



## Interaction of Environmental Uncertainty, Characteristics of Management Accounting Information Systems and Decentralization on Managerial Performance

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**Abstract:**

This study aims to examine the effect of the characteristics of management accounting information systems and decentralization on managerial performance with environmental uncertainty as a moderating variable. This research is a type of quantitative research, the data used using primary data and data collection using a questionnaire to obtain information from respondents, namely middle managers who work in manufacturing companies in the feedmill sector in Banten Province. The analytical method used is Structural Equation Model (SEM) with Partial Least Square (PLS) Path Modeling with SmartPLS 3.0 analysis tool. The results of this study are 1) The effect of the characteristics of the management accounting information system on managerial performance, a) Broadscope has an effect on managerial performance, b) Timeliness has no effect on managerial performance, c) Aggregation has no effect on managerial performance, d) Integration has no effect on managerial performance, 2) Decentralization has an effect on managerial performance, 3) The effect of environmental uncertainty moderates the relationship between the characteristics of management accounting information systems on managerial performance, a) Environmental uncertainty does not moderate the relationship between broad- scope management accounting information characteristics and managerial performance, b) Environmental uncertainty does not moderate the relationship between characteristics of management accounting information timeliness with managerial performance, c) Environmental uncertainty does not moderate the relationship between the characteristics of aggregation management accounting information with managerial performance, d) Uncertainty environmental assurance does not moderate the relationship between the characteristics of integrated management accounting information and managerial performance, 4) Environmental uncertainty moderates the relationship between decentralization and managerial performance



## Introduction

The development and increasingly fierce business competition in Indonesia requires business actors to improve business competitiveness, including improving managerial performance. Good company performance will certainly be supported by good managerial skills from top managers, as well as lower level managers. On the other hand, poor managerial skills tend to result in poor performance.

Managerial performance is the result of work in quality and quantity achieved by a manager in carrying out his duties in accordance with the responsibilities given to him. Managerial is the results and outputs produced by managers in accordance with their role in the organization in a certain period. The ability of managers in managing the company is a barometer of company growth. (Amalia et al, 2019)

In improving managerial performance, human resources become the most important aspect in an organization, this aspect can bring the most significant influence in increasing organizational productivity (Zammuto and Bedeian, 1991). Performance appraisal plays an important role to know or measure the success of an organization. However, in reality, this condition still receives less attention from several companies, because it is still oriented towards benefits and timely completion of performance by not paying attention to the results of its performance or only paying attention to economic aspects with the exception of non-companies. This is certainly not suitable to be applied in the era of globalization where business competition is getting tougher.

Performance that can be achieved by a or a group of people inside an organization, in accordance with the authority and their respective responsibilities, in efforts to achieve organizational goals legal, does not violate law and in accordance with morals and ethics. Performance management defined as a process that managers go through to ensure that activities of employees and the resulting output according to organizational goals. Performance managerial is a measure of how effective and efficient manager has worked to reach the goal organization (Juniarti and Evelyne, 2003).

Low Performance of company, caused by dependence on the company management accounting system that fails in determine the right target, performance measurement (Kaplan, 1990; Banker et al, 1993). Fact this refers to on a contingency approach based on on the premise that there is no system universal management accounting it's always right for applied to all organizations in every situation, contingency. Approach needed to evaluate environmental factors (intensity competition, strategy and uncertainty environment) that can cause accounting system management to be more effective, but the management accounting system also depends on conditional factors existing in the organization.

Information is a component that very important for the company, because information is basic input in each decision making, by because it's information relevant, correct time, accurate and complete very needed by each company. Accountancy management is systematic liaison network in presentation of useful information and get the power to help company leader in effort to achieve

destination established organization previously. Accounting information management needed by management various levels of the organization, for compiling company activity plan in the future (Komalasari, 2017).

The characteristics of management accounting information as one of the management accounting products play a role in helping predict the consequences that may occur for various activities such as planning, controlling, and decision making. The presence of information will also increase the ability of managers to understand the actual state of the environment and its function as well as in identifying relevant activities. The characteristics of useful information based on managers' perceptions as decision makers are categorized into four characteristics, namely broad scope, timeliness, aggregation, and information integrity (Chenhall and Morris, 1986). Management accounting itself is prepared by a company or organization with the aim of producing information that is useful in making management decisions.

Reliable accounting system information according to Dwirandra (2007) suggests that the characteristics of useful information based on managers' perceptions for decision making are those that have broad scope, timeliness, aggregate and integrated characteristics. *Broad scope* is information with comprehensive and comprehensive coverage. *Timeliness* is the correct information received time, *aggregated* is information concise which includes important things. And *integration* reflects complexity and interrelationships between sub-units within the company. Thus the characteristics of the management accounting information system using the four sub-units including broad scope, timeliness, aggregate and integrated greatly influence managerial performance in making good and appropriate decisions.

Management accounting system information provides the information needed to fulfill certain management objectives in planning, control, and decision-making activities. Needs information in a company will depend on various factors of environmental uncertainty and factors of the company's organizational structure. A company in conditions of high levels of environmental uncertainty cause difficulties in planning, control, and decision-making activities. Structure good company organization decentralization or centralization will also affect level of need for information provided. Information a company in the business world has main target.

System management accounting information provide the required information to meet goals certain management. Accounting information system management is system that produces output output using input input to support retrieval decision. According to Putra (2015) system accounting information management aims to provide information needed for facilitate monitoring and action against organizational assessment.

Decentralization is delegation of decision-making authority within the organization, with give authority to managers at various operational levels to make a decision that related to their area of responsibility. Some organizations may be more decentralized than others, according to the characteristics and distribution of the coverage area (Bustami and Nurlela, 2009).

Organizations that are growing rapidly, both operational activities and business networks will tend to use business unit strategies to overcome operational complexities. Efforts to improve and increase the effectiveness and productivity of an organization require a decentralized organizational structure. A decentralized organization is an organization whose decision-making is not only left to top managers, but is also left to lower levels to make and implement important decisions related to their areas of responsibility. With decentralization, managers are given the right to make decisions by their superiors and carry out those decisions. On the other hand, the manager will also be responsible for the decisions he has taken. Therefore, Managers need information as a basis for making decisions, so that the policies taken are of high quality and can be accounted for. Because in organizations that adopt a centralized system, middle managers and supervisory managers or subordinates only carry out tasks or orders from their superiors and are not authorized to make decisions. (Alamsa et al, 2019)

Decentralized organizations give lower managers the freedom or authority to make decisions. The existence of freedom or authority of divisional managers in making decisions will indirectly affect the organization's ability to process, collect, and follow up on that information. According to Handoko (2012) decentralization is a broader concept and relates to the extent to which top management delegates authority down to divisions, branches, or other lower-level organizational units. Decentralization will also depend on the information management accounting system because these two things have an effect positive. The positive influence occurs if there is an interaction that occurs it can be balanced. Interaction impact between the characteristics of each management accounting system information with decentralization will feel more positive if in level very high decentralization manager also supported by the level of availability management accounting system tall. (Melasari and Handayani, 2018)

This research is motivated by the phenomenon that occurs in a number of manufacturing companies in the feedmill sector which has an impact on the weakening of the rupiah and the supply of feed raw materials (imports) is hampered, especially feed additives. Cost Logistics increase has an impact on lower feed prices undergo adjustment. Need regulation and innovations that support the feed industry keep growing and getting stronger competitiveness (source, <http://troboslivestock.com>).



Figure 1.1 Indonesian Manufacturing PMI Chart

Source: Markit Economics

In 2020 the Ministry of Industry (Kemenperin) acknowledged that there was a decline in the manufacturing industry. That matter according to Manufacturing Purchasing Managers Index (PMI) data Indonesia in the quarter first 2020 announced IHS Markit. IHS Markit announced, Indonesian Manufacturing PMI decreased from 51.9 in February to level 45.3 on March. That number the lowest since 2011. The decline was also influenced by the number of areas affected by Covid-19 or the corona virus. In this way, the decline in the utility of the manufacturing industry in various sectors cannot be avoided (source, <https://republika.co.id>).

The effects of the COVID-19 pandemic on the economy in Banten decreased so that the utility of the manufacturing industry in various sectors was unavoidable, it was influenced by the number of areas affected by covid 19. Several industries experienced a decrease in capacity of almost 50% except for the medical equipment industry or medicine, they continue to encourage the industry to operate as usual but with strict health protocols so as to avoid the covid 19 outbreak. (source, [www.minded-rakyat.com](http://www.minded-rakyat.com))

During the new normal, the Ministry of Industry targets the manufacturing industry to experience a 4% increase due to the new normal phase or the new normal era that has begun to be implemented. The effects of social restrictions imposed in several areas will be felt on the national economy because the largest circulation of money is from the Jabodetabek area. According to some employees, activity restrictions disrupt factory activities, and the company also reduces purchasing activities from inventory as part of efforts to control spending. (source, <http://money.kompas.com>)

Environmental uncertainty is an external environmental condition that can affect the company's operations (Desmiyawati, 2010). Planning prepared in conditions of high environmental uncertainty will be a problem, because of the inability of managers to predict

future conditions. Thereby also activity supervision will be affected by conditions environmental uncertainty, so that decisions to be made by the manager will be hampered. For solve problems that arise as a result high level of uncertainty environment, managers need information management accounting system reliable (Chenhall and Morris, 1986).

Environmental uncertainty is often a factor that causes organizations to make adjustments to organizational conditions with the environment. Top management will experience high perceived environmental uncertainty, if they feel the environment is unpredictable and cannot understand how environmental components will change (Miliken, 1987). Conversely, low environmental uncertainty (relatively stable environment, top management individuals) can predict the situation so that the steps to be taken can be planned more accurately.

According to Komalasari (2017), the increasing uncertainty of the business environment can become a problem in management activities such as planning, supervision, decision making or in the use of management accounting information. Enhancement managerial performance by the company by demanding management to own and use existing capabilities as much as possible to excel in the competition. By Therefore, management must have the ability to see and take advantage of opportunities, identify problems and select as well implementing the adaptation process appropriately. Management is also obligated maintain viability and controlling the company to achieve organization goals.

According to Putri et al, (2016) environmental uncertainty that is difficult to predict will affect the level of accounting information systems provided to provide information. Something information in order corporate decision making with the aim of providing information regarding ability level company in predicting level of environmental uncertainty, so that the ultimate goal of the company in minimize losses and optimize profits caused by environmental uncertainty with the level of ability from the internal environment (Internal Locul), from the external environment (External Locul) or a combination of both (Combination Locul).

This research is a development of previous research conducted by Amalia et al., (2019) in Indonesia. Difference this research with research previously was a model study. The researcher adds decentralization as an independent variable and environmental uncertainty as a moderating variable. The reason researchers use decentralization as an independent variable is because implementing decentralization has not shown ideal results for organizations in Indonesia, and environmental uncertainty as a moderating variable is due to the drastic decline in exports and imports in the era of the covid-19 pandemic. which resulted in the loss or decline of a manufacturing industry company in Indonesia. Based on the description above, the writer is interested in conducting research on managerial performance.

## Research Method

### 1. Population and sample

The population used in this study is the manufacturing industry in Banten Province. The sampling method uses the purposive sampling method with the aim of getting a representative sample in accordance with the specified criteria. In this study, samples were taken based on the following criteria:

- a. Manufacturing company in the feedmill sector that has been registered with the DISPERINDAG of Banten Province 2020.
- b. Manufacturing company in the feedmill sector which has a large company scale.
- c. Manufacturing company in the feedmill sector that only focuses on animal feed.

Respondents in this study were managers of manufacturing companies in the feedmill sector in Banten Province with the following criteria:

- a. *Middle manager*, marketing manager, financial manager, production manager, HRD, warehouse manager, and operational manager at a manufacturing company in the feedmill sector in Banten Province
- b. The manager holds the position for at least 1 year.

### 2. Data Testing Method

#### a. Data Quality Test

##### a.1 Validity Test

Validity test is used to measure the validity or validity of a questionnaire. Testing the validity in this study using Pearson Correlation, namely by calculating the correlation between the values observed from the questions. If the Pearson Correlation obtained has a significance value below 0.05 then the data obtained is valid (Ghozali, 2016).

##### a.2 Reliability Test

Reliability test is used to measure a questionnaire which is an indicator of a variable or construct. An instrument can be said to be reliable if it has a Cronbach Alpha value of more than 0.70 (Nunnaly, 1994 in Ghozali 2016).

#### b. Hypothesis Test

##### a. T test

The test is carried out using a significance level of 0.05 ( $\alpha=5\%$ ) and Comparing the calculated t value with the t value according to the table

##### b. Moderated Regression Analysis-MRA

$$Y = a + b_1X_1 + b_2X_2 + b_3X_1 X_3 + b_4X_2X_3 + e$$

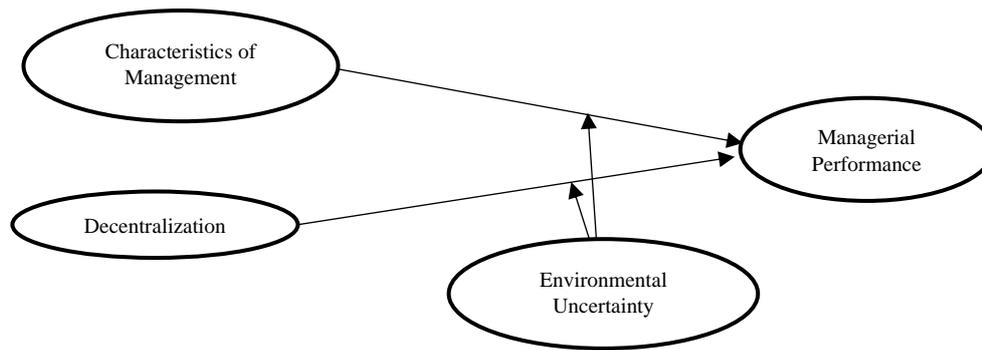


Figure 1. Research Model

**Results and Discussion**

**1. Overview of Respondents**

Table 1.Characteristics of Questionnaire Data

Description	Amount
Submitted Questionnaire	72
Returning Questionnaire	65
Questionnaires used in data processing	65

Source: Primary Data Processed

**2. Variable Descriptive Statistics**

Table 2.Variable Descriptive Statistics

Variable	Empirical Range				
	N	Min	Max	Std. Dev	mean
Broadscope	65	1	5	1,290	3,077
Timeliness	65	1	5	1.384	3,077
Aggregation	65	1	5	1,489	2,969
Integration	65	1	5	1,390	3,138
Decentralization 1	65	1	5	1,307	3.092
Decentralization 2	65	1	5	1,471	3,077
Decentralization 3	65	1	5	1,408	3,123
Decentralization 4	65	1	5	1,301	3,077
Managerial Performance 1	65	1	5	1,402	3.092
Managerial Performance 2	65	1	5	1,448	3,000
Managerial Performance 3	65	1	5	1,340	3,231
Managerial Performance 4	65	1	5	1.356	3.062
Managerial Performance 5	65	1	5	1,423	3,123
Managerial Performance 6	65	1	5	1,419	2,985
Managerial Performance 7	65	1	5	1.372	3,154
Managerial Performance 8	65	1	5	1.377	3,031
Environmental Uncertainty 1	65	1	5	1,380	2,892
Environmental Uncertainty 2	65	1	5	1.331	3.015
Environmental Uncertainty 3	65	1	5	1.379	3.062
Environmental Uncertainty 4	65	1	5	1,463	2,938

Source: Primary Data Processed

### 3. Data Quality Test

#### a. Validity Test

Table 3. Validity test

Construct Indicator	Average Variance Extracted (AVE)
Broadscope	1,000
Timeliness	1,000
Aggregation	1,000
Integration	1,000
Decentralization	0.821
Managerial Performance	0.796
Environmental Uncertainty	0.804
KL*A -> KM	1,000
KL*B -> KM	1,000
KL*D -> KM	1,000
KL*I -> KM	1,000
KL*T -> KM	1,000

Source: Primary Data Processed

From table 3 it can be seen that the value of *broadscope*, *timeliness*, *aggregation*, *integration*, *decentralization*, *managerial performance*, and *environmental uncertainty* constructs has an AVE value of more than 0.50 so it can be said to be valid

#### b. Reliability Test

Table 4. Reliability Test Result

No	Variable	Cronbach Alpha . value	Description
1	Broadscope	1,000	Reliable
2	Timeliness	1,000	Reliable
3	Aggregation	1,000	Reliable
4	Integration	1,000	Reliable
5	Decentralization	0.927	Reliable
6	Managerial Performance	0.963	Reliable
7	Environmental Uncertainty	0.919	Reliable
8	KL*A -> KM	1,000	Reliable
9	KL*B -> KM	1,000	Reliable
10	KL*D -> KM	1,000	Reliable
11	KL*I -> KM	1,000	Reliable
12	KL*T -> KM	1,000	Reliable

Source: Primary Data Processed

From the results above, it can be concluded that the questions that measure the variables of *broadscope*, *timeliness*, *aggregation*, *integration*, *decentralization*, *managerial performance*, and *environmental uncertainty* are reliable.

#### 4. Data Analysis

##### a. Assessing the Outer Model (Measurement Model)

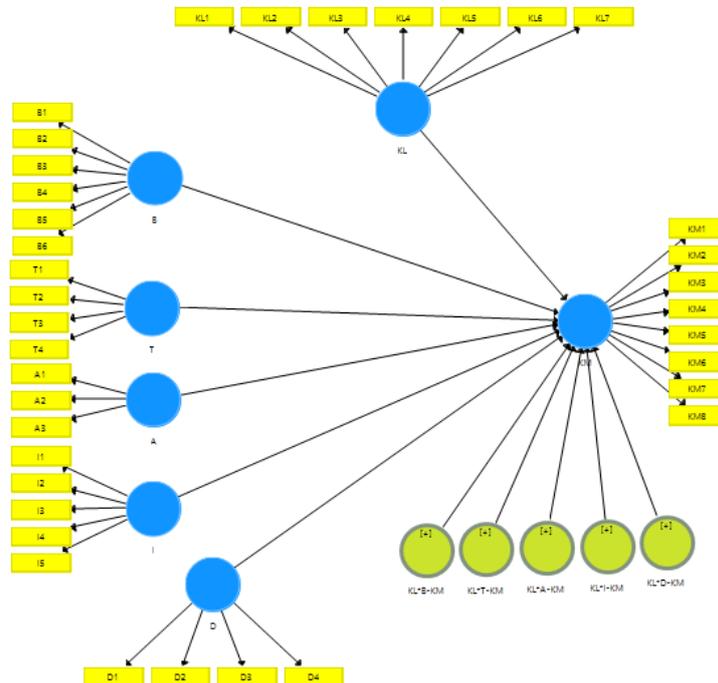


Figure 2. Full Model Structural Partial Least Square Before Elimination

Source: Primary Data Processed

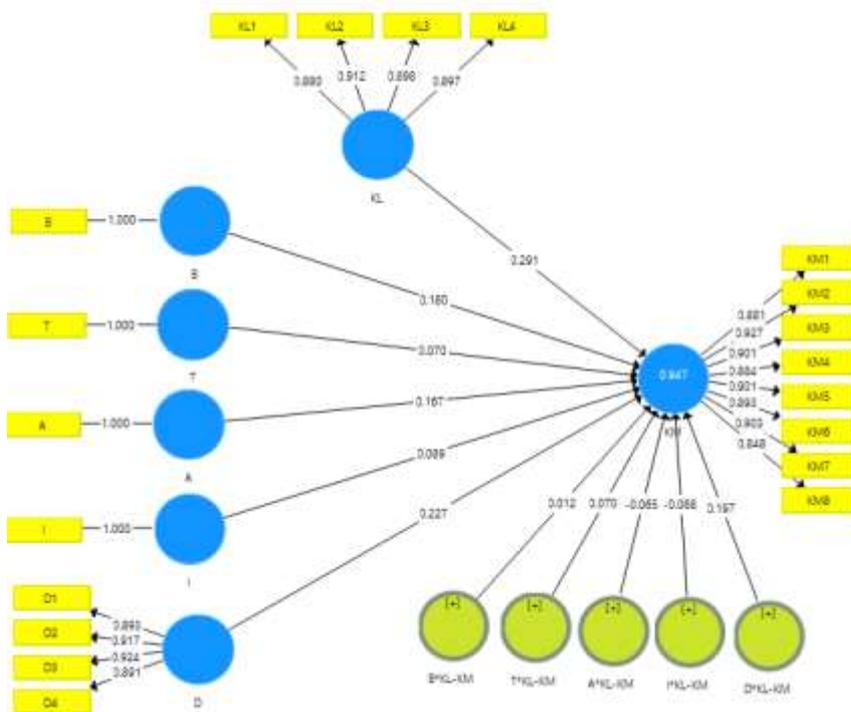


Figure 3. Normality Test Results using P-Plot Graph

Source: Primary Data Processed

## 5. Hypothesis Test

### a. The Effect of Management Accounting Information System Characteristics on Managerial Performance

#### a.1 Effect of Broadscope on Managerial Performance

Table 5. Test Result  
Effect of Broadscope on Managerial Performance

	Original Sample	T statistic
B ->KM	0.180	2,985
R Square = 0.947 p = 0.003		

*Source: Primary Data Processed*

The results of this study indicate that broadscope has a positive effect on managerial performance as indicated by t-statistic 2.985 > t-table 1.96 with a significance level of 0.003. From the test results above, managers with a broad scope will affect the performance of their managers to achieve better company goals. With a broad scope, managers can minimize the risk that occurs in the company. In carrying out its function as a manager, information from a wide variety of sources is needed so that the function can run properly. Broadscope is needed by managers because it is able to provide comprehensive and comprehensive information including information on economic and non-economic aspects that have been described previously.

#### a.2. The Effect of Timeliness on Managerial Performance

Table 6. Test Result  
The Effect of Timeliness on Managerial Performance

	Original Sample	T statistic
T ->KM	0.070	1,294
R Square = 0.947 p = 0.212		

*Source: Primary Data Processed*

The test results show that timeliness has no effect on managerial performance as evidenced by the t-statistic 1.294 < t-table 1.96 and the significance value equal 0.212. From the test results above that timely information will affect the manager's ability to respond to any events or problems that exist and anticipate increasingly complex environmental uncertainties, organizational conditions will require support from timely information. Timely information in a hurry will affect inadequate information so that the information provided is less than perfect.

#### a.3 Effect of Aggregation on Managerial Performance

Table 7. Test Result  
Effect of Aggregation on Managerial Performance

	Original Sample	T statistic
A ->KM	0.167	2,384
R Square = 0.947 p = 0.018		

*Source: Primary Data Processed*

The results of this study indicate that aggregation has a positive effect on managerial performance as indicated by t-statistic  $2.384 > t\text{-table } 1.96$  with a significance level of 0.018. From the test results above that the aggregated information can help in increasing the efficiency and effectiveness of managerial performance, because the aggregated information presents information briefly but does not eliminate important things that exist so that the value of the information is not reduced. One important contribution to the decision-making process is properly aggregated information, because it saves time in evaluating information compared to using time to evaluate raw or unaggregated information which will require more time.

#### a.4 Effect of Integration on Managerial Performance

Table 8. Test Result  
Effect of Integration on Managerial Performance

	Original Sample	T statistic
I ->KM	0.089	1.312
R Square = 0.947 p = 0.190		

*Source: Primary Data Processed*

The results of this study indicate that integration has no effect on managerial performance as indicated by t-statistic  $1.312 < t\text{-table } 1.96$  with a significance level of 0.190. From the test results above that the more inadequate the characteristics of the integrated management accounting information system in a company, the lower the managerial performance. On the other hand, the higher the characteristics of the integrated management accounting information system in a company, the better the managerial performance. The presence of information that is combined in a hurry will result in a misalignment between the existing information.

#### b. The Effect of Decentralization on Managerial Performance

Table 9. Test Result  
**The Effect of Decentralization on Managerial Performance**

	Original Sample	T statistic
D ->KM	0.227	2,301
R Square = 0.947 p = 0.022		

*Source: Primary Data Processed*

The results of this study indicate that decentralization has a positive effect on managerial performance as indicated by t-statistic  $2.301 > t\text{-table } 1.96$  with a significance level of 0.022. From the results of the research above, it is very important that the delegation of authority is carried out by superior managers to subordinate managers so that lower level managers can respond quickly and accurately regarding economic situations as well as the culture in the surrounding environment. Thus, decentralization can increase the effectiveness of managerial performance.

Delegation is the assignment of responsibilities to heads of sections from several operational levels and authorities in making decisions for the departments that are their

responsibility. The decentralized system really helps high level management to focus on issues related to the company's strategy. Because everything related to the company's operational activities can be delegated to lower management levels (Low Level Management). This synergy between higher and lower levels of management will encourage an increase in the company's managerial performance

**c. The Effect of Environmental Uncertainty Moderates the Relationship between Management Accounting Information System Characteristics on Managerial Performance**

**c.1 The Effect of Environmental Uncertainty Moderates the Relationship between Broadscope on Managerial Performance**

Table 10. Interaction Between environmental uncertainty and the broad scope of managerial performance

	Original Sample	T statistic
KL*B ->KM	0.012	0.179
R Square = 0.947 p = 0.858		

Source: Primary Data Processed

The results of this study indicate that environmental uncertainty does not moderate the relationship between broadscope and managerial performance as indicated by t-statistic  $0.179 < t\text{-table } 1.96$  with a significance level of 0.858. From the results of the study above, it is difficult for individuals to predict the failure and success of the decisions they make. To overcome the problems that arise due to the high level of environmental uncertainty, managers need information from the right management accounting system. Thus, to identify that environmental uncertainty in manufacturing companies in the feedmill sector requires the characteristics of adequate management accounting information to improve managerial performance.

**c.2 The Effect of Environmental Uncertainty Moderates the Relationship between Timeliness on Managerial Performance**

Table 11. Interaction Between environmental uncertainty and timeliness of managerial performance

	Original Sample	T statistic
KL*TM ->KM	0.070	1.234
R Square = 0.947 p = 0.218		

Source: Primary Data Processed

The results of this study indicate that environmental uncertainty does not moderate the relationship between timeliness and managerial performance as indicated by t-statistic  $1.234 < t\text{-table } 1.96$  with a significance level of 0.218. From the results of the research above that in conditions of high uncertainty prediction, individuals are difficult to predict the failure and success of the decisions they make. To overcome the problems that arise due to the high level of environmental uncertainty, managers need information from a reliable management accounting system.

### c.3 The Effect of Environmental Uncertainty Moderates the Relationship between Aggregation on Managerial Performance

Table 12. Interaction Between environmental uncertainty and aggregation of managerial performance

	Original Sample	T statistic
KL*A ->KM	-0.065	0.769
R Square = 0.947 p = 0.442		

Source: Primary Data Processed

The results of this study indicate that environmental uncertainty does not moderate the relationship between aggregation and managerial performance as indicated by t-statistic  $0.769 < t\text{-table } 1.96$  with a significance level of 0.442. From the test results above that with high environmental uncertainty can make it difficult for companies to find aggregated information, where information is presented in a concise manner but does not eliminate important things that exist so that the value of the information does not decrease will require a long span of time. In conditions of high uncertainty prediction, individuals find it difficult to predict the failure and success of the decisions they make. To overcome the problems that arise due to the high level of environmental uncertainty, managers need information from a reliable management accounting system.

### c.4 The Effect of Environmental Uncertainty Moderates the Relationship between Integration on Managerial Performance

Table 13. Interaction Between environmental uncertainty and integration into managerial performance

	Original Sample	T statistic
KL*I ->KM	-0.068	0.924
R Square = 0.947 p = 0.356		

Source: Primary Data Processed

The results of this study indicate that environmental uncertainty does not moderate the relationship between integration and managerial performance as indicated by t-statistic  $0.924 < t\text{-table } 1.96$  with a significance level of 0.356. From the test results above that with the existence of high environmental uncertainty can make it difficult for companies to develop effective planning and control. Integrated information sometimes has problems with the old subunit providing information for managers, thus making the manager's performance weak. In conditions of high uncertainty prediction, individuals find it difficult to predict the failure and success of the decisions they make. To overcome the problems that arise due to the high level of environmental uncertainty, managers need information from a reliable management accounting system.

**d. The Effect of Environmental Uncertainty Moderates the Relationship between Decentralization on Managerial Performance**

Table 14. Interaction Between environmental uncertainty and integration into managerial performance

	Original Sample	T statistic
KL*D ->KM	0.197	2,219
R Square = 0.947 p = 0.027		

*Source: Primary Data Processed*

The results of this study indicate that environmental uncertainty moderates the relationship between decentralization and managerial performance as indicated by t-statistic  $2.219 < t\text{-table } 1.96$  with a significance level of 0.027. From the test results above that decentralization will affect the adaptability of sub-unit managers, so managerial performance is very influential on the level of decentralization, thus decentralization has a positive effect on organizational performance when managers feel their environment is full of environmental uncertainty. In order to achieve better managerial performance, there is a match between the characteristics of management accounting information and the level of decentralization when facing environmental uncertainty.

Under conditions of high decentralization, managers have greater decision-making authority than in conditions of centralization. Decentralization will affect the adaptability of sub-unit managers, so managerial performance is very influential on the level of decentralization, thus decentralization has a positive effect on organizational performance when managers feel their environment is full of uncertainty. In order to achieve better managerial performance, there is a match between the characteristics of management accounting information and the level of decentralization. In other words, managerial performance will be influenced by the interaction between the level of decentralization and the level of environmental uncertainty.

**Conclusion**

The characteristics of the management accounting information system based on the broad scope have a positive and significant effect on managerial performance, the characteristics of the management accounting information system based on timelines has no effect on managerial performance, The characteristics of the management accounting information system based on aggregation have a positive and significant effect on managerial performance, and the characteristics of the management accounting information system which based on integration has no effect on managerial performance.

Decentralization has a positive and significant effect on managerial performance. Environmental uncertainty does not moderate the relationship between the characteristics of management accounting information systems based on broad scope, timeliness, aggregation, integration and managerial performance. However, environmental uncertainty

moderates decentralization on managerial performance.

Future research is expected to develop different research methods, such as by conducting direct interviews with respondents to better reflect the answers to actual conditions.

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