

THE EFFECT OF CHARACTERISTICS OF MANAGEMENT ACCOUNTING SYSTEM INFORMATION (BROADSCOPE, TIMELINESS, AGGREGATION, AND INTEGRATION) AND DECENTRALIZATION OF MANAGERIAL PERFORMANCE

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Abstract: This study tested the hypothesis developed by Chenhall and Morris (1986) and aims to examine the effect of management information system characteristics of management accounting and decentralization on managerial performance. This study uses contingency theory as a grand theory because the theory of the contingency approach is based on the premise that no management accounting system is always appropriate for all types of companies. This study was analyzed using multiple linear regression analysis. This study used a survey method using a questionnaire with 41 respondents consisting of 5 area managers and 36 supervisors at one pharmaceutical company in Bali province. The results showed that the characteristics of management accounting system information in broadscope, timeliness, aggregation, and integration did not affect managerial performance. It is because managers and supervisors do not fully use the information of the existing management accounting system, so the information management accounting system does not contribute to decision-making that will impact managerial performance. The results of this study are not in line with previous research, but this research supports the contingency theory approach. The decentralization variable has a significant effect on managerial performance. These results support previous research showing that delegating authority from officials to lower-level officials can assist management in making decisions better to improve managerial performance.

Keywords: Broadscope, Timeliness, Aggregation, Integration, Decentralization, Managerial Performance

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The management accounting system is an organizational control mechanism that can be an effective tool to provide information and be useful in predicting the consequences that may arise from various choices of activities and actions that

are possible to Nazaruddin (1998). The management accounting system is a system that produces information that is used in organizational control mechanisms to be used as a basis for policy-making and evaluation. The more reliable the management accounting information provided, the better the decisions made by members of the organization will be. The characteristics of the management accounting information system have an important meaning in the effectiveness of the continuity of the running of a company. In organizations, managers need broad-scope information (information that has been summarized according to time and function) as one of the implications of increasing their authority and responsibility and their function as control (Hariadi, 2002). The characteristics of aggregation have an impact in terms of obtaining information. Properly aggregated information will provide input in decision-making because the time required to evaluate information is relatively shorter than information that is still raw and not well structured (Chia, 1995). Next is the timeliness characteristic, which means accuracy, related to the grace period between the need for the required information and the availability of the information. Timely information will affect the manager's ability to respond to any problems. If the information is not delivered in a timely manner, then the information will lose value in the decision-making process (Gordon and Narayanan, 1984). Characteristics of integration where integrated information provides a role in coordinating various decisions in the organization. Integrated information is also a moral generator for business unit managers and indicates that the information provided improves performance (Chia, 1995).

Not all companies need management accounting system information because this information is used to assist management in making decisions. Companies that use a centralized system do not need this information because they only do what their superiors order. On the contrary, the characteristics of management accounting information systems are needed by companies that use a decentralized system in running their companies.

Decentralization can be interpreted as a delegation of authority from officials to officials under

them to make decisions and be responsible for the allocation of resources and services to the community (Karyanti, 2010). The decentralized management system applied by many companies today makes decision-making no longer a monopoly of top managers. Lower-level managers have more authority to make decisions within the limits of their authority. Therefore, managers use information systems as the main basis for decision-making.

This research is based on contingency theory because this theory explains the existence of situational factors that can influence one variable to another (Otley, 1980). This study is in line with the contingency approach that the level of availability of each characteristic of management accounting information may not always be the same for each performance in every company condition. This contingency approach makes it possible that differences in the level of responsibility and business strategy in each company cause differences in the need for information characteristics of management accounting systems on managerial performance.

This study tested the hypothesis that Chenhall and Morris (1986) developed and aimed to examine the effect of management information system characteristics of management accounting and decentralization on managerial performance. Researchers use manufacturing companies as research objects because manufacturing companies are the most common type of company in Indonesia. Companies must always evaluate the company's performance to continue to compete and develop in a better direction.

HYPOTHESIS DEVELOPMENT

Effect of Broadscope on Managerial Performance

Hastuti (2010) stated that broad-scope information is needed because it is basic information about the company's external and internal factors. Broadscope includes information on problems, both economic and non-economic, estimates of events that may occur in the future, and environmental aspects. Information on external factors of an economic nature includes, among others, total market sales, gross national product, and company market

share. Non-economic external information includes demographics, competitor actions, consumer tastes, and technological advances. In addition, a broadscope management accounting system will estimate the likelihood of future events occurring. Hastuti (2010) stated that management accounting system information (Broadscope) significantly influences managerial performance. Still, the effect is negative, meaning that the higher the broadscope, the lower the managerial performance. Ayu and Dahen (2014) stated that the broadscope management accounting system positively and significantly influences managerial performance. Aminah (2021) also showed that the characteristics of broadscope management accounting system information significantly affect managerial performance.

H1: Broadscope has a positive effect on managerial performance

The Effect of Timeliness on Managerial Performance

Managers also need timely information to respond quickly to any existing problems and anticipate that they will not get more complicated. The ability of managers to respond quickly to an event may be affected by the timeliness of the Management Accounting System. The timeliness of information is to improve the facilities of the Management Accounting System to report the latest events and to provide quick feedback on the decisions that have been made. Chia (1995) stated that the timing of information shows the time distance between the request and the availability of information from the management accounting system to the requesting party. Irawati and Ardianshah (2018) indicated that the variable characteristics of information timeliness affect managerial performance. Ayu and Dahen (2014) stated that the timeliness management accounting system positively and significantly influences managerial performance. Aminah (2021) also showed that the information characteristics of the management accounting system timeliness significantly affect managerial performance.

H2: Timeliness has a positive effect on managerial performance

Effect of Aggregation on Managerial Performance

Aggregation Management Accounting System provides information in various forms of aggregation ranging from providing basic, unprocessed data to various aggregations based on certain time periods or time areas such as responsibility centers or functionalities. Properly aggregated information will provide important input in decision-making because the time needed to evaluate the information is less than the disorganized information or information in raw form. Irawati and Ardianshah (2018) indicated that the variable characteristics of information aggregation affect managerial performance. Ayu and Dahen (2014) stated that the aggregation management accounting system positively and significantly influences managerial performance. Aminah (2021) also showed that the characteristics of the aggregation of management accounting system information significantly affect managerial performance.

H3: Aggregation has a positive effect on managerial performance

Effect of Integration on Managerial Performance

Integration information combines with each other, reflecting the coordination between sub-unit segments with one another. Integrated information is useful for managers when they make decisions that may affect other sub-units. This information also shows the nature of information transparency of each manager because information about the impact of a policy on other units is reflected in the integrated information. The existence of integrated information will cause managers to consider the element of integrity in evaluating performance. Ayu and Dahen (2014) stated that the Integration management accounting system positively and significantly influences managerial performance. Aminah (2021) also showed that the characteristics of integrated management accounting system information significantly affect managerial performance.

H4: Integration has a positive effect on managerial performance

Effect of Decentralization on Managerial Performance

Decentralization is a policy of each company that is independent, meaning that each company can give freedom to divisions or parts within the company to regulate and carry out activities to be carried out. Establishing authorization for each of these divisions can often motivate or encourage employees to improve their performance. This condition arises because, with the establishment of a decentralized system, activities such as monitoring and assessment can be easier to carry out. Authority or authority here provides an understanding as the right to determine the assignment, while responsibility is the obligation to achieve the assigned assignment. The higher the level of decentralization, the higher the authority of managers in making decisions autonomously. Hasan and Randi (2020) showed that decentralization and management accounting systems influence managerial performance. Aminah (2021) also showed that a decentralized management accounting system's information characteristics significantly affect managerial performance.

H5: Decentralization has a positive effect on managerial performance

METHOD

This quantitative study uses a causal approach to see the relationship between one variable and another. This study uses a population of managers and supervisors at a pharmaceutical manufacturing company in Bali Province. Based on this population, the sample was selected using the criteria: the respondent worked at least one year in a manager or supervisor position and had a supervisor who supervised and controlled subordinates. The criteria are made with the consideration that respondents have time and experience in performance evaluation so that they can identify and determine the appropriate answers to the questionnaire. From the above criteria, 41 respondents were obtained, consisting of 5 area managers and 36 supervisors.

Variable Measurement

The characteristics of management accounting information were measured using an instrument Chenhall and Morris (1986) developed. The broadscope variable provides information about the company's external and internal factors. The timeliness variable will provide information that shows how long it takes between the information requester and the desired information presenter and the frequency of reporting information. Furthermore, Aggregation provides information in various forms of aggregation ranging from providing basic, unprocessed data to various aggregations based on certain periods or time areas and integration variables providing information that reflects the coordination between the sub-sections of one another. Furthermore, the Decentralization variable is the delegation of decision-making authority to lower organizational management levels. The scale used is a Likert scale of 1 to 5.

RESULTS

The number of questionnaires distributed was 45, while 41 questionnaires were returned. All returned questionnaires can be analyzed, so the percentage rate of return is 91.11%.

Validity Test

The validity test results obtained that all the questions used had a t-count value greater than the t-table (0.3081). It can be concluded that the measuring instrument used can be said to be valid.

Reliability Test

Table 2 showed that the measuring instrument used is valid and reliable. It can be seen from the value of the t count is greater than the t table (0.3081). At the same time, the reliability can be seen from the value of Cronbach's alpha of each variable that has a value of more than 0.6. Then the measuring instrument used can be said to be valid and reliable.

Table 2. Reliability Test

No	Variable	Cronbach Alpha	Reliability
1	Broadscope	0,756	Reliable
2	Timeliness	0,795	Reliable
3	Aggregation	0,620	Reliable
4	Integration	0,754	Reliable
5	Decentralization	0,701	Reliable
6	Managerial Performance	0,821	Reliable

Source: data processed in 2018

Table 3. Kolmogorov Smirnov One Sample Test

Variable	Asymp. Sig. (2-tailed)	Conclusion
<i>Broadscope</i>	0,676	Normal Distributed
<i>Timeliness</i>	0,522	Normal Distributed
<i>Aggregation</i>	0,615	Normal Distributed
<i>Integration</i>	0,801	Normal Distributed
Decentralization	0,601	Normal Distributed
Managerial Performance	0,518	Normal Distributed

Source: processed 2018

Classic Assumption Test

Table 3 showed that all variables, both dependent and independent variables, are normally distributed. It is evidenced by the significance value of each variable > 0.05 . It can be concluded that the data used is normally distributed. The Kolmogorov Smirnov test value details are broadscope variables with a value of 0.676, timeliness of 0.522, aggregation of 0.615, Decentralization of 0.601, and Managerial Performance of 0.518. With this value, it can

be concluded that all data used in this study are normally distributed. Table 4 shows that all independent variables are not affected by multicollinearity. This is evidenced by the Variance Inflation Factor (VIF) value of less than 10 with details, namely Variable broadscope of 1.501, timeliness of 1.925, aggregation of 1.672, integration of 1.524, and Decentralization of 1.560. So it can be concluded that there is no correlation or relationship between variables.

Table 4. Multicollinearity Test

No	Variable	VIF	Conclusion
1	<i>Broadscope</i>	1,501	Non Multicollinearity
2	<i>Timeliness</i>	1,925	Non Multicollinearity
3	<i>Aggregation</i>	1,672	Non Multicollinearity
4	<i>Integration</i>	1,524	Non Multicollinearity
5	Decentralization	1,560	Non Multicollinearity

Source: processed 2018

Table 5. Heteroscedaticity Test

No	Variable	Sig	Conclusion
1	<i>Broadscope</i>	0,501	Non Heteroskedastisitas
2	<i>Timeliness</i>	0,091	Non Heteroskedastisitas
3	<i>Aggregation</i>	0,548	Non Heteroskedastisitas
4	<i>Integration</i>	0,682	Non Heteroskedastisitas
5	Decentralization	0,552	Non Heteroskedastisitas

Source: processed 2018

Table 5 showed that the regression model is not affected by heteroscedasticity. It is evidenced by the resulting p-value greater than 0.05. So it can be concluded that in the independent variable, there is no variance equation from the residual from one observation to another.

Hypothesis Test

Based on table 6 above, the adjusted R2 value is 53%. It showed that the independent variables in

the form of broadscope, timeliness, aggregation integration, and decentralization could explain the dependent variable by 53%. The other 47% is influenced by other variables not tested in this study.

Based on table 7 above, the results showed that the sig value is 0.000. It indicates that all independent variables simultaneously affect Managerial Performance. It means that the research model used is fit. So it can be used to predict Managerial Performance.

Table 6. Coefficient Determination Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,768	0,589	0,530	2,435

Source: processed 2018

Table 7. Goodness of Fit Test

Model	Sum of Squares	Mean Squares	Sig
Regression	297,519	59,504	0,000
Residual	207,457	5,927	

Source: processed 2018

Table 8. t Statistics test

Variable	t-count	sig	Conclusion
<i>Broadscope</i>	0,442	0,661	No significant effect
<i>Timeliness</i>	1,245	0,221	No significant effect
<i>Aggregation</i>	0,896	0,376	No significant effect
<i>Integration</i>	1,489	0,145	No significant effect
Decentralization	3,099	0,004	Significantly influential

Source: processed, 2018

H1 test: broadscope has a positive effect on Managerial Performance. The regression analysis results obtained the value of t count = 0.422 while the value of t table = 2.030, with a significance level of $0.301 > \alpha$ (0.05). So that t count is smaller than the t table, which means H_0 is accepted, or in other words, broadscope information has no significant effect on Managerial Performance. Test H2: Timeliness has a positive effect on Managerial Performance. The regression analysis results obtained the value of t count = 1.245 while the value of t table = 2.030, with a significance level of $0.661 > \alpha$ (0.05). So that t count is smaller than the t table, which means H_0 is accepted, or in other words, timeliness information has no significant effect on Managerial Performance. Test H3: Aggregation has a positive effect on Managerial Performance. The regression analysis results obtained the value of t count = 0.896 while the value of t table = 2.030, with a significance level of $0.221 > \alpha$ (0.05). So that t count is smaller than the t table, which means H_0 is accepted, or in other words, aggregation information has no significant effect on Managerial Performance. Test H4: Integration has a positive effect on Managerial Performance. The regression analysis results obtained the value of t count = 1.489 while the value of t table = 2.030, with a significance level of $0.376 > \alpha$ (0.05). So that t count is smaller than the t table, which means H_0 is accepted, or in other words, integration information has no significant effect on Managerial Performance. Test H5: Decentralization has a positive effect on Managerial Performance. The regression analysis results obtained the value of t count = 3.099 while the value of t table = 2.030, with a significance level of $0.004 < \alpha$ (0.05). So that t count is greater than the t table, which means H_0 is rejected, or it can be said that Decentralization significantly affects Managerial Performance.

DISCUSSION

Broadscope to Managerial Performance

Based on the results of statistical tests that have been carried out, the explanation is that all independent variables simultaneously affect the dependent variable. Partially broadscope information (X1) con-

tains information that has a broad and complete scope related to the external environment of an economic nature and non-economic in nature. These results contradict the results of research by Sulani and Dedi (2013), Hastuti (2010), Ayu and Dahen (2014), and Aminah (2021), which showed that broadscope information has a significant effect on Managerial Performance.

Timeliness to Managerial Performance

Timeliness has no significant effect on managerial performance. The timeliness variable is a variable that serves as a provider of information about the timeliness of providing the information needed by its users. This question does not support previous research, which states that timeliness affects Managerial Performance in the company. This is not in accordance with Irawati and Ardianshah (2018), Ayu and Dahen (2014), and Aminah (2021) stated that timeliness has a significant effect on managerial performance.

Aggregation of Managerial Performance

The third variable in this study, aggregation (X3), gives similar results to the previous variable, which proves that aggregation partially has no significant effect on Managerial Performance. This is not in accordance with Irawati and Ardianshah (2018), Ayu and Dahen (2014), and Aminah (2021) stated that aggregation has a significant effect on managerial performance.

Integration with Managerial Performance

Variable integration (X4) also showed that integration has no significant effect on Managerial Performance. It is not in accordance with what was conveyed by Ayu and Dahen (2014), Aminah (2021), and Achmad and Ira (2009) the Integration management accounting system has a positive and significant influence on managerial performance. Integrated information is important when managers are faced with situations where they have to make decisions that will impact other units. At the same time, Variable integration has no effect on Managerial Performance due to the subjective answers of the respondents, which are adjusted to the respon-

dents' abilities. So when making decisions, respondents only think about the useful information for each of them.

Characteristics of Management Accounting System Information on Managerial Performance

In the explanation above, the four characteristics of management accounting information partially do not affect Managerial Performance. This statement is not in line with the research of Ratnawati (2011) and Sulani and Dedi (2013), which stated that the characteristics of accounting information have a significant effect on Managerial Performance. However, the characteristics of management accounting information become useless in improving Managerial Performance because even though the company implements a management accounting system, many risks and uncertainties occur, so that information on the characteristics of the management accounting system has no value in making decisions to improve Managerial Performance.

Decentralization of Managerial Performance

Decentralization, the fifth variable in this study, shows that partial Decentralization has a significant effect on Managerial Performance. Decentralization is a variable that provides information about the delegation of authority from officials to subordinates to provide opportunities for lower-level management to make decisions and help upper-level management focus on carrying out their duties with the assistance of lower-level management. These results support the research conducted by Hasan and Randi (2020) and Aminah (2021), which stated that decentralized significantly affects managerial performance.

CONCLUSIONS

This study aims to develop research conducted by Chenhall and Morris by examining the effect of information characteristics of management accounting systems and Decentralization on Managerial Performance. The results of hypothesis testing do not support previous research; namely, the characteristics of management accounting system infor-

mation consisting of broad scope, timeliness, aggregation, and integration do not affect Managerial Performance. However, these results are supported by contingency theory with the premise that no accounting information system design can generally be applied to all companies but depends on the needs of each company. Furthermore, Decentralization affects Managerial Performance, which means that the delegation of authority from officials to officials under them can assist in improving Managerial Performance.

IMPLICATIONS

Based on the results of the discussion of the research, it can be seen that of the five hypotheses tested, only the fifth hypothesis is accepted. Namely, Decentralization has a significant effect on Managerial Performance. Decentralization is the delegation of authority to lower-level management that can help upper-level management carry out their duties and functions. These results support research (Suryani, 2013) which stated that Decentralization has a significant effect on Managerial Performance. This study also supports the contingency theory, which has the opinion that environmental uncertainty and changes in culture and structure cause the management control system and decentralization cannot be applied equally to all companies, but depending on the conditions of each company so that later the design of the management accounting system and the division of authority in tasks can have a significant influence on Managerial Performance. Therefore, the characteristics of the management accounting system information have no effect on Managerial Performance because managers and supervisors do not use this information much in decision-making. It can be proven from the questionnaire results that the average respondent chooses to hesitate to use the information, so the results do not support Managerial Performance.

RECOMMENDATIONS

Suggestions for further similar research are expected to be able to conduct research on the research object and increase the types of respondents so that the research results become more accurate

and can represent the actual situation in the research object. And it is hoped that in future research, there will be moderation in Variable Decentralization so that the results can affect Managerial Performance. In addition, it is hoped that the development of this research will make Decentralization a moderating variable or an intervening variable on the relationship between the characteristics of management accounting information systems and managerial performance.

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