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The Influence of Business Strategy and Environmental Uncertainty to The Characteristics Management Accounting Information System

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ABSTRACT

The characteristics of management accounting information systems can be influenced by Business Strategy and Environmental Uncertainty. Business Strategy in the Company has been implemented and is running well. In addition, the ability to predict the level of environmental uncertainty owned by employees of PT Multi Garmen Jaya is good. This research was conducted, aims to determine how much influence business strategy and environmental uncertainty have on the characteristics of management accounting information systems at PT Multi Garmen Jaya. The methods used in this research are descriptive and verification methods. The population taken for this study were employees of PT Multi Garmen Jaya. Sampling was done by probability sampling with simple random sampling technique with a sample of 37 respondents. The types of data used in this study are primary and secondary data. Data processing techniques using statistical test modelling with the Structural Equation Modelling - Partial Least Square (SEM-PLS) version 3.0 program. The results of this study indicate that: 1) business strategy affects the characteristics of management accounting information systems. 2) environmental uncertainty affects the characteristics of management accounting information systems.

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INTRODUCTION

The Indonesian economy is currently facing two challenging phenomena, namely the Covid-19 pandemic and global competition. Economic activity has experienced a very drastic decline, affecting the decline in economic growth, unemployment and poverty have increased and almost all countries in the world have experienced economic growth at an alarming minus number (Wardana et al, 2021: 1-2). Businesses with good governance in a business organization that is registered, officially licensed, focused on business, has credibility and corporate responsibility that can convince the public and can be considered. Nowadays, the development of the business world is very rapid because many similar businesses are increasingly competitive, so companies need to be more innovative and creative in doing their business so that the survival of the company can survive and even progress and maximize profits (Maryam et al, 2023: 1-2). Every company or corporation after preparing the company's strategic plan, then prepares to implement the plan by preparing a business strategy which is expected to guide the company's operational

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implementation (Siagian, 2021: 22). The rapid pace of development in the global world has resulted in increased competition in the business world which affects companies in carrying out their operational activities and survival (Bursa Indonesia Exchange, 2021). This can be caused by uncontrollable external factors, as well as internal factors such as weak competitiveness and suboptimal application of information and communication technology (Ambarriani et al, 2022).

Managers are required to study environmental changes and adapt policies to them. Adapting to environmental changes, controlling the environment indirectly, and influencing the environment directly are strategies for managing environmental change and uncertainty (Solong and Yadi, 2021: 53). Changes in the global business environment and rapid technological advances encourage companies to be innovative and responsive in responding to consumer needs and desires (Aydiner et al, 2019). Leading a company in the decision-making process requires information support, especially for managers who play an important role in decision making. Information received by managers must be selected according to characteristics that fulfil managerial objectives (Rumapea et al, 2018). The abundance of information presents various challenges to people's daily activities and lives, especially with regard to how to effectively access relevant information (Qin Dai, 2022). Management accounting information systems are not bound by any formal criteria that define the nature of their processes, inputs, or outputs. The management accounting system produces information for internal users such as managers, supervisors, and employees. (Kholmi, 2019: 7-8).

Hypotheses

H1 : Business Strategy affects the Characteristics of Management Accounting Information Systems

H2 : Environmental Uncertainty affects the Characteristics of Management Accounting Information Systems

METHODS

In this study, all variables used an ordinal scale. The data sources used in this study are primary data and secondary data. The method of collecting data by distributing questionnaires to employees of PT Multi Garmen Jaya so as to get 37 respondents. Sampling was done by probability sampling with simple random sampling technique. Data processing techniques using statistical test modelling with the Structural Equation Modelling - Partial Least Square (SEM-PLS) version 3.0 program.

RESULTS AND DISCUSSION

Business Strategy

The business strategy variable uses two dimensions, namely cost leadership and differentiation strategy. This dimension is a reflective dimension. The parameter estimation results of this variable measurement model are shown in the figure below:

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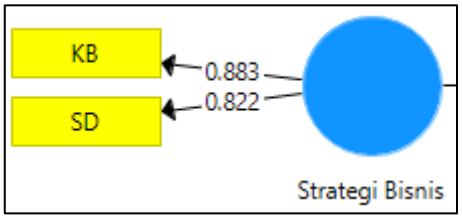

Figure 1. Business Strategy Path Diagram
Source: Data processed by SEM-PLS

From the path diagram of the business strategy variable above, it can be seen that the value contained in each indicator is generated through the dimensions derived from the reflective business strategy. The results of the calculation of the measurement model organisation on business strategy variables are as follows:

Table 1. Calculation Results of Business Strategy Measurement Model

Item	Loading Factor	Indicator Reliability	t-hitung	p-value
Cost Leadership	0.883	0.887	16.888	0.000
Differentiation Strategy	0.822	0.784	4.222	0.000
Average Variance Ectracted (AVE)		0.727		
Composite Reability (CR)		0.842		

Source: Data processed by SEM-PLS

The outer loading of the reflective constructs of business strategy measurement are all above 0.70. The cost leadership dimension has a loading value of 0.883, above the 0.70 threshold and significant (p=0.000) at the 5% real level. This dimension has an indicator reliability value (0.887). Then the differentiation strategy dimension has a loading value of 0.822, significant (p = 0.000) at the real level of 5%. This dimension has a reliability indicator worth (0.784). The composite reliability value of 0.842 above the 0.70 threshold indicates that the business strategy construct has a high level of internal consistency reliability. On the other hand, the AVE value of 0.727 is above the minimum required 0.50, so the measures of this reflective construct have a high level of Convergent Validity. Discriminant validity test through cross loading states that both indicators have higher loading values for their constructs while all cross loading with other constructs have lower values, thus providing better evidence of discriminant validity of the construct than others.

Environmental Uncertainty

The environmental uncertainty variable uses two dimensions, namely the level of change and the level of complexity. This dimension is a reflective dimension. The parameter estimation results of this variable measurement model are shown in the figure below:

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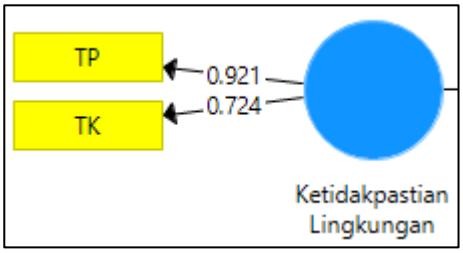

Figure 2. Environmental Uncertainty Path Diagram
Source: Data processed by SEM-PLS

From the path diagram of the environmental uncertainty variable above, it can be seen that the value contained in each indicator is generated through dimensions derived from reflective environmental uncertainty. The results of the calculation of the measurement model organization on environmental uncertainty variables are as follows:

Table 2. Results of Measurement Model Calculation of Environmental Uncertainty

Item	Loading Factor	Indicator Reliability	t-hitung	p-value
Level of Change	0.921	0.885	6.623	0.000
Level of Complexity	0.724	0.695	3.043	0.002
Average Variance Ectracted (AVE)		0.686		
Composite Reability (CR)		0.812		

Source: Data processed by SEM-PLS

The outer loading of the reflective constructs of environmental uncertainty are all above 0.70. The level of change dimension has a loading value of 0.921, above the 0.70 threshold and significant (p=0.000) at the 5% real level. This dimension has an indicator reliability value (0.885). Furthermore, the complexity level dimension has a loading value of 0.724, above the 0.70 threshold and is significant (p = 0.006) at the 5% real level. This dimension has an indicator reliability value of (0.695). The composite reliability value of 0.812 above the 0.70 threshold indicates that the environmental uncertainty construct has a high level of internal consistency reliability. On the other hand, the AVE value of 0.686 is above the minimum required 0.50, so the measures of this reflective construct have a high level of Convergent Validity. Discriminant validity test through cross loading states that both indicators have higher loading values for their constructs while all cross loading with other constructs have lower values, thus providing better evidence of discriminant validity of the construct than others.

Characteristics of Management Accounting Information Systems

The variable characteristics of management accounting information systems use four dimensions, namely scope (broad scope), timeliness (timeliness), collection (aggregate), integration (integrated). This dimension is a reflective dimension. The results of the parameter estimation of this variable measurement model are shown in the figure below:

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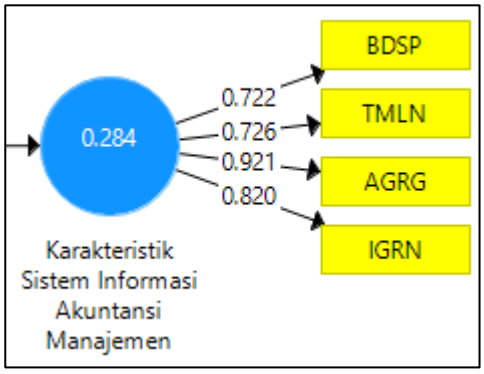

Figure 3. Characteristics of Management Accounting Information Systems Path Diagram
Source: Data processed by SEM-PLS

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

Table 3. Results of Measurement Model Calculation of Characteristics of Management Accounting Information Systems

Item	Loading Factor	Indicator Reliability	t-hitung	p-value
Broadscope	0.722	0.701	5.602	0.000
Timeliness	0.726	0.710	3.548	0.000
Aggregate	0.921	0.914	9.069	0.000
Integrated	0.820	0.803	5.820	0.000
Average Variance Ectracted (AVE)		0.642		
Composite Reability (CR)		0.877		

Source: Data processed by SEM-PLS

The outer loading of the reflective constructs of management accounting information system characteristics are all above 0.70. The broad scope dimension has a loading value of 0.722, above the 0.70 threshold and is significant (p = 0.000) at the 5% real level. This dimension has a reliability indicator worth (0.701). Furthermore, the timeliness dimension has a loading value of 0.726, above the 0.70 threshold and is significant (p = 0.000) at the 5% real level. This dimension has a reliability indicator worth (0.710). Then the aggregate dimension has a loading value of 0.921, above the 0.70 threshold and significant (p = 0.000) at the 5% real level. This dimension has an indicator reliability value of (0.914). Meanwhile, the integrated dimension has a loading value of 0.820, above the 0.70 threshold and significant (p=0.000) at the 5% real level. This dimension has an indicator reliability value of (0.803). The composite reliability value of 0.877 above the 0.70

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threshold indicates that the management accounting information system characteristics construct has a high level of internal consistency reliability. On the other hand, the AVE value of 0.642 is above the minimum required 0.50, so the measures of this reflective construct have a high level of Convergent Validity. On the other hand, the AVE value of 0.642 is above the minimum required 0.50, so the measures of this reflective construct have a high level of Convergent Validity. Discriminant validity test through cross loading states that both indicators have higher loading values for their constructs while all cross loading with other constructs have lower values, thus providing better evidence of discriminant validity of the construct than others.

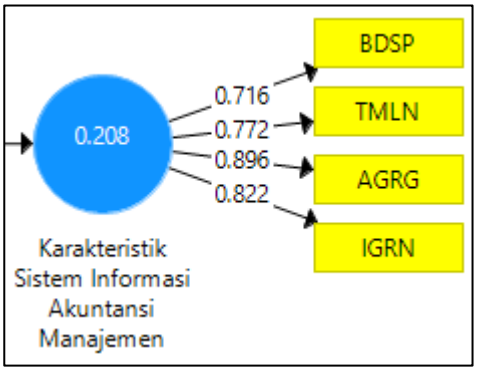

Figure 4. Characteristics of Management Accounting Information Systems Path Diagram
Source: Data processed by SEM-PLS

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

Table 4. Results of Measurement Model Calculation of Characteristics of Management Accounting Information Systems

Item	Loading Factor	Indicator Reliability	t-hitung	p-value
Broadscope	0.716	0.692	4.941	0.000
Timeliness	0.772	0.751	5.396	0.000
Aggregate	0.896	0.889	9.026	0.000
Integrated	0.822	0.814	7.132	0.000
Average Variance Ectracted (AVE)		0.646		
Composite Reability (CR)		0.879		

Source: Data processed by SEM-PLS

The outer loading of the reflective constructs of management accounting information system characteristics are all above 0.70. The broad scope dimension has a loading value of 0.716, above the 0.70 threshold and is significant (p = 0.000) at the 5% real level. This

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dimension has a reliability indicator worth (0.692). Furthermore, the timeliness dimension has a loading value of 0.772, above the 0.70 threshold and is significant (p = 0.000) at the 5% real level. This dimension has a reliability indicator worth (0.751). Then the aggregate dimension has a loading value of 0.896, above the 0.70 threshold and significant (p = 0.000) at the 5% real level. This dimension has an indicator reliability value of (0.889). Meanwhile, the integrated dimension has a loading value of 0.822, above the 0.70 threshold and significant (p=0.000) at the 5% real level. This dimension has an indicator reliability value of (0.814). The composite reliability value of 0.879 above the 0.70 threshold indicates that the management accounting information system characteristics construct has a high level of internal consistency reliability. On the other hand, the AVE value of 0.646 is above the minimum required 0.50, so the measures of this reflective construct have a high level of Convergent Validity. Discriminant validity test through cross loading states that both indicators have higher loading values for their constructs while all cross loading with other constructs have lower values, thus providing better evidence of discriminant validity of the construct than others.

Collinearity Testing

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

Table 5. Collinearity Assessment

Construct	VIF
Business Strategy	1.000
Environmental Uncertainty	1.000

Source: Data processed by SEM-PLS

From the calculation results, the VIF value of each business strategy variable and environmental uncertainty is known in the table. Based on the table above, there is no significant level of collinearity between the two variables. Then the structural model evaluation can be carried out which includes testing the two research hypotheses.

Structural Model Evaluation

The results of the calculation of the standard path coefficient of the structural model of the effect of business strategy and environmental uncertainty on the characteristics of accounting information systems are shown in the figure below:

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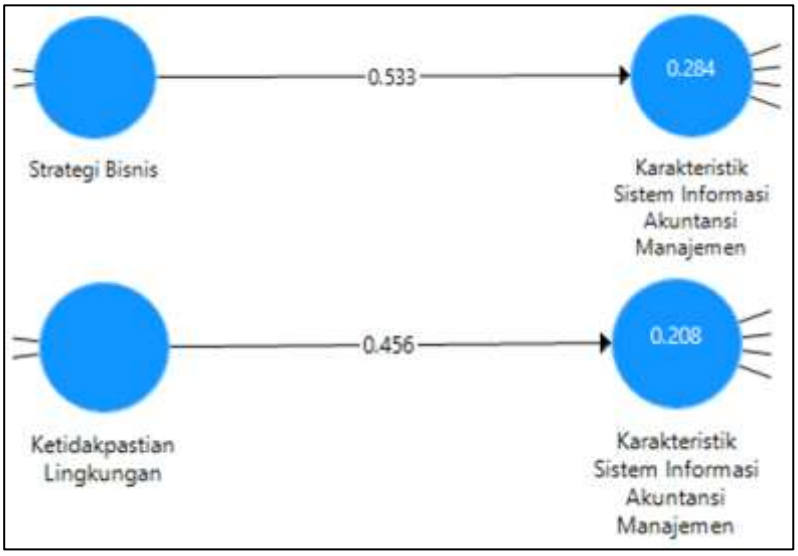

Figure 5. Standardized Structural Model Coefficient
Source: Data processed by SEM-PLS

Statistical hypothesis 1

H0 : $\gamma_{11} = 0$ Business Strategy has no effect to Accounting Information System Characteristics

H0 : $\gamma_{11} \neq 0$ Business Strategy has a significant effect to Accounting Information System Characteristics

Statistical hypothesis 2

H0 : $\gamma_{12} = 0$ Environmental Uncertainty has no effect to Accounting Information System Characteristics

H0 : $\gamma_{12} \neq 0$ Environmental Uncertainty has a significant effect to Accounting Information System Characteristics

To test this hypothesis, the t-student test statistic is used as described in the previous chapter. The test criterion is that H0 is rejected if the p-value is smaller than α, with α = 0.05. The test results are summarised in the table below:

Table 6. Hypothesis Testing Results

Statistical Hypothesis	Path Coefficient	t-hitung	f *square*	p-*value*	Description
$H_0 : \gamma_{11} = 0$ $H_1 : \gamma_{11} \neq 0$	0,533	5,288	0,396	0,000	H_0 Rejected
$H_0 : \gamma_{12} = 0$ $H_1 : \gamma_{12} \neq 0$	0,458	3,446	0,262	0,001	H_0 Rejected

Source: Data processed by SEM-PLS

Hypothesis Testing Results 1

Based on table 6, it can be seen that the t_count value of the business strategy variable (5.288) is greater than t_critical (1.96) which means that the result of hypothesis 1

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test is H0 rejected, so the statistical conclusion is that business strategy has a significant effect on the characteristics of management accounting information systems.

Then based on the calculation results obtained f2 of 0.396. Because the value of f2 exceeds 0.35 (the limit of the effect size value is large), it can be stated that the effect size for business strategy on the characteristics of management accounting information systems is large.

Hypothesis Testing Results 2

Based on table 6, it can be seen that the t_count value of the environmental uncertainty variable (3.446) is greater than t_critical (1.96) which means that the result of hypothesis 2 test is H0 rejected, so the statistical conclusion is that business strategy has a significant effect on the characteristics of management accounting information systems.

Furthermore, based on the calculation results obtained f2 of 0.262. Because the value of f2 exceeds 0.15 (medium effect size value limit), it can be stated that the effect size for environmental uncertainty on the characteristics of management accounting information systems is medium.

In this study, the findings regarding business strategies show that business strategies cannot be said to be perfect. This is shown in the dimension of business strategy caused by responsiveness or responsiveness between the staff's desire to help customers and provide services with a quick response. Furthermore, the findings regarding environmental uncertainty show that environmental uncertainty cannot be said to be perfect. This is shown in the dimension of the level of complexity because there are still shortcomings in dealing with problems inside and outside the environment. This is because some employees do not fully understand the environment in identifying threats.

CONCLUSIONS

Based on the results of this study, the research conclusions are as follows: 1) business strategy affects the characteristics of management accounting information systems at PT Multi Garmen Jaya. However, the characteristics of the management accounting information system are not fully optimal, this is influenced by the differentiation strategy dimension which is still experiencing obstacles so that it has not run perfectly. 2) environmental uncertainty affects the characteristics of the management accounting information system at PT Multi Garmen Jaya. However, the characteristics of the management accounting information system are not fully optimal, this is influenced by the dimension of the level of complexity which is still experiencing obstacles so that it has not run perfectly.

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