

THE INFLUENCE OF MANAGEMENT ACCOUNTING INFORMATION SYSTEMS AND PERFORMANCE MEASUREMENT SYSTEM ON MANAGERIAL PERFORMANCE

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Abstract: This study aims to examine the effect of management accounting information systems and performance measurement systems on managerial performance. Management accounting information system is a process of the activities of an information system so that the resulting information can help managers to make decisions. Furthermore, the performance measurement system is a measurement that is used to monitor employee performance. Management accounting information systems and performance measurement systems can increase or decrease managerial performance in companies. The object of this research is PT. Sangkuriang Jaya Abadi located in Antapani, Bandung. This study uses a survey method with the number of respondents employees and managers. The data used in this study is primary data and uses a data collection method using a questionnaire. The results of the study are 1) Management accounting information system has an effect on managerial performance. 2) The performance measurement system has an effect on managerial performance.

Keywords: Management Accounting Information System, Performance Measurement System, Managerial Performance

INTRODUCTION

One of the roles of management accounting information is to provide information that facilitates the decision-making process. There needs to be a way in accounting that can directly address the information needs of management in carrying out decision-making responsibilities, namely with a management accounting information system (Kholmi 2019). A good management accounting information system can reduce opportunities for waste, leakage of funds and detect programs that are not economically feasible (Handayani 2019). The results of the initial performance measurement will be the starting point for evaluating process performance and building a more effective measurement system in the future (Soemohadiwidjojo 2017). A performance measurement system that focuses on the wrong set of indicators can undermine an organization's strategic mission (Franceschini *et al* (2019). To achieve its goals, an organization must have effective and efficient performance because organizational performance is an accumulation of individual and group performance. Organizational goals are an important aspect of manager's performance and employee's performance. Performance is one of the concerns in an organization or company by increasing all efforts such as increasing the resources and advantages possessed in order to compete with other companies (Sinaga 2020). Managerial performance greatly determines the

productivity of human resources within the control area. A wise leader will create a positive working environment that will increase employee productivity (Irianto 2017).

H1: Management Accounting Information System has an influence on Managerial Performance.

H2: Performance Measurement System has an influence on Managerial Performance.

METHODS

In the research, all variables use an ordinal scale. The source of data used in this study is primary secondary data and data. The data collection method is by distributing 33 questionnaires to employees of PT. Sangkuriang Jaya Abadi Bandung. The sampling technique in this study is to use cluster random sampling to employees of PT. Sangkuriang Jaya Abadi Bandung by profession. This study uses validity and reliability tests to measure the validity and reliability of the data. This study uses a descriptive method with data analysis techniques using SEM-PLS.

RESULT AND DISCUSSION

Management Accounting Information System

The management accounting information system variable uses four dimensions, namely broad scope, aggregation, timeliness, and integration. This dimension is a reflective dimension. The results of the estimation of the parameters of this variable measurement model are shown in the figure below:

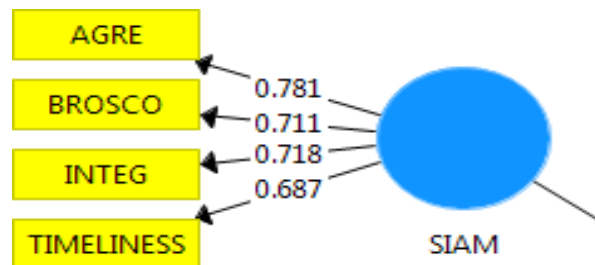


Figure 1. Management Accounting Information System Path Diagram

Source: data processed by SEM-PLS

From the management accounting information system path diagram above, it can be seen that the value of the contained in each indicator is generated through the dimensions derived from the reflective management accounting information system. Organizational calculation results management accounting information system measurement model is as follows:

Table 1. Calculation Results of Management Accounting Information System Measurement Model

Item	Loading Factor	Indicator Reliability	t-count	p-value
Broad Scope	0.711	0.696	4.273	0.000
Aggregation	0.781	0.785	11.163	0.000
Timeliness	0.687	0.682	5.689	0.000
Integration	0.718	0.687	5.173	0.000

Source: data processed by SEM-PLS

Average Variance Extracted (AVE)	0.526
Composite Reliability	0.816

Outer loading and reflective constructs of measurement of management accounting information systems are all above 0.50. The broad scope dimension has a loading value of 0.711 above 0.50 and is significant ($p=0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.696. Then the aggregation dimension has a loading value of 0.781 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.785. Furthermore, the timeliness dimension has a loading value of 0.687 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.682. Then the integration dimension has a loading value of 0.718 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.687. The AVE value of 0.526 is above the minimum required level of 0.50, so the measures of this reflective construct have a good level of convergent validity. Then the composite reliability value of the construct value above has a value of 0.816, which is above the minimum value of 0.80, so this dimension has been declared good. Discriminant validity tested through cross loading states that the four dimensions have higher loading values for their constructs while all cross loadings have lower constructs, thus providing evidence for discriminant validity constructs of management accounting information systems better than others.

Performance Measurement System

The performance measurement system variable uses six dimensions, namely quality, quantity, timeliness, cost effectiveness, need for supervisors, and interpersonal impact. This dimension is a reflective dimension. The results of the estimation of the parameters of this variable measurement model are shown in the figure below:

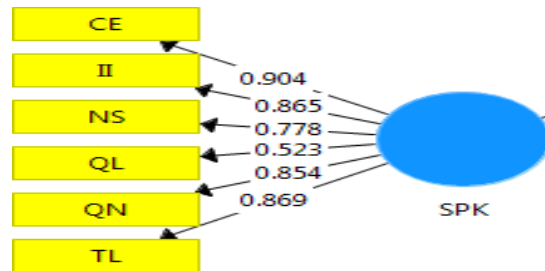


Figure 2. Performance Measurement System Path Diagram

Source: data processed by SEM-PLS

From the performance measurement system path diagram above, it can be seen that the value of the contained in each indicator is generated through the dimensions derived from the reflective performance measurement system. Organizational calculation results performance measurement system measurement model is as follows:

Table 2. Calculation Results of Performance Measurement System Measurement Model

Item	<i>.loading Factor</i>	<i>Indicator Reliability</i>	t-count	p-value
Quality	0.523	0.534	4.111	0.000
Quantity	0.854	0.836	9.476	0.000
Timeliness	0.869	0.871	20.288	0.000
Cost Effectiveness	0.904	0.888	12.059	0.000
Need for Supervisor	0.778	0.754	5.702	0.000
Interpersonal Impact	0.865	0.864	19.191	0.000
Average Variance Extracted (AVE)		0.655		
Composite Reliability		0.917		

Source: data processed by SEM-PLS

The outer loading and reflective constructs of the performance measurement system are all above 0.50. The quality dimension has a loading value of 0.523 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.534. Then the quantity dimension has a loading value of 0.854

above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.836. Furthermore, the timeliness dimension has a loading value of 0.869 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.871. Then the cost effectiveness dimension has a loading value of 0.904 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.888. Furthermore, the need for supervisor dimension has a loading value of 0.778 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.754. Then the interpersonal impact dimension has a loading value of 0.865 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.864. The AVE value of 0.655 is above the minimum required level of 0.50, so the measures of this reflective construct have a good level of convergent validity. Then the composite reliability value of the construct value above has a value of 0.917, which is above the minimum value of 0.80, so this dimension has been declared good. Discriminant validity tested through cross loading states that the six dimensions have higher loading values for their constructs while all cross loadings have lower constructs, thus providing evidence for discriminant validity constructs of performance measurement systems that are better than others.

Managerial Performance

The managerial performance variable uses eight dimensions, namely planning, investigation, coordination, evaluation, supervision, staffing, negotiation, and representation. This dimension is a reflective dimension. The results of the estimation of the parameters of this variable measurement model are shown in the figure below:

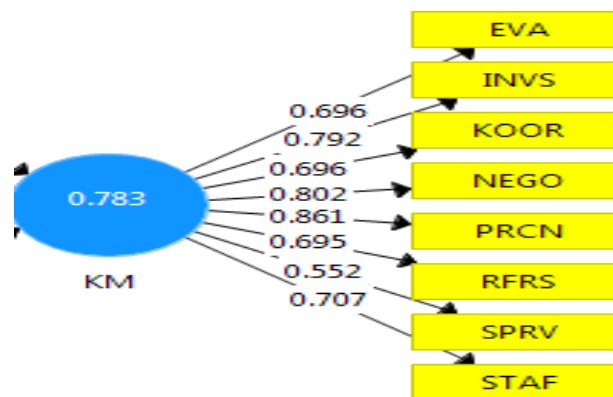


Figure 3. Managerial Performance Path Diagram

Source: data processed by SEM-PLS

From the managerial performance path diagram above, it can be seen that the value of the contained in each indicator is generated through the dimensions derived from the reflective managerial performance. Organizational calculation results managerial performance model is as follows:

Table 3. Calculation Results of Managerial Performance Measurement Model

Item	loading Factor	Indicator Reliability	t-count	p-value
Planning	0.861	0.858	11.608	0.000
Investigation	0.792	0.797	12.721	0.000
Coordination	0.696	0.676	3.953	0.000
Evaluation	0.696	0.697	6.526	0.000
Supervisi	0.552	0.528	3.430	0.001
Staffing	0.707	0.695	3.785	0.000
Negotiation	0.802	0.796	7.912	0.000
Refresentatif	0.695	0.691	5.545	0.000
Average Variance Extracted (AVE)		0.533		
Composite Reliability		0.900		

Source: data processed by SEM-PLS

Outer loading and reflective constructs of managerial performance measurement are all above 0.50. The planning dimension has a loading value of 0.861 above 0.50 and is significant ($p = 0.000$) at a 5% level of significance. This dimension has a reliability indicator of 0.858. Then the investigation dimension has a loading value of 0.792 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.797. Furthermore, the coordination dimension has a loading value of 0.696 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.676. Then the evaluation dimension has a loading value of 0.696 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.697. Furthermore, the supervision dimension has a loading value of 0.552 above 0.50 and is significant ($p = 0.001$) at a 5% significance level. This dimension has a reliability indicator of 0.528. Then the staffing dimension has a loading value of 0.707 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.695. Then the negotiation dimension has a loading value of 0.802 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.796. Furthermore, the representative dimension has a loading value of 0.695 above 0.50 and is significant ($p = 0.000$) at a 5% significance level. This dimension has a reliability indicator of 0.691. The

AVE value of 0.533 is above the minimum required level of 0.50 then the measures of this reflective construct have a good convergent validity level. Then the composite reliability value of the construct value above has a value of 0.900 which is above the minimum value of 0.80, so this dimension has been declared good. Discriminant validity tested through cross loading states that the eight dimensions have higher loading values for their constructs while all cross loadings have lower constructs, thus providing evidence for discriminant validity managerial performance constructs that are better than the others.

Collinearity Testing

To evaluate collinearity, a measure of variance inflation factor (VIF) is used. In the context of PLS-SEM, a tolerance value of 0.20 or less than the VIP value or more indicates that there is a collinearity problem (Hair et al, 2017: 186)

Table 4. Collinearity Assesment

Konstruk	VIF
Management Accounting Information System	3,037
Performance Measurement System	3,037

Source: data processed by SEM-PLS

From the calculation results, it is known that the VIF value of each management accounting information system variable and performance measurement system in the table. VIF value inside value tolerance for differences in collinearity problems, so it can be concluded that there is a significant level of collinearity between the two predictor variables, with the evaluation of the structural model can be realized by covering the conducted through two stages of research hypotheses.

Stuctural Model Evaluation

The results of the calculation of the standard path coefficients for the structural model of the influence of management accounting information systems and performance measurement systems on managerial performance are shown in the figure below:

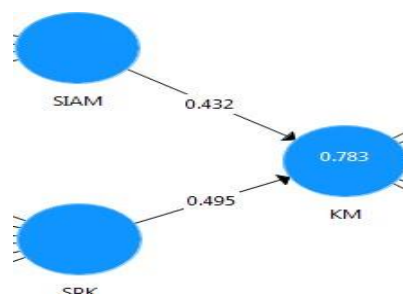


Figure 4. Standardized Structural Model Coefficients

Source: Data Processed SEM-PLS 20

Statistical hypothesis 1

$H_0 : \gamma_{11} = 0$ Management accounting information system has no effect on managerial performance

$H_0 : \gamma_{11} \neq 0$ Management accounting information system has an effect on managerial performance

Statistical hypothesis 2

$H_0 : \gamma_{12} = 0$ Performance measurement system has no effect on managerial performance

$H_0 : \gamma_{12} \neq 0$ Performance measurement system affects managerial performance

To test this hypothesis, the statistical t-test was used. The test criteria is that H_0 is rejected if the p-value is less than α , with $\alpha = 0.5$. The test results are summarized in the table below:

Table 5. Hypotesis Testing Result

Statistical Hypothesis	Path Coefficient	t-count	p-value	Information
$H_0 : \gamma_{11} = 0$ $H_0 : \gamma_{11} \neq 0$	0,432	2,281	0,023	H_0 rejected
$H_0 : \gamma_{12} = 0$ $H_0 : \gamma_{12} \neq 0$	0,495	2,592	0,010	H_0 rejected

Source: data processed by SEM-PLS

Hypothesis Testing Results 1

Based on the table above, it can be seen that the t-count value of the organizational culture variable shows that the value is greater than the t-table, which is 1.96 which means that hypothesis 1 test in this study is that H_0 is rejected with the statistical conclusion drawn that management accounting information system has a significant effect on managerial performance.

Hypothesis Testing Results 1

Based on the table above, it can be seen that the t-count value of the organizational culture variable shows that the value is greater than the t-table, which is

1.96 which means that hypothesis 2 test in this study is that H_0 is rejected with the statistical conclusion drawn that performance measurement system has a significant effect on managerial performance. Based on the calculation results obtained f^2 value of 0.372. Because the value of f^2 exceeds 0.35 (the limit of effect size is large), it can be stated that the influence of the performance measurement system on managerial performance is large. Another measure that can be used in evaluating the structural model is the managerial performance coefficient R^2 . Presenting the relationship between the variables of management accounting information systems and performance measurement systems as predictors and endogenous latent variables of managerial performance gives the calculation results $R^2 = 0.783$. So it can be concluded that 78.3%

of the variance in the managerial performance variable is explained by the management accounting information system and performance measurement system variables, and the rest is explained by other factors.

Discussion

In this study, the findings regarding the management accounting information system at PT. Sangkuriang Jaya Abadi Bandung has been going very well but it is not perfect because it has to be done value 100% (ideal). The following are the things that cause a management accounting information system the variable has not been said to be ideal: In achieving broad scope shows that there is still a management accounting information system at PT. Sangkuriang Jaya Abadi who has not provided information from outside the company. Next is the lack of an information system that provides financial and non-financial information, because some employees who use information systems think that financial and non-financial information is less important. Then the information system has not provided an estimate of the possibility of future events, due to the constraints that exist in the company often occur with different levels of difficulty each year. The achievement of aggregation shows that the information system obtained from other divisions is not in accordance with the situation in the company. Furthermore, the information system obtained by the user has not helped in making decisions, this is due to the lack of courage in being afraid of making mistakes. In achieving timeliness, it shows that the level of achievement in the speed of requesting information is not maximal with the presentation of information. Then the information has not been able to support in dealing with the uncertainty that occurs, because the constraints in the field often cause changes in the work plan that has been set per period. In achieving integration, it shows that the target information system in the company is not needed by some users. Then employees are less able to make information as a coordination tool between divisions to make it easier to exchange opinions. Furthermore, information is also less able to contribute to improving employee performance. In this study, the findings regarding the performance measurement system at PT. Sangkuriang Jaya Abadi Bandung has been going very well but it is not perfect because it has to be done value 100% (ideal). The following are the things that cause a performance measurement system the variable has not been said to be ideal: In achieving quality, it shows that information about the quality of work desired by the company is not spread evenly. This is because the quality of the work is not as expected by the company. In achieving quantity, it shows that there are still employees who are less able to complete the work that has been given. This is because there are still employees who are not good enough in managing work processes. In achieving timeliness, it shows that there are still employees who have not been able to complete work on time. This is because there is a sudden addition of work so that some employees have not been able to complete the work on time. In achieving cost effectiveness, it shows that there are employees who have not been able to utilize resources, company assets, and technology properly, this is due to a lack of knowledge about the benefits of existing facilities in the company. In achieving the need for supervisors, it shows that there are still employees who are not able to carry out their work properly if they are not supervised by their superiors, thus requiring direct supervision from their superiors. In achieving interpersonal impact, it shows that there are still employees who have not been able to maintain their self-

imageproperly, this is because some employees have not been able to maintain their behaviorproperly/politely to other co-workers.

CONCLUSION

Based on the results of the research, the conclusions of the study are as follows: Management accounting information system has a significant effect on managerial performance. Managerial performance is not fully optimal because the management accounting information system which includes broad scope, aggregation, timeliness, and integration that occurs at PT. Sangkuriang Jaya Abadi still has obstacles so that it is not perfect in its application. The performance measurement system has a significant effect on managerial performance. Managerial performance has not been fully maximized because the performance measurement system which includes quantity, quality, timeliness, cost effectiveness, need for supervisors, and interpersonal impact that occurs at PT. Sangkuriang Jaya Abadi still has obstacles so that it is not perfect in its application.

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