

Effect of management accounting information systems and information technology utilization on managerial performance with internal control as a moderating variable

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ABSTRACT

The purpose of this study was to test and analyze the effect of management accounting information systems and the use of information technology on managerial performance with internal control as a moderating variable at PT. Perkebunan Nusantara IV Medan City. directly or indirectly. The approach used in this research is an associative approach. The population in this study were all employees of PT. Perkebunan Nusantara IV Medan City which numbered 323 people. The sample in this study used saturated sampling which amounted to 77 people at PT. Perkebunan Nusantara IV Medan City. Data collection techniques in this study using observation techniques, and questionnaires. The data analysis technique in this study uses a quantitative approach using statistical analysis using the Outer Model Analysis test, Inner Model Analysis, and Hypothesis Test. Data processing in this study used the PLS (Partial Least Square) software program. The results of this study prove that directly the management accounting information system has a significant effect on managerial performance. Information technology utilization has a significant effect on managerial performance. Management accounting information systems have a significant effect on managerial performance with internal control as a moderating variable. And the utilization of information technology has a significant effect on managerial performance with internal control as a moderating variable at PT. Perkebunan Nusantara IV Medan City.

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1. INTRODUCTION

Managerial performance in an organization is very important, because good managerial performance can create an organization's competitive advantage. Improved managerial performance is achieved by managers utilizing the ability to see and take advantage of opportunities, identify problems, and select and implement the adaptation process appropriately. An increase in the managerial performance of managers in an organization will improve organizational performance which in turn will increase the competitiveness of the organization. (Alpi & Donggoran, 2022).

The factor that affects managerial performance is the Internal Control System. According to the Committee of Sponsoring Organizations of The Treadway Commision (COSO), internal control is a series of actions consisting of a series of processes within the organization. Internal control is

included in the basic management process, namely planning, implementing and monitoring. (Astuty, 2016).

According to (Sari et al., 2020), the internal control system includes various techniques, procedures and practices implemented by the company to obtain an efficient and reliable accounting information system, so that management gets help in planning and controlling business activities and maintaining the security of company assets. Internal control objectives according to (Diana & Haryati, 2021) said that the internal control system must also provide the possibility to detect violations as early as possible. In general, the problems that occur are due to weaknesses in the internal control system that are unable to minimize the weaknesses of the application for employee salary payment procedures.

PTPN IV has committed to implementing an Internal Control System so that the Company can achieve optimal operational and business management objectives. An effective Internal Control System is needed to secure investments and assets, which includes a system of control procedures (tangible) and control substance (intangible). This is done in order to monitor and ensure the alignment of all unit activities against the business strategy and the Company's strategy that has been set. However, PT. Perkebunan Nusantara IV (PTPN IV) still has not performed optimal internal control because there are some operational management that is often late from the specified schedule. The results of research conducted by (Putri & Endiana, 2020) To produce optimal performance in a company, it can be measured by the results of the work that has been done by employees compared to the standards set by the company, because the success of an organization is influenced by performance.

One of the factors that affect managerial performance is the management accounting information system. (Vita et al., 2021). Management accounting information systems play an important role in business activities in order to handle the company's operational activities in meeting management's needs in decision making, management accounting information systems are designed to make it easier for companies to ensure that all transactions that have been recorded are precise, valid, accurate and can protect effective and efficient company activities. (Lubis & Syafira, 2021).

Management accounting information system is a component or sub-system of an organization that has responsibility and for the preparation of financial information. (Supratinigrum & Lukas, 2021). Information systems can basically be operated without using computers, but the presence of computers in handling human tasks in a system has a very large role in supporting the smooth running of a system, so that the information needed by management can be presented quickly and on time. (Mardia et al., 2021).

The quality of an effective and efficient accounting information system is needed for PT. Perkebunan Nusantara IV (PTPN IV), especially in the management accounting information system. It is said to be effective when a thing can be used and useful in accordance with the predetermined basis, while it is said to be efficient when doing something can minimize or reduce the use of previously existing costs.

The management accounting information system that occurs at PT. Perkebunan Nusantara IV (PTPN IV) is often late in submitting financial reports to the public. The results of research conducted by (Nainggolan, 2015) that management accounting information helps management identify a problem, solve problems, and evaluate performance. Management accounting information is needed and used in all spheres of management, including planning, control and decision making and another factor that affects managerial performance is the utilization of information technology. (Pebriani & Pratomo, 2015). The development of technology today has shown tremendous progress. With a computerized system, it is expected to increase work efficiency, speed, and accuracy in decision making. (Hamizan et al., 2020).

PT. Perkebunan Nusantara IV (PTPN IV) utilizes information technology in the work process. Employees involved in the payroll system use a company database that can be systematically processed using software to produce interrelated information from various divisions. In streamlining time and costs, users of information systems can use computer technology systems, telecommunications system technology and other technologies to facilitate accuracy and speed in the payroll process into the system for decision making.

Technological advancements led to the internet, a civilization-changing network of electronic communication systems. Its presence is able to summarize distance and time, making everything

easier. The internet is growing rapidly because it can be useful for anyone, not least for business entities. The benefits are felt by PT. Perkebunan Nusantara IV (PTPN IV). Since the last few years, the company has implemented Internet of Things (IoT) technology in various ways. Including for monitoring the Palm Oil Mill (PKS). So far, the digitalization program has proven successful. We believe this challenge can be unraveled through the use of technology. However, the use of these applications is often an obstacle when network problems occur.

PT. Perkebunan Nusantara IV Medan uses a computer system in all work with a telecommunications network as a data link reported to the Bank related to payroll and implements the System Application and Product in Data (SAP) Human Capital Management (HCM) module in the payroll system since 2017 with modules implemented including personal administration, organization development, payroll and checkroll modules. PT. Perkebunan Nusantara IV (PTPN IV) uses third-party consultants in the development of information systems through SAP (System Application and Product in Data). However, SAP (System Application and Product in Data) often experiences problems such as network disruptions and hacker interference that has occurred, making SAP (System Application and Product in Data) unable to function.

The results of research conducted by (Supratinigrum & Lukas, 2021) The performance of a manager cannot be separated from the use of information technology to obtain information that is needed for decision making. Information technology is a use of technology such as computers that are used to process, process, obtain, compile, store, manipulate data that produces quality information. Information technology is very important for managers to help complete their tasks, so that the use of information technology can affect managerial performance

2. METHOD

This type of research uses associative research, which is research that aims to determine the relationship between two or more variables. (Sugiyono, 2019). This study aims to test hypotheses related to the subject under study. The test results can be used as a basis for drawing research conclusions, supporting or rejecting hypotheses developed from theory. The sample is part of the population that will be taken for research and the results of the research are used as a representation of the population as a whole. Thus, the sample can be stated as part of the population taken with certain techniques or methods to be studied and generalized to the population. (Sugiyono, 2019). The sample in this study were 77 employees of PT Perkebunan IV Medan. The sampling technique in this study was the Slovin formula.

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

Explanation:

n= Number of populations

N= Population

Ne= Standard error (5% = 0.05)

2.1 Data Analysis Technique

This data will be analyzed using a quantitative approach using statistical analysis, namely partial least squares – structural equation model (PLSSEM) which aims to carry out path analysis with latent variables. This analysis is often referred to as the second generation of multivariate analysis (Ghozali & Latan 2015). Variant-based structural equation analysis (SEM) can simultaneously test measurement models as well as test structural models. The measurement model is used to test validity and reliability, while the structural model is used to test causality (testing hypotheses with prediction models).

The purpose of using (Partial Least Square) PLS is to make predictions. Where making these predictions is to predict the relationship between constructs, in addition to helping researchers and their research to obtain latent variable values with the aim of making predictions. Latent variables are linear aggregates of the indicators. The weight estimate for creating latent variable score components is obtained based on how the inner model (structural model that connects latent variables) and outer model (measurement model, namely the relationship between indicators and their constructs) are specified. The result is that the residual variance of the dependent variable (both latent and indicator variables) is minimized.

2.2 Analysis of the measurement model (Outer Model):

2.2.1 Convergent validity (Convergent Validity);

2.2.2 Construct reliability and validity (Construct Reliability And Validity);

2.2.3 Discriminant validity (Discriminant Validity).

2.3 Structural model analysis (Inner Model):

2.3.1 Coefficient of determination (R-Square);

2.3.2 f-square; And

2.3.3 Hypothesis test

2.4 Hypothesis Testing

In hypothesis testing, it can be seen from the t-statistic value and probability value. To test the hypothesis, namely by using statistical values, for alpha 5% the t-statistic value used is 1.96. So the criteria for accepting/rejecting the hypothesis are H_a accepted and H_0 rejected when the t-statistic > 1.96. To reject/accept a hypothesis using probability, H_a is accepted if the probability value is <0.05.

2.5 Fit Testing (Testing Fit)

Testing of the inner model or structural model is carried out to test the relationship between latent constructs. The inner model includes inner relations, structural models and substantive theory describing the relationship between latent variables based on substantive theory. The inner model is tested by looking at the R-square, Q-square and path coefficient values to get information on how much the dependent latent variable is influenced by the independent latent variable, as well as a significance test to test the significance value of the relationship or influence between variables (Ghozali & Latan, 2015).

2.6 R-Square Test

The R-square value or coefficient of determination shows the diversity of exogenous constructs that are able to explain endogenous constructs simultaneously. The R-square value is used to measure the level of variability in changes in the independent variable towards the dependent variable. This parameter is also used to measure the feasibility of the prediction model with a range of 0 to 1. The higher the R-square value, the greater the influence of the exogenous latent variable on the endogenous latent variable. Changes in the R-square (r^2) value are used to substantively assess the influence of certain independent variables on the dependent latent variable (Ghozali & Latan, 2015).

2.7 Path Coefficient Test

The path coefficient shows how big the relationship or influence of the latent construct is carried out using the bootstrapping procedure. Between constructs there is a strong relationship if the path coefficient value is more than 0.01. And the relationship between latent variables is said to be significant if the path coefficient is at the level of 0.050.

2.8 Moderated Regression Analysis (Moderating Regression Analysis)

This research consists of two independent variables, one dependent variable, and one moderating variable. That's why moderating regression analysis is used. This analysis is used to see whether the moderating variable (XM) influences the influence between variable explained by other variables from this variable is called the dependent variable. This influence can then be used to find the influence of variable X on variable Y. Then see whether the variable (XM) influences the relationship between variable X and Y.

Table 1. Indicators

Variables	Indicator
Management Accounting Information System (X1)	<ol style="list-style-type: none"> 1. Dimensions of system quality 2. Dimensions of information quality (Information Quality) 3. Dimensions of system use (System Use) 4. Dimensions of User Satisfaction According to (Jeyaraj, 2020)
Information Technology Utilization (X2)	<ol style="list-style-type: none"> 1. Relationship 2. Wawasasn 3. Value, satisfaction, and support According to (Susanto, 2015)

Managerial Performance (Y)	<ol style="list-style-type: none"> 1. Planning 2. Investigation 3. Coordination 4. Evaluation 5. Supervision 6. Staffing <p>According to (Widarsono, 2007)</p>
Internal Control (Z)	<ol style="list-style-type: none"> 1. Control environment 2. Risk Assessment 3. Control Activities 4. Information and communication 5. Monitoring <p>According to (Elder et al., 2021)</p>

3. RESULTS AND DISCUSSION

Based on the data from the questionnaire results that have been presented, the qualitative data of the questionnaire is made into quantitative form data based on predetermined criteria. The quantitative data is raw data from each variable in this research. In this section, the data that has been described from the previous data which is the data description will be analyzed. Data analysis in this study used the Structural Equation Model Partial Least Square (SEM-PLS).

As an alternative to covariance based SEM, the variance based or component based approach with PLS oriented analysis shifts from testing causality/theory models to component based predictive models. (Ghozali & Latan, 2015).. PLS is a powerful analytical method because it is not based on many assumptions and data does not have to be multivariate normally distributed (indicators with categorical, ordinal, interval to ratio scales can be used in the same model). Structural model testing in PLS is carried out with the help of Smart PLS software ver. 3 for Windows. The following are the results of the structural model formed from the problem formulation:

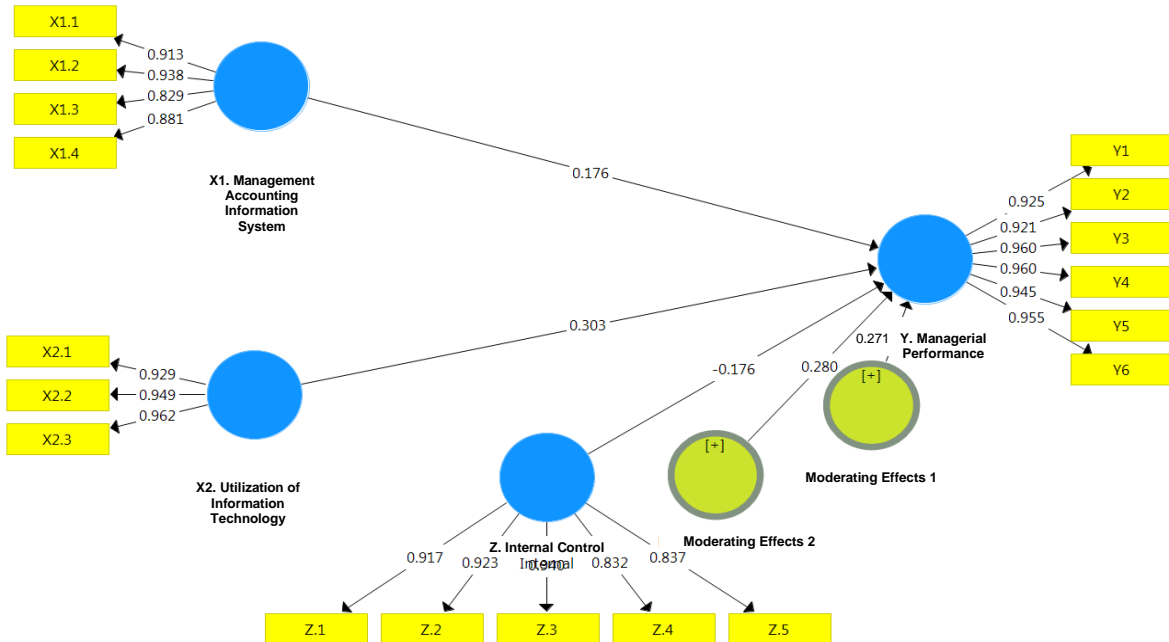


Figure 1. PLS Algorithm

3.1 Measurement Model Analysis (Outer Model)

The measurement model analysis (outer model) aims to evaluate the construct variables under study, the validity (accuracy), and reliability (reliability) of a variable.

3.1.1 Construct Reliability and Validity

Internal consistency analysis is a form of reliability used to assess the consistency of results across items on the same test. Internal consistency testing uses a composite reliability value with the criteria that a variable is said to be reliable if the composite reliability value is > 0.600 (Hair Jr et al., 2017).

Table 2. Construct Validity and Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Moderation Effect 1	1,000	1,000	1,000	1,000
Moderation Effect 2	1,000	1,000	1,000	1,000
X1. Management Accounting Information System	0,913	0,912	0,939	0,794
X2. Information Technology Utilization	0,942	0,942	0,963	0,896
Y. Managerial Performance	0,976	0,978	0,980	0,892
Z. Internal Control	0,936	0,953	0,950	0,794

Based on the internal consistency analysis data in the table above, the results show that the variable:

1. The Management Accounting Information System has a composite reliability value of $0.939 > 0.600$, so the Management Accounting Information System variable is reliable.
2. Information Technology Utilization has a composite reliability value of $0.963 > 0.600$, so the Information Technology Utilization variable is reliable.
3. Managerial Performance has a composite reliability value of $0.980 > 0.600$, so the Managerial Performance variable is reliable.
4. Internal Control has a composite reliability value of $0.950 > 0.600$, so the Internal Control variable is reliable.

3.1.2 Convergent Validity

Convergent validity is used to see how far a measurement is positively correlated with alternative measurements of the same construct. To see whether an indicator of a construct variable is valid or not, it is seen from the outer loading value. If the outer loading value is greater than (0.7) then an indicator is valid. (Hair Jr et al., 2017).

Table 3. Convergent validity

	Moderation Effect 1	Moderation Effect 2	X1. Management Accounting Information System	X2. Information Technology Utilization	Y. Managerial Performance	Z. Internal Control
X1. Management Accounting Information System *Z. Internal Control	0,968					
X1.1			0,913			
X1.2			0,938			
X1.3			0,829			
X1.4			0,881			
X2. Information Technology Utilization * Z. Internal Control		0,983				
X2.1				0,929		
X2.2				0,949		
X2.3				0,962		
Y1					0,925	
Y2					0,921	
Y3					0,960	
Y4					0,960	
Y5					0,945	
Y6					0,955	
Z.1						0,917
Z.2						0,923
Z.3						0,940
Z.4						0,832
Z.5						0,837

Based on the table above, it can be seen that the variables of Accounting Information Systems, Information Technology Utilization, Managerial Performance and Internal Control are greater than 0.7 , so all indicators are declared valid.

3.1.3 Discriminant Validity

Discriminant validity aims to assess whether an indicator of a construct variable is valid or not, namely by looking at the Heterotrait - Monotrait Ratio Of Corelation (HTMT) value <0.90 , then the variable has good discriminant validity (valid). (Hair Jr et al., 2017).

Table 4. Heterotrait - Monotrait Ratio Of Corelation (HTMT)

	Moderation Effect 1	Moderation Effect 2	X1. Management Accounting Information System	X2. Information Technology Utilization	Y. Managerial Performance	Z. Internal Control
Moderation Effect 1						
Moderation Effect 2	0,587					
X1. Management Accounting Information System	0,555	0,599				
X2. Information Technology Utilization	0,599	0,533	0,652			
Y. Managerial Performance	0,698	0,699	0,729	0,736		
Z. Internal Control	0,028	0,035	0,201	0,081	0,221	

Based on the table above, the results of the Heterotrait - Monotrait Ratio Of Corelation (HTMT) correlation are obtained, then

1. The variable correlation of the Management Accounting Information System with Information Technology Utilization is $0.652 < 0.900$, the correlation of the Heterotrait - Monotrait Ratio Of Corelation (HTMT) variable of the Management Accounting Information System with Managerial Performance is $0.729 < 0.900$ correlation of the Heterotrait - Monotrait Ratio Of Corelation (HTMT) variable of the Management Accounting Information System with Internal Control is $0.201 < 0.900$, thus the entire correlation value of the Management Accounting Information System is declared valid.
2. The correlation value of the Heterotrait - Monotrait Ratio Of Corelation (HTMT) of the Information Technology Utilization variable with Managerial Performance is $0.736 < 0.900$, the correlation value of the Heterotrait - Monotrait Ratio Of Corelation (HTMT) of the Information Technology Utilization variable with Internal Control is $0.081 < 0.900$, thus the entire correlation value of Information Technology Utilization is declared valid.
3. The correlation value of the Heterotrait - Monotrait Ratio Of Corelation (HTMT) of the Managerial Performance variable on Internal Control is $0.221 < 0.900$, thus the entire correlation value of Managerial Performance is declared valid.

3.2 Structural Model Analysis (Inner Model)

3.2.1 Coefficient of Determination (R Square)

The Coefficient of Determination (R Square) aims to evaluate the accuracy of predicting a variable. In other words, to evaluate how the variation in the value of the dependent variable is influenced by the variation in the value of the independent variable in a path model. (Hair Jr et al., 2017).

Table 5. Coefficient of Determination

	R Square	Adjusted R Square
Y. Managerial Performance	0,745	0,727

Source: SEM PLS (2024)

In the table above, the result of the effect of the Management Accounting Information System and Utilization of Information Technology with Internal Control on Managerial Performance is 0.745 , which indicates that the variation in the value of Y can be explained by the variation in the values of X1, X2 and Z by 74.5% or in other words that the model is substantial (good), and 25.5% is influenced by other variables.

3.2.2 Hypothesis Testing

This test is to determine the path coefficient of the structural model. The goal is to test the significance of all relationships or hypothesis testing.

Hypothesis testing aims to prove the hypotheses of the influence of a variable on other variables, namely:

1. If the path coefficient value is positive, it indicates that an increase in the value of a variable is followed by an increase in the value of other variables.
2. If the path coefficient value is negative, it indicates that an increase in a variable is followed by a decrease in the value of other variables. (Hair Jr et al., 2017)

And the probability value is :

1. If the probability value (P-Value) < Alpha (0.05) then H_0 is rejected (the effect of one variable on another is significant).
2. If the probability value (P-Value) > Alpha (0.05) then H_0 is accepted (the effect of one variable on another is insignificant).

Table 6. Hypothesis Testing

	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	T Statistic (O/STDEV)	P Values
Moderating Effect 1 -> Y. Managerial Performance	0,271	0,268	0,094	2,875	0,004
Moderating Effect 2 -> Y. Managerial Performance	0,280	0,279	0,097	2,901	0,004
X1. Management Accounting Information System -> Y. Managerial Performance	0,176	0,191	0,086	2,049	0,041
X2. Information Technology Utilization -> Y. Managerial Performance	0,303	0,284	0,106	2,865	0,004
Z. Internal Control -> Y. Managerial Performance	-0,176	-0,173	0,073	2,418	0,016

Based on the table above, it can be obtained:

1. Effect of Management Accounting Information Systems on Managerial Performance.

The results of this study that the Management Accounting Information System on the Managerial Performance variable has a path coefficient of 0.176 (positive), and a P-Values value of 0.041 < 0.05, so that the Management Accounting Information System has a significant effect on Managerial Performance.

This shows that the Management Accounting Information System (SIAM) is a system that collects, stores, and processes accounting data and provides useful information for management in decision making. Effective use of SIAM can have a significant impact on managerial performance. Thus, SIAM has an important role in improving managerial performance through the provision of accurate information, better decision making, operational efficiency, and more effective control. Good implementation of SIAM can make a significant contribution to the achievement of the company's strategic objectives.

A reliable accounting information system also affects Managerial Performance. Because an accounting information system is designed to produce financial information that is used by users to make decisions and determine the steps that must be taken to support operations and also develop the company. For this reason, it is a must for companies to have productive and innovative managers in order to see and use opportunities well, identify problems appropriately. In addition, in improving their performance, managers carry out their functions, duties and responsibilities in carrying out company operations (Paramitha & Mulyadi, 2017).

From the results of research conducted by (Nainggolan, 2015), (Inapty & Martiningsih, 2016), (Animah, 2021) which concluded that the Management Accounting Information System affects Managerial Performance.

2. Effect of Information Technology Utilization on Managerial Performance.

The results of this study found that Information Technology Utilization on Managerial Performance variables has a path coefficient of -0.303 (negative), and a P-Values value of 0.004 < 0.05, so that Information Technology Utilization has a significant effect on Managerial Performance.

This shows that information technology includes various tools and systems, such as management software, enterprise information systems, the internet, and communication tools, all of which assist managers in carrying out their tasks more efficiently and effectively. Thus, optimal utilization of information technology can make a significant contribution to improving managerial performance through better decision making, operational efficiency, better communication, and more effective control.

The benefits reflected in information technology are benefits that are useful in implementing the payroll system. The better the information technology used, the more convincing the performance of the company's payroll system will be. So that it can improve the performance of the company's payroll system. The effect of the high participation of users of this information system is expected to make the payroll system more commonly used and easily socialized, so that it will make the performance of the payroll accounting information system good. Information system user participation also provides confidence that users have a share and responsibility to improve the performance of the payroll accounting information system (Nasir & Oktari, 2011). From the results of research conducted by (Pebriani & Pratomo, 2015) which concluded that the use of information technology affects managerial performance.

3. Effect of Internal Control on Managerial Performance.

The results of this study found that the Internal Control on Managerial Performance variable has a path coefficient of -0.176 (negative), and a P-Values value of 0.016 <0.05, so it can be stated that Internal Control has a significant effect on Managerial Performance.

This shows that internal control is a process designed to provide reasonable assurance regarding the achievement of effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations. Effective internal control is critical to managerial performance because it helps ensure that organizational objectives can be achieved in an efficient manner and in accordance with applicable regulations. Thus, effective internal control can make a significant contribution to improving managerial performance through improved financial reporting accuracy, operational efficiency, regulatory compliance, better risk management, and increased transparency and accountability.

In general, between the company and its employees is like a symbiotic mutualism which means mutual benefit where the company needs its labor services to run the company in order to get maximum production results and make a maximum profit for the company while on the other hand, the employees get a salary paid for their work to meet their daily needs. A manager in addition to using the management accounting information system must also implement a management control system in every decision. management control system is an activity carried out in the organization regularly and continuously. The management control system is very important to be used by top-level managers to capture conditions that are not conducive in the company and activities that are not effective and efficient (Yusuf et al., 2018). The results of research conducted by (Nengsy, 2018) found that internal control has a significant positive effect on managerial performance.

4. Effect of Management Accounting Information Systems on Managerial Performance with Internal Control as a Moderating Variable.

The results of this study found that 0.271 (positive) and has a P-Values value of 0.004 <0.05, so it can be stated that Internal Control has a significant effect in influencing the relationship between the Management Accounting Information System and the Managerial Performance variable. Thus, the Internal Control variable moderates the effect of the Management Accounting Information System on the Managerial Performance variable.

This shows that using management accounting information systems to improve managerial performance with internal control as a moderating variable is a very relevant topic in modern management. With effective internal control, management accounting information can be used more optimally to improve managerial performance. Internal controls help ensure that information used for decision making is accurate and reliable, risks related to business decisions can be managed properly, and operations can run more efficiently and in accordance with regulations.

To obtain good managerial performance, indicators are needed, namely planning, investigation, coordination, evaluation, supervision and staffing. A company that is supported by. A good Management Accounting Information System can improve Managerial Performance. SIAM is an information system that collects operational and financial data, processes it, stores it and reports it to users. Companies design management accounting information systems to assist organizations through managers in planning, organizing, directing, and making decisions (Ramadani et al., 2023).

A reliable accounting information system also affects Managerial Performance. Because an accounting information system is designed to produce financial information that is used by users to make decisions and determine the steps that must be taken to support operations and also develop the company. A manager is someone who uses authority to direct others and is responsible for their work in achieving a goal. High manager performance will result in high company performance as

well. For this reason, it is a must for companies to have productive and innovative managers in order to see and use opportunities well, identify problems appropriately. (Paramitha & Mulyadi, 2017).

5. Effect of Information Technology Utilization on Managerial Performance with Internal Control as a Moderating Variable.

The results of this study found that 0.280 (positive) and has a P-Values value of 0.004 <0.05, so it can be stated that Internal Control has a significant effect in influencing the relationship between Information Technology Utilization and Managerial Performance variables. Thus, the Internal Control variable moderates the effect of Information Technology Utilization on Managerial Performance variables.

This shows that the use of information technology (IT) to improve managerial performance can be very effective, especially when internal control is applied as a moderating variable. Information technology provides tools and systems that assist managers in decision making, planning, controlling, and evaluating performance. Meanwhile, internal controls help ensure that these technologies are used efficiently and safely. With effective internal control, IT utilization can be more optimal in improving managerial performance. Internal controls help ensure that IT is used safely and efficiently, reduce risk, and ensure that the information generated is accurate and reliable, which in turn supports better decision making, operational efficiency, and compliance with regulations. Utilization of information technology and user participation of information systems can be said to be related to the performance of the payroll system seen from the elements of the payroll system in the form of hardware (Hardware), software (Software), human resources (Brainware), procedures (Procedure), databases and database management systems, and communication network technology. The above statement illustrates that it is possible that the use of information technology and the participation of information system users simultaneously have an influence on the performance of the payroll system because they have a mutual relationship to improve the performance of the payroll system.

Management requires a performance evaluation system that can assist in evaluating company performance achievements through the performance of managers at various levels of responsibility centers. The manager's performance evaluation system is based on data and information including accounting information (Lubis & Syafira, 2021).

4. CONCLUSION

Based on the results of the research and discussion previously presented, the following conclusions can be drawn: Management Accounting Information Systems have a significant effect on Managerial Performance at PT. Perkebunan Nusantara IV Medan City. The use of Information Technology influences Managerial Performance at PT. Perkebunan Nusantara IV Medan City. Internal Controllers influence Managerial Performance at PT. Perkebunan Nusantara IV Medan City. Internal Control moderates the influence of the Management Accounting Information System on Managerial Performance at PT. Perkebunan Nusantara IV Medan City. Internal Control moderates the influence of the Use of Information Technology on Managerial Performance at PT. Perkebunan Nusantara IV Medan City. Nusantara IV Medan City. Internal Control moderates the effect of Management Accounting Information Systems on Managerial Performance at PT. Perkebunan Nusantara IV Medan City. Internal Control moderates the influence between Information Technology Utilization on Managerial Performance at PT. Perkebunan Nusantara IV Medan City.

Based on previous phenomena and research results, the author can provide suggestions as follows: Management Accounting Information Systems and Environmental Uncertainty, and employee performance. PT. Perkebunan Nusantara IV Medan is expected to be able to provide support to its employees, in the form of training or mentoring when the employee is working on more difficult tasks until the employee feels capable of carrying out a task individually. Suggestions for further research are to add other variables to research on Managerial Performance and not just use Information Technology and Management Accounting Information Systems variables. Future research is also expected to take research samples outside PT. Perkebunan Nusantara IV Medan.

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