.5.

Reliability Test

The purpose of the reliability test is to establish whether or not a data collection tool can reliably and consistently reveal the same symptoms across a sample of people, despite being administered at different times. When repeated measurements of the same symptom with the same instrument yield the same results, we say that the instrument is dependable (Nasution, 2003).

A construct is said to have good reliability if it meets the value criteria according to the *Outer Model Evaluation Rule of Thumb* table in Table 4.12, namely *Cronbach's alpha* above 0.7 and *composite reliability* above 0.5.

Table 4.9 Reliability Test Results for Each Variable

Variable/Construct	Testing Results		Reliability Description
	<i>Cronbach's Alpha</i> ()	<i>Composite Reliability</i> ()	
<i>Work From Home</i> (X ₁)	0.882	0.916	Reliable
<i>HR Competence</i> (X ₂)	0.877	0.911	Reliable
Performance (Y)	0.914	0.936	Reliable

Source: own data processed in 2023

Cronbach's alpha values for all variables in Table 4.9 are greater than 0.7, and composite reliability values for all variables are greater than 0.5, indicating that all constructs in this study can be relied upon.

Structural Model Evaluation (Inner Model)

Testing the importance of the research model, as well as the relationships between its variables and constructs, can be done through structural or internal model testing. The t-statistic is used to determine the level of significance of the structural model. Bootstrapping allows you to view the results of the Inner model evaluation in the SmartPLS 4.0 program. Here is a screenshot of the structural model's final presentation after going through the bootstrapping procedure.

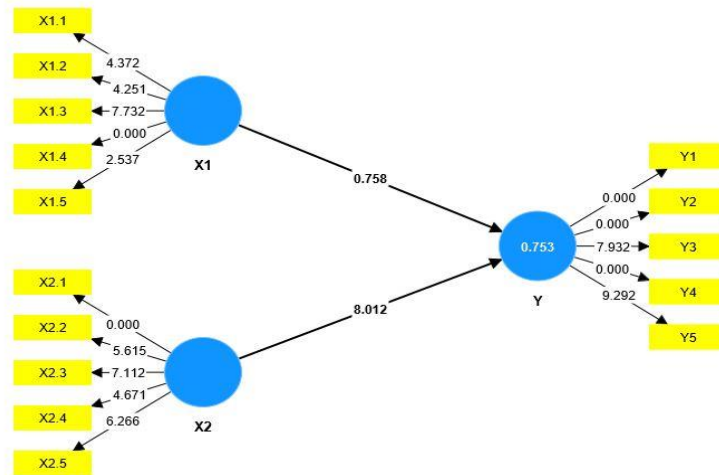


Figure 4.2 Bootstrapping Output Display (Inner Model)

Source: own data processed in 2023

Figure 4.2 displays the *t-statistic* values from indicators to variables and from *exogenous* variables to *endogenous* variables. The following is the result of the *t-statistic* value of the research shown in Table 4.10:

Table 4.10 Significance Test Results from Indicators to Variables (Outer Model)

Variable Construct	Indicator		<i>T-Statistic</i>	P-Values	Significance
Work From Home (X₁)	X ₁ .1	There are clear working hours in the implementation of <i>Work From Home (WFH)</i>	4.372	0.000	Significant
	X ₁ .2	Communication between employees is well established even though only using social media	4.251	0.000	Significant
	X ₁ .3	Superiors are able to monitor the work of their subordinates during the implementation of the WFH policy	7.732	0.000	Significant
	X ₁ .4	Superiors are able to monitor the work of their subordinates during the implementation of the WFH policy	0.000	0.000	Not Significant
	X ₁ .5	Working from home brings family closer together	2.537	0.011	Significant

Table 4.10 Significance Test Results from Indicators to Variables (Outer Model)
(continued)

Variable Construct	Indicator		<i>T-Statistic</i>	P-Values	Significance
	X ₂ .1	Knowing the latest information about work delivered by superiors	0.000	0.000	Not Significant

HR Competence (X₂)	X ₂ .2	Employees are able to complete work by following the methods that have been applied	5.615	0.000	Significant
	X ₂ .3	Professionalism in doing work even if not in the office	7.112	0.000	Significant
	X ₂ .4	High willingness of employees to learn new things	4.671	0.000	Significant
	X ₂ .5	Employees are able to operate online meeting applications well (Zoom/Google Meet)	6.266	0.000	Significant

Table 4.10 Significance Test Results from Indicators to Variables (Outer Model)
(continued)

Variable Construct	Indicator		T-Statistic	P-Values	Significance
Employee Performance (Y)	Y.1	I can achieve the work quality standards set by the company well and optimally.	0.000	0.000	Not Significant
	Y.2	Employees are able to complete the work that has been targeted by the company	0.000	0.000	Not Significant
	Y.3	Time Completion of a job is done on time according to deadlines	7.932	0.000	Significant
	Y.4	Minimize the risk of errors in doing the assigned tasks	0.000	0.000	Not Significant
	Y.5	Employee work effectiveness can be seen from the competence of employees at work.	9.292	0.000	Significant

Source: own data processed in 2023

Table 4.10 displays the value of the *t-statistic* analysis results from the relationship of the indicators to each *exogenous* variable/construct. To find out whether *exogenous* variables affect *endogenous* variables significantly or not, a significance test must be carried out. Testing the significance of a variable's influence can be seen based on the *t-statistic* value with the criteria contained in the *Outer Model Evaluation Rule of Thumb* table in Table 7 for a tolerance value of 5% (0.05). If the *t-statistic* value > 1.96 or P-Values < 0.05 then the variable has a significant effect. Meanwhile, if the *t-statistic* value < 0.05 or P-Values > 0.05 then the variable is influential but not significant. Based on this table, it can be seen that 10 (Ten) *T-statistic* indicators have a value of more than 1.96 and 5 (Five) *T-statistic* indicators have a value of less than 1.96 so it can be concluded that only 10 (Ten) indicators of the *Work From Home* variable, *HR Competencies*, and *Performance* are significant.

From Table 4.10, it can also be seen that there are indicators that have the most significant influence on each variable, this can be seen from the largest *T-statistic* value. So that the indicators that have the most significant influence on each variable are;

- *WorkFromHome* variable (X_1): Superiors are able to monitor the work of their subordinates during the implementation of the WFH policy (X_1 .3), There are clear working hours in implementing *Work From Home* (WFH) (X_1 .1) and Communication between employees is well established even though only using social media (X_1 .2).
- *HR Competency* Variable (X_2): Professionalism in doing work even though not in the office (X_2 .3), Employees are able to operate online meeting applications properly (Zoom/Google Meet) (X_2 .5), and employees are able to complete work by following the methods that have been applied (X_2 .2).
- *Employee Performance* Variable (Y): The effectiveness of employee work can be seen from the competence of employees at work (Y .5), and the completion time of a job is done on time according to the deadline (Y .3).

Table 4.11 Significance Test Results from Variable to Variable (*Inner Model*)

Variable/Construct	<i>T-Statistic</i>	<i>P-Values</i>	Significance
Work From Home → <i>Employee Performance</i>	0.758	0.449	Not Significant
HR Competencies → <i>Employee Performance</i>	8.012	0.000	Significant

Source: own data processed in 2023

Table 4.11 shows that the T-statistic value for Work From Home is less than the significance criteria in Table 5 for Evaluating the Measurement Model (Outer Model), and that the T-statistic value for HR Competencies is greater than the significance criteria in Table 5, leading one to conclude that HR Competencies have a significant effect on Performance.

Model Fit Test (*Goodness of Fit*)

A model fit test is performed to see if the acquired data is reliable and accurate. According to Goodness of Fit, if the model can explain the data, it is valid and good. The study's model fit test results are presented below.

Table 4.12 Model Fit Test Results

Measurement Model	Criteria	Testing Results	Description
SRMR	< 0.08 (Henseler et. al, 2014)	0.103	Model does not fit
NFI	> 0.90 (Lohmöller, 1989)	0.635	Model does not fit

Source: own data processed in 2023

Based on the test results in Table 4.12, it is known that the SRMR, NFI values do not meet the specified criteria, so it means that the data collected does not fit the model according to *Goodness of Fit*.

Hypothesis Testing

The original sample value of the path coefficient reveals the extent to which each exogenous variable exerts its independent (partial) influence on the endogenous variables. The external variable influences the endogenous variable favorably if the initial sample value is positive. An adverse effect of the exogenous variable on the endogenous variable is shown by an initial sample value that is negative. The study's initial sample value is as follows:

Table 4.13 Original Sample

Variable/Construct	Original Sample
<i>Work From Home</i> (X_1)	0.082
<i>HR Competence</i> (X_2)	0.812

Source: own data processed in 2023

From Table 4.13, we can deduce that HR Competency has a favorable effect on employee performance (effect value = 0.812), whereas Work From Home has a negative effect (effect value = -0.082).

Table 4.14 R Square and Adjusted R Square

Endogenous Variable	R Square	Adjusted R Square
Performance	0.753	0.734

Source: own data processed in 2023

The data analysis led to an R-squared for performance value of 0.753. The coefficient of determination, which may be derived from the R-squared value, reveals how much outside factors affect the dependent variables.

Based on the calculation results, the coefficient of determination is 75.3%, which means that the *exogenous* variables used in the model, namely *Work From Home* (X_1) and *HR Competencies* (X_2) are able to explain the *endogenous variable Performance* as much as 75.3%, while the remaining 24.7% is explained by variables outside this study

CONCLUSIONS AND SUGGESTIONS

CONCLUSION

Based on the results of research data obtained and data analysis conducted by researchers in the previous chapter, it shows that Human Resource Competencies affect the improvement of Employee Performance at Financial Technology Company in DKI Jakarta and the Work From Home program shows no effect on Employee Performance at Financial Technology Company in DKI Jakarta.

Furthermore, research also shows a causal relationship between human resource competencies and employee performance. If human resource competencies are improved, employee performance will also increase. Human Resources Competency (X_1) was found to have a 75.3%

impact on Employee Performance (Y) in the Financial Technology Company, whereas other variables or factors had an effect on 24.7%.

ADVICE

The researcher can make a number of recommendations, including these, based on the results of the research and debate that have been provided concerning the impact of work from home and HR competency on employee performance.

- a) Researchers hope that by include a larger number of people in their studies, they will be able to more accurately generalize their findings.
- b) In conducting this research, the researchers encountered many obstacles during the distribution of the questionnaire, which prevented them from directly distributing the questionnaire and monitoring its completion. Future research will hopefully distribute and monitor survey responses directly and explain the survey content to respondents so that the results are better and more accurate
- c) Researchers recognize that there are still many shortcomings in deepening this research material, and it is hoped that further research will further deepen and further develop the research tools. A chance to measure other elements that affect employee performance would be welcome.

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CHAPTER 7

The Business Opportunity of the Salt Industry Responding to The Market Demand In Indonesia

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ABSTRACT

Salt is a very important commodity in people's lives. Apart from being consumed, salt is much needed in several industries, including for preservation and chemical mixtures. Data from the Ministry of Industry for 2022 states that the national salt need for 2022 is based on the salt balance, which is 4.5 million tons, but this year, the plan to absorb domestically produced salt by medium and large-scale salt processing industries is limited to 1,050,000 tons from several salt production centers throughout Indonesia, excluding those absorbed directly by the small and medium industrial sector. The ratio of the national salt demand and fulfillment is 4.5:1. However, there is still limited research on how to fulfill the national salt demand. The data shows an imbalance between the demand and the availability of the national salt supply. This research will show the big chances of investment in the salt industry with a descriptive and qualitative approach. This analysis includes SWOT analysis, Capital Budgeting Overview, and Fundamental Financial Analysis.

Keywords: Salt Industry, SWOT, Capital Budgeting, Finance Analysis



INTRODUCTION

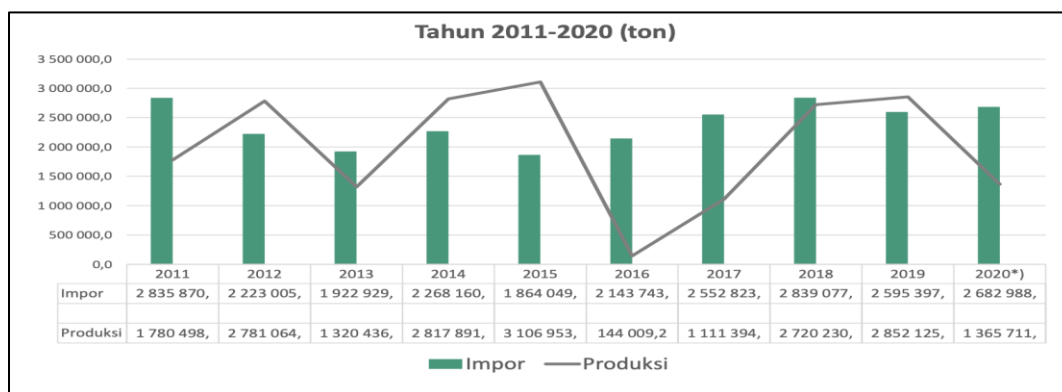
Salt is a very important commodity for people's lives. Apart from being consumed, salt is much needed in several industries, including for preservation and chemical mixtures. Natural salt contains compounds of magnesium chloride, magnesium sulfate, magnesium bromide, and other trace compounds. According to Sulistyaningsih (Wiwin Puspita Hadi et al, 2017). In line with the development vision of the Ministry of Maritime Affairs and Fisheries (KKP), namely "Indonesia is the Largest Producer of Marine and Fishery Products in 2015" with its mission "Prospering the Maritime and Fisheries Communities", the KKP determines meeting the needs of national salt consumption as one of the priorities in marine economic development. Increasing national salt production will be carried out through various efforts such as optimizing potential salt fields, building partnerships, and strengthening institutional capacity between agencies (KKP, 2010).

Data from the Ministry of Industry for 2022 states that the national salt need for 2022 is based on the salt balance, which is 4.5 million tons, consisting of 3.7 million tons for the processing industry and 800 thousand tons for consumption, both for households and commercial purposes. This year, the plan to absorb domestically produced salt by medium and large scale salt processing industries is 1,050,000 tons from several salt production centers throughout Indonesia, excluding those absorbed directly by the small and medium industrial sector (IKM). The data above shows that the ratio of national salt demand and fulfillment is 4.5 : 1. The above data also shows an imbalance between the need for and the availability of national salt supply.

Geographically, Indonesia stretches from 6° North Latitude to 11° South Latitude and 92° to 142° East Longitude, consisting of large and small islands totaling approximately 17,504 islands. Three-quarters of Indonesia's territory is sea (5.9 million km²). Based on data from the Geospatial Information Agency (BIG), Indonesia as a Maritime Country has a total coastline length of 99,093 km. This proves that actually Indonesia has great potential as a salt-producing country, but unfortunately this potential is not matched by an increase in the quantity and quality of salt production in Indonesia. The coastline of Indonesian waters can be one of the capitals for producing salt in large quantities to meet national salt needs because seawater has high salinity or contains NaCl levels.

According to the Secretary of the Maritime Society, Agust Salahuddin, industrial salt is salt with a high NaCl content, which is between 96-97%. In Indonesia, quality industrial salt is needed with a NaCl content of more than 96%. However, the quality of industrial salt in Indonesia is still an obstacle, so that the need for industrial salt still relies on imported salt, especially from Australia. The development of purification technology in Indonesia also still uses precipitating materials, where the process requires quite a lot of energy and the results still cannot meet SNI. This is what affects the production and quality of the salt produced.

Tabel. 1. Salt Production and Import in Indonesia from Year 2011-2020



Source: Kementerian Kelautan dan Perikanan Republik Indonesia



Putri, et. Al (2020) states that the low production of industrial salt in Indonesia is caused by the absence of a salt industry that is worked on in a sustainable manner to anticipate the needs of the community, causing the government to still import salt every year. In addition, salt production in Indonesia also only relies on the results of local pond farmers. Another factor is that the production techniques and equipment used in the salt production process are still very traditional, and salt production is very dependent on the weather, which generally only allows salt to be produced in just 4 months. The salt production period in Indonesia is much shorter when compared to Australia because the Australian climate allows salt production for up to 8 months with much more high quality salt production.

Indonesia has been able to meet the need for salt for domestic consumption, but the need for industrial salt has not been met through domestic production so that meeting the need for domestic industrial salt still relies on imports. This is also a problem that needs to be resolved immediately. Therefore, based on the Regulation of the Minister of Industry of the Republic of Indonesia number 88 of 2014, one of the government's long-term goals (2010-2025) is to intensify the salt industry to increase the productivity of salt fields and the quality of salt products so that later Indonesia is able to be self-sufficient in industrial salt and various industries. salt with 95% NaCl content and some industrial salt has been able to import substitution of 30%. The need for Industrial salt always increases every year around 5% - 7% in addition to the expansion of the capacity of existing industrial users, there is also the addition of new industries that require salt such as the soda ash industry. The industry still depends on imports, due to quality and guaranteed supply. The government needs to encourage the industrialization of salt to reduce dependence on imports.

Based on these problems, the salt industry is seen as a promising business opportunity, given the national salt demand which is increasing every year. This study aims to provide a comprehensive analysis of the feasibility of the salt business. In addition, this research also aims to support the Government's long-term program in efforts to increase national salt productivity.

❑ RESEARCH OBJECTIVES

1. To analyze and forecast Indonesia industrial salts market on the basis of source, manufacturing process and application.
2. To analyze the opportunities in the industrial's salts market corresponded with Salt Import Policy in Indonesia.

❑ RESEARCH METHOD

This study described the financial modelling of salt industry. This research used SWOT analysis, Capital Budgeting analysis, and Fundamental Financial analysis.

❑ LITERATURE REVIEW

1. Signalling Theory

According to Jogiyanto (2013), signaling theory emphasizes the importance of information released by companies on investment decisions of parties outside the company. Information is an important element for investors and business people because information essentially provides information, notes or descriptions for past, present and future conditions for the survival of a company and how the market for securities is. Complete, relevant, accurate and timely information is needed by investors in the capital market as a tool analysis to make investment decisions. This study seeks to provide positive news/signals obtained from the results of the analysis of various methods that have been selected regarding business projections and potential in the salt industry.

2. Swot Analysis

Numerous practitioners, marketing researchers, and corporate marketing and strategy students have all utilized SWOT. It is also a common and well-liked instrument. The tool is used to examine alternatives and difficult decision circumstances (Helms, M. M., & Nixon, J., 2010). SWOT analysis is a useful framework for examining an organization's Strengths, Weaknesses, Opportunities, and Threats (or a project's), which aids in addressing the efficiency of project planning and execution (GURL, E., 2017). Kim (2005) defines SWOT analysis as a tool used to evaluate a company's factors in terms of their respective strengths, weaknesses, opportunities, and threats.

3. Capital Budgeting

Capital budgeting is employed as a vital tool for planning, managing, and allocating scarce resources among competing demands. The ability to use capital budgeting techniques to make better decisions and be able to defend the choice of certain capital investments among competing options makes capital budgeting an essential component of financial planning and decision-making (Anthony et al., 2011). Top management makes the crucial decision to select the best investment project from among competing initiatives, hence it is important to pay close attention to how these projects are evaluated and chosen (Brickley, 2006).

The fundamental capital investment models, according to Mowen et al. (2017), can be divided into two groups: Non-Discounting Models and Discounting Models. The time value of money is not taken into account by non-Discounting models, whereas Discounting Models explicitly consider it. The most prevalent capital budgeting techniques in the public finance literature include Net Present Value (NPV), Internal Rate of Return (IRR), Payback period (PB), Return on Investment (RoI), and Weighted Average Cost of Capital (WACC) method.

4. Fundamental Financial Analysis

In this study, a fundamental financial analysis of the feasibility of the salt industry will also be carried out. Some of the matrices/ratios chosen to complete the analysis in this study are:

- **Return on Equity (ROE)**

Fundamental analysis is an examination of a company's state with the intention of estimating or analyzing a stock's value. The analysis' findings are then applied to determine the company's performance and potential for future growth. Several financial ratios can be employed in

fundamental analysis to examine a company's performance or financial situation (Kurniawan, 2021). Return on equity is one of the ratios that were employed in the study.

The profitability of a business compares the profit to the capital or asset that produces the profit. In other words, profitability is the capacity of a business to produce profits over time. The profitability of a business compares the profit to the capital or asset that produces the profit. In other words, profitability refers to a business's capacity to produce profits over the long term (Kurniawan, 2021).

- **Net Profit Margin**

According to Brigham and Houston (2013: 107) "Net Profit Margin is measures the size of the company's net profit compared to its sales. According to Hanafi and Halim (2012: 81) "Net Profit Margin is a ratio that calculates the extent to which a company's ability to generate net profit at a certain level of sales." From the opinions of the experts above, the authors conclude that the net profit margin is the ratio between profit after tax to sales. Net profit margin is useful for the results of net sales for a certain period and is used to measure the net profit for every rupiah of company sales. The greater this ratio, the better the company's operating conditions.

❑ RESEARCH FRAMEWORK

This research going to analyze and forecast Indonesia industrial salts market on the basis of source, manufacturing process and application. Then, this research will analyze the opportunities in the industrial's salts market corresponded with Salt Import Policy in Indonesia. According to the research objective above we can revealed the research framework:

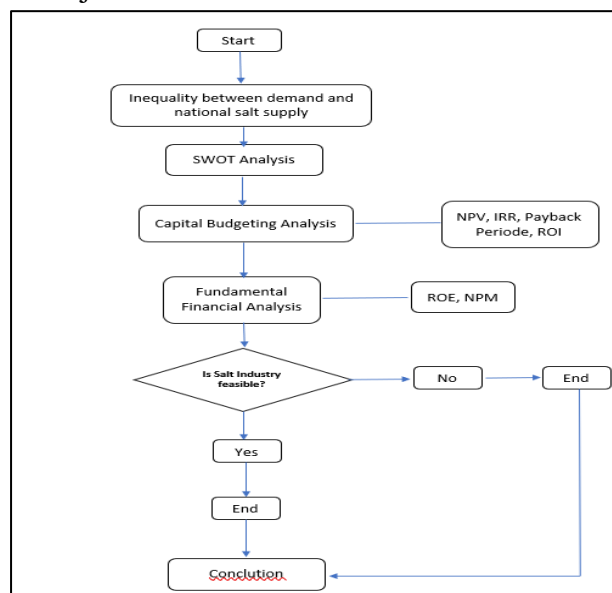


Figure 1. Research Hypotheses Framework

❑ METHODOLOGY

- **Research Approach**

This type of research is descriptive qualitative, which is a technique that describes and interprets the meaning of the data that has been collected by paying attention and recording as many aspects of the situation under study at that time, so as to obtain a general and comprehensive picture of the actual situation (Kriyantono, 2007). According to Moleong (2010) using the descriptive method means that researchers analyze the data collected which can be in the form

of words, pictures and not numbers. The data may come from interview scripts, field notes, photographs, video tapes, personal documents, notes or memos and other official documents.

- **Data Type and Sources**

This research use secondary data. Secondary data is obtained from the results of literature studies, references, journals, articles, magazines, the internet and so on. It aims to become supporting data related to research.

Data for the study is gathered in a variety of ways:

1. Stage 1 - Collect the supporting data from various secondary sources, such as journals, books, electronic media information, and other supporting sources.
2. Stage 2 – Commercial Analysis
3. Stage 3 – Serving the result and drawing the conclusion

- **Data Analysis**

1. **SWOT Analysis**

The tool is used to examine alternatives and difficult decision circumstances (Helms, M. M., & Nixon, J., 2010). SWOT analysis is a useful framework for examining an organization's Strengths, Weaknesses, Opportunities, and Threats (or a project's), which aids in addressing the efficiency of project planning and execution (GURL, E., 2017). Kim (2005) defines SWOT analysis as a tool used to evaluate a company's factors in terms of their respective strengths, weaknesses, opportunities, and threats.

The SWOT analysis considers both internal and external elements that are essential to accomplishing a company's goals. The external opportunities and threats; consumers, rivals, market trends, partners and suppliers, societal changes and new technology, as well as economic, political, and regulatory challenges, are included in the bottom row of the SWOT grid. Internal resources i.e., expertise, drive, technology, finances, business model, etc. aids in meeting expectations and beating off threats is referred to as a strength (Lee & Ko, 2000).

2. **Capital Budgeting Analysis**

Using the gathered financial data, author proceed to the next phase, which is to determine the feasibility of the salt industry. The measurement consist of Payback Period, Net Present Value, Internal Rate of Return, Profitability Index, Weighted Average Cost of Capital.

3. **Fundamental Financeial Analysis**

The fundamental financial analysis that used ini this research are Return on Equity and Net Profit margin. ROE analyzes how well a company uses its resources to produce profits. The higher the ROE value of a company denotes that the company uses its resources (equity) well to produce maximum profit and identifies that the company can provide returns and higher shares for investors. A ratio scale that is based on percentage calculations was employed as the measurement scale in this study according to Chritianto & Firnanti, (2019). Then, according to Hanafi and Halim (2012: 81) "Net Profit Margin is a ratio that calculates the extent to which a company's ability to generate net profit at a certain level of sales."

4. Serving The Result And Drawing The Conclusion

In this phase, the researcher will present data in the form of processed output of supporting data that has been collected. Then the researcher will carry out an analysis based on the results of the calculations that have been carried out, and combine them with related theories to support the results of the analysis that has been carried out. The data presented is data in the form of metrics and infographics to make it easier for readers to understand. After the data is presented, the researcher will make an overall conclusion on the research results.

❑ FINDING & DISCUSSION

- Lack of Production Technology
- Environmental Factors
- Production Quality
- Imbalance between national salt needs and domestic production capabilities

❑ CONCLUSION AND RECOMMENDATIONS

- Indonesia has great potential as a salt-producing country, but unfortunately this potential is not matched by an increase in the quantity and quality of salt production in Indonesia.
- There is a good effort from Indonesian Government that called The development vision of the Ministry of Maritime Affairs and Fisheries (KKP), namely "Indonesia is the Largest Producer of Marine and Fishery Products in 2015": "The Mission is "Prospering the Maritime and Fisheries Communities", the KKP determines meeting the needs of national salt consumption as one of the priorities in marine economic development".
- There is big opportunity to invest in Salt Industry in Indonesia.

CHAPTER 8

The Effect of Employee Performance Assessment on Job Satisfaction at Private University with Work Motivation as a Mediator

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ABSTRACT

Technological developments are one of the factors of competition between companies, where in seeking competition, human resources can be assessed as an asset for the company. Increasing the capacity of human resources is then considered important so that companies can compete. This study aims to examine the effect of performance appraisal on job satisfaction mediated by work motivation. This study uses a quantitative method, where the respondents in this study are lecturers and staff at tertiary institutions. The targeted sample of respondents was 74, but managed to get 96 respondents. The questionnaire used in this study was adopted through previous research and then carried out validity and reliability. The results of this study indicate that the questionnaire used is valid and reliable, then for the effect test it is found that performance appraisal affects job satisfaction directly or through motivational mediation. This research has implications especially in the managerial field that it is important for companies to pay attention to the performance appraisal process to improve the quality and capacity of employees, and most importantly also increase employee motivation and job satisfaction.

Keywords: Performance appraisal; job satisfaction; motivation; university

INTRODUCTION

The rapid development of technology raises a lot of potential for competition between companies. In competing there are many things that must be considered by the company, one of which is employees who are considered as one of the company's assets. Employee capacity building is considered as an important factor that enables companies to compete (Coutts & Schneider, 2004). Therefore, companies need to improve the quality of their employee performance through periodic performance appraisals that can be carried out by their direct superiors (Ainnisya & Susilowati, 2018). One way to increase this capacity is in the form of evaluation (Mondy & Mondy, 2016). The application of performance appraisal has been applied in companies for a long time, and researchers also continue to study, investigate and try to improve the effectiveness of employee performance appraisal (Farr & Levy, 2014).

A good performance appraisal does not only assess the work performed, but identifies and places employees according to their abilities (Wahjono et al., 2016). Performance appraisals that are well structured and implemented by the company can increase satisfaction for employees, where employee satisfaction can be seen from the results of performance appraisals carried out by the company (Al-Jedaia & Mehrez, 2020). Employee satisfaction is an important factor that companies must pay attention to in order to retain employees (Agarwal & Mehta, 2014). In maintaining employee satisfaction, performance appraisal is designed and related to awards that will be given in the form of salary increases or benefits, promotions and bonuses.

Performance appraisal is considered as a form of intervention and is classified as a stimulus to increase employee motivation. Motivation is defined as a stimulus that drives a behavior, which consists of intrinsic motivation and extrinsic motivation (Deci & Ryan, 1985). Employees who have good work motivation will also show good performance so that they will get a good performance appraisal as well, this good performance appraisal will then affect the rewards that will be received.

Based on the background of the problem above, the problem formulation is obtained:

1. Is there a significant influence between Performance Appraisal and Work Motivation?,
2. Is there a significant influence between Performance Appraisal and Job Satisfaction?,
3. Is there a significant influence between Performance Appraisal and Job Satisfaction with Work Motivation as a mediator?

The purpose of this study is to investigate and analyze:

1. Identify the relationship between Performance Appraisal factors and Work Motivation.
2. Identify the relationship between Performance Appraisal and Job Satisfaction factors.
3. Identify the relationship between Performance Appraisal and Job Satisfaction with Work Motivation as a mediator.

1. LITERATURE REVIEW AND HYPOTHESES

1.1 Performance Appraisal

Performance appraisal is the process of evaluating an employee's current and/or past performance so that a comparison of work standards with performance results is obtained (Dessler, 2020). This requires setting performance standards and assuming that employees receive the necessary training, feedback, and incentives to eliminate performance deficiencies.

Performance appraisal involves a three-step performance appraisal process: (1) setting work standards; (2) assess the employee's actual performance against those standards (this usually involves some form of appraisal); (3) provide feedback to employees, to help them eliminate performance deficiencies or continue to work above average.

According to Dessler (2020), there are five reasons why it is necessary to do a performance appraisal:

1. Consider managers when making decisions regarding compensation, promotion and retention, especially when evaluating employee performance.
2. Appraisal plays a central role in the employer's performance management process, namely to ensure that each employee's performance remains in line with company objectives.
3. Evaluation allows managers and subordinates to develop plans to correct weaknesses and strengthen strengths.
4. Assessment provides an opportunity to review employees' career plans, taking into account their strengths and weaknesses.
5. Assessment allows the supervisor to determine if training is needed and if it is required.

1.2 Job Satisfaction

Job satisfaction is an emotional condition that shows how employees perceive their work. This can be in the form of pleasant or unpleasant emotions (Siagian, Enre, & Panjaitan, 2019). Giving awards or rewards is one way that can be taken by the company as a way to increase employee satisfaction and as a form of payment or compensation for employees who have worked as well as possible by sacrificing energy, time and thought. Rewards can increase job satisfaction because by giving awards to employees according to their needs and contributions, employees feel satisfied and show positive attitudes at work such as enthusiasm, competence, and discipline (Rohwiyati, 2019).

Research shows the importance of job satisfaction in determining employee behavior and performance. For example, a study by Wright and Cropanzano (1998) found that job satisfaction is positively correlated with employee performance and organizational citizenship behavior (Wright & Cropanzano, 1998). Another study by Huselid (1995) showed that job satisfaction is an important predictor of employee turnover, with lower job satisfaction associated with higher turnover (Huselid, 1995).

Job satisfaction was also found to have a positive impact on employee well-being and health. For example, a meta-analysis by Faragher, Cass, and Cooper (2005) found a significant negative relationship between job satisfaction and various health outcomes such as psychological distress, physical illness, and work-related injuries (Faragher, Cass, & Cooper, 2005).

1.3 Work Motivation

According to Ramlall (2004), motivation is defined as the factors and reasons that make employees work hard in a certain way to achieve the desired goals. Workforce is a critical success factor for any organization today and a competitive advantage in the market. The role of human resource management is to ensure that employees are satisfied, have the skills, knowledge they need, and have goals that make them passionate about working (Borowski & Daya, 2014).

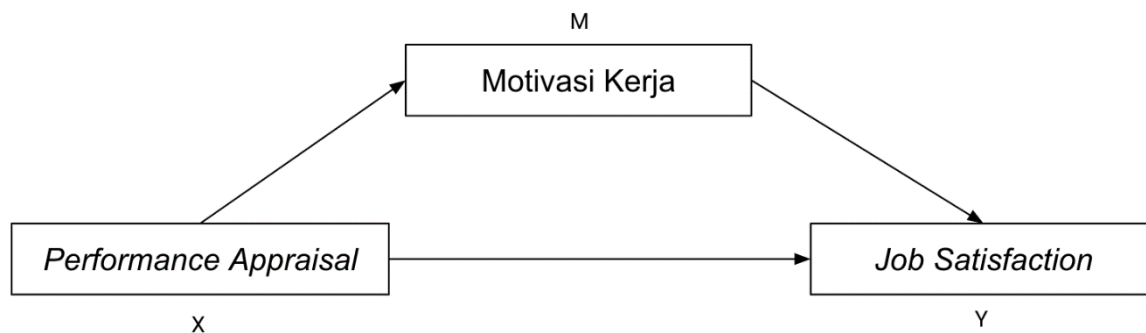
According to (Lloyd, Mertens, Boukis, Gounaris, & Urooj, 2016) and (Parijat & Bagga, 2014) who investigated Vroom's Expectancy Theory, they found that Vroom highlighted several important factors influencing motivation that lead to increased motivation and work performance. These factors are supervisors or managers who are responsible for evaluating and providing honest feedback, work environment and teamwork, diversity and job content, and finally rewards and incentives.

The intrinsic motivator factors of the two Herzberg factors cited by (Luthans, 2002) are as follows:

1. Achievement (Successful Implementation) is the need to complete a task, produce the best work, obtain a consistent, fair and objective assessment, so that work performance is achieved.
2. Appreciation is appreciation or praise from superiors for employee performance.
3. The work itself, employees prefer jobs that provide opportunities to use their skills, freedom to do their jobs, and feedback on how well employees are performing. Jobs that offer challenges lead to employee satisfaction when executed successfully.
4. Responsibility, giving employees the power, authority and responsibility to do their jobs, and severe penalties for failure to do their jobs.
5. Promotion (development), the opportunity to advance in work, including fair promotion.

1.4 Hypotheses

Based on the introduction and explanation above, several hypotheses are taken as follows:



- H1. The effect of employee performance appraisal on job satisfaction.
H2. The effect of employee performance appraisal on work motivation.
H3. Effect of employee performance appraisal on job satisfaction by mediating motivation.

2. RESEARCH METHODS

This research is a survey research that is descriptive and quantitative in nature, which is used to obtain the perceptions of respondents with a population of employees at Private University and a sample of teaching and educational staff about the relationship between Performance Appraisal and Job Satisfaction by mediating Work Motivation. The type of survey that researchers conducted was to collect data by sending questionnaires (questionnaires) and to teaching and educational staff at Private University. The questionnaires used in this study were adopted and modified through previous research, namely the performance appraisal questionnaire adopted from Aly and El-Shanawany's research (2016), the job satisfaction questionnaire adopted from Gagne et al's research (2010) and the work motivation questionnaire adopted from Ahmad et al's research (2020).

Questionnaires were distributed online to each respondent by providing a list of questions. The distribution of this questionnaire was carried out in two stages, namely: the sample test stage (pilot study) and the overall survey. The survey was conducted on educators and education staff respondents at Private University. The results of the preliminary survey (pilot study) state whether or not it is necessary to carry out refinement steps on the questionnaire. If it is necessary to make changes and improvements, then before the questionnaire is distributed widely, the questionnaire will be corrected first both in the grammar used, the scale of measurement and the variables used. In this study a sample test will be carried out on 74 respondents to the questionnaire that has been made. The analytical procedure in this study used multiple linear regression analysis using SPSS and Sobel Test (Baron & Kenny, 1985).

3. RESULT AND DISCUSSION

Respondent data obtained in this study amounted to 96 respondents, consisting of lecturers and staff. As for the early stages of this study the validity and reliability of the questionnaire was carried out where the following results were obtained:

Table 1. Validity and Reliability Testing

Variabel	Indicator	Cronbach Alpha's	CITC	Fitness
Performance Appraisal	Performance Appraisal	0.902	0.613 – 0.798	Fit
Job Satisfaction	Cooperation	0.743	0.417 – 0.661	Fit
	Leadership	0.863	0.645 – 0.743	Fit
	Award	0.864	0.645 – 0.743	Fit
	Empowerment	0.831	0.604 – 0.672	Fit
	Training	0.835	0.491 – 0.782	Fit
	Working hours	0.873	0.707 – 0.802	Fit
	Communication	0.806	0.662 – 0.674	Fit
	office situation	0.740	0.596 – 0.488	Fit
Work Motivation	Work motivation	0.895	0.387 – 0.716	Fit

After that, a classic assumption test was carried out which consisted of tests for normality, linearity, multicollinearity and heteroscedasticity. The results of the analysis show that the data is feasible to proceed to the influence test and mediation test stages. From the results of multiple linear regression tests, it shows significant results, where performance appraisal significantly affects job satisfaction and performance appraisal along with work motivation significantly affects job satisfaction. Then we include the results of the regression test in the Sobel test, so we get the results in Figure 2. Based on the results of the Sobel test, it can be concluded that performance appraisal affects job satisfaction directly or through the mediation of work motivation.

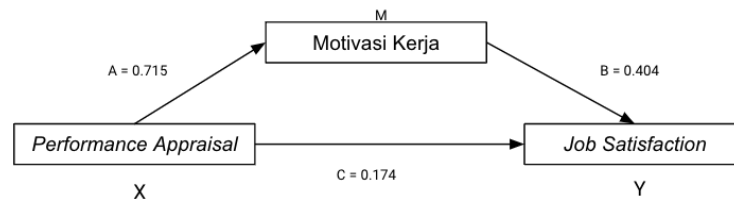


Figure 2. Mediation result

Based on the results of this data analysis it can be concluded that all hypotheses are accepted. The results of this study are in line with several previous studies which explained that performance appraisal affects employee job satisfaction in a company (Al-Jedaia & Mehrez, 2020; Agarwal & Mehta, 2014; Kampkötter, 2017; Effendi & Radianto, 2022). The mediation results of this study are also in line with several previous studies, which show that performance appraisal can affect the level of employee motivation at the company (Ainnisya & Isnurrini, 2018; Yousif & Ahmed, 2020), and work motivation can increase employee job satisfaction at the company (Zakaria et al., 2022; Lee et al., 2022).

In addition, as an additional analysis, the results of the open question show that it is important to carry out objective assessments, weekly meetings, and open communication prior to performance appraisal. Then the performance assessment is carried out based on KPI, 360, BARS. As well as performance appraisal it is also important to follow up in the form of training and incentives.

CONCLUSION

This research has implications especially managerially, where it is important for companies to pay attention to the performance appraisal process to increase employee satisfaction. In addition, this research also makes a scientific contribution, especially in the field of human resource management. Suggestions for further research, research can be done in other sectors besides education.

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CHAPTER 9

Impact of Digital Transformation and Performance Appraisal Process Mediated By Employee's Motivation to Increase Employee Performance

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ABSTRACT

This study aims to analyze the effect of Digital Transformation and Performance Appraisal Systems on increasing employee motivation and performance. A quantitative approach was selected and facilitated the evaluation of large study participants, hypothesis testing, and an explanation and comparison of multiple variables. This research design is descriptive and explanatory, using the survey to collect quantitative data. The main question to be addressed is the relationship between Performance Appraisal factors, Digital Transformation, Employees Motivations, and Employees Performance factors. This study's population is the staff, supervisor, and manager in PT XYZ (Office - Tangerang Plant). The sampling method used is probability sampling using proportionate stratified random sampling among staff in the company. In this study, the researcher will test the hypotheses using structural equation modeling as well as the ratio of Chi-square, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normal fit index (NFI), and Root Mean Square Residual (RMSR) to evaluate overall model fitness. The results showed that Performance Appraisal and Digital Transformation partially positively and significantly affected Employee Motivation at PT XYZ Likewise, Performance Assessment, Digital Transformation, and Employee Motivation partially have a positive and significant effect on Employee Performance at PT XYZ Meanwhile, performance appraisal and digital transformation simultaneously affect employee motivation. Performance Assessment and Digital Transformation simultaneously also affect Employee Performance.

Keywords: Digital Transformation, Performance Appraisal System, Employee Motivation, Employee Performance

INTRODUCTION

In theory and practice, employee motivation has become a difficult subject touching on multiple disciplines. Managers in organizations or companies have tasks to ensure their team achieves their objectives every year. Managers should have personnel with the right qualifications and capabilities and are motivated to perform the assigned job. Today, people must understand why they're working hard. Every individual in an organization is motivated in some different way. Organizations in this dynamic globalized world continuously try to develop and motivate their employees to help achieve enhanced performance with various Human Resource applications and practices.

Much scholarly research has been written on motivation; this subject is not clearly understood and, more often than not, poorly practiced. On this score, to best understand how motivation can impact employee performance, one must understand human nature. In as much as motivation impacts employee performance, there is a need to blend the appropriate motivational tools with effective management and leadership to achieve this goal. These are the challenges managers are confronted with in designing appropriate motivation tools that will be able to meet the expected performance within the company. This, therefore, arouses more critical academic thinking within the subject area. In this light, a lot of academic literature from scholars and practicing managers have ensured to resolve this intriguing academic domain on how motivation can enhance performance.

Organizations in this dynamic globalized world are continuously trying to develop and motivate their employees to help achieve enhanced performance with various Human Resource applications and practices. The reward management system is a highly used practice for enterprises to achieve the desired goals (Güngör, 2011). The study shows that the performance of firms is influenced by many things in which employee motivation is the main factor if employees are more motivated then the performance of the organization will also enhance (Ahmad et al., 2012). The significant employees' motivation, influencing the behaviors of their employees to behave in a certain way, can ultimately decide the success or failure of the organization.

Although a lot of scholarly research has been written on motivation, this subject is not clearly understood and more often than not poorly practiced. On this score, to best understand how motivation can impact an employee's performance one must understand human nature. The understanding of individual differences is the most complex component of this process because managers have to deal with human behavior, which often seems unpredictable and irrational; in addition, human beings often act from emotions rather than with reason. Digital Transformation is one example of fast-changing disruption in the work environment and industrial landscape that companies have to respond to to survive and be competitive. Employee motivation has clearly been an important factor in the organization to ensure performance, and Digital transformation is also a much-needed change to ensure business sustainability. Many existing studies are lacking in showing their relationship and this has attracted the author to research the phenomenon to find out how the technology transformation factors influence the motivation of employees towards increasing of the employee's performance.

This research will conduct in PT XYZ which is one of the biggest tire maker company in Indonesia. Established in 1951, PT XYZ began its tire manufacturing by producing bicycle tires. Thereafter, the Company has grown to become the largest integrated tire producer in South-East Asia. The company expanded its production and diversified its product range by

producing motorcycle tires in 1971, followed by bias tires for passenger and commercial vehicles in 1981. In the early 90s the Company started to produce radial tires for passenger cars and light trucks. PT XYZ are the largest integrated tire manufacturer in Southeast Asia, produces and distribute high quality tires for passenger car, SUV's, commercial, off-the-road, industrial and motorcycles. This Company also manufacture and distribute other rubber related products such as synthetic rubber, tire cords, inner tube, flap, O-rings and more.

This research is expected to help PT XYZ realize more appropriate ways of motivating its workforce to induce high performance, as well as forming policies or decision schemes to motivate employees to increase performance within the company. A company's profit, growth, and high performance are the organization's main goals, which could be achieved through appropriate motivation. Therefore, employee motivation will be a condition necessary to achieve these goals. This work will assist in further studies by other researchers interested in the link between Digital Transformation, employee motivation, and performance. Furthermore, it will assist practicing managers in the organization to obtain a broader knowledge of motivation at work.

This research intends to break new ground on the link between Digital Transformation and employee motivation as mediating and performance. Also, new factors will involve how Digital Transformation has impacted organizations and how this knowledge can be useful within other companies or organizations. The research will analyze how well some of the implementations of Digital Transformation impact employees' motivation as a mediating factor that can help enhance employee performance and to know the factors which trigger high performance, including the Digital Transformation they implemented in PT XYZ also, to understand the different ways an organization can motivate its workers. Furthermore, to establish the various aspects that could be further developed and improved to increase employee performance. In understanding that the dream of most managers today is to have a greater motivated people and market share when they are in business, better performance within their company would be very necessary to achieve this goal.

Maslow's views, the short answer appears to be the fact that for the majority of people, money is clearly significant and a motivator at work. But to what extent is money a significant motivator and how important depends upon their individual circumstances and the other happiness they derive from work. Motivation is quite complex to comprehend thus placing awareness to the fact that several factors influence employee's performance in a particular organization. Reason being that, what motivates one employee will not definitely motivate the other employees within the same company.

The subject matter of this research work –motivation and employee performance is central to managers/human resource department within organizations and companies. Therefore, scholars, researchers and entrepreneurs have seen theories put forth in an attempt to explain how best employees can be motivated in order to achieved greater performance.

An approach that motivates some employee to perform well misses the mark with other employees. Employee motivation is an intricate and sophisticated subject; however, contemporary managers must face and deal with this topic to obtain organizational success. To enhance understanding of employee motivation, managers must recognize the imperativeness of employee motivation, its concepts, and differences in individual needs. Subsequently, managers need to be aware of a variety of employee motivational factors and the changes in priorities of these factors over time.

This research will help an organization or company realize more appropriate ways of employee motivation to introduce digital transformation, as well as forming policies or decision schemes and implementing employee motivation as mediating to increase employee performance within the company. The theoretical Contribution of this research is to enrich knowledge and understanding of the concept of Digital Transformation in the workplace and this process as a relatively new approach to human psychology and well-being. This also can be used as a reference for further research on Transformations of Technology to employee motivations to improve performance. Meanwhile, the practical Contribution expected from this research is to provide a deeper understanding of the importance of Digital Transformation not only as a business driver for growth and competitive advantage but how and in which specific areas the Digital Transformation on the workplace and in affecting company operations and employee well-being.

LITERATURE REVIEW

Employee Motivation

Motivation is fundamentally meant to facilitate behavioral alteration. It is a force that enables an individual to action the direction of a particular objective. According to the study of Grant (2008) held on employee motivation; motivation forced such result as productivity, performance and persistence (Grant, 2008). Topic of motivation is more discussed in the subject of organizational behavior which contains a variety of models and theories relevant to motivation. Development and growth of employees is significantly focused. According to the outcomes of the study accomplished on the association between motivation and job satisfaction of employees by Sirota et al. (2005) having 135,000 respondents from different groupings and countries, organizations implementing various motivation programs involving three constructs as camaraderie, equity and achievement were considered to be more effective than organizations that had no or twice as many 'enthusiastic' employee (of total 45%).

Theories on Work Motivation

The bottom line is how much money motivates people to work to the top of their abilities. Even though the pay may still compose people tick, there are now several other significant influences on motivation. For many people, feeling recognized and valued appears more important than money in motivating them to keep on in a particular job. Therefore motivation has been an issue of concern in the past and has established itself as an integral part of current organizational settings. McShane et al. define motivation as a factor that exists in an individual that can affect the way, strength, and eagerness to behave towards work (McShane & Von Glinow, 2003). Many studies have been carried out on the issue of motivation. The theories of motivation seek to justify why certain employees act or do things in a certain way rather than others. For this research, I considered the following theories to be vital in this study: Maslow's hierarchy of needs, Herzberg's Motivation-hygiene theory, Fifty-Fifty theory, and Vroom's Expectancy theory.

Performance Appraisal

Performance appraisals are indispensable for the effectual supervision and costing of staff. Appraisal help to enlarge individuals, perk up secretarial routine, and nourish into dealing development. Ceremonial performance judgment is commonly conducted per annum for each

and every one workforce in the organization everyone is appraised by their line supervisor. Performance appraisals provide a recognized, recorded, customary assessment of an individual's routine, and a sketch for potential enlargement. In diminutive, performance and career judgment are crucial for administration the performance of natives and organizations. Performance evaluation ought to be treated as an enduring developmental progression to a certain extent than a prescribed once-a-year review. It ought to be intimately monitored by both worker and assessor to guarantee that targets are mortal achieved. Assessments are worn for influential disburse boost, who acquire let go, who acquire sponsor. Nearly everyone frequently, they are worn to hub on what populace contain invalid.

Digital Transformation

It is a fact that the possibilities opened up by digitalization will bring dramatic change to our companies – to their strategies, processes, structures and products, but also to their cultures. In the future, people, machines and resources will communicate with each other directly and in real time. The enablers of the digital transformation of industry include the internet of things, a high-quality broadband network and the increasing automation and autonomy of production. These enablers facilitate new market positions and value propositions such as smart fabrics, fourth-party logistics (4PL) and predictive maintenance. The digital transformation takes place via four levers Digital data, Automation, Connectivity.

Employee Performance

Performance of the employee is considered as what an employee does and what he doesn't do. Employee performance involves quality and quantity of output, presence at work, accommodative and helpful nature and timeliness of output. According to the results of the study conducted by Yang (2008) on individual performance showed that performance of the individuals cannot be verified. In line with Yang (2008), Bishop (1987) investigated employee performance and revealed that acknowledgment and recognition and reward of performance of employees direct the discrimination between employee productivity. Moral and productivity of employees is highly influenced by the effectiveness of performance of an organization and its reward management system (Yazıcı et al., 2008). To satisfy customers, firms do much effort but do not pay attention on satisfying employees.

The theoretical framework of this research is mainly containing of four factors: Performance Appraisal Process in the company, Digital Transformation, Employees Motivation as mediating factor, and Employees Performance. Those four factors will be analyzed through questionnaire and the writer will define the relationship between them.

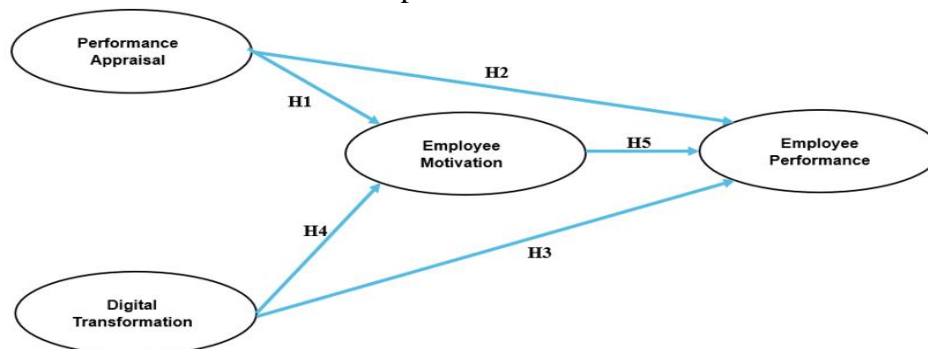


Figure 1 Research Framework

- H1: The Performance appraisal process have correlated positively and significantly with Employees Motivations
- H2: The Performance appraisal process have correlated positively and significantly with Employees Performance
- H3: The Digital Transformation have correlated positively and significantly with Employees Performance
- H4: The Digital Transformation have correlated positively and significantly with Employees Motivation
- H5: The Employees Motivations have correlated positively and significantly with work Employees Performance

RESEARCH METHODS

Kumar (2005) mentions that there are two perspectives to research: from the perspective of objectives (descriptive research, exploratory research and correlation research) and from modes of inquiry (quantitative and qualitative). Creswell (2013) also explained there are three common research design: qualitative research, quantitative research and research with mixed methods. There are also two types of research approaches which is deductive approach and inductive approach. A quantitative approach was selected and facilitated the evaluation of large numbers of study participants, hypothesis testing, and an explanation and comparison of multiple variables. Types of data and information used in this study are primary data and secondary data. Primary data is a source of research data obtained directly from the source (not through intermediaries) in the form of individual or Employee's opinions. In this study, primary data were obtained directly from questionnaires that had been filled in google form by respondents. This study's population is the staff, supervisor, and manager in PT XYZ (Office - Tangerang Plant.). The population of staff, supervisor, and manager were 3.870 employees. The sampling method used is probability sampling using proportionate stratified random sampling among staff in the company. Saunders et al. (2009) explained two types of sampling techniques: probability or representative sampling and non-probability or judgmental sampling. Selection of sampling technique is crucial in order to precisely address the research questions and to achieve the research objective.

Quantitative research adopts structured procedures and formal instruments for data collection. The data are collected objectively and systematically (Queirós et al., 2017). There are five data collection methods commonly used in quantitative research, they are field experiments, simulation, surveys, correlation study and multivariate analysis. From a total of around 16 million quantitative studies from 2008-2017, surveys and correlational study stand out from the others with 31% and 27% being used in the research respectively (Queirós et al., 2017). In this study, researcher will test the hypotheses using structural equation modeling as well as the ratio of Chi-square, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normal fit index (NFI), and Root Mean Square Residual (RMSR) to evaluate overall model fitness. Factor analysis is used to confirm the dimensionality of constructs and to determine the discriminant validity between sets of constructs. Factor analysis has two kinds: Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). In this study, researcher intends to do relationships analysis of latent constructs (leadership, digital

transformation, psychological ownership and employee engagement) by measuring observed variables (dimensions / indicators) and in particular the analysis of causal links between these latent constructs, as well as test the developed hypotheses, then researcher used Structural Equation Modelling (SEM) as it fits the purpose.

RESULTS AND DISCUSSION

Descriptive Statistic

Before carrying out further hypothesis analysis, it is necessary to verify that the data collected from the distributed questionnaires meets the criteria. The central trend consisting of the mean, standard deviation and coefficient of variation, which reflects the dispersion, is also an example of measurement. Clean, filtered data is then processed to generate descriptive statistics that serve two purposes: to provide basic information about the variables in the data set and to highlight potential relationships between variables.

Table 1 Descriptive Statistic

	Performance Appraisal	Digital Transformation	Employee Motivation	Employee Performance
N	100	100	100	100
Mean	4,8403	4,8210	4,9466	4,8235
Std. Deviation	,77544	,71567	,66958	,81042
Skewness	-,986	-,102	-,023	-,436
Kurtosis	1,133	-,302	-,743	-,235
Minimum	2,11	3,00	3,50	3,00
Maximum	6,00	6,00	6,00	6,00

Source: SPSS Result (2023)

The results of the Performance Appraisal (PA) variable have the highest average score of 4.8403 which means that PA has the greatest influence on the dependent variables: EM and EP. The independent variable that least influences the dependent variable Digital Transformation (DT) with an average score of 4.8210. The results showed that all variables, namely Performance Appraisal (PA), Digital Transformation (DT), Employee Motivation (EM), and Employee Performance (EP) had negative skewness with respective scores of -0.986, -0.102, -0.023, and -0.436. Negative skewness values indicate concentration of high-end scores (right side of graph). Kurtosis measurements in this study gave Digital Transformation (DT), Employee Motivation (EM), and Employee Performance (EP) results with light-tailed kurtosis of -0.302, -0.743, and -0.235. Meanwhile, Performance Appraisal (PA) gives a high-tail kurtosis of 1.133.

1. Research Instrument Test

The research instrument test used is the validity test and reliability test. The validity of a research result is largely determined by the measuring instrument used. If the measuring instrument used is invalid and/or unreliable, then the results of the research conducted cannot describe the real situation. The results of the validity and reliability tests will be explained in the following discussion. Validity test is a test that aims to determine the ability of an indicator to measure the latent variable. The validity of an indicator can be evaluated by the significant level of influence between a latent variable and its indicators (Ghozali & Fuad, 2005).

Source: LISREL Results 8.70 (2023)

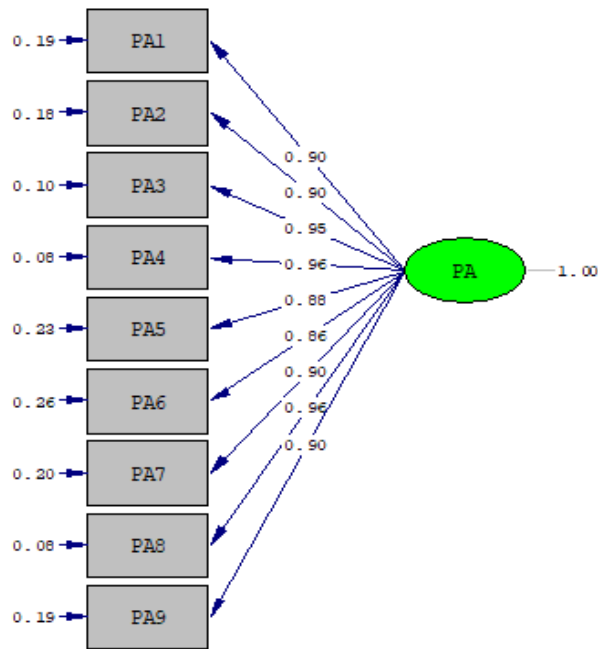
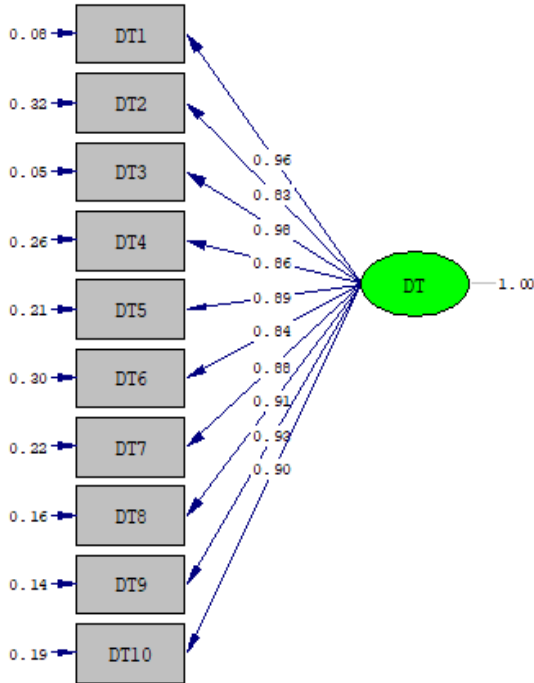


Figure 2 Test The Validity of CFA Variable Performance Appraisal

Based on Figure 2 above, it is known that all statement items or indicators (PA1 – PA9) in this study are valid, because they have a standardized loading factor value greater than 0.5. Thus there are no indicators that must be discarded, so it can be concluded that all indicators in the Performance Appraisal variable are significantly able to reflect latent variables.



Source: LISREL Results 8.70 (2023)

Figure 3 Test The Validity of CFA Digital Transformation Variables

Based on Figure 3 above, it is known that all statement items or indicators (DT1 – DT10) in this study are valid, because they have a standardized loading factor value greater than 0.5. Thus there are no indicators that must be discarded, so it can be concluded that all indicators on the Digital Transformation variable are significantly able to reflect latent variables.

Source: LISREL Results 8.70 (2023)

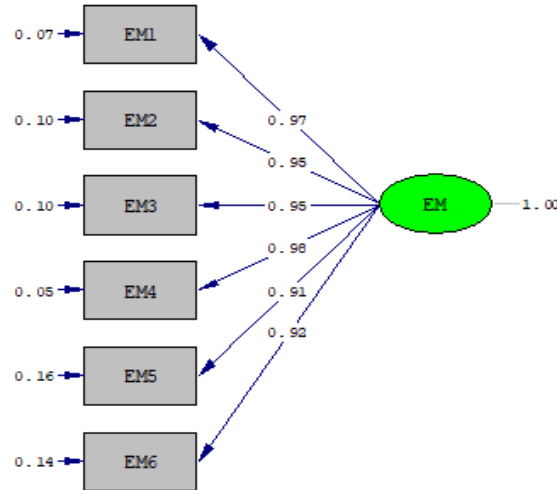
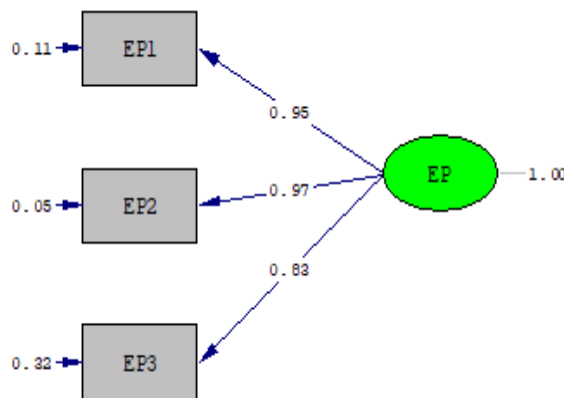


Figure 4 Test The Validity of the CFA Variable Employee Motivation

Based on Figure 4 above, it is known that all statement items or indicators (EM1 – EM6) in this study are valid, because they have a standardized loading factor value greater than 0.5. Thus there are no indicators that must be discarded, so it can be concluded that all indicators in the Employee Motivation variable are significantly able to reflect latent variables.



Source: LISREL Results 8.70 (2023)

Figure 5 Test The Validity of the CFA Variable Employee Performance

Based on Figure 5 above, it is known that all statement items or indicators (EP1 – EP3) in this study are valid, because they have a standardized loading factor value greater than 0.5. Thus there are no indicators that must be discarded, so it can be concluded that all indicators in the Employee Performance variable are significantly able to reflect latent variables.

Reliability Test

The reliability test was carried out to determine the level of consistency of the measurement results if repeated measurements were made of the same symptoms and

measuring instruments (Supranto and Limakrisna, 2013). Construct reliability aims to test the consistency of the questions/statements in the questionnaire for each observed variable (Hair et al., 2016). In SEM modeling, reliability testing uses the composite reliability (CR) method. Provisions for composite reliability testing according to Hair et al. (2016) are as follows:

- If the CR value < 0.7 then the data is not reliable
- If the CR value > 0.7 then the data is reliable

Table 2 Reliability Test Results

Variable	Indicator	Loading Factor	CR	Conclusion
Performance Appraisal (X1)	PA1	0,90	0,978	Reliable
	PA2	0,90		
	PA3	0,95		
	PA4	0,96		
	PA5	0,88		
	PA6	0,86		
	PA7	0,90		
	PA8	0,96		
	PA9	0,90		
Digital Transformation (X2)	DT1	0,96	0,977	Reliable
	DT2	0,83		
	DT3	0,98		
	DT4	0,86		
	DT5	0,89		
	DT6	0,84		
	DT7	0,88		
	DT8	0,91		
	DT9	0,93		
	DT10	0,90		
Employee Motivation (Z)	EM1	0,97	0,981	Reliable
	EM2	0,95		
	EM3	0,95		
	EM4	0,98		
	EM5	0,91		
	EM6	0,92		
Employee Performance (Y)	EP1	0,95	0,940	Reliable
	EP2	0,97		
	EP3	0,83		

Source: LISREL Results 8.70 (2023)

From the table above, it can be explained that all variables (Performance Appraisal, Digital Transformation, Employee Motivation, and Employee Performance) have a construct reliability value of > 0.07 . There are results indicating that all variables are reliable, it can be understood that all the indicators used are appropriate to be used to measure each of these variables.

Table 3 Measurement Model Fitment Test Results

Size Degree of Match	Definition of Model Fit	Value	Acceptable match rate	Information
<i>Goodness of Fit Indices</i> (GFI)	A measure of the accuracy of the model in	0,96	$GFI \geq 0,9$	<i>Good Fit</i>

Size Degree of Match	Definition of Model Fit	Value	Acceptable match rate	Information
<i>Root Mean Square Error of Approximation (RMSEA)</i>	producing the observed covariance matrix. Measures the deviation of parameter values in a model with its population covariance matrix.	0,077	$RMSEA \leq 0,08$ (good fit)	<i>Good Fit</i>
<i>Normed Fit Index (NFI)</i>	Is one additional original fit index.	0,94	$NFI > 0,90$	<i>Good Fit</i>
<i>Adjusted GFI (AGFI)</i>	Calculation of the level of complexity of different models/adjusting the effect of degrees of freedom on a model.	0,90	$AGFI \geq 0,90$	<i>Good Fit</i>
<i>Comparative Fit Index (CFI)</i>	It is an extended fit index which is an improved version of the normal index fit.	0,97	$CFI > 0,90$	<i>Good Fit</i>
<i>Incremental Fit Index (IFI)</i>	Used to address parsimony and sample size problems, which are associated with NFI.	0,97	$IFI > 0,90$	<i>Good Fit</i>
<i>Relative Fit Index (RFI)</i>	Used to measure fit where the value is 0 to 1	0,94	$RFI > 0,90$	<i>Good Fit</i>

Source: LISREL Results 8.70 (2023)

Based on the results of the measurement model fit test in table 4.8 above, it shows an RMSEA value of 0.077 which is less than 0.08 so that it is said to be a good fit model. The normal fit index (NFI) obtained from model testing is $0.94 > 0.9$, so the model is said to be good fit (I. Ghazali & Fuad, 2007).

2. Hypothesis Testing

Testing the hypothesis in this study used the structural equation model (SEM) analysis method which included elements of the model suitability index test, and the critical ratio (CR) test to answer the research hypothesis.

Overall Model Fit

Structural model analysis in SEM begins with testing the fit of the overall model which is seen based on the statistical goodness-of-fit index (GFI) indicator of the LISREL output (Hair et al., 2016). Overall, a summary of the critical values of the overall suitability test of the structural model can be seen from the summary in.

Size Degree of Match	Definition of Model Fit	Value	Acceptable match rate	Information
<i>Goodness of Fit Indices (GFI)</i>	A measure of the accuracy of the model in	0,92	$GFI \geq 0,9$	<i>Good Fit</i>

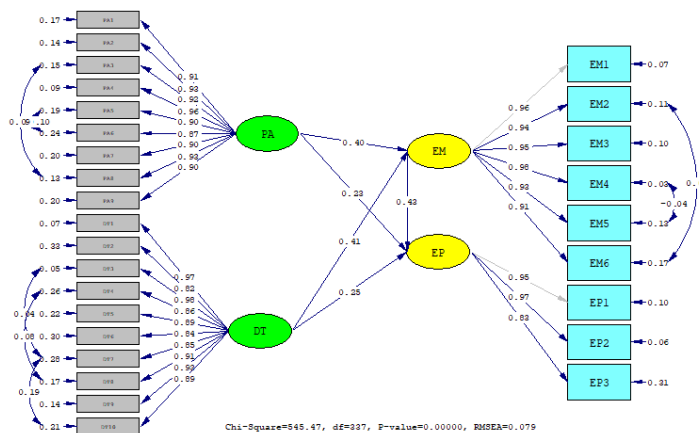
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Size Degree of Match	Definition of Model Fit	Value	Acceptable match rate	Information
<i>Root Mean Square Error of Approximation (RMSEA)</i>	producing the observed covariance matrix. Measures the deviation of parameter values in a model with its population covariance matrix.	0,079	$RMSEA \leq 0,08$ (good fit)	<i>Good Fit</i>
<i>Normed Fit Index (NFI)</i>	Is one additional original fit index. Calculation of the level of complexity of different	0,96	$NFI > 0,90$	<i>Good Fit</i>
<i>Adjusted GFI (AGFI)</i>	models/adjusting the effect of degrees of freedom on a model.	0,96	$AGFI \geq 0,90$	<i>Good Fit</i>
<i>Comparative Fit Index (CFI)</i>	It is an extended fit index which is an improved version of the normal index fit.	0,98	$CFI > 0,90$	<i>Good Fit</i>
<i>Incremental Fit Index (IFI)</i>	Used to address parsimony and sample size problems, which are associated with NFI.	0,98	$IFI > 0,90$	<i>Good Fit</i>
<i>Relative Fit Index (RFI)</i>	Used to measure fit where the value is 0 to 1.	0,95	$RFI > 0,90$	<i>Good Fit</i>

Table 4 Structural Model Fit Test Results

Source: LISREL Results 8.70 (2023)

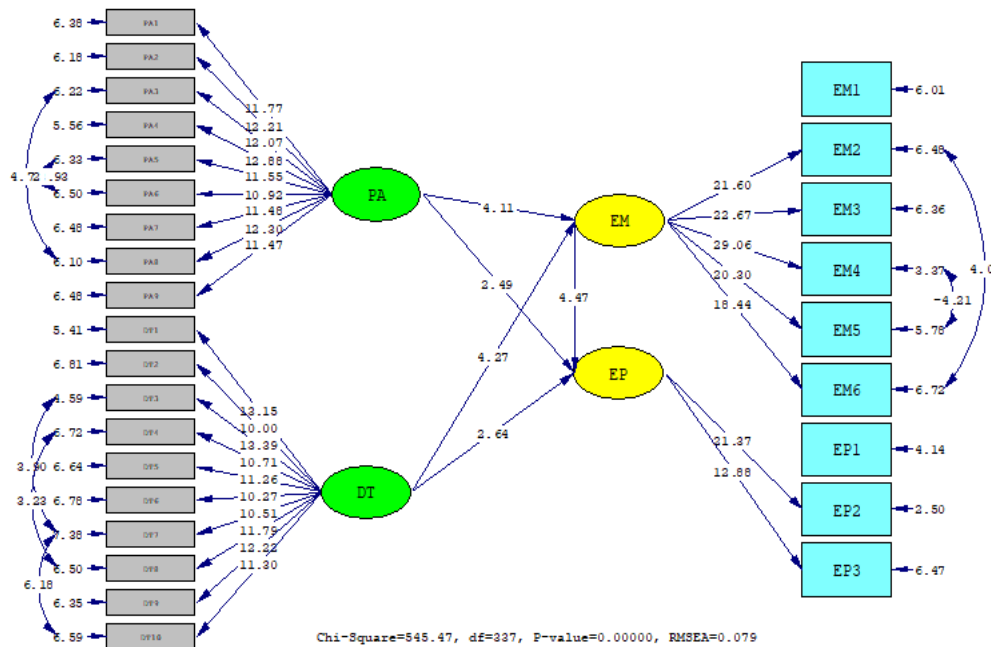
From Table 4 above it is known that the results of the model fit test show that the RMSEA is 0.079 which is less than 0.08 so that it is said to be a good fit model. The normal fit index (NFI) obtained from model testing is $0.96 > 0.9$, so the model is said to be good fit (I. Ghozali & Fuad, 2007).



Source: LISREL Results 8.70 (2023)

Figure 6 Structural Model Results (Standardized Solution)

The model fit test was carried out using several models of fit measures (Goodness of Fit Test, GOF). Basically, the GOF measure consists of three criteria, namely absolute, comparative, and parsimony measures. Based on some of the test results regarding the model suitability test index, it can be concluded that the model used in this study meets the good fit criteria, so that it can be continued in further testing.



Hypothesis Test

Source: LISREL Results 8.70 (2023)

Figure 7 Hypothesis Testing Results (T-Value)

Table 5 Hypothesis Test Results

Path		Coefficient	P-Values	Conclusion
From	To			
Performance Appraisal	Employee Motivation	0,40	4,11	H1 Accepted
Performance Appraisal	Employee Performance	0,23	2,49	H2 Accepted
Digital Transformation	Employee Performance	0,25	2,64	H3 Accepted
Digital Transformation	Employee Motivation	0,41	4,27	H4 Accepted
Employee Motivation	Employee Performance	0,43	4,47	H5 Accepted

Source: LISREL Results 8.70 (2023)

Based on the data shown in Figure 7 and Table 5 above, an analysis of the results of the research can be carried out. The following is a discussion of each hypothesis test based on the test results summarized in Table 5.

First Hypothesis (H1)

Based on the results of testing the first hypothesis in table 5, it shows that the effect of Performance Appraisal on Employee Motivation produces a coefficient value with a positive relationship of 0.40 and P-Values of $4.11 > 1.96$. Thus, it can be concluded that Performance Appraisal has a positive and significant effect on Employee Motivation at PT XYZ.

Second Hypothesis (H2)

Based on the results of testing the second hypothesis in table 5, it shows that the effect of Performance Appraisal on Employee Performance produces a coefficient value with a positive relationship of 0.23 and P-Values of $2.49 > 1.96$. Thus, it can be concluded that Performance Appraisal has a positive and significant effect on Employee Performance at PT XYZ.

Third Hypothesis (H3)

Based on the results of testing the third hypothesis in table 5 it shows that the effect of Digital Transformation on Employee Performance produces a coefficient value with a positive relationship of 0.25 and P-Values of $2.64 > 1.96$. Thus, it is concluded that Digital Transformation has a positive and significant effect on Employee Performance at PT XYZ.

Fourth Hypothesis (H4)

Based on the results of testing the fourth hypothesis in table 5 it shows that the effect of Digital Transformation on Employee Motivation produces a coefficient value with a positive relationship of 0.41 and P-Values of $4.27 > 1.96$. Thus, it is concluded that Digital Transformation has a positive and significant effect on Employee Motivation at PT XYZ.

Fifth Hypothesis (H5)

Based on the results of testing the fifth hypothesis in table 5, it shows that the effect of Employee Motivation on Employee Performance produces a coefficient value with a positive relationship of 0.43 and P-Values of $4.47 > 1.96$. Thus, it can be concluded that Employee Motivation has a positive and significant effect on Employee Performance at PT XYZ.

Determination Coefficient Test Results

According to Ghazali (2018) suggests that the coefficient of determination (R^2) essentially measures how far the ability of the model is to explain the effect of the independent variable on the dependent variable.

Table 6 Determination Coefficient Test Results

Variable	R Square
Employee Motivation	0,540
Employee Performance	0,650

Source: LISREL Results 8.70 (2023)

Based on Table 6 above, it is known that the R-Square results of Employee Motivation aim to see how much the Performance Appraisal and Digital Transformation variables contribute, these results show an R-Square value of 0.540 or 54%. It can be interpreted that the existence of Performance Appraisal and Digital Transformation is 54% in influencing Employee Motivation, while the remaining 46% is influenced by other factors outside of this study. Then the R-Square value of Employee Performance aims to see how much the Performance Appraisal, Digital Transformation, and Employee Motivation variables contribute, these results show an R-Square value of 0.650 or 65%. It can be interpreted that the existence of Performance Appraisal, Digital Transformation, and Employee Motivation is 65% in influencing Employee Performance, while the remaining 35% is influenced by other factors outside of this study.

Discussion

The Effect of Performance Appraisal on Employee Motivation

Performance Appraisal has a positive and significant effect on Employee Motivation at PT XYZ. This shows that the purpose of performance appraisal for employees is to increase motivation. So that the better the performance appraisal implementation, the higher the employee motivation at PT XYZ. The performance appraisal process which is carried out in a fair and objective manner must be understood by employees so that it can be used as an opportunity for employees in self-development and fulfilling the needs for employee self-actualization. With the application of performance appraisal in a company, the hope is that performance appraisal can influence work performance mediated by factors that can drive motivation. An effective performance appraisal process in an organization must be able to provide the necessary feedback to employees and take action to motivate them. These results support the research conducted by Samodra & Noermijati (2018) which states that there is a positive and significant effect on employee performance appraisal on work motivation.

The Effect of Performance Appraisal on Employee Performance

Performance Appraisal has a positive and significant effect on Employee Performance at PT XYZ. This shows that the results of the performance appraisal received by the employee will have an impact on the employee's performance in the next period because the employee feels that what he is doing is being assessed and given feedback by his superior, so that the employee becomes motivated to work even better. Performance appraisal is a useful human resource activity for providing feedback to employees (Zainal, 2015). With the feedback given to employees will make the employee's performance better. In addition, with performance appraisal, companies can develop their human resources, such as by providing training and promotion. The results of this study are in line with the opinion of Dessler (2015) which states that the purpose of performance appraisal is to improve employee performance.

The Effect of Digital Transformation on Employee Performance.

Digital Transformation has a positive and significant effect on Employee Performance at PT XYZ. This explains that the use of information technology or digital transformation has an important effect on improving employee performance. So it can be said that organizations/resources must be able to run technology in order to create digital innovations that can improve organizational performance from various aspects. According to Nur Fauziah & Wahyuningtyas (2020) that companies/organizations must successfully embrace transformation through digital technology to enable big business improvements such as improving customer experience and engagement, streamlining operations and creating new business models but if they do not do so they will face destruction at the hands of their competitors. The same results were found by Chen et al. (2016) who stated that customer service through web portals: B2B functions and cloud computing services have a significant effect on the organizational performance of the Taiwanese textile industry.

The Effect of Digital Transformation on Employee Motivation.

Digital Transformation has a positive and significant effect on Employee Motivation at PT XYZ. This indicates that digital transformation of human resources can trigger an increase in motivation so that benefits are not only obtained among employees, but also for the entire organization. Innovation contests or other award programs may also be used to recognize individual contributions to digital transformation efforts. In addition, non-financial rewards such as recognition, expertise or reputation can also be an effective driver of employee motivation to support the digitalization process. Organizations can try innovative approaches such as 'playing games' with new digital tools by integrating game mechanics into the reward system. Achievements and recognition can create a more engaging user experience. The results of this study are in line with Larasati (2022) which states that digital technology affects employee motivation.

The Effect of Employee Motivation on Employee Performance.

Employee Motivation has a positive and significant effect on Employee Performance at PT XYZ. This indicates that with motivation, an employee will feel that he has a special drive to complete a job towards achieving organizational effectiveness. An employee who has high motivation will be able to carry out tasks effectively and efficiently and have good performance. Motivation is a willingness to expend a high level of effort towards organizational goals, which is conditioned by the ability of that effort to fulfill an individual need. Motivation will also affect a person's attitude and behavior in carrying out their duties and responsibilities. The strength and weakness of work motivation will determine the level of employee or employee performance (Yuliantini et al., 2017). Based on the results of previous findings by Yuningsih & Ardianti (2019), motivation has a positive effect on performance. This shows that the higher the employee's motivation, the higher the performance tendency of the employee's motivation.

CONCLUSION

Based on the results of the research that has been done, the following conclusions are drawn Performance Appraisal, and Digital Transformation have an impact on Employee Motivation by 54%, Performance Appraisal, and Digital Transformation have an impact on Employee Performance by 65%, Performance Appraisal has a positive and significant effect on Employee Motivation at PT XYZ Performance Appraisal has a positive and significant effect on Employee Performance at PT XYZ Digital Transformation has a positive and significant effect on Employee Performance at PT XYZ Digital Transformation has a positive and significant effect on Employee Motivation at PT XYZ Employee Motivation has a positive and significant effect on Employee Performance at PT XYZ Digital Transformation is the factor that has the biggest influence on Employee Motivation at PT XYZ.

Based on the conclusions above, the authors try to provide suggestions for PT XYZ which are expected to be useful for PT XYZ. The suggestions that the author would like to convey include the following With regard to the Performance Appraisal variable, it is hoped that the management of PT XYZ can improve the quality of the appraisal tool or if the company wants to get employee performance appraisal results with better and objective results, then the company needs to use the services of a professional appraiser, so that the appraisal process can avoiding assessment biases and the performance appraisal process can have a positive effect on the performance of individuals in the company, With regard to the Digital Transformation

variable, the management of PT XYZ is expected to be able to build effective collaboration and communication between fellow workers and superiors in developing digital technology to realize the company's direction and goals in developing business. With regard to the Employee Motivation variable, the management of PT XYZ is expected to be able to foster intellectual stimulation to stimulate employees to be more creative and innovative, and to provide guidance and advice to employees to be more motivated in carrying out all their duties and responsibilities.

Future research can conduct research by adding several other independent variables, such as leadership style, organizational culture, and job satisfaction, where these variables can also add broader results related to factors that determine employee performance. Then, the analysis can be carried out by adding moderating variables such as age and years of service to obtain information on which groups are more likely to receive employee development in supporting their performance at the company. In addition, further research is expected to expand the number of samples to be used so as to provide more representative research.

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CHAPTER 10

The Influence of Entrepreneurial Orientation on Business Performance with Business Strategic as Moderation and Mediation

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ABSTRACT

Maintaining a business in the long term is not an easy task, especially with the rapid changes in the business environment that can greatly impact business performance. This is also true in the fashion industry, which typically relies on the turnover of trends in society. The COVID-19 pandemic has also had an impact on performance in the fashion business. Therefore, this research aims to understand the important influence of entrepreneurial orientation and business strategy factors on business performance, particularly when facing rapid environmental changes. It is hoped that this research can provide insights for fashion business practitioners to understand the important factors that can be applied to their businesses, especially when dealing with rapid changes in the business environment. A total of 42 fashion business CEOs owned by students from Universitas Ciputra Surabaya were selected as the sample for this study. The data obtained were then analyzed using SmartPLS 4.0 software. The results indicate that entrepreneurial orientation is able to influence business strategy and business performance, while business strategy has not yet been able to influence business performance. The results of the mediation and moderation effects show that business strategy has not yet been able to mediate or moderate the relationship between entrepreneurial orientation and business performance.

Keywords: Entrepreneurial Orientation, Business Strategy, Business Performance.

INTRODUCTION

The entry of the Covid-19 pandemic into Indonesia has had an impact on all aspects of society's life. One of them is in the business sector, where many businesses have been forced to close due to the effects caused by Covid-19, as these impacts have hindered their ability to operate as usual. The impact of Covid-19 has also significantly affected the performance in the creative industry in 2020. However, despite the initial impact, it turns out that in 2021, the Creative Industry was able to withstand and even achieve a significant improvement in its performance after the Covid-19 pandemic.

Minister of Tourism and Creative Economy, Sandiaga Uno, stated that the creative economy is a major driver of economic growth that accelerates recovery after the pandemic and creates more job opportunities (Kemenparekraf.go.id, 2022). This statement is supported by the increase in the National GDP value by 7.0 percent, Export Value by 41.0 percent, and Employment Absorption that grew by 12.9 percent in the Creative Industry in 2021. There are three main sectors that contribute the highest value in the creative industry, namely the Culinary, Fashion, and Crafts sectors. Based on data from (Kemenparekraf/Baparekraf Republik Indonesia, 2022), the fashion industry ranks second after culinary in its contribution to the National GDP of the Creative Industry with a GDP value of 210.1 trillion rupiahs in 2021. In terms of export value, the fashion industry ranks first with a contribution of 61.5 percent in 2021.

The growth and development of the competitive fashion industry are undoubtedly inseparable from the synergistic efforts of the government, businesses, society, and educational institutions, including universities. Ciputra University, as one of the higher education institutions supporting entrepreneurship growth in Indonesia, also plays a role in providing a teaching model based on direct business practices mentored by experienced lecturers in their fields. Ciputra University provides learning facilities based on business developments each semester, where the learning system required by each student can be tailored to the needs of the businesses they create. However, it has been found in the process that the Covid-19 pandemic has had a significant impact on student businesses, particularly in the fashion sector, with a decrease in the number of fashion industry-related businesses in the academic year 2022/2023 compared to the previous academic year, 2021/2022. Therefore, this research is important to assess the effectiveness of teaching in Ciputra University Surabaya, specifically in the ESU (Entrepreneurial Innovation for Sustainability) course.

Maintaining performance in the fashion industry is not an easy task. The rapid turnover of innovations driven by changing trends poses a challenge for industry players, especially with the changes in consumer behavior following the Covid-19 pandemic. The increased familiarity of digital usage among consumers creates a new challenge for the industry to adapt to the current conditions. Therefore, every player in this industry needs to have heightened sensitivity and agility to seize opportunities amidst the rapidly changing business environment. The ability to capture these opportunities aligns with the Dynamic Capability Theory. According to Teece et al. (1997), dynamic capability refers to an organization's ability to integrate, build, and reconfigure internal and external competencies when facing rapid environmental changes. Priyono et al. (2019) explain that there are three components in Dynamic Capability: sensing, seizing, and reconfigure.

Sensitivity in capturing opportunities to create innovation alone is not enough; it is necessary to form an appropriate strategy so that when the innovation is implemented, it can be competitive and accepted by consumers, ultimately resulting in profits for the company. According to Zainurrafiqi & Rachmawati (2019), over time, innovation and uniqueness of various products will always show significant development. Therefore, a business must be able to adopt different or unique strategies from other competitors to compete in the market.

The formulation of strategies also requires entrepreneurial orientation because with entrepreneurial orientation, the strategies created can be implemented effectively. According to Hamel & Wijaya (2020), the implementation of strategies based on entrepreneurial orientation enables a company to adapt to the existing environmental changes. Vaitoonkiat & Charoensukmongkol (2020) explain that entrepreneurial orientation is an important resource for a company to outperform other competitors. According to Gho et al. (2020), entrepreneurial orientation is a critical factor in improving business performance. Businesses that adopt entrepreneurial orientation will always be the key players that win in the competition because they are quick to initiate changes, ultimately leading to a competitive advantage in business performance. Based on the description above, this research is conducted to provide solutions to the problem of the decrease in the number of fashion businesses at Ciputra University Surabaya. It is expected that this research can assist fashion business players, especially students at Ciputra University Surabaya, in facing rapid changes in the business environment.

The next section is the research findings, which include variable descriptions, hypothesis development, and research methodology. It is followed by the results, discussion of hypotheses, as well as the conclusion, limitations, and recommendations for further research.

LITERATURE REVIEW

1.1 Dynamic Capabilities

Dynamic capability is a theory that explains an organization's ability to integrate, build, and reconfigure internal and external competencies when facing rapid environmental changes (Teece et al., 1997). Dynamic capability is not aimed at short-term efficiency but rather used for long-term efficiency for a company, which involves changes over time (Teece, 2007). Furthermore, Teece (2016) explains that there are three dimensions to Dynamic Capability. First is sensing, which relates to the ability to position oneself in the environment to discover new opportunities (Teece, 2007). The next dimension is seizing, which refers to the company's ability to develop resources and identify opportunities and threats (Teece, 2007). After identifying opportunities, the company engages in the process of creating opportunities through trial and error. Finally, the reconfigure dimension involves restructuring the existing company structure by adding, separating, reallocating, combining, or eliminating units without changing the fundamental principles of the company (Karim, 2006).

1.2 Entrepreneurial Orientation

Entrepreneurial orientation is a strategic decision-making process that enables entrepreneurs to act and operate their organizations according to plans and with a focus on novelty (Darmanto & Sulistyani, 2018). There are three indicators used to measure entrepreneurial orientation in this study: innovation, proactive attitude, and risk-taking (Niode, 2022). Innovation reflects a company's tendency to engage in new ideas and creative processes

to generate new products. Proactive attitude refers to the extent to which a company takes a leadership or follower role in aggressively responding to competitors. It also pertains to a forward-looking perspective in taking initiatives by anticipating and pursuing new opportunities and participating in emerging markets. Furthermore, risk-taking refers to the extent to which a company is willing to make significant and risky commitments to its business.

1.3 Business Strategy

Business strategy is a tactic aimed at achieving goals through systematic thinking, preparation, planning for swift action, daring risk-taking, and the drive to win in business competition (Primadhita et al., 2021). There are three indicators used to measure business strategy: cost leadership strategy, differentiation strategy, and focus strategy. Cost leadership strategy relates to competing by providing low-cost products, while differentiation strategy is described as a strategy to pursue competition by creating unique and distinct products compared to competitors. The indicator for the focus strategy pertains to a strategy of pursuing competition by catering to the specific demands of one or a few consumer groups.

1.4 Business Strategy

Business performance is the end result of a structured and extensive management process that utilizes effective and efficient resources, allowing its performance to be regularly measured in accordance with predetermined targets (Wahyudiono, 2022). There are two indicators used to measure business performance in this research, namely sales volume and market growth (Ekaputri et al., 2018; Lia Riani Kore et al., 2018; Wahyuni & Sara, 2020). Sales volume is an assessment by business practitioners of the increase in the number of sales within a certain period of time. Business sales volume is measured in the currency unit of Indonesian Rupiah, while market growth refers to the rate of change in market receipts for the products or services offered by a company.

HYPOTHESIS

Entrepreneurial orientation is described as entrepreneurial behavior that encompasses a mindset for generating new changes. Therefore, entrepreneurial orientation is crucial for a company. The implementation of strategies based on entrepreneurial orientation enables a company to adapt to existing environmental changes (Hamel & Wijaya, 2020). According to the research findings of Supriadi et al. (2020), entrepreneurial orientation has an influence on strategic flexibility. This result is further supported by the analysis of Sarkosi et al. (2022), which also found that entrepreneurial orientation has an impact on strategic agility. Based on these findings, the following hypothesis is formulated:

H₁: Entrepreneurial Orientation affects Business Strategy

The formation of a strategy is aimed at achieving a goal, which means that the formation of a business strategy will always be related to the performance outcomes of a business. According to Supriadi et al. (2020), strategic flexibility helps companies in dealing with uncertain business environmental changes as it enables them to make appropriate decisions to sustain their business. This finding is further supported by the research analysis conducted by Farida & Setiawan (2022), Islami et al. (2020), Rehman et al. (2021), Sarkosi et al. (2022), and Supriadi et al. (2020), which resulted in a positive influence of business strategy on business

performance. However, research conducted by Vlastic (2022) indicates that business strategy has an impact on non-family business performance but not on family business performance. Based on these findings, the following hypothesis is formulated:

H₂: Business Strategy affects Business Performance

The presence of entrepreneurial orientation can have a better impact on strategy formulation. This is because the characteristics of entrepreneurs described in entrepreneurial orientation can assist companies in creating more systematic strategies. Entrepreneurial orientation helps companies in shaping strategies to outperform their competitors, ultimately leading to business performance outcomes (Vaitoonkiat & Charoensukmongkol, 2020). Based on the research conducted by Supriadi et al. (2020) and Niode (2022), a positive influence of the mediating role of business strategy on the relationship between entrepreneurial orientation and business performance was found. Therefore, based on these findings, the following hypothesis is formulated:

H₃: Entrepreneurial Orientation affects Business Performance in the mediation of Business Strategy

The measurement of business strategy in this study consists of three aspects: cost leadership strategy, differentiation strategy, and focus strategy. Cost leadership strategy refers to providing lower prices compared to competitors, while differentiation strategy focuses on providing added value to products, and focus strategy is used for companies that have a specific consumer focus. Based on these explanations, the influence of strategy on the relationship between entrepreneurial orientation and business performance can be either influential or not influential because, according to Supriadi et al. (2020), focus strategy is only suitable when used for specific businesses. Based on the research conducted by Daradkeh & Mansoor (2023), Rehman et al. (2021), Sarkosi et al. (2022), a positive influence of business strategy moderating the relationship between entrepreneurial orientation and business performance was found. However, in the study by Widianingsih & Sunarmo (2022), an insignificant influence was found. Therefore, based on these findings, the following hypothesis is formulated:

H₄: Entrepreneurial Orientation affects Business Performance in moderation Business Strategy

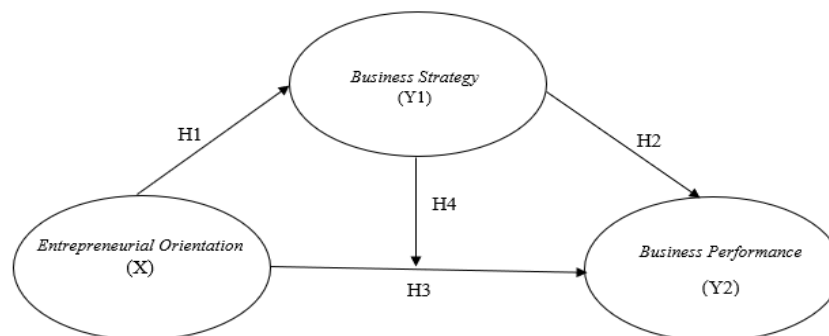


Figure 1. The conceptual research framework

RESEARCH METHODS

This study adopts a quantitative method with primary data collected from the independent variable of entrepreneurial orientation (X1) and two dependent variables, namely business strategy (Y1) and business performance (Y2). The data is transformed into a questionnaire format and distributed to respondents through a Google Form. The respondents in this study are CEOs of fashion businesses owned by students of Ciputra University Surabaya. The sampling technique used is a census, where the entire population of 42 CEOs of fashion businesses owned by Ciputra University Surabaya students will be included in the study (Sugiyono, 2013). A 7-point interval scale is employed to measure respondents' answers for each statement, ranging from (1) Strongly Disagree, (2) Disagree, (3) Slightly Disagree, (4) Neutral, (5) Slightly Agree, (6) Agree, to (7) Strongly Agree (Wibowo et al., 2023).

RESULT DISCUSSION

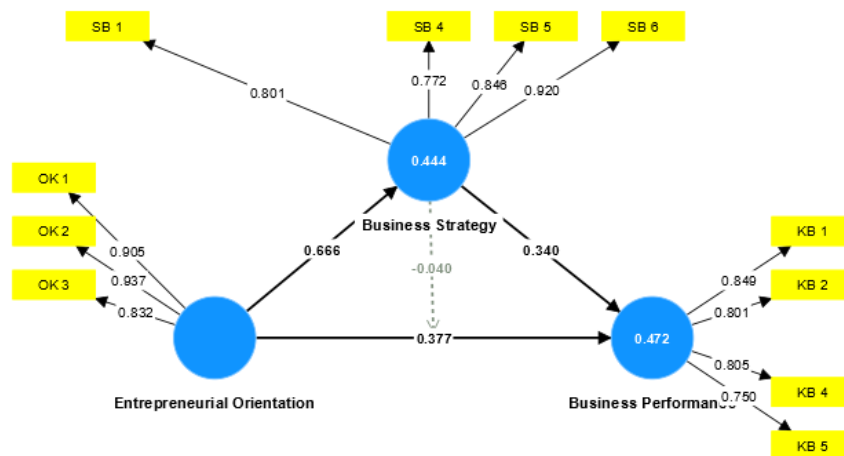


Figure 2. PLS Algorithm

Table 1. Outer Model

Variable	Indicator	Outer Loading	AVE	Cronbach's Alpha	Composite Reliability
Entrepreneurial Orientation	(X1) Value-added Business	0.905	0.797	0,875	0,922
	(X2) Win Competition	0.937			
	(X3) Increase Customers	0.832			
Business Strategy	(Y1.1) Effective Cost	0.801	0.700	0,858	0,903
	(Y1.4) Uniqueness Product	0.772			
	(Y1.5) Value-added Product	0.846			
	(Y1.6) Target Market Strategy	0.920			
Business Performance	(Y2.1) Strategy Affects Sales	0.849	0,643	0,814	0,878
	(Y2.2) Sales Volume	0.801			
	(Y2.4) Innovation Affects Customer	0.805			
	(Y2.5) Market Growth	0.750			

Source: Data was processed by the research, 2023

Convergent Validity

Convergent validity testing should result in outer loading values > 0.7 and AVE values > 0.5 (Hair et al., 2019). Based on Table 1, it can be seen that the outer loading values for the above variables for indicators X.1, X.2, X.3, Y1.1, Y1.4, Y1.5, Y1.6, Y2.1, Y2.2, Y2.4, Y2.5 are all > 0.7 and AVE values > 0.5 , indicating that they meet the criteria for convergent validity. However, indicators X.4, X.5, X.6, X.7, Y1.2, Y1.3, Y1.7, Y2.3 are eliminated because their outer loading values are < 0.7 and AVE values are < 0.5 .

Discriminant Validity

Discriminant validity testing should demonstrate outer loading values > 0.7 (Abdillah & Hartono, 2015). Based on Table 1, it can be observed that the outer loading values for each indicator measuring the variables are all > 0.7 , indicating that this study meets the criteria for discriminant validity testing.

Reliability Variable

Reliability testing of the variables is conducted by examining the Cronbach's alpha, which should be > 0.6 , and the composite reliability, which should be > 0.7 (Abdillah & Hartono, 2015). Based on Table 1, it can be seen that the Cronbach's alpha values are above > 0.6 and the composite reliability values are above > 0.7 for each variable. Therefore, it can be concluded that each variable in this study has met the reliability requirements.

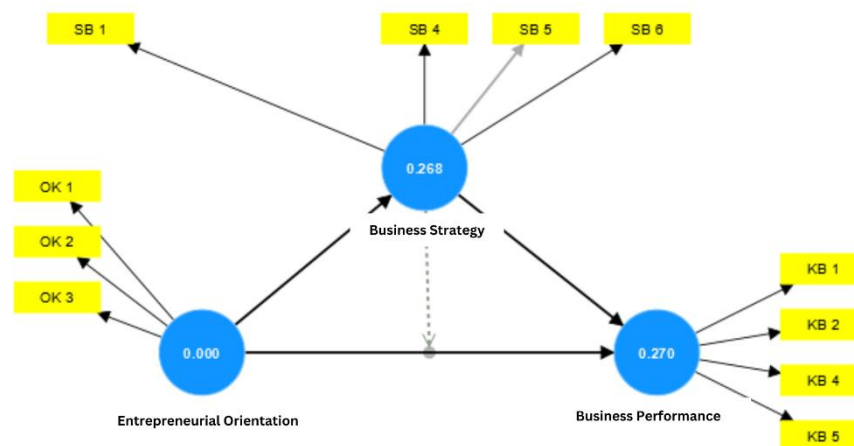


Figure 3. Blind Folding

Table 2. Q Square

Variable	SSO	SSE	Q ²
Entrepreneurial Orientation	126.000	126.000	0,000
Business Strategy	168.000	122.929	0,268
Business Performance	168.000	122.687	0,270

Source: Data was processed by the research, 2023

Blind Folding testing is conducted by examining the results of the Q Square value. If the Q Square value is greater than 0, it can be said that the model demonstrates predictive relevance. However, if the Q Square value is less than 0, the model does not exhibit predictive

relevance (Joseph F Hair, 2014). Additionally, the magnitude of the relevance is determined as follows:

1. $0.02 \leq Q^2 < 0.15$ (small)
2. $0.15 \leq Q^2 < 0.35$ (moderate)
3. $Q^2 > 0.35$ (large)

Based on Table 2, the Q Square results for the Business Strategy and Business Performance variables have values greater than 0, indicating predictive relevance. Furthermore, the Q2 value for business strategy is 0.268, which suggests that entrepreneurial orientation has a moderate predictive relevance because $0.15 \leq Q^2 < 0.35$. Similarly, the Q2 value for business performance is 0.270, indicating that both entrepreneurial orientation and business strategy have moderate predictive relevance because $0.15 \leq Q^2 < 0.35$.

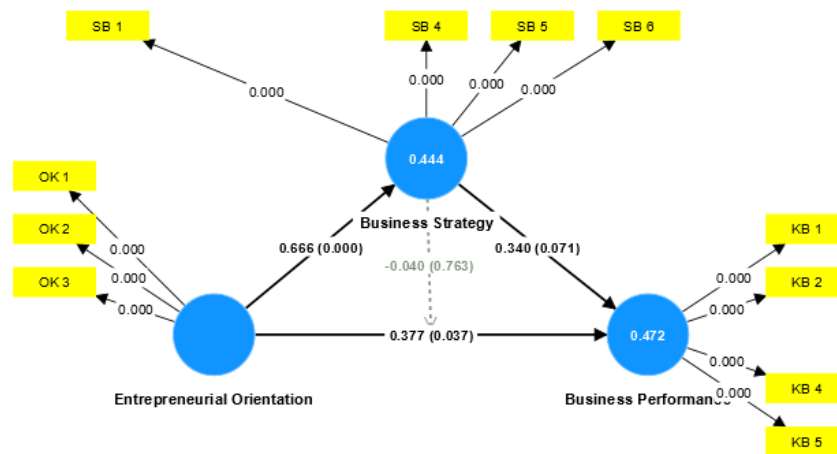


Figure 4. Bootstrapping

Table 3. R Square

Variable	R Square
Business Strategy	0,444
Business Performance	0,472

Source: Data was processed by the research,2023

The R2 value is used to measure the level of variation in the dependent variable explained by the independent variables (Abdillah & Hartono, 2015). Based on Table 3, the obtained R Square value for business strategy is 0.444, indicating that entrepreneurial orientation has a 44.4% influence on the student fashion business at Ciputra University Surabaya, while the remaining 55.6% is influenced by other variables not explained in this study. Additionally, the R Square value for business performance is 0.472, indicating that entrepreneurial orientation and business strategy collectively have a 47.2% influence on the student fashion business at Ciputra University Surabaya, while the remaining 52.8% is influenced by other variables not described in this research.

Table 4. F Square

Effect	F2
Entrepreneurial Orientation (X) →Business Strategy (Y1)	0,799
Entrepreneurial Orientation (X)→Business Performance (Y2)	0,123
Business Strategy (Y1) →Business Performance (Y2)	0,121
Entrepreneurial Orientation (X) x Business Strategy (Y1) →Business Performance (Y2)	0,004

Source: Data was processed by the research,2023

F square testing is used to show the relative influence of independent latent variables on dependent latent variables. According to (Ghozali & Latan, 2015), the result of f^2 0.02 indicates a small effect, f^2 0.15 indicates a medium effect, and f^2 0.35 indicates a large effect. Based on Table 4, a relatively large influence is shown by the effect of X on Y1 because F Square > 0.35 while for moderate influence there is none, for a small influence there is the effect of X on Y2 and Y1 on Y2 because the F Square value is in the range of $0.02 < \text{F Square} < 0.15$, for negligible influence there is the effect of X x Y1 on Y2 because F Square < 0.02.

Table 5. Hypothesis

	Hypothesis	Path Coefficient	Description
H ₁	Entrepreneurial Orientation → Business Strategy	<i>T Statistic:</i> 8,158 <i>P Values:</i> 0,000	Supported
H ₂	Entrepreneurial Orientation → Business Performance	<i>T Statistic:</i> 2,087 <i>P Values:</i> 0,037	Supported
H ₃	Business Strategy → Business Performance	<i>T Statistic:</i> 1,811 <i>P Values:</i> 0,071	Not Supported
H ₄	Business Strategy x Entrepreneurial Orientation → Business Performance (moderation)	<i>T Statistic:</i> 1,711 <i>P Values:</i> 0,088	Not Supported
H ₅	Entrepreneurial Orientation → Business Performance (mediation)	<i>T Statistic:</i> 0,302 <i>P Values:</i> 0,763	Not Supported

Source: Data was processed by the research,2023

Hypothesis testing is conducted by examining the results of the T statistic and P-values, where the T statistic should be > 1.96 to be considered statistically significant, and the P-values should be > 0.05 to be considered statistically significant (Muhson, 2022). Based on Table 5, the following results were obtained:

H₁: Entrepreneurial orientation has a significant effect on business strategy

The results of this study indicate a significant influence of entrepreneurial orientation on business strategy, as evidenced by a T statistic of 8.158 and a P-value of 0.000. These findings are consistent with the explanation provided by Hutahayan (2019), who stated that a high implementation of entrepreneurial orientation will have a positive impact on the ability of entrepreneurs to determine appropriate business strategies, particularly in differentiation strategies. This study found that the most influential factors of entrepreneurial orientation on

business strategy are innovation and aggressive attitude, as these factors assist entrepreneurs in formulating effective strategies for their businesses.

H₂: Entrepreneurial orientation has a significant effect on business performance

The results of this study also indicate a significant relationship between entrepreneurial orientation and business performance, as evidenced by a T statistic of 2.087 and a P-value of 0.037. These findings are in line with the explanation provided in the study by Sutrisno et al. (2021), which states that entrepreneurial orientation has a positive impact on firm performance, particularly when a company is able to maintain the quality of its products. In this study, the factor of innovation is found to be the most influential aspect of entrepreneurial orientation on business performance, as continuous innovation renewal has an impact on increasing the number of customers. Another study by Daradkeh & Mansoor (2023) found that there are two types of innovation that affect business performance and growth, namely exploitative innovation, which has a greater impact on business performance, and exploratory innovation, which has a greater impact on the growth stage of a business.

H₃: Business strategy has not significant effect on business performance

The results of this study indicate the absence of a significant effect on the relationship between business strategy and business performance, as indicated by a T statistic of 1.811 and a P-value of 0.071. In this study, it was found that the cost leadership strategy factor does not have a significant impact on business performance in the fashion industry. In the fashion business, low product prices do not significantly influence customers' desire to purchase products, but rather the uniqueness of the products that can attract customers' attention. Therefore, a differentiation strategy is more important in the fashion industry. These findings align with a study conducted by Soedirman & Rizaldi (2019) on retail stores in Bandung, which also yielded similar results. In that study, business strategies related to cost leadership or low cost received the lowest scores, while the highest score was obtained by the differentiation strategy.

H₄: Business Strategy has not significant effect to mediation Entrepreneurial Orientation to Business Strategy

The results of this study indicate the absence of a significant effect on the mediating role of business strategy on business performance, as indicated by a T statistic of 1.711 and a P-value of 0.088. This is because the influence of business strategy does not have a significant impact on business performance. In a study conducted by Sarkosi et al. (2022), it was found that business strategy has a positive mediating effect when using an agility strategy to influence business performance. The study also suggests that agility strategy can enhance business performance in a dynamic environment, as it allows a business to innovate according to the developments in the business environment. In this study, it is stated that the fashion industry always focuses on the changes in trends.

H₅: Business Strategy has not significant effect to moderation Entrepreneurial Orientation to Business Strategy

The results of this study indicate the absence of a significant effect on the moderating role of business strategy on business performance, as indicated by a T statistic of 0.302 and a P-value of 0.763. In the previous mediation analysis, it was also shown that there was no influence of business strategy on the relationship between entrepreneurial orientation and business performance, therefore, in the moderating role, it also has no effect. Widianingsih & Sunarmo (2022) stated in their study that business strategy does not have a significant influence on moderating the relationship between entrepreneurial orientation and business performance because business strategy does not have a direct impact on business performance. Abraham & Tupamahu (2020) explain that the moderating role of business strategy does not directly affect the success of a business but supports the realization of personal characteristics, traits, and entrepreneurial skills to become a successful entrepreneur. This indicates that the development of a business strategy does not necessarily directly influence business performance since not all strategies can be implemented and should be adjusted with other factors to support it. On the contrary, the presence of a business strategy influences the formation of the character of an entrepreneur.

CONCLUSION, LIMITATIONS, AND SUGGESTIONS

The fashion industry is one of the most popular industries among entrepreneurs, resulting in a high number of participants in the industry and intensifying competition, making it increasingly challenging to navigate. To overcome this, continuous innovation is necessary. However, innovation alone is not sufficient. Adding value to each innovation is crucial because a large number of businesses with similar value creation capabilities can easily be outperformed by competitors. Therefore, adding value to a product becomes crucial in facing intense competition. Innovation renewal has proven to be an answer in the fashion business to cope with the rapidly changing business environment. In the fashion industry, the changes typically revolve around shifts in fashion trends. Therefore, being aggressive in identifying and seizing every opportunity is vital to success.

This study has limitations as it focuses only on the fashion business scope among students at Ciputra University in Surabaya. Finding respondents was challenging due to the need to align with the university's available data. Therefore, for future research, it is recommended to expand the study to a different and broader population and explore other factors that can influence performance in the fashion business beyond the variables examined in this study.

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CHAPTER 11

Determine the Level of Information Technology Risk to Optimization Capability Services Organization Using Cobit 5 in Indonesia

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ABSTRACT

Today's information technology (IT) has become a fundamental requirement for every organization and it is not uncommon today for an organization to have a high dependence on the use of IT. Information technology services in an organization must be well managed, so that IT use can be minimized and IT use can help achieve the main goals of the organization. The identification of information technology services and catalogs in the organization is one of the domains that exist in IT governance based on the COBIT 5 process. This process aims to ensure that what services the organization relates to the use of IT does not exceed tolerances, the impact of the use of IT that can be used, identified and the potential for failure can be minimized. The identification of information technology catalog services is in the governance domain, namely APO09 which consists of five sub processes namely APO09.01 (Identify IT Service), APO09.02 (Catalog IT Enabled Services), APO09.03 (Define and Prepare Service Agreements), APO09.04 (Monitor and Report Service Levels), and APO09.05 (Review Service Agreement and Contract). Identification of information technology catalog services in the organization should be assessed to find out how the level of process capability is carried out by the organization and assist the organization in preparing corrective steps to increase the capability level. The process capability assessment model is designed to determine the level of IT risk optimization capability which consists of several capability levels starting from level 1 to level 5.

Keywords: COBIT 5, Maturity Level, Measuring, System, Library and University

INTRODUCTION

Information technology today has become an important requirement for almost all organizations in order to support organizational goals. Information technology is also believed to be able to help increase the effectiveness and efficiency of the business processes of a company and organization. An IT governance that has been carried out in the company determines how the success of corporate governance (Enterprise Governance). In several parts of Corporate governance, there is IT Governance which deals with how top-level management can have a good impact on an organization or company.

Activities in the library are in accordance with approved functions, namely as a need for users, including needs and also things that have a need for management, access to flexibility, storage storage, and manipulation of various important information that will be stored in a collection of library materials which represent a library collection. In this case, the library of UIN Sunan Ampel Surabaya has been supported by TI, namely in the form of a Digital Library system. The creation of Digilib, one of which is to support business processes between libraries and library members themselves. In addition to simplifying it, it is hoped that a Digilib system like this can produce effective and efficient value in accordance with the original objectives of IT Governance.

Making IT Governance in this study uses a framework from COBIT (Control Objectives for Information and Related Technologies), where the basic concept of the COBIT framework is the determination of control in IT processes based on the information needed to support business process objectives and information that has been generated from multiple combined applications.IT, related processes and resources. Formulation of the problem : a. How do IT audits on the University library system in Surabaya use COBIT 5? B. At what level is the system library at the University in Surabaya when viewed in the APO09.01 and APO09.05 processes? With purpose : a. To find out the maturity level of the University library system in Surabaya), b. Providing solutions related to IT management. Benefits :a. To provide solutions in the use of IT so that in the future it will be even better, b. To apply the knowledge that has been obtained.

Background TeoryLibrary System

The library system is a system that is the center of information and a source of searching for information for all academics and also other library users. With a supporting system in the field of education, it is easier to find information about books, journals, theses or other works. The library system supports the implementation of the Tri Dharma of Higher Education, namely education, research and community service.

Cobit Framework

Control Objectives for Information and Technology or commonly called COBIT is a model designed to control information technology functions and as a guide for implementing IT Governance. ISACF (Information System Audit and Control Foundation), is a research institute for ISACA (Information System Audit Control Association). In 1999 ISAF's assignment for the COBIT model was transferred to the IT Governance Institute (ITGI). ITGI is an independent body within ISACA.

While COBIT itself was developed by ISACF for the ISACA research process. COBIT is a technique that can help identify IT control issues. This model is very useful for users because they can gain confidence in the reliability of the system and applications used. COBIT can also support the management process to optimize its IT investment through measurements that will notify you when an error and risk will occur. COBIT has undergone many developments to become a framework that can be used to implement IT governance. Here is the evolution of COBIT in Figure 1. Evolution of Scope.

COBIT Principle 5

COBIT 5 has a general principle that benefits all companies, including commercial, non-profit or public sector companies. For this reason COBIT 5 has 5 principles that meet stakeholder needs, end-to-end conversion, implement one integrated framework, enable a holistic approach and also separate governance from management. COBIT 5 has general principles and benefits for all companies, whether commercial, non-profit or public sector companies. For this reason COBIT 5 has 5 principles of meeting stakeholder needs, end-to-end conversion, Implementing a single integrated framework, enabling a holistic approach and separating governance from management. This can be seen in Figure 1 below.

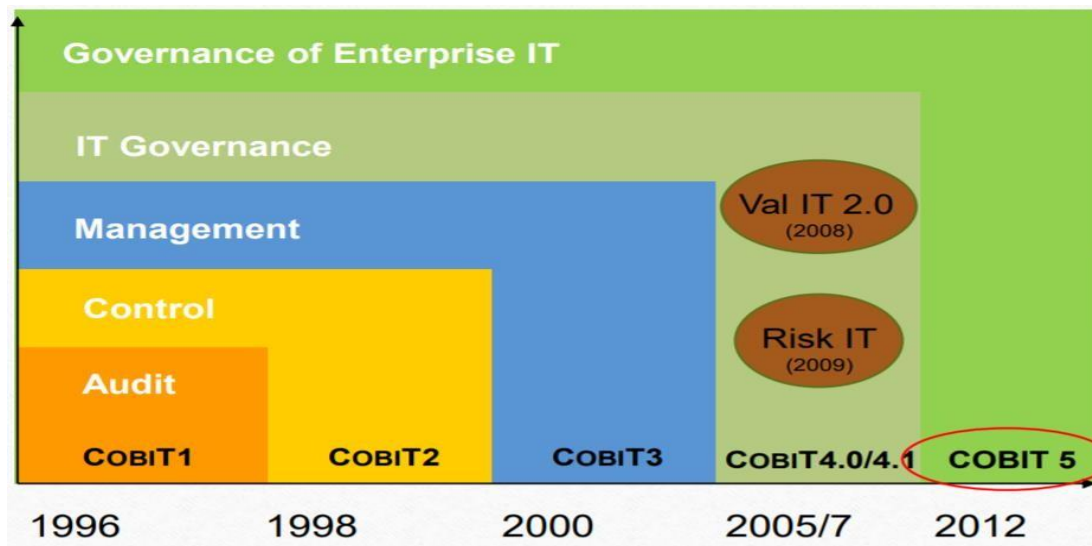


Figure 1. Evolution of Scope

Meeting stakeholder needs

Useful for defining priorities for implementation, improvement as well as assurance. In this principle, stakeholder needs are presented in the Cascade Goals into more specific goals and can be adjusted in the context of company goals, IT-related goals, goals that will achieve the enabler. This can be seen in Figure 2 below.



Figure 2. The Governance Objective: Value Creation (ISACA, 2012)

End-to-end enterprise converting

Integrating corporate IT governance into corporate governance. This principle includes all functions and processes needed to organize and manage corporate IT wherever information is processed. COBIT 5 handles all internal and external IT services as well as business.

Applying a single integrated framework

Aligning with other relevant standards and frameworks, companies can use COBIT 5 as a common standard and integrator. This principle also brings together all previous knowledge in the various ISACA frameworks (COBIT, VAL, IT, Risk IT, BMIS, etc.).

Enabling a holistic approach

Each enabler influences each other and determines whether COBIT implementation was successful.

Separating governance from management

COBIT makes a fairly clear distinction between governance and management. Both cover a variety of different activities, organizational structures and services for different purposes aswell. this can be seen in Figure 3 below.

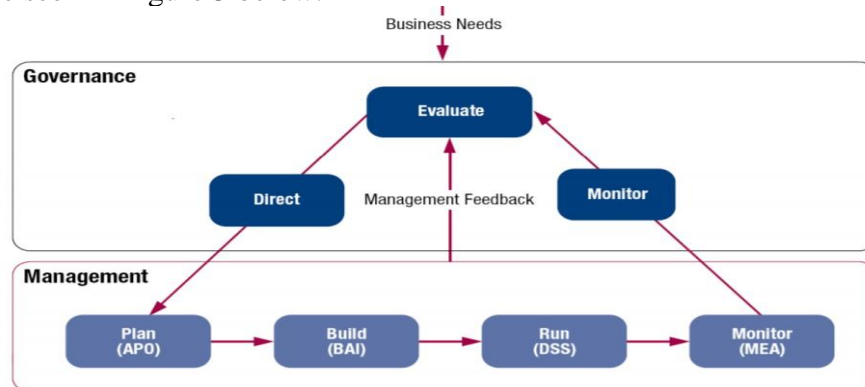


Figure 3. Governance and Management Key Areas (ISACA, 2012)

Process in COBIT Framework 5

COBIT 5 is a framework for IT governance and management as well as matters relating to meeting stakeholder needs for information and technology. COBIT 5 defines IT activities in a generic process model in 4 domains, consisting of 37 processes (ISACA, 2012). This can be seen in Figure 4 below.

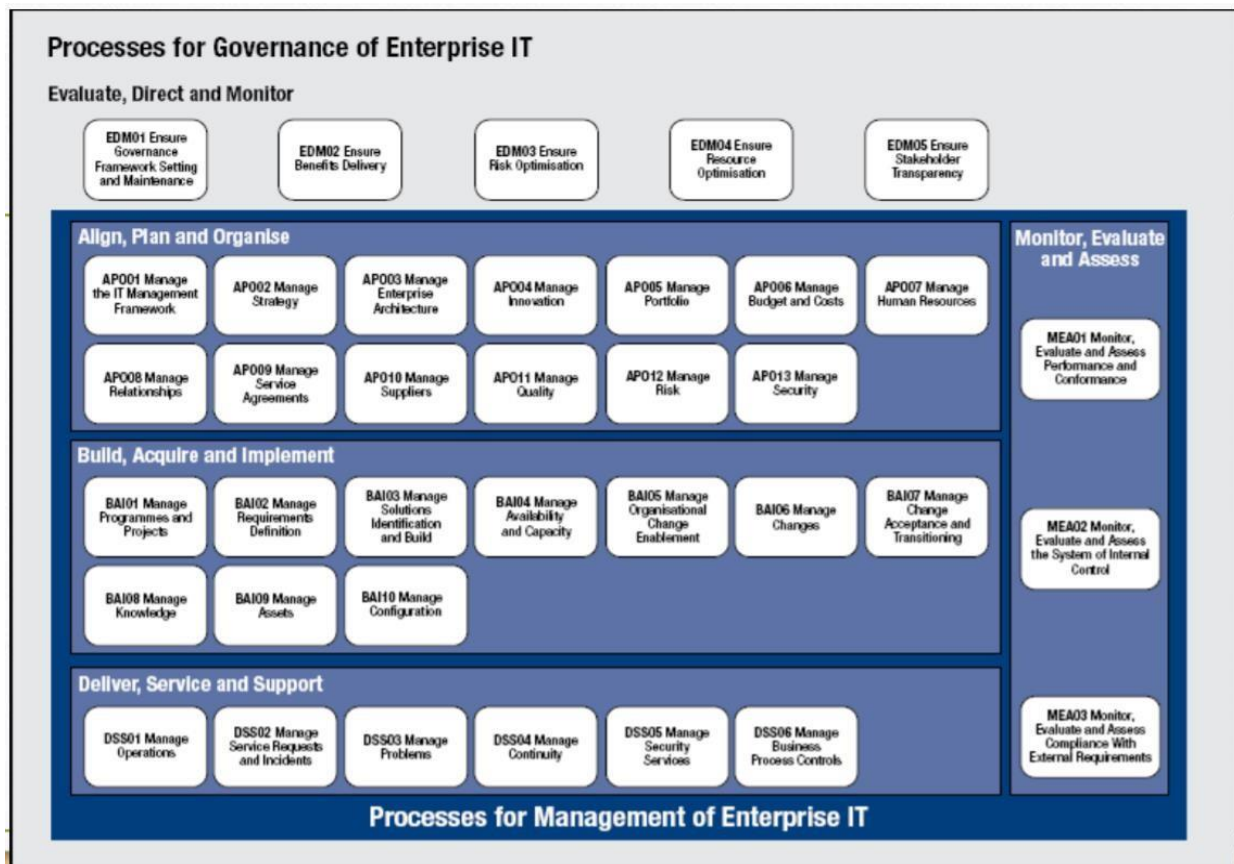


Figure 4. Process Of COBIT 5

EDM (Evaluate, Direct, and Monitor)

Aims for stakeholder governance in assessment, risk and resource optimization, includes practices as well as activities aimed at evaluating strategic options, providing direction on IT and monitoring results.

APO (Align, Plan and Organize)

Aims to provide direction for solution delivery (BAI) and service and support provision (DSS). This domain covers strategy and tactics, and identifies concerns about how best IT can contribute to achieving goals.

BAI (Build, Acquire and Implement)

To realize an integrated IT strategy, IT solutions must be identified, developed, implemented, and can also be integrated into business processes. Changing and maintaining of existing systems is also included in this domain, to provide assurance that the solution is in line with business objectives.

MEA (Monitor, Evaluate and Assess)

In this domain, it is related to the actual delivery and a necessary service support, including services, security and management that are continuity, service support for users, and data management and organizational operational facilities. The figure 5 is description of the Maturity Level System Library. This can be seen in Figure 5 below.

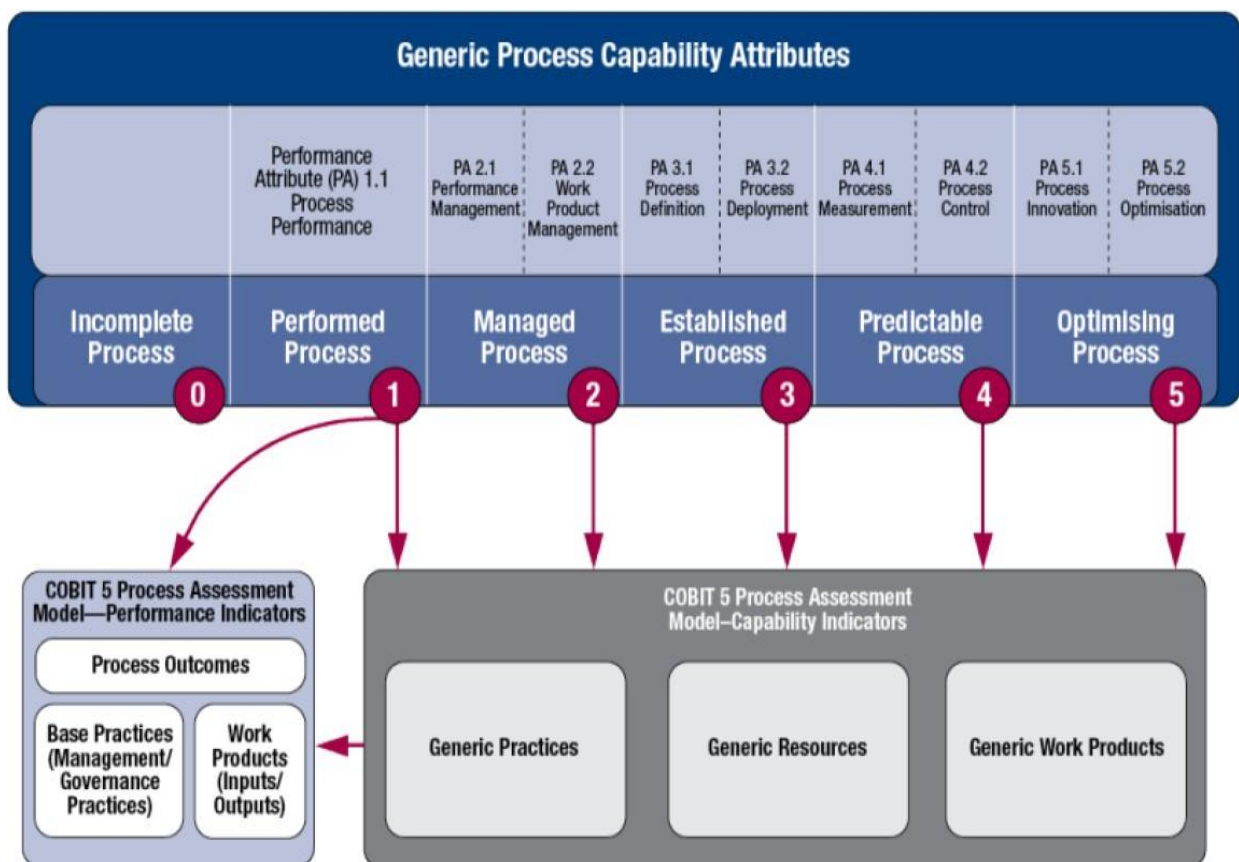


Figure 5. Maturity Level

0 Incomplete processes - at this level, there is little or no evidence of systematic achievement of the process objectives. In this process it is not implemented or fails to achieve process objectives. 1 Process performed (one attribute) - A process that can be implemented to achieve

process objectives. 2 Process is managed (two attributes) - A process performed previously is described in this process and implemented in a managed (planned, monitored and adjusted) manner and its work products are properly created, controlled and maintained. Established processes (two attributes) - Processes performed in a managed manner described earlier can now be implemented using defined processes capable of achieving process results. Predictable process (two attributes) - The process described earlier now operates within the defined limits to achieve the desired process result. Process optimization (two attributes) - The predictable processes described earlier are continuously improved to meet relevant current and projected business objectives.

METHODOLOGY

The research method used is to conduct a literature study then proceed with making a questionnaire and distributing to respondents to fill out the questionnaire and after the data is obtained from the respondent, it is continued with data recording using excel, then the data is processed with excel to determine the maturity level of the library and it provides recommendations and makes reports on the results of investigations. this can be seen in Figure 6 below.

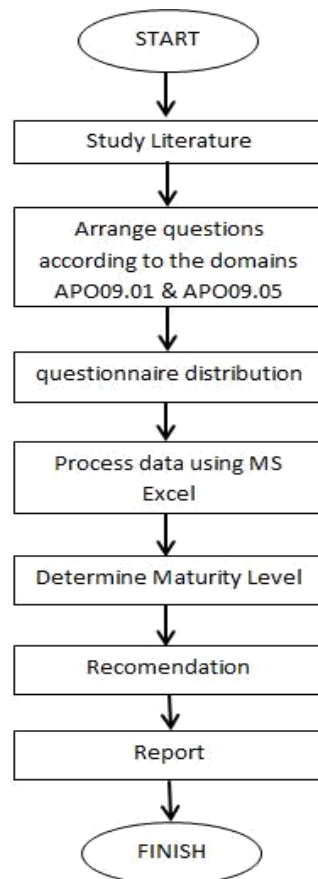


Figure 6. Step of Process Collection Data

RESULT AND DISCUSSION

Domain Focus

This research focuses on the APO domain in the APO09.01 and APO09.05 processes. This is because the existing system in the library is an IT service, therefore it is important to know how

IT service management is. APO09 (Manage Service Agreement) in this process describes the availability of IT services and service levels to the needs of the organization including identification, specification, design approval, issuance and monitoring of IT services. The following is an explanation of APO09.01 and APO09.05.

APO09.01 Identifying IT Services

In process analyzes business requirements and the ways in which service and service levels that support IT processes can support business processes. Discuss and agree on potential service levels with the business and compare them with the current service portfolio to identify or change service or lease options, service levels, and development options.

APO09.05 Review Service Agreements and contracts

Conduct periodic reviews of the service agreement and make revisions if necessary. Questionnaire Results. The results of the questionnaire were obtained from 12 respondents, in APO09.01 there were 9 questions and APO09.05 there were 6 questions asked. The scale used is "Yes" and "No". The following Table 1 is the results of the questionnaire. The level used is only level 0-2 along with normalization.

Table 1. Results of APO09.01 Questionnaire Data Processing Identifying IT Services

Process	Level	Question	Average Answer	Conversion	Average Conversion	Normal Isation ($\sum \text{Average Conversion} / 1,00$)	Normal isation * Level
APO09.01	0	Q1	Yes	1	0,33	1	0
		Q2	Yes	1	0,33		
		Q3	Yes	1	0,33		
	1	Q1	No	0	0	0,33	0,33
		Q2	No	0	0		
		Q3	No	1	0,33		
	2	Q1	No	1	0,33	0,33	0,66
		Q2	No	0	0		
		Q3	No	0	0		

Table 2. Results of APO09.05 Questionnaire Data Processing Reviewing Service Agreements and Contracts

Proses	Level	Question	Average Answer	Conversion	Average Conversion	Normali sation ($\sum \text{average conversion} / 1,00$)	Normal isation* Level
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APO09.05	0	Q1	Yes	1	0,5	0,5	0
		Q2	No	0	0		
	1	Q1	No	1	0,5	1	1
		Q2	Yes	1	0,5		
	2	Q1	No	0	0	0	0
		Q2	No	0	0		

From the results of data processing, the results of the questionnaire above can generally be described as follows :

- The level of normalization in the APO09.01 process of implementing IT services is 0, which is where the process is not implemented or fails to achieve the specified process objectives.
- Normalization level at APO09.05 Reviewing Service Agreement and contract is 1, which is implemented to achieve the objectives of the process. Results of Gap Analysis.

Table 3. Gap Analysis Results Based on the APO09.01 Questionnaire Results

Process	Gap Analysis
APO09.01	The library system has not conducted a review TII service
	Have not made any planning or adjustments to the service
	Have not made planning and adjustments to the IT service portfolio
	IT service level assessment has not been carried out

Table 4. Gap Analysis Results Based on the APO09.05 Questionnaire Results

Process	Gap Analysis
APO09.05	The library system has not carried out a review implementation to the IT service portfolio
	There is no plan yet to reach the IT service catalog
	Not yet implemented the updated IT service catalog
	An up to date IT service catalog has not been implemented

Recommendation

The recommendations given are based on the results of questionnaires that have been distributed and the maturity level, in the APO09.01 process sub domain the maturity level is at level 0, where there has been no implementation or failure to achieve the process objectives. Meanwhile, in the APO09.05 process, the maturity level is at level 1. The following recommendations are given to improve the quality of service in the library system.

Recommendation for APO09.01

- Conduct an assessment of the current level of IT services, with the aim of identifying service gaps and business activities

2. Analyze future needs and confirm IT services with the aim of identifying new service requirements or redesigns.
3. Using service standards in order to achieve efficiency
4. The achievement of a review of the IT service portfolio as an identification of servicechanges

Recommendation for APO09.05

- a. Supervising, planning and adjusting the review of service agreements according to the agreement (contract)
- b. Supervise, plan and adjust IT service updates.

CONCLUSION

From the results of the discussion it can be concluded that the library system in the process of identifying IT services (APO09.01) is still due to the results of the maturity level at level 0, while in the review process service agreements and contracts are at level 1. Therefore it is necessary to make improvements and development on the quality of the system. The recommendations given for the APO09.01 process are:

1. Conduct an assessment of the current level of IT services, with the aim of identifying servicegaps and business activities
2. Analyze future needs and confirm IT services with the aim of identifying new service requirements or redesigns.
3. Using service standards in order to achieve efficiency
4. The achievement of a review of the IT service portfolio as an identification of servicechanges

While the recommendations for APO09.05 are:

1. Supervising, planning and adjusting the review of service agreements according to the agreement (contract)
2. Supervise, plan and adjust IT service updates.

Suggestion

Suggested developing a mobile library system that is able to solve all the problems of the science and technology faculty library so that it can provide benefits and develop the abilities of lecturers and students and other users in learning.

Notes on Contributors

Anis Eliyana and Tanti Hendriana are a professor in the field of management science from the Department of Management, Faculty of Economics and Business, Airlangga University and he has published many scientific works and knows a lot about libraries and information technology.

Fendy Suhariadi is a leader of the doctoral study program in the field of management science, Department of Management, Faculty of Economics and Business, Airlangga University and she has published many scientific works and knows a lot about libraries and their applications.

Merlin apriayanti is a librarian of the Information Systems Study Program, Department of Technology, Faculty of Science and Technology, Sunan Ampel Islamic University of Surabaya, East Java, Indonesia and has done a lot of research on libraries and about university laboratories and the world of information technology.

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EDITORS' BIOGRAPHIES

Prof. Dr. Iskandar MUDA



Prof. Dr. Iskandar Muda, SE, M.Si, Ak, CA, CPA is an Accounting Lecturer at the Faculty of Economics and Business, University of Sumatera Utara (2002 - Until Now), he is included in the AD Scientific Index (Alper-Doger Scientific Index) 2022 World Scientist Ranking list. Based on the release of AD Scientific Index , Iskandar Muda is ranked 7906 in Asia and ranked 18 in Indonesia.

The list is based on the accumulation of various scientific papers assessed from the H Index, I Index and citations indexed by Google Scholar. The H Index is an index that attempts to measure both the productivity and impact of a scientist's published work. This index is based on the number of scientific papers produced by a scientist and the number of citations received from other publications.

While the I Index is the score of a researcher in a publication that has articles cited by at least 10 other articles. Citation is the number of scientific works that are cited or cited by other people around the world and become a source of reference for scientific works. This list is a form of recognition by world institutions for the achievements of the work given by scientists.

The AD (Alper-Doger) Scientific Index is a study that shows the total and productivity coefficients of publication performance over the last five years of scientists, based on H-Index scores and citations according to Google Scholar. The index provides a ranking and assessment of scientists in a field of study and academic branch from 14,120 universities and 215 countries.

He is also active in professional organizations such as the Indonesian Institute of Certified Public Accountants (IAPI), the Indonesian Institute of Accountants (IAI), the Indonesian Bachelor of Economics Association (ISEI), the Institute of Certified Sustainability Practitioners (ICSP) Netherland and the International Public Sector Accounting Standards (IPSAS), USA. As for his achievements, he was the winner of the USU No.1 Productive Researcher Award in 2017 and the 2nd most author in the field of Social Science, Humanities and Art in the database at Scimago, Scopus as of September 2021.

In addition to being active as a lecturer in Masters & Doctoral Accounting programs, Uuniversity of Sumatera Utara, he is also active as a regional finance researcher, speaker of Technical Guidance (BIMTEK) and practitioner accountant at City District in North Sumatra. Some of his research has been published in indexed national and international journals and Intellectual Property Rights listed on Google Playstore.

Leonora Bruçaj- KEKA, Phd Cand. in Albanian Literature



She has completed her Master Degree Studies in the Philological Faculty, in Albanian Literature and Sciences in the Public University Hasan Prishtina in Pristina.

She has also completed her Master Degree in the FAMA College in Pristina, in International Relations and Diplomacy.

She is a Phd Cand, Doctor of Science in Albanian Literature in the Hasan Prishtina University in Pristina.

She has published until now five poetry books.

Some of her creations have been translated in other languages.

“Vdekja e Baložit” (The death of the Vicious Giant), Editing House “Rilindja”, Prishtinë, 1993.

“Dhembje e harresës”(Oblivion Suffering), Editing House “ Rilindja, Prishtinë, 1998.

“Inner Voice of Silence” Editing House Lena Graphic, Prishtinë, 2020.

“IUBIEREA IN CALATORIE “(Poema in limba romana), Editing House, Amanda Edit Verlag, Bucuresti, 2022

“Brererimë politikash “ (Political Tempest), (prose), still a manuscript.

Creative Profile:

The creative profile of Leonora Bruçaj- KEKA goes far back to the 90's, since from that time, Leonora Bruçaj- KEKA has been creating and writing poetry with no interruptions, moreover, not only challenging herself only with poetry, but also testing her creative abilities in prose. In her renowned literary creations she embraces many different topics, from the innate love of her land, to many other social questions, facts and situations that have been quite actual, especially at the time when Leonora had begun writing her poetic verses, and afterwards taking care of even more sensitive topics.

The poetry of Leonora Bruçaj- KEKA is quite distinguishable for its outstanding stylistic structure, thanks to the use of a wide range of figurative elements that make her verses profoundly colorful, with a sophisticated tonification of senses that seems like a unique sort of degustation.

Her further artistic and scientific enrichment as a Literature Researcher will go on through other scientific meetings focusing on literature in Kosovo, Albania, Montenegro, North Macedonia and Germany, where she has been honored with special certificates for her valuable contribute in the wider field of Literature, and in Albanian Literature as well.

- i. “HISTORY OF LITERATURE-SCIENCE OF LITERATURE”- SSRN- Platforme shkencore SKOPUS dhe ELSEVIER https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3597248
- ii.2. “COMPARISON OF PESSIMISTIC CHARACTER OF SPASSE’S JON ZAVERI AND GOETHE’S WERTHER” SSRN- Platforme shkencore SKOPUS dhe ELSEVIER https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3602289
- iii. CERTIFICATE OF INTERNATIONAL CONFERENCE ON LINGUISTICS, LITERATURE AND CULTURE - ICLLC, 2017- AAB COLLEGE, DEPARTMENT OF ENGLISH - SOUTH EAST EUROPEAN UNIVERSITY.
- iv. JMU- JAMES MADISON UNIVERSITY -CERTIFICATE OF COMPLETION - Leadership Development Program coursework-2019.
- v. MERCER UNIVERSITY - CERTIFICATE OF COMPLETION- Leadership Development Program.
- vi. XI INTERNATIONAL SCIENTIFIC CONFERENCE- CERTIFICATE OF PARTICIPATION - “ STRATEGY FOR ECONOMIC AND LOCAL ECONOMIC DEVELOPMENT OF MUNICIPALITIES IN BALKAN COUNTRIES WITH SPECIAL PREVISIONS THE OBSERVATIONS, CHALLENGES AND OPPORTUNITIES FOR THE DEVELOPMENT.
- vii. The United Nations Institute For Training and Research Program of Correspondence Instruction in Peacekeeping Operations - CERTIFICATE OF COMPLETION - The conduct of Humanitarian Relief Operations: Principles of Intervention and Management.
- viii. The United Nations Institute For Training and Research Program of Correspondence Instruction in Peacekeeping Operations - CERTIFICATE OF COMPLETION - Logistical Support to United Nations Peacekeeping Operations.

Other Major Titles:

- Member of the Kosova Writer’s Association.
- Member of the Global Union of Albanian Poets.

Malinda Sari Sembiring, S.E. M.Si



Malinda Sari Sembiring is an accomplished and dedicated professional with a strong academic background and a passion for education and community service. She holds a Magister of Science in Accounting from the Faculty of Economics and Business, University of Sumatera Utara, where she achieved an impressive grade of 3.66 during 2016-2018. Prior to that, she completed her Bachelor of Economics at the same university, earning a commendable grade of 3.50 between 2010 and 2014. Throughout her career, Malinda has held various key positions that showcase her expertise and leadership skills. As a Lecturer in the Department of Accounting at the Faculty of Economics and Business, University of Sumatera Utara, she has been actively engaged in teaching undergraduate and vocational students. Alongside her teaching responsibilities, Malinda has been involved in conducting research and community services in

accounting and other relevant fields, making a positive impact on the academic community.

In her role as Dean's Advisor for Academic and Accreditation, Malinda has been instrumental in developing and implementing policies and procedures related to academic programs and accreditation. Her strategic planning and budget allocation skills have contributed to the growth and success of the faculty. Moreover, she has led the accreditation process for three undergraduate degrees: Accounting, Economics, and Management, ensuring compliance with industry standards and fostering excellence in education.

Malinda's commitment to quality education is further demonstrated through her position as Head of Quality Assurance Force, where she spearheaded the implementation of the Internal Quality Assurance System (IQAS). Her attention to detail and effective coordination ensured compliance with IQAS requirements and enhanced the overall quality of education within the faculty.

In addition to her academic contributions, Malinda has been actively involved in community service projects that have brought about meaningful change. Her projects include providing training on the use of accounting computer applications for teachers and students during the challenging times of the Covid-19 pandemic. She has also contributed significantly to the institutional strengthening of farmer groups in Humbang Hasundutan Regency, North Sumatera, Indonesia, promoting environmentally friendly practices and fostering sustainable agricultural development.

With a passion for sharing knowledge and empowering others, Malinda has taught various courses, including Accounting Information Systems, Financial Institutions, Budgeting Accounting, and Computerization in Economics and Business. Her dedication to education has extended beyond her primary institution, as she also taught courses at the Open University in Indonesia.

Malinda's expertise and contributions have been recognized through various professional honors and awards, including research grants for her exceptional work. She is an active member of the Indonesian Economists Association (Ikatan Sarjana Ekonomi Indonesia), where she engages with the professional community.

In summary, Malinda Sari Sembiring's career journey has been marked by academic excellence, leadership in education, and a strong commitment to community service. Her diverse skills, coupled with her dedication to academic and social advancement, make her a valuable asset to any institution or organization she associates with.

Windi Astuti. S.E. M.Si



Windi Astuti holds a Magister of Science in Accounting from the Faculty of Economics and Business, University of Sumatera Utara, and she also completed her Bachelor of Economics at the same university.

Throughout her career, Windi Astuti has held various key positions that showcase her expertise and leadership skills. As a Lecturer in the Department of Accounting at the Faculty of Economics and Business, University of Sumatera Utara, she has been actively engaged in teaching undergraduate and vocational students. She also has been chosen to be one of the lecturers in the “Merdeka Belajar Kampus Merdeka” which is a program from the Indonesian ministry of education and culture to introduce culture in Indonesia, especially the culture of North Sumatra.

In addition to her academic achievement, Windi has obtained a competency certificate in the field of public sector accounting (Cert IPSAS). She is an active member of the Indonesian Economists Association (Ikatan Sarjana Ekonomi Indonesia), Indonesia Accountant Association (Ikatan Akuntan Indonesia), where she engages with the professional community.

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