



Moderating Environmental Uncertainty on The Effect of Accounting Knowledge and Accounting Information Systems on the Performance of SMES

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ABSTRACT

The purpose of this research is to analyze the influence of accounting expertise and accounting information systems on the performance of MSMEs using environmental uncertainty as a moderating variable. The research method used is quantitative with data collection techniques through questionnaires. A total of 97 respondents were collected from various MSMEs in the Lagoa sub-district, Jakarta, Indonesia. The sample was tested for validity and reliability as well as hypothesis testing through the Smart PLS software application. The findings indicated that accounting expertise had no discernible influence on MSMEs' performance. Accounting information systems have a substantial impact on the performance of micro, small, and medium-sized enterprises (MSMEs). Uncertainty in the environment might mitigate the influence of accounting expertise on the performance of MSMEs. Environmental uncertainty may mitigate the influence of accounting information systems on the performance of small and medium-sized businesses.

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1. INTRODUCTION

MSMEs are sometimes referred to as acronyms for Micro, Small, and Medium-Sized Enterprises. However, when seen through a different lens and perspective, MSMEs take on a considerably larger meaning. MSMEs are companies or enterprises operated by people, households, and small business entities, according to business players. MSMEs have uncertain functions and roles for the economy of a country, especially in Indonesia ([Halim, 2020](#)). As a brief fact, MSMEs became one of the main supports of the economy in Indonesia when it almost collapsed due to the monetary crisis that occurred in 1997 ago. When many giant companies went bankrupt at that time, MSME activities in Indonesia actually became the savior of the country that was in a state of decline ([Lestanti, 2015](#)).

The Covid-19 epidemic has a number of implications and concerns for the health sector, as well as economic issues, particularly for micro, small, and medium-sized businesses (MSMEs).

According to the Minister of Cooperatives and Small and Medium-Sized Firms (MSMEs), 80 percent of micro, small, and medium-sized enterprises (MSMEs) reported reduced profit margins over the last year (CNN Indonesia, 2021). 94.69 percent of firms reported a reduction in sales during the epidemic. According to company size, 49.01 percent of ultra-micro firms, 43.3 percent of micro businesses, 40% of tiny businesses, and 45.83 percent of medium-sized enterprises saw sales drops of more than 75%. According to the duration of the business, 23.27 percent of firms aged 0-5 years, 10.9 percent of enterprises aged 6-10 years, and 8.84 percent of businesses operating for more than 10 years witnessed a fall in sales of more than 75%. ten years According to sales techniques, 47.44 percent of offline/physical sales efforts, 40.17 percent of internet sales efforts, and 39.41 percent of firms had a sales loss of more than 75%. both retail and internet sales. Currently, what the government needs to do is to control the spread of Covid-19. Because, restraining the rate of spread of Covid-19 will affect the economy.

The Covid-19 pandemic also caused many MSME actors in Lagoa Village, North Jakarta, Indonesia to be forced to go out of business because of the absence of income to meet their needs. In addition, the existence of the Covid-19 pandemic made many companies take a policy of Termination of Employment. This situation makes everyone switch professions that were as employees to become entrepreneurs. As a result, business competition in Lagoa Village is getting tighter. But MSMEs are only present as Home Industries. There are home industry actors who make it in their own homes there are those who already have their own warehouse or production place. Various kinds of home industries in lagoa villages are such as food, beverages, fashion / textiles, cosmetics, automotive, and others.

Home industry has the potential to increase employment and offer a wide range of economic services to the community; it may contribute to the improvement of the community's economy and family income, as well as to the reduction of unemployment. and contribute to the community's wellbeing (Sumartan et al., 2019). But not in line with what happened to MSMEs in Lagoa Village.

Although the number of small and medium enterprises (SMEs) in Lagoa Village is quite a lot, especially the home industry, but many novice entrepreneurs are falling. In fact, not a few SMEs that went out of business in the first year of business, almost most home industries fail due to lack of understanding of unmanaged bookkeeping with well. Home industry actors in Lagoa Village have not thought about making bookkeeping in the management of small home industry businesses, capital management provided by the government has not been able to Well utilized because of lack of understanding in managing bookkeeping, especially finance. Because it has not been fully from the village to provide socialization about msme learning including about bookkeeping, especially finance.

Research on msme performance, accounting knowledge, accounting information systems and environmental uncertainties has been widely carried out. Research conducted Azudin & Mansor, 2018; Hutahayan, 2021; Kijkasiwat, 2021; and Lee & Hallak, 2020 related to accounting knowledge of msme performance. Research conducted by Al-Okaily, 2021; Bin & Hui, 2021; Latifah et al., 2020; Epede & Wang, 2022; Garcia et al., 2022; Nguyen et al., 2021; Le & Ikram, 2022; and Sahu et al., 2021 related to accounting information systems and MSMe performance. Akinboye & Morrish, 2022; Peng et al., 2020; and Li et al., 2021 linking the performance of msmes with environmental uncertainty.

2. RESEARCH METHOD

According to Sugiyono (2017), the population is defined as a region of generalization comprised of items or individuals that possess certain features and attributes that researchers study and then form conclusions. Population capture techniques use probability sampling because all populations are given the same opportunity to be sampled. The population was obtained from the Lagoa Village database 2021, known as many as 3,125 MSMEs located in Lagoa Village.

According to Sugiyono (2017), samples are a subset of the population's size and features. The selection approach utilized in this investigation was simple random sampling, in which population individuals were randomly selected without consideration for their stratum membership. The sample

that will be used as a research object is a portion of the Lagoa Village MSMEs whose number is determined based on the calculation of the Slovin opinion formula, namely as follows:

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

Information:

n = number of samples

N = population

e = *alpha* (0.10) or *sampling error* = 10%

Through the above formula, the number of samples to be taken is:

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

$$n = \frac{3,125}{1 + 3.125(0,1)^2}$$

$$n = 96.04 \text{ rounded to } 97$$

So, the minimum sample number is 97 people. And thus, the respondents who participated in this study amounted to 97 respondents who were msme business actors in Lagoa Village. This research drew its data from original sources.

The study's data gathering strategy is to provide a set of questions (questionnaires) to be completed or answered by respondents. The data collection required to support this study will be accomplished via the use of questionnaires or other questionnaire-based methodologies. Techniques for data gathering with questionnaires include bringing questionnaires directly to the study location. The likert scale was used in this research to assess a person's attitudes, views, and perceptions of an item or phenomena. The likert scale response format ranges from "strongly agree" to "strongly disagree." The scales are as follows: Strongly Disagree (STS) gets a score of 1, Disagree (TS) gets a score of 2, Disagrees (KS) gets a score of 3, Agree (S) gets a score of 4, and Strongly Agreed (SS) gets a score of 5.

2.1. Variable Operations

MSME performance plays a dependent variable in this study. Accounting knowledge and accounting information systems as independent variables. The study also presents environmental uncertainty as a moderation variable.

Table 1 below contains the information for each variable utilized in this investigation.

Table 1. Operational Variables

Variable	Dimension	Indicator	Source
Accounting Knowledge	Declarative Knowledge	Accounting knowledge of facts based on concepts	(Abdallah & Maryanto, 2020)
	Procedural Knowledge	Knowledge consistent with applicable rules or standards of accounting	
Accounting Information System	Ease of learning	Easy to understand and understand business people	(Desyani & Nuratama, 2021)
	Ease of use	Develop applications that can be learned and used by business people so that they can work with applications productively	
	Conformity	The specifics of the application used in supporting the business executed	
	System Reliability	A quality system can produce reliable information.	
	Response Time	Average response time for a system's online transactions	
MSME Performance	Capital/financial growth rate increases	Capital growth can produce more goods.	(Kore & Septarini, 2018)
	High labor growth rate	Increasing number of workers in increasing income	
	Wide market growth rate	Spread of market share and increase of intended market	
Environmental Uncertainty	Specific Environment	external forces that directly influence managers' decisions and actions	(Hawa E, 2019)
	General Environment	Broader external forces that can affect an organization's performance	
	Environment		

Source: Author's own compilation.

3. RESULTS AND DISCUSSIONS

In this section, it is explained the results of research and at the same time is given the comprehensive discussion. Results can be presented in figures, graphs, tables and others that make the reader understand easily (Nguyen et al., 2020). The discussion can be made in several sub-chapters.

3.1. Respondents Overview

Respondent data on this study was obtained from questionnaires that have been shared with msm in Lagoa Village in 2021. Of the 97 questionnaires that have been shared, all questionnaires have been returned and filled out well and completely according to the specified criteria. Here is an overview of the respondents in this study:

Table 2. Characteristics of Respondents

Information	Sum	%
Gender		
A. Men	34	35,05
b. Women	63	64,95
Age		
a. 20 - 25 Years	31	31,96
b. 26 - 30 years	54	55,67
c. >30 years	12	12,37
The Last Education		

a. SMP	25	25,77
b. SMA/SLTA	48	49,48
c. Diploma	11	11,34
d. Bachelor	13	13,41
Type / Business Field		
a. Culinary	64	65,98
b. Fashion	18	18,56
c. Cosmetics	7	7,22
d. Automotive	3	3,09
e. Others	5	5,15
Income Per Year		
a. <100 Million	29	29,90
b. 100 -300 Million	36	37,11
c. 300 - 500 Million	23	23,71
d. >500 Million	9	9,28

Source: Author's own compilation.

Judging from the table of 2 categories of gender of female respondents more than men, which is as many as 63 respondents (64.95%). when viewed in terms of age respondents dominated by the age of 16 - 30 years as many as 54 respondents (55.67). Judging from the level of education, the majority of high school graduates are as many as 48 respondents (49.48). Judging from the type / business field of respondents dominated by culinary business as many as 64 respondents (65.98). And the last seen from the income per year the majority of respondents have income of 100-300 million per year, which is as many as 36 respondents (37.11).

3. 2 Validity Test Results

The Validity Test is used to determine the link between an indicator and the concept upon which it is based. The model's first assessment or measurement testing is reflective, i.e. it has convergent validity. Convergent validity assessment starts with an examination of the loading factor value, which serves as a validity indicator. Factors with a loading value of less than 0.5 are considered legitimate. Here is an illustration of the validity test findings.

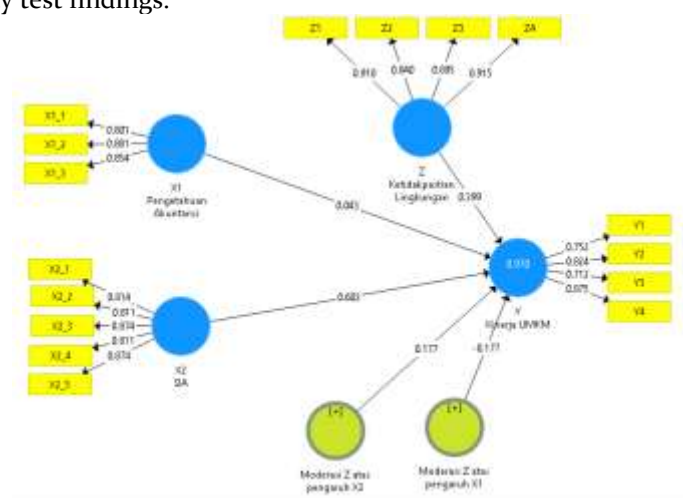


Figure 1. Validity test results

Source: Authors' testing results using SmartPLS 3.0

From the results of the research model validity test, for each variable consisting of business capital, accounting information system, ecommerce, msme performance, and environmental uncertainty, it already has an outer loading / loading factor of 0.5 which means the relationship between each variable and the indicator is valid according to the criteria. For the purposes of the following study, a research model is termed poor if its R Square value is less than 33%, moderate if it is between 33% and 66%, and strong if it is more than 66%. In the study this model falls into the strong category because the R Square / coefficient of determination is above 66%. Because in this study the ability of independent variables in explaining dependent variables is worth 97%.

3.3 Reliability Test

A construct is considered trustworthy in sem-pls analysis if it has a composite reliability value of >0.6 and is reinforced by a Cronbach's Alpha score of >0.7. The following table summarizes the findings of the composite reliability test:

Table 3. Reliability Test Results

	Cronbach's Alpha	Composite Reliability	Decision
Accounting Knowledge	0.800	0.883	Reliable
Accounting Information System	0.893	0.921	Reliable
MSME Performance	0.801	0.871	Reliable
Environmental Uncertainty	0.913	0.939	Reliable

Source: Authors' testing results using SmartPLS 3.0

A composite reliability rating of 0.6–0.7 and a Cronbach's alpha value more than 0.7 are regarded to be satisfactory. According to the table above, all constructions had composite reliability scores more than 0.7, indicating that they were dependable

3.4 Hypothesis Test

Testing this hypothesis includes the significance value of each path coefficient that states there is a significant or insignificant influence between constructs. Structural model testing used for hypothesis testing between variables in research can be seen from the values P value and T statistics. If the T value of the statistic > 1.96 then shows a significant influence between the variables tested or if the P value < 0.05 then shows a significant influence between the variables tested. The following table summarizes the study's hypothesis testing outcomes.

Table 4. Hypothesis Tests

Hypothesis	Original Sample (O)	T Statistic (O/STEDV)	P-Values	Decision
Accounting Knowledge =>MSMEs Performance	0.043	0.557	0.578	not accepted
Accounting Information System => MSMEs Performance	0.602	7.036	0.000	Accepted
Environmental Uncertainty => MSMEs Performance	0.399	6.221	0.000	Accepted
Moderating Effect of Accounting Knowledge =>MSMEs Performance	-0.177	3.359	0.001	Accepted
Moderating Effect of Accounting Information System => MSMEs Performance	0.177	3.264	0.001	Accepted

Source: Authors' testing results using SmartPLS 3.0

3.5 Research Results

The first hypothesis test revealed a T-statistical value of $0.557 > 1.96$ for the variable connection between Accounting Knowledge and MSME Performance. These findings indicate that the P-Value of $0.578 < 0.05$ indicates that hypothesis 1 is not accepted. The findings of this study contradict those of [Lestari & Rustiana \(2019\)](#) and [Setiawati et al., \(2021\)](#), who both assert that accounting expertise has a substantial impact on the performance of Micro, Small, and Medium-Sized Enterprises. It may be concluded that the more accounting expertise one has, the more successful Micro, Small, and Medium-Sized Enterprises are.

The second hypothesis test revealed a statistical T-value of $7.036 > 1.96$ for the variable association between accounting information systems and umkm performance. These data indicate that if the P value is $0.000 < 0.05$, hypothesis 2 is accepted. The findings of this study corroborate those of [Wahyuni et al. \(2018\)](#), who concluded that accounting information systems had no discernible effect on the performance of MSMEs. This is an accounting information system that has been adopted despite remaining shortcomings and may assist workers in completing tasks effectively, efficiently, and inexpensively in order to achieve optimum corporate performance.

The final hypothesis test revealed a statistical T-value of $6.221 > 1.96$ for the variable connection between environmental uncertainty and umkm performance. These data indicate that if the P value is $0.000 < 0.05$, hypothesis 3 is accepted. The findings of this research corroborate those of [Fahmia \(2017\)](#) who found that environmental uncertainty has a major impact on the performance of MSMEs. This demonstrates that the environment has a direct effect on how MSMEs do business.

The fourth hypothesis test revealed a statistical T-value of $3.359 > 1.96$ for the link between environmental uncertainty moderation and the effect of accounting expertise on the performance of msms. These findings indicate that if P Value $0.001 > 0.05$, hypothesis 4 is supported. This might be read as meaning that as long as msms possess enough accounting knowledge, their performance is unaffected by environmental unpredictability.

The fifth hypothesis test revealed a statistical T-value of $3.264 > 1.96$ for the link between environmental uncertainty moderation and the effect of accounting information systems on the performance of msms. These findings indicate that if P Value $0.001 > 0.05$, hypothesis 5 is supported. It may be stated that the greater the degree of environmental uncertainty faced by a business, the more readily available the required accounting information characteristics, which will impact the performance of msms.

4. CONCLUSION

The purpose of this study was to quantify and assess the effect of accounting knowledge and the implementation of accounting information systems on the performance of msm in the presence of environmental uncertainty. The findings of the analysis utilizing SEM with SmartPLS 3.0 software indicated that four of the five hypotheses in this research were supported by data, while one was not. Provide the following conclusion based on the data processing output: Accounting expertise has a substantial impact on the performance of msms. Accounting information systems have a major impact on the performance of msms. Environmental unpredictability has a substantial effect on the performance of msms. Environmental uncertainty has a moderating effect on the effect of accounting knowledge on the performance of msm when it is not considerable. Due to the lack of considerable environmental uncertainty, the effect of accounting information systems on the performance of msm is mitigated.

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