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The Influence of Enterprise Resource Planning on Firm Value Mediated Financial Performance in State-Owned Commercial Banks

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ABSTRACT

The development of technology and information greatly influences the progress of the business world. Various types of companies have adopted technology to improve company performance so they can compete and maintain business continuity in the future. This research aims to examine the influence of Enterprise Resource Planning (ERP) and financial performance on company value. This research uses a sample of state-owned banks registered on the IDX during the period 2015 to 2022. The sampling technique is purposive sampling by obtaining 4 state-owned banks multiplied by 8 years, namely 32 observation data. The data analysis method in this research is Structural Equation Modeling Partial Least Square (SEM-PLS) method with the help of SmartPLS 4.0 software. The research results show that ERP partially has a positive and significant effect on financial performance (NPM), and company value, and financial performance has a positive and significant effect on company value. Another finding is that financial performance is able to mediate the relationship between Enterprise Resource Planning (ERP) and company value by 0.116% and 11.6%.

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1. Introduction

Many banks provide banking services for financial transactions with the main aim of making transactions easier for customers. The high need for easy, safe and fast transactions requires every bank to improve its services, especially in the field of information system security, in order to be able to answer current challenges [1]. Technological developments have a big influence on the development of a company's information system. In particular, an important role of technology is the rapid conversion of data into information, which often has to go through several complex and interconnected steps, using the highest level of control and precision. Users of the Company Resource Planning system are very helpful in improving decision making, and companies can store and process data that can improve employee performance. Enterprise Resource Planning users are very useful in improving decision making and companies can store important information. Information quality is affected by information processing strategies that can improve company performance. Enterprise Resource Planning (ERP) is a combination of information technology to manage company resources. Enterprise Resource Planning (ERP) helps the flow of information between various company business functions and external stakeholders [2].

Technological developments have a big impact on several things, for example the ease of obtaining information, managing company management, and so on. The existence of technology itself makes the activities of each individual or group easier, for example in companies, technology

can be applied as a security device, for example password keys, software to store company data which is then encrypted, with encryption the company data is not easily compromised. hack and personal data of companies and customers becomes protected. Company investment in the information technology sector continues to grow. Data from Gartner1 shows that corporate spending in information technology globally can be predicted to grow 2.7%, or $3.5 trillion in 2017. In 2018, information technology spending by companies in Southeast Asia is estimated at $62 billion [3].

Apart from that, with technology, banking operational activities become increasingly optimal, for example when a bank implements an ERP or Corporate Resource Planning system. The implementation of the ERP system will have an impact on banking operational activities, where banking company operational activities will be increasingly optimal because ERP can increase the efficiency and productivity of a company by optimizing each cycle of a company's operational activities [2]

In the financial sector, especially in the banking industry, high efficiency and productivity are precisely important. Apart from that, operational banks involve various complex processes, ranging from financial management to risk management. However, companies often face challenges in integrating and managing all these aspects effectively. Therefore, this is why implementing ERP in banks and the financial sector is becoming increasingly important.

In this context, ERP (Enterprise Resource Planning) is a software system that integrates various business processes in a company into one attractive platform. Furthermore, implementing ERP in banks allows the integration of all existing systems, for example financial management, risk management, human resource management, customer management, and many more. In this way, banks can manage and assemble all aspects of their operations efficiently through one integrated system.

An Enterprise Resource Planning System (ERP) is software that aims to integrate business functions and processes in order to produce comprehensive business information with the support of information technology [4]. An ERP system is the essence of a company or agency [5]. In this era of information technology, ERP systems are used to quickly distribute information between departments and aim to improve organizational operational performance [6]. It is hoped that implementing ERP can moderate company performance in order to increase company value. The value of the company can of course increase if it is balanced with increasing company performance. So, together the ERP system and company performance can increase effectiveness and efficiency which will then increase company value.

Much research has been conducted regarding the impact of ERP system implementation on company performance in Indonesia. The results of research conducted by [7] stated that there was a significant increase in financial ratios, namely inventory turnover, net profit margin, gross profit margin, operating margin and pre-tax margin, after the company implemented the ERP system. However, different research results were shown by [8] which states that there is no direct relationship between ERP implementation and financial performance.

According to [9] measuring financial performance is one of the most important factors for a company, because this measurement is used as a basis for developing a reward system within the company, which can influence decision-making behavior within the company and provide useful information in making important decisions regarding assets. Used to make decisions that channel the company's interests. Much research has been conducted on the factors that influence company value, including by [10]. The theory underlying these studies is that the higher the financial performance, which is usually proxied by financial ratios, the higher the company value [11].

The Influence of Financial Performance on Company Value. Good company financial performance will have an impact on increasing the value of a company [12]. This good company value will attract investors to invest in the company in the hope that they will get profits (dividends). If the company makes large profits this year, the amount of dividends distributed will also be greater, automatically in the coming year investors will flock to invest in the company to share in the profits [9]. They will be more motivated to invest capital in the company in the future. So the more investors invest their capital in a company, the higher the share price of the company and the greater the number of shares in circulation. These two things can increase company value. The value of a company is determined by the earning power of the company's assets.

The research results from [11] and [13] show that ROA has a significant effect on Tobins Q. From the partial test results of ROA on company value, it is known that ROA has an effect on company value. According to IAI (2007), information on company performance, especially profitability, is needed to assess potential changes in the future. Performance information is also useful for predicting a company's capacity to generate cash flow from existing resources [14]. It is also useful in formulating considerations about the company's effectiveness in utilizing resources. Based on the research results from the explanation above, it can be concluded that the better the financial performance of a company, the higher the company's ability to generate profits [15]. When the profits generated continue to increase, the dividends received by investors will also increase or it could be said that the welfare of shareholders increases. Investors whose welfare is maintained will automatically give a good assessment to the company

Based on factual and empirical phenomena regarding Enterprise Resource Planning on company value through financial performance, researchers are interested in discussing this topic further in state-owned banks listed on the Indonesia Stock Exchange.

2. Method

The population of this research is state-owned bank companies listed on the Indonesia Stock Exchange. The sampling technique uses purposive sampling. The time period used in this research is 2015-2022. Cross sectional data totaling 4 companies over a period of 8 years. The four banks include Bank Mandiri, Bank Negara Indonesia (BNI), Bank Rakyat Indonesia (BRI), and Bank Tabungan Negara (BTN). Data analysis uses the Structural Equation Modeling Partial Least Square (SEM-PLS) method with the help of SmartPLS 4.0 software

This type of research is quantitative with a descriptive approach. This method is a type of research whose specifications are systematic, structured and planned well and clearly from the beginning until the creation of the research design [16]. Using secondary data collection methods with documentation techniques from annual reports and financial reports of state-owned bank companies listed on the Indonesia Stock Exchange obtained from the company's official website. Endogenous variables are influenced or are the result of exogenous variables. The endogenous variable in this research is company value while the exogenous variables in this are Enterprise Resource Planning and financial performance (Net Profit Margin):

$$Y = a + b1X + b2Z + e$$

In testing the mediating variable, the Sobel test is used. [17] mediation hypothesis testing can be done with a procedure developed by Sobel and known as the Sobel test. The Sobel test is carried out by testing the strength of the indirect influence of the independent variable (X) on the dependent variable (Y) through the Mediation variable (Z)

3. Results and Discussion

Structural model testing (Inner Model) aims to see whether the model used has good goodness-fit, which means whether the variability of company value can be explained well by each exogenous latent variable, namely Enterprise Resource Planning and financial performance by looking at the R square value, where a good R square value is above 0.5 or is able to explain the endogenous latent variable by 50% (Hartono, 2011). The calculation results using SmartPLS 4.0 show that the R square value is as follows:

Table 1. Contribution of Exogenous Variables

	R-square	R-square adjusted
Financial Performance	0,720	0,711
Firm Value	0,968	0,966

Source: Research Results (Processed, 2023)

Based on the R square value above, it can be seen that the R square value for latent enterprise resource planning (ERP) on financial performance is 0.720 or enterprise resource planning is able to explain financial performance by 72.00%. Meanwhile, the influence of enterprise resource planning

(ERP) and financial performance on company value is 0.968 or 96.80%. Based on the test results, this shows that the model used in this research can be said to be good, because the exogenous latent variables used can explain well the endogenous latent variables examined in this research.

Direct Effect

In Smart PLS 4.0 testing, the hypothesis is directly shown using modeling and tables, so it can be shown as follows:

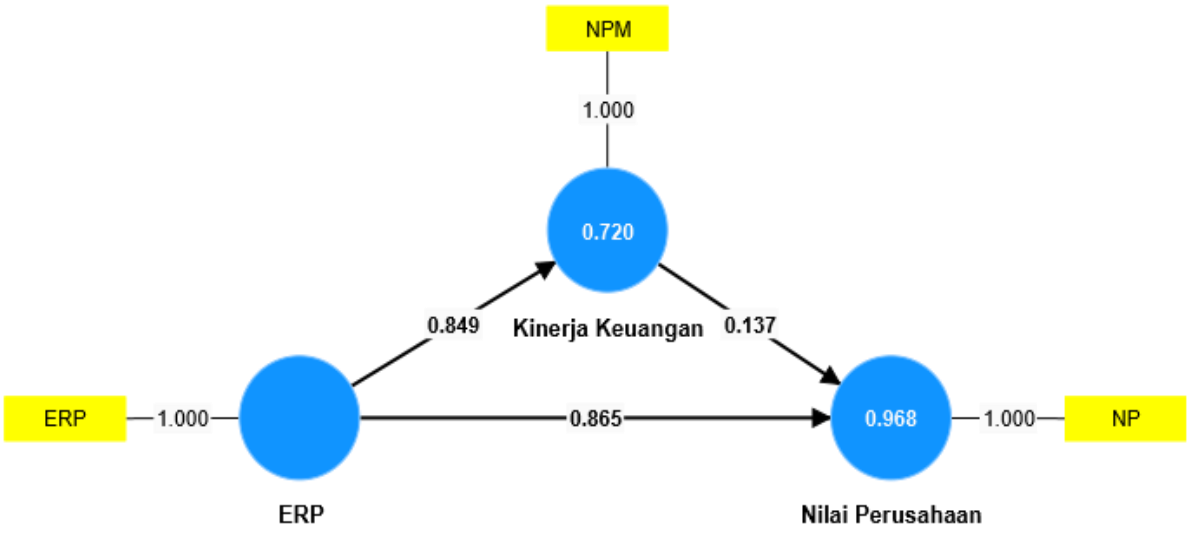

Figure 1. Smart PLS test results

In Path Analysis/path analysis, the path coefficient will be tested for each exogenous latent variable (Enterprise Resource Planning and financial performance variables) against the endogenous latent variable (firm value), and the path coefficient will be tested for the endogenous latent variable (financial performance) against endogenous latent variable (firm value). This proves whether financial performance is an intervening variable that mediates the relationship between Enterprise Resource Planning and company value. Based on the SmartPLS processed test results, the Total Effect values are as follows:

Table 2. Direct Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
ERP -> Financial Performance	0,849	0,845	0,052	16,186	0,000
ERP -> Firm Value	0,865	0,863	0,033	26,342	0,000
Financial Performance -> Firm Value	0,137	0,138	0,028	4,864	0,000

Source: Research Results (Processed, 2023)

Based on the table above, it explains the direct relationship between exogenous variables which include: Enterprise Resource Planning (ERP) and endogenous variables which consist of: financial performance (NPM) and company value. For further explanation regarding the direct influence of exogenous variables on endogenous variables, it can be explained as follows:

H1: The effect of Enterprise Resource Planning (ERP) on financial performance (NPM). The results of research data analysis, namely the influence of Enterprise Resource Planning on financial performance at state-owned banks in 2015-2022, showed that the findings of the first hypothesis test produced a path coefficient value of 0.849 and T-Statistic = 16,186 > 1.96 and a P-value of 0.000 < 0.05. So it can be said that Enterprise Resource Planning will have a positive influence on financial performance as a proxy for Net Profit Margin (NPM).

H2: The influence of Enterprise Resource Planning (ERP) on company value. The results of research data analysis, namely the influence of Enterprise Resource Planning on company value in state-owned banks for the 2015-2022 period, obtained the findings of the second hypothesis test, the

path coefficient value was 0.869 and resulted in T-Statistic = 26.342 > 1.96 and P-value 0.000 < 0, 05. So it can be said that Enterprise Resource Planning will have a positive and significant influence on company value.

H3: The influence of financial performance on company value. The results of research data analysis, namely the influence of financial performance on company value in state-owned banks for the 2015-2022 period, obtained the findings of testing the third hypothesis, the path coefficient value was 0.137 and resulted in T-Statistic = 4.864 > 1.96 and P-value 0.000 < 0.05. So it can be said that financial performance will have a positive and significant influence on company value.

Indirect Effect

In indirect hypothesis testing (indirect effect) there are two causalities, namely the influence of Enterprise Resource Planning on company value with financial performance. As an intervening variable, the results of the indirect effect test can be shown as follows:

Table 3. Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
ERP -> Financial Performance -> Firm Value	0,116	0,117	0,024	4,783	0,000

Source: Research Results (Processed, 2023)

Based on the table above, it can be concluded that:

H4: Enterprise Resource Planning on company value with financial performance as an intervening variable. The results of research data analysis, namely the influence of Enterprise Resource Planning on company value with financial performance as an intervening variable in BUMN Banks for the period 2015-2022, obtained hypothesis testing findings, path coefficient value 0.116 and T-Statistic = 4.786 > 1.96 and P-value 0.000 < 0.05. So it can be said that Enterprise Resource Planning will have a positive influence on company value with financial performance as an intervening variable.

Discussions

The Effect of Enterprise Resource Planning on Firm Value

Based on the results of his research, it can be concluded that there is a positive and significant influence between variable X (Enterprise Resource Planning) on variable Y (Firm Value), because the results show that T-Statistic = 26.342 > 1.96 and P-value 0.000 < 0.05. This research is supported by research conducted by [18] which states that ERP has an effect on company value. This proves that implementing ERP can support company operational activities more easily and faster than not implementing an ERP system. By implementing ERP, a company can indicate that there is an indication of a good company, which can be the cause of an increase in company value. [18]. ERP can be used as a competitive advantage in the long term. This also provides a signal to investors that the company has thought about and taken action to be able to develop and maintain the company in the future to be superior to its competitors.

The Effect of Financial performance on Firm Value

Based on the results of his research, it can be concluded that there is a significant influence between variable Z (Financial Performance) on variable Y (Firm Value), because the results show that T-Statistic = 4.864 > 1.96 and P-value 0.000 < 0.05. This shows that the higher the NPM value obtained, the higher the company value, because a high NPM will provide an indication of good company prospects so that it can trigger investors to increase demand for shares. The increasing demand for shares will cause the company value to increase. This is also influenced by factors such as the large selling expenses (transportation costs, administrative costs, high company receivables which affect the company's net profit. This research is in line with [19] but not in line with Previous research conducted by [20] indicated that NPM had a negative effect on company value.

The Effect of Enterprise Resource Planning on Financial Performance

Based on the results, it is concluded that there is a positive and also significant effect between variable X (Enterprise Resource Planning) on variable Z (financial performance) because the results show that T-Statistic = 4.864 > 1.96 and P-value 0.000 < 0.05. This result is also in line with the results of [7] research, the existence of an ERP system can provide company effectiveness in terms of solvency ratios so that companies can reduce uncertainty in paying their obligations because they can process good resources. Apart from that, companies can also reduce production costs and increase the accuracy of information in helping decision making. However, different research conducted by [8] which produces the statement that ERP implementation has no effect on financial performance. In this research, financial performance is measured by three ratios, namely Return on Equity, Return on Assets, and Net Profit Margin. Thus, the results obtained show that ERP implementation does not directly affect the company's profitability.

The Effect of Enterprise Resource Planning on Firm Value through Financial Performance

The results of research data analysis, namely the influence of Enterprise Resource Planning on company value with financial performance as an intervening variable in companies in state-owned banks for the period 2015-2022, obtained hypothesis testing findings, path coefficient value 0.116 and T-Statistic = 4.786 > 1.96 and P-value 0.000 < 0.05. So it can be said that Enterprise Resource Planning will have a positive influence on company value with financial performance as an intervening variable. The results of this research are in line with [21] that the application of Enterprise Resource Planning in the banking industry determines the empowerment of information resources in achieving financial performance which in turn increases the value of companies in state-owned banks listed on the Stock Exchange Indonesia.

4. Conclusion

Judging from the research results, it can be concluded that the implementation of the Enterprise Resource Planning system has an influence on the company's financial performance and company value with varying results for each company. Researchers assume that these varied results can occur due to other factors that influence the sustainability of the implementation and application of the Enterprise Resource Planning system. Other factors that can influence these results include a company's ability to adapt to the implementation of a new system or culture, high implementation and maintenance costs, the ability and willingness of personnel to adapt to new work environments and job descriptions, and understanding of the ERP system and in practice.

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