



The use of accounting information with environmental uncertainty as moderating variable

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ABSTRAK

Penelitian ini menginvestigasi faktor yang mempengaruhi UMKM dalam menggunakan informasi akuntansi dengan adanya ketidakpastian lingkungan. Ketidakpastian lingkungan ini disebabkan karena di Indonesia sedang menghadapi pandemi COVID-19. Variabel independen yang digunakan adalah skala bisnis, umur perusahaan, budaya organisasi, masa memimpin. Populasi penelitian ini adalah UMKM di Kabupaten Kudus sebanyak 15.895. Teknik sampling yang digunakan adalah convenience sampling. Sampel yang diperoleh sebanyak 104 responden. Teknik analisis data yang digunakan adalah PLS-SEM. Hasil penelitian menunjukkan bahwa skala usaha, budaya organisasi dan masa memimpin berpengaruh positif terhadap penggunaan informasi akuntansi. Umur perusahaan tidak berpengaruh terhadap penggunaan informasi akuntansi. Ketidakpastian lingkungan tidak mampu memoderasi pengaruh skala usaha, umur perusahaan, budaya organisasi dan masa memimpin terhadap penggunaan informasi akuntansi. Hasil penelitian ini dapat digunakan oleh UMKM untuk memotivasi UMKM meningkatkan kinerja UMKM dengan memanfaatkan informasi akuntansi dalam berbisnis. Selain itu hasil penelitian ini juga dapat memberikan kontribusi bagi Dinas Tenaga Kerja, Perindustrian, Koperasi, Usaha Kecil dan Menengah dan UMKM Kabupaten Kudus untuk lebih memperhatikan kesejahteraan UMKM di Kabupaten Kudus melalui pelatihan tentang penggunaan informasi akuntansi.

ABSTRACT

This study investigates the factors that influence MSMEs in using accounting information, considering the challenges posed by environmental uncertainty, particularly in the context of the

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ongoing COVID-19 pandemic in Indonesia. The study focuses on independent variables such as business scale, company age, organizational culture, and leading period. The research population comprises a total of 15,895 MSMEs in Kudus Regency. The sampling technique used is convenience sampling. The sample obtained was 104 respondents. The data analysis utilized Partial Least Square - Structural Equation Modeling (PLS-SEM). The results revealed that business scale, organizational culture, and leading period positively influence the utilization of accounting information. However, company age was found to have no significant impact on the use of accounting information. Environmental uncertainty did not moderate the effect of business scale, company age, organizational culture, and leading period on the use of accounting information. The study provides valuable insights for MSMEs to improve their performance by incorporating accounting information into business operations. It suggests that the Department of Manpower, Industry, Cooperatives, and Small and Medium Enterprises in Kudus Regency should prioritize MSMEs' welfare through training programs.

INTRODUCTION

The use of accounting information in micro, small, and medium enterprises (MSMEs) involves utilizing such information to support and enhance their business operations. This accounting information encompasses recording financial transactions, including cash flow, payables, receivables, and inventories, and preparing financial statements (Amanamah *et al.*, 2016; Rahmiyanti *et al.*, 2020). This accounting information is important for MSMEs to manage business activities (Umami *et al.*, 2020). Understanding and utilizing accounting information is crucial for the sustainability of MSMEs, making it an imperative aspect that demands attention. Nevertheless, MSMEs often face challenges in comprehending and effectively using accounting information (Nirwana & Purnama, 2019; Puspita & Pramono, 2019; Setiawan, 2019).

The difficulty of MSMEs in using accounting information can be influenced by several factors, including environmental uncertainty (Shirlyani *et al.*, 2018), business scale (Susilawati *et al.*, 2017), company age (Hananto *et al.*, 2020; Kurniawan *et al.*, 2020), organizational culture (Baroroh *et al.*, 2020; Yolanda *et al.*, 2020), and leading period (Susilawati *et al.*, 2017). Environmental uncertainty has become intriguing, especially due to the COVID-19 pandemic, which has made it challenging to control environmental conditions effectively (Purwono, 2020). The COVID-19 pandemic has forced MSMEs to be able to survive in the business world. MSME efforts to maintain their business by utilizing accounting information (Yolanda *et al.*, 2020). The ongoing uncertainty surrounding the end of the pandemic necessitates MSMEs to prioritize the use of accounting information for business sustainability. To adapt, MSMEs should enhance their proficiency in accounting software, engage in

online marketing, and conduct financial transactions online. The COVID-19 pandemic has compelled MSMEs to rely on accounting information as a crucial tool for sustaining their businesses.

Another factor that affects the use of accounting information is the business scale. The business scale shows the size of the MSME in terms of assets (Umami *et al.*, 2020). MSMEs with large assets are likely to use high accounting information because they need information for decision-making (Dewi & Restika, 2018). However, several studies have also found that business scale does not affect the use of accounting information (Horvat & Mojzer, 2019; Nafsiah & Birahma, 2019; Rikah, 2019).

In addition to business scale, the use of accounting information is also influenced by the company age (Hananto *et al.*, 2020; Kahsay, 2019). Older MSMEs use accounting information more in making decisions (Hananto *et al.*, 2020). However, several studies find evidence that company age does not affect the use of accounting information (Nafsiah & Birahma, 2019; Pasaribu, 2018; Rikah, 2019).

Organizational culture also contributes to the interest of MSMEs in utilizing accounting information (Dewi *et al.*, 2018; Napitupulu, 2018). A good organizational culture can manage finances and use accounting information for business success (Baroroh *et al.*, 2020). Candra *et al.* (2020) showed different results and found evidence that organizational culture did not affect the use of accounting information.

Another influential factor for MSMEs in using accounting information is the leading period. MSMEs led by experienced and long-serving leaders are more adept at effectively leveraging accounting information for business operations (Susilawati *et al.*, 2017). This is in contrast to the findings of Kurniawan *et al.* (2020), who found that the leading period could not influence MSMEs' use of accounting information.

This research is a follow-up study by Candra *et al.* (2020). In this research model, the researcher adds an independent variable, namely the leading period (Susilawati *et al.*, 2017). The inclusion of this variable is motivated by the fact that the information acquired from internal and external sources is shaped by the leading period within the company (Ramadhani *et al.*, 2018). The leading period, representing the duration of time MSME leaders have spent managing their businesses and the diverse experiences they have accumulated, underscores the heightened need for ample information in guiding sound decision-making within MSMEs. As a manager's leading period increases, their wealth of experience in business operations tends to expand, contributing to an ongoing enhancement of decision-making capabilities.

In addition to adding the leading period variable, this study uses environmental uncertainty as a moderating variable. Environmental uncertainty due to the COVID-19 pandemic has changed the pattern of limited life. All educational and economic activities are run on an online model. This change in the pattern of life has a negative impact on the income of MSMEs. At the time of the COVID-19 pandemic, many MSMEs were in a state of disrepair due to the imposition of restrictions on micro-

community activities, so the uncertainty of the economic environment became increasingly uncertain. This will have an impact on the use of accounting information. So, the novelty of this study is that the role of environmental uncertainty in the aftermath of the COVID-19 pandemic can moderate the factors in using accounting information in MSMEs.

The remarkable growth in the micro, small, and medium enterprises (MSMEs) sector in Kudus Regency is a primary focus of our research. A thorough examination of the MSMEs' situation in Kudus Regency reveals a positive trend, with a consistent improvement from 2017 to 2020, as depicted in Figure 1. During this period, there was a notable increase in the number of MSMEs, indicating a robust dynamic in the local business sector. More businesses are actively contributing to the economic development of the region. While the rise in the number of MSMEs signifies positive economic progress, it also presents new challenges, particularly in increased business competition. The growing number of businesses has increased competition among MSMEs in Kudus Regency.

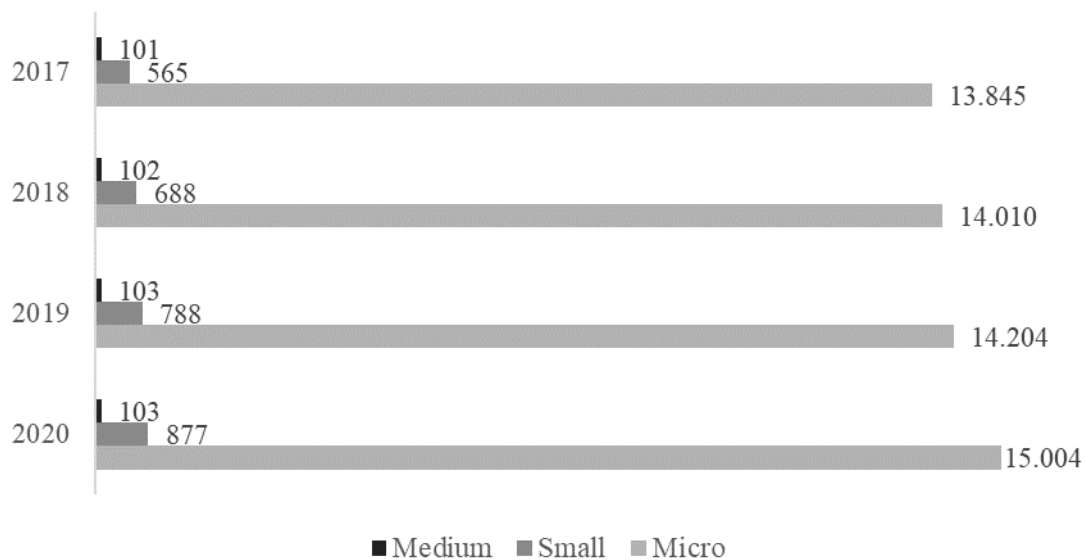


Figure 1
Micro, Small, and Medium Enterprises (MSMEs) sector in Kudus Regency for the Period 2017-2020

In facing increasingly tough competition, the MSMEs sector must keep improving the quality of their products and services. MSMEs must also optimize their operational strategies to maintain market share and gain a competitive edge. In this Industry 4.0 era, accounting information is crucial for businesses to make informed decisions (Fachruzzaman *et al.*, 2021). For MSMEs, accounting information comes from keeping track of financial transactions. This helps MSMEs understand their financial situation, which becomes the basis for planning business strategies in the next period. Therefore, having a good business strategy is crucial for MSMEs to improve

efficiency and sustain their business. It's not just about seeking profits for MSMEs; it's also about becoming more efficient and sustainable in the long run. MSMEs can stay competitive and grow amidst the rapidly changing business dynamics by continually improving the quality of products and services and optimizing their operations. In other words, accounting information is vital for MSMEs to remain competitive and sustainable in a challenging business environment (Andriany *et al.*, 2023).

This study investigates the impact of business scale, company age, organizational culture, and leading period on accounting information use and whether environmental uncertainty moderates these factors. The findings of this study offer valuable insights for MSMEs, catalyzing to enhance their performance by effectively incorporating accounting information into their business operations. Additionally, these results can provide a foundation for the Department of Manpower, Industry, Cooperatives, and Small and Medium Enterprises in Kudus Regency to prioritize the welfare of MSMEs. This may involve implementing training programs focused on empowering MSMEs through the adept utilization of accounting information. In addition, this study also adds to the research literature on the influence of business scale, organizational culture, and leading periods on the use of accounting information supported by motivation theory.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Motivation Theory

The motivation theory in business encourages entrepreneurs, particularly those in MSMEs, to expand their operations into larger business entities (Whetyningtyas, 2016). In running their business, MSMEs are motivated to use accounting information to increase MSME performance (Johan & Akbar, 2020). Motivation plays a crucial role in driving MSMEs to use accounting information effectively. The significance of this accounting information lies in its potential application by MSMEs for strategic planning and informed decision-making (Kurniawati & MeilianaIntan, 2016). Puspita & Pramono (2019) found that MSMEs tend to be motivated to record their business transactions to assess how far MSMEs are performing in their management.

Business Scale and the Use of Accounting Information

The business scale shows the ability of MSMEs to run their business when viewed from the size of the assets owned by MSMEs (Mustaghfiroh & Yanto, 2016; Nirwana & Purnama, 2019; Rahman & Kasdi, 2016; Setiawan, 2019; Yasa *et al.*, 2017). MSMEs with large business scales indicate higher complexity (Nirwana & Purnama, 2019). Consistent with the motivation theory, when MSMEs exhibit high business complexity, it motivates them to leverage accounting information for the success of their business. Additionally, MSMEs with a substantial business scale

necessitate accounting information to discern strategic steps for making informed decisions (Santosa & Wulandari, 2019; Yasa *et al.*, 2017).

Several studies have shown that high business scale can influence MSMEs in the use of accounting information (Anggraini & Thorp, 2020; Dewi & Restika, 2018; Mustaghfiroh & Yanto, 2016; Nirwana & Purnama, 2019; Rahman & Kasdi, 2016; Santosa & Wulandari, 2019; Shirlyani *et al.*, 2018; Susilawati *et al.*, 2017; Whetyningtyas, 2016). Based on the theory and previous research, it can be hypothesized as follows:

H1: Business scale positively affects the use of accounting information.

Company Age and the Use of Accounting Information

Company age is the time a business has been established (Hananto *et al.*, 2020). Company age within MSMEs is crucial in shaping their inclination toward utilizing accounting information. MSMEs with a longer company age inherently possess extensive experience managing their business affairs. Drawing from this accumulated experience, such MSMEs are motivated to actively engage with accounting information to enhance the efficiency and success of their business operations (Mustaghfiroh & Yanto, 2016; Yasa *et al.*, 2017). This long-running MSME business requires accounting information for the investment decision-making (Alfian & Tresna, 2017; Ernawati, 2017; Nirwana & Purnama, 2019; Yasa *et al.*, 2017).

The extensive operational history of long-standing MSMEs reflects a high level of business knowledge. Consequently, these seasoned MSMEs emphasize the importance of accounting information to facilitate the seamless functioning of their business. The wealth of experience accumulated over time underscores the crucial role that accounting information plays in ensuring the efficiency and success of their operations (Alfian & Tresna, 2017; Dewi & Restika, 2018; Ernawati, 2017; Hananto *et al.*, 2020; Nirwana & Purnama, 2019; Rahman & Kasdi, 2016; Setiawan, 2019; Susilawati *et al.*, 2017; Yuniarsih & Yuristanti, 2018). Based on the theory and previous research, it can be hypothesized as follows:

H2: Company age positively affects the use of accounting information.

Organizational Culture and the Use of Accounting Information

Organizational culture is a habit applied in the business environment to affect organizational performance (Baroroh *et al.*, 2020; Yolanda *et al.*, 2020). The organizational culture in the MSMEs environment is a union of differences in habits between MSMEs owners and employees to jointly advance a run business (Napitupulu, 2018). A good MSME organizational culture, such as discipline and high work motivation, will increase the MSME's ability to manage finances well. In managing

good finances, of course, MSMEs need information that can support their business continuity. The information referred to is accounting information. Based on motivation theory, when MSMEs have a good organizational culture, MSMEs will be motivated to use accounting information to facilitate business management so that MSMEs performance will increase (Yolanda *et al.*, 2020). It can be concluded that organizational culture can influence the use of accounting information (Baroroh *et al.*, 2020; Dewi *et al.*, 2018; Napitupulu, 2018; Yolanda *et al.*, 2020). Based on the theory and previous research, it can be hypothesized as follows:

H3: Organizational culture positively affects the use of accounting information.

Leading Period and the Use of Accounting Information

The leading period shows the time the business leader has to manage his business activities (Susilawati *et al.*, 2017). MSME leaders become more aware of the requirement for accounting data to support their business operations as their leadership duration increases (Ramadhani *et al.*, 2018). As leaders accumulate more years in their roles, they gather a wealth of experience in business management. This experience encompasses a deep understanding of the significance of accounting information in decision-making processes (Abubakar *et al.*, 2019).

Linking to motivational theories, leaders with a longer leading period are likely to possess intrinsic motivation to enhance the performance of their businesses. Effectively utilizing accounting information allows them to make more precise and strategic decisions, contributing to the growth and sustainability of the business. As the duration of leadership increases, leaders tend to develop a deeper understanding of the importance of accounting information. They become increasingly aware of how the effective use of accounting information can provide critical insights into financial management, identify opportunities, and manage risks. Therefore, leaders with a longer leading period not only signify accumulated experience but also strengthen leaders' intrinsic motivation to optimize the use of accounting information as a strategic tool for enhancing MSME performance (Baroroh *et al.*, 2020).

The higher the leading period, the greater the manager's experience related to business competition, thus motivating MSMEs to use accounting information for the success of their business. It can be concluded that the leading period positively affects the use of accounting information (Ramadhani *et al.*, 2018; Sularsih, 2018; Susilawati *et al.*, 2017). Based on the theory and previous research, it can be hypothesized as follows:

H4: The leading period positively affects the use of accounting information.

Environmental Uncertainty Moderates Business Scale on the Use of Accounting Information

The current state of environmental uncertainty is evident in Indonesia due to the ongoing challenges posed by the COVID-19 pandemic (Purwono, 2020). During the COVID-19 pandemic, it became an important point for MSMEs to survive in these conditions. In maintaining their business during this pandemic, MSMEs with large business scales will find it difficult to have accurate accounting information. MSMEs with a larger scale are likely to employ many workers. (Hananto *et al.*, 2020). This large number of workers is necessary for large-scale MSMEs, considering that there will be more regulated and controlled things compared to MSMEs, which are, of course, smaller in scale.

High environmental uncertainty causes MSMEs with large assets and many employees to find it difficult to maintain their business conditions properly (Shirlyani *et al.*, 2018). In a COVID-19 pandemic like this, MSMEs with more workers and larger business scales will need more accounting information to ensure their operations are running effectively and well-controlled. It can be concluded that environmental uncertainty can moderate the effect of business scale on the use of accounting information (Shirlyani *et al.*, 2018). Based on the results of previous research, it can be hypothesized as follows:

H5: Environmental uncertainty moderates the effect of business scale on the use of accounting information.

Environmental Uncertainty Moderates Company Age on the Use of Accounting Information

The COVID-19 pandemic has brought about significant uncertainty for businesses, particularly MSMEs, leading to a decline in performance mainly due to unpredictable sales. However, long-established MSMEs have found motivation to use accounting information to sustain their businesses in the face of this uncertainty. The volatile environment supports the notion that experienced MSMEs are more inclined to leverage accounting information effectively. With limited community activities during the pandemic, MSMEs recognize the importance of accounting information and are working diligently to adapt by transitioning to online sales. MSMEs are motivated to learn about managing cash, receivables, and debts to ensure survival in this online landscape. Yasa *et al.* (2017) show evidence that environmental uncertainty can moderate the effect of company age on the use of accounting information. MSMEs that have been running their business for a long time will certainly easily predict the existence of environmental uncertainty by using accounting information (Yuniarsih & Yuristanti, 2018). Based on the conceptual framework and previous research, it can be hypothesized as follows:

H6: Environmental uncertainty moderates the effect of company age on the use of accounting information.

Environmental Uncertainty Moderates Organizational Culture on the Use of Accounting Information

This environmental uncertainty has a negative impact on MSMEs if it is not managed properly (Yolanda *et al.*, 2020). The current environmental uncertainty is shown by the COVID-19 pandemic, which can weaken the current performance of MSMEs. MSMEs with a high organizational culture, such as high discipline and work ethic during the COVID-19 pandemic, are trying to maintain business continuity. To maintain the continuity of this business, MSMEs will use accounting information in making decisions. In other words, the COVID-19 pandemic indicates high environmental uncertainty. MSMEs with a high organizational culture will be motivated to use accounting information to maintain business continuity. It can be concluded that environmental uncertainty can moderate the influence of organizational culture on the use of accounting information (Candra *et al.*, 2020). Based on the conceptual framework and previous research, it can be hypothesized as follows:

H7: Environmental uncertainty moderates the effect of organizational culture on the use of accounting information.

Environmental Uncertainty Moderates the Leading Period on the Use of Accounting Information

The leading period is the period of office of a leader to manage a business (Yasa *et al.*, 2017). This leading period can be seen from how long an MSME leader manages his business. A long leadership period shows that the leader's experience is high. However, at this time of high uncertainty, with the COVID-19 pandemic, it is a big task for MSME leaders to survive. To survive this time of high uncertainty, the MSME leaders who have been leading MSMEs for a long time have enough experience to deal with things like this. During this pandemic, MSME leaders managing their businesses for a long time will be motivated to use accounting information. The accounting information obtained is used by MSMEs for strategic decision-making to improve MSME performance (Ashsifa *et al.*, 2023; Latifah *et al.*, 2021). Based on the description above, it can be hypothesized as follows:

H8: Environmental uncertainty moderates the effect of the leading period on the use of accounting information.

Based on the hypothesis development above, the proposed research framework is as follows:

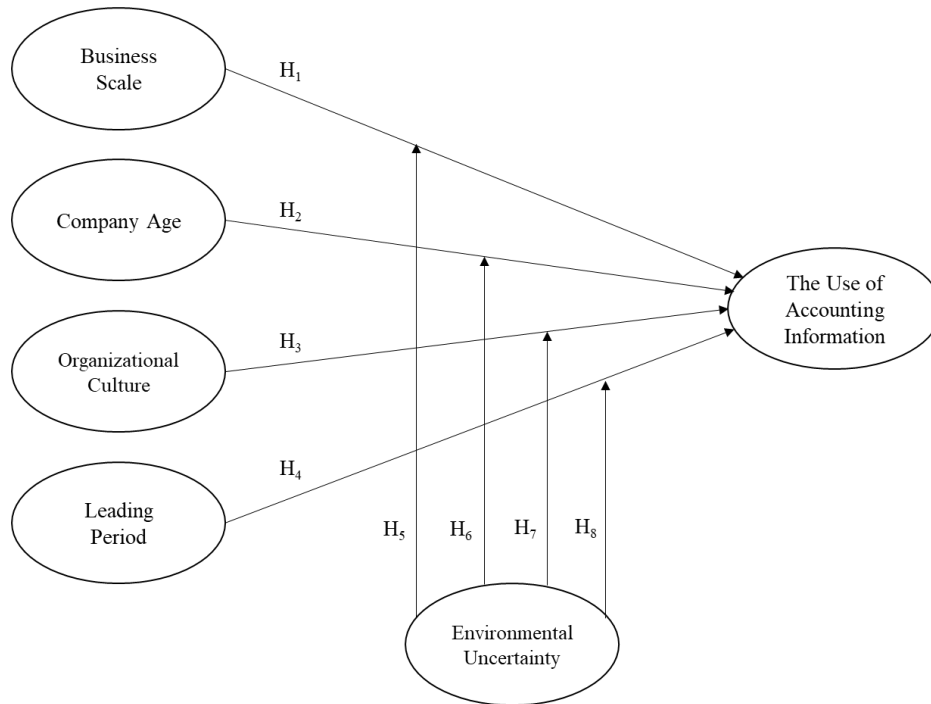


Figure 2
Research Framework

RESEARCH METHOD

Population and sample

The population used in this study were all MSMEs in Kudus Regency. Data were obtained from the Department of Manpower, Industry, Cooperatives, and Small and Medium Enterprises in Kudus Regency. In 2021, the number of MSMEs was 15,895. The sampling technique used is the convenience sampling method. The number of samples was determined using the Slovin formula. Based on the Slovin formula, the sample obtained was at least 99 respondents. The sample used in this study was 104 respondents.

$$n = \frac{N}{1+Ne^2} = \frac{15.895}{1+(15.895 \times 0.10^2)} = 99.37 \text{ (rounded to 99)} \dots\dots\dots 1$$

Variable Definition and Measurement

The research variables used in this study are moderating, independent, and dependent variables. The moderating variable used is environmental uncertainty. The independent variables are business scale, company age, organizational culture, and leading period. The dependent variable used is the use of accounting information. Variable measurements are presented in Table 1.

Table 1
Variable Measurement

No	Variable	Definition	Measurement Indicator
1	Business Scale (BS)	The extent of MSMEs' proficiency in handling their business operations (Dewi & Restika, 2018)	<ol style="list-style-type: none"> 1. Number of employees 2. Total assets 3. Initiatives to use accounting information
2	Company Age (CA)	The length of time a company has been established to carry out its operational activities (Ramadhani <i>et al.</i> , 2018)	Length of time running a business with the following criteria: < 1 year 1 – 2 years 2 – 5 years 6 – 10 years > 10 years
3	Organizational Culture (OC)	The set of habitual behaviors that form established norms and serve as guiding principles and references for navigating and addressing diverse challenges within a company (Yolanda <i>et al.</i> , 2020)	<ol style="list-style-type: none"> 1. Finances are carefully regulated 2. The business runs in conditions of intense competition 3. Uphold the vision, mission, and business goals 4. Long-term business planning
4	Leading Period (LP)	The duration of a manager's leadership tenure can significantly impact the efficiency of decision-making processes (Ramadhani <i>et al.</i> , 2018)	<ol style="list-style-type: none"> 1. Long lead 2. Experienced leaders use accounting information 3. Understanding accounting information
5	Use of Accounting Information (UAI)	Information containing the operations, management, and finances of a company (Hasibuan, 2020)	<ol style="list-style-type: none"> 1. Recording transactions 2. Knowing the amount of production and cost 3. Preparing financial statements 4. Manage finances well 5. Presenting financial reports well
6	Environmental Uncertainty (EU)	Difficulty predicting changes in the surrounding environment (Candra <i>et al.</i> , 2020)	<ol style="list-style-type: none"> 1. Demand is hard to predict during a pandemic 2. Difficult to follow regulations that have an impact on business 3. It is difficult to predict the future economic environment

Data Analysis Technique

Partial Least Square - Structural Equation Modeling (PLS-SEM) is the data analysis technique used in this research. This technique uses three stages. First, outer model analysis. Second, inner model analysis. Third, hypothesis testing.

ANALYSIS AND DISCUSSION

Descriptive statistics

This descriptive statistic includes minimum, maximum, mean, and standard deviation values. The following are the results of descriptive statistical tests (Table 2):

Table 2
Descriptive Statistics

	N	Min.	Max.	Mean	Std. Deviation
Business Scale (BS)					
BS_1	104	1	5	2.952	1.113
BS_2	104	1	5	2.680	1.200
BS_3	104	1	5	2.350	1.059
BS_4	104	1	5	3.760	1.005
BS_5	104	1	5	3.337	1.190
BS_6	104	1	5	3.058	1.223
BS_7	104	1	5	2.933	1.235
				Average	3.010
Company Age (CA)	104	1	5	2.913	1.178
				Average	2.913
Organizational Culture (OC)					
OC_1	104	1	5	4.221	0.588
OC_2	104	1	5	4.163	0.652
OC_3	104	1	5	4.202	0.671
OC_4	104	1	5	4.135	0.694
				Average	4.108
Leading Period (LP)					
LP_1	104	1	5	3.490	0.877
LP_2	104	1	5	3.712	0.927
LP_3	104	1	5	3.731	0.933
				Average	3.644
Environmental Uncertainty (EU)					
EU_1	104	1	5	3.817	0.769
EU_2	104	1	5	3.875	0.885
EU_3	104	1	5	3.865	0.821
EU_4	104	1	5	3.923	0.895
				Average	3.870
Use of Accounting Information (UAI)					
UAI_1	104	1	5	3.529	1.100
UAI_2	104	1	5	3.962	0.980
UAI_3	104	1	5	3.712	1.080
UAI_4	104	1	5	3.798	0.965
UAI_5	104	1	5	3.519	1.074
				Average	3.704

Based on the results of descriptive statistical tests conducted on 104 samples, the business scale (BS) indicators exhibited a range between a minimum value of 1 and a maximum value of 5, with an overall average of 3.010. Similarly, the company age (CA) indicator ranged from a minimum of 1 to a maximum of 5, with an average of 2.913. The organizational culture (OC) indicator ranged from a minimum of 1 to a maximum of 5, with an average of 4.108. The leading period (LP) indicator displayed values between a minimum of 1 and a maximum of 5, with an average of 3.644. As for the economic uncertainty (EU) indicator, acting as a moderation variable, it ranged from a minimum of 1 to a maximum of 5, with an average of 3.870. Lastly, the dependent variable in this study, the use of accounting information (UAI) indicator, ranged from a minimum of 1 to a maximum of 5, with an average of 3.704.

Outer Model Analysis

The analysis of this outer model is indicated by the value of Loading Factor, Composite Reliability (CR), and Average Variance Extracted (AVE) of each latent variable used in this study (Tables 4 & 5).

Table 3
Loading Factor Value

Indicator	Loading Factor	Indicator	Loading Factor
Business Scale (BS)		Leading Period (LP)	
BS_2	0.768	LP_1	0.902
BS_3	0.724	LP_2	0.948
BS_4	0.765	LP_3	0.952
BS_5	0.772	Environmental Uncertainty (EU)	
BS_6	0.806	EU_1	0.880
BS_7	0.735	EU_2	0.896
Company Age (CA)		EU_3	0.925
CA_1	1.000	EU_4	0.896
Organizational Culture (OC)		Use of Accounting Information (UAI)	
OC_1	0.736	UAI_1	0.875
OC_2	0.820	UAI_2	0.846
OC_3	0.871	UAI_3	0.912
OC_4	0.848	UAI_4	0.890
		UAI_5	0.868

Table 4
Cronbach's Alpha, CR dan AVE

Indicator	Cronbach's Alpha	rho_A	Composite Reliability (CR)	Average Variance Extracted (AVE)
BS	0.857	0.867	0.892	0.581
CA	1.000	1.000	1.000	1.000
OC	0.838	0.857	0.891	0.673
LP	0.927	0.929	0.954	0.873
EU	0.922	0.954	0.944	0.809
UAI	0.926	0.927	0.944	0.772

In the data validity test, one indicator from the business scale (BS_1) does not pass validity because the value is below 0.60. So, it needs to be deleted. Table 3 indicates that all loading factors exceed 0.60, indicating the relevance of each item, the absence of redundancy, and the formation of independent constructs. In Table 4, the Cronbach Alpha value surpasses 0.60, the Composite Reliability (CR) exceeds 0.70, and the Average Variance Extracted (AVE) exceeds 0.50. Therefore, the indicators used in the research have passed the validity and reliability tests.

Inner Model Analysis

The analysis of the inner model is assessed through the coefficient of determination (R-squared). The following are the results of the R-squared test (Table 5):

Table 5
Coefficient of Determination

	R-Squared	Adjusted R-Squared
UAI	0.620	0.584

Based on Table 5, the R-squared value is 0.620. The test results show that 62% of the variables of business scale, company age, organizational culture, and leading period affect the use of accounting information. The variable of the use of accounting information is influenced by other variables not included in the research model by 38%.

The PLS-SEM test model is presented as follows (Figure 3):

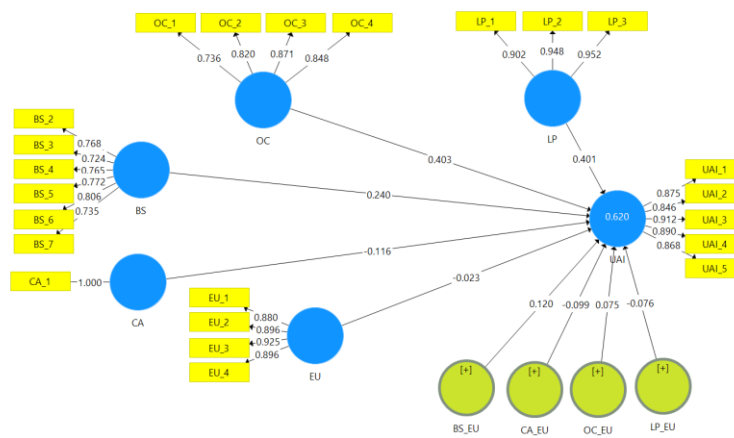


Figure 3
PLS-SEM Output

- BS = Business Scale (X1)
- CA = Company Age (X2)
- OC = Organizational Culture (X3)
- LP = Leading Period (X4)
- EU = Environmental Uncertainty (Z)
- UAI = The Use of Accounting Information (Y)

The results of hypothesis testing can be shown as follows (Table 6):

Table 6
Hypothesis Testing Results

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Conclusion
H1: BS → UAI	0.240	0.237	0.087	2.776	0.003	Accepted
H2: CA → UAI	-0.116	-0.115	0.073	1.581	0.057	Rejected
H3: OC → UAI	0.403	0.403	0.105	3.852	0.000	Accepted
H4: LP → UAI	0.401	0.404	0.110	3.648	0.000	Accepted
H5: BS*EU → UAI	0.120	0.136	0.117	1.021	0.154	Rejected
H6: CA*EU → UAI	-0.099	-0.115	0.088	1.128	0.130	Rejected
H7: OC*EU → UAI	0.075	0.091	0.080	0.947	0.172	Rejected
H8: LP*EU → UAI	-0.076	-0.073	0.121	0.631	0.264	Rejected

Business Scale and the Use of Accounting Information

The results show that business scale positively affects the use of accounting information, with a p-value of 0.003. From the results of testing the first hypothesis, it can be concluded that the hypothesis is accepted. MSMEs that have high business scale are willing and have a higher tendency to use accounting information (Dewi & Restika, 2018; Mustaghfiroh & Yanto, 2016; Nirwana & Purnama, 2019; Rahman & Kasdi, 2016; Santosa & Wulandari, 2019; Shirlyani *et al.*, 2018; Susilawati *et al.*, 2017; Whetyningtyas, 2016). According to motivation theory, MSMEs with a high business scale show that they have many assets and employees. Adequate resource capacity motivates MSMEs to use accounting information to help make it easier to run their business. MSMEs that have large assets will need accounting information to manage their finances. However, the results of this study are not in line with several studies that found evidence that business scale does not affect the use of accounting information (Candra *et al.*, 2020; Hananto *et al.*, 2020; Johan & Akbar, 2020; Kurniawan *et al.*, 2020; Nafsiah & Birahma, 2019; Pasaribu, 2018; Rikah, 2019; Setiawan, 2019; Umami *et al.*, 2020).

Company Age and the Use of Accounting Information

The second hypothesis states that the company age positively affects the use of accounting information. Based on Table 6, the p-value is 0.057. The results of the hypothesis testing led to the rejection of the hypothesis. To sum it up, the hypothesis testing results suggest that company age does not significantly impact the use of accounting information.

The results of this study differ from research which states that company age has a positive effect on the use of accounting information (Alfian & Tresna, 2017; Dewi & Restika, 2018; Ernawati, 2017; Hananto *et al.*, 2020; Nirwana & Purnama, 2019; Rahman & Kasdi, 2016; Setiawan, 2019; Susilawati *et al.*, 2017; Yuniarsih & Yuristanti, 2018). The results of this test also do not support the motivation theory. MSMEs that have been running their business for a long time do not affect MSMEs to use accounting information. Descriptive statistics test results were obtained on average respondents who run their business at 2 to 5 years old. At the age of 2 to 5 years, MSMEs still do not have sufficient accounting knowledge to run their business, so their desire to use accounting information in running their business does not yet exist.

However, the results of this study support the results of research conducted by Candra *et al.* (2020), Johan & Akbar (2020), Nafsiah & Birahma (2019), Pasaribu (2018), Rikah (2019), and Santosa & Wulandari (2019), where the age of the company does not affect the use of accounting information. This research shows that the more mature a business is, the MSMEs may be unable to provide appropriate and useful accounting information when making decisions. This shows that MSMEs fail to understand the importance of providing accounting information for business continuity. According to Santosa & Wulandari (2019), the company's age cannot

influence the company's use of accounting information because business activities that do not change from year to year cause the use of accounting information that is not optimal.

Organizational Culture and the Use of Accounting Information

The third hypothesis shows that organizational culture positively affects the use of accounting information. Table 6 shows the p-value of 0.000. The third hypothesis is accepted, meaning that organizational culture affects the use of accounting information. The results of this study support the research conducted by Baroroh *et al.* (2020), Dewi *et al.* (2018), Napitupulu (2018), and Yolanda *et al.* (2020), who found evidence that organizational culture has a positive effect on the use of accounting information. A good MSME organizational culture will increase financial management capacity. Of course, in managing a good financial situation, MSMEs need to understand the use of accounting information that can support their business sustainability.

The results align with the motivation theory. MSMEs with a strong organizational culture exhibit motivation to use accounting information. When MSMEs foster a culture of meticulous financial management, the need for accounting information becomes integral to supporting their business operations. These MSMEs tend to record financial transactions accurately. Moreover, when MSMEs prioritize their vision, mission, and business goals, striving for significant profits, they actively record financial transactions and compile comprehensive financial reports. The imperative for profit information arises as a crucial metric for measuring the MSMEs' performance.

Leading Period and the Use of Accounting Information

The fourth hypothesis states that the leading period positively affects the use of accounting information. The results in Table 6 show a p-value of 0.000. The results of hypothesis testing indicate that the hypothesis is accepted, where the leading period positively affects the use of accounting information. The results of this study support the research conducted by Ramadhani *et al.* (2018) and Susilawati *et al.* (2017), which shows that the leading period has a positive effect on the use of accounting information. In line with Ramadhani *et al.* (2018), the longer the owner's leading period, the higher the preparation and use of accounting information. This is because management wants to make the right decisions and quickly solve the problems they face. Managers will increasingly need to use accounting information as a basis for decision-making to make choices carefully.

The results of hypothesis testing support the motivation theory. MSME leaders who have long led MSMEs certainly need information for decision-making. In obtaining this information, the MSME leadership requires accounting knowledge to make these decisions. This is what encourages MSME leaders who have long led MSMEs to try to use accounting information. The importance of this accounting

information for MSMEs encourages MSME leaders to record transactions, compile financial reports, and even be able to analyze financial reports. However, the results of this study do not support the results of research conducted by Budiman & Zuliyati (2015), and Kurniawan *et al.* (2020), which showed that the leading period could not influence the use of accounting information.

Environmental Uncertainty Moderates Business Scale on the Use of Accounting Information

The fifth hypothesis shows that environmental uncertainty moderates the effect of business scale on the use of accounting information. The results of hypothesis testing in Table 6 show a p-value of 0.154. The test results show that the hypothesis is rejected, meaning that environmental uncertainty cannot moderate the effect of business scale on the use of accounting information. The study's results support the research conducted by Candra *et al.* (2020) and Yolanda *et al.* (2020), who found evidence that environmental uncertainty cannot moderate the effect of business scale on accounting information.

This environmental uncertainty can be demonstrated by the current COVID-19 pandemic, where MSMEs cannot predict the demand for products or services offered. This uncertain condition where MSMEs find it difficult to predict the demand for their products and services causes MSMEs that have large and small scales to be unmotivated to use accounting information. Many MSMEs cannot operate due to uncertain demand for products or services. MSMEs can still survive to run their business; they are lucky. The results of this study differ from Shirlyani *et al.* (2018), who found evidence that environmental uncertainty can moderate the effect of business scale on the use of accounting information.

Environmental Uncertainty Moderates Company Age on the Use of Accounting Information

The sixth hypothesis in this study is that environmental uncertainty moderates the effect of company age on the use of accounting information. Table 6 shows the p-value of 0.130. The results of hypothesis testing show that the p-value is greater than 0.05, indicating that the hypothesis is rejected. Hypothesis testing found evidence that environmental uncertainty cannot moderate the effect of firm age on the use of accounting information. The findings of this study align with the results of research conducted by Candra *et al.* (2020) and Ernawati (2017), which found evidence that environmental uncertainty could not moderate company age on the use of accounting information. The results of this test also do not support the motivation theory. At this time of high uncertainty, the COVID-19 pandemic shows that MSMEs with short or long lives are not motivated to use accounting information to maintain the viability of their business. The results of this study do not support the research conducted by Yuniarsih & Yuristanti (2018).

Environmental Uncertainty Moderates Organizational Culture on the Use of Accounting Information

The seventh hypothesis states that environmental uncertainty moderates the effect of organizational culture on the use of accounting information. Based on Table 6, the p-value is 0.172. The test results found evidence that the seventh hypothesis was rejected, which means that environmental uncertainty cannot moderate the effect of organizational culture on the use of accounting information. The results of this study support the research conducted by Candra *et al.* (2020), who found evidence that environmental uncertainty cannot moderate the influence of organizational culture on the use of accounting information.

The existence of this COVID-19 pandemic as a proxy for environmental uncertainty cannot encourage MSMEs with a good organizational culture to use accounting information. During this COVID-19 pandemic, MSMEs with a highly disciplined spirit, high work motivation, and high entrepreneurial spirit are not motivated to use accounting information for decision-making. MSMEs are currently more focused on surviving the COVID-19 pandemic by surrendering to government regulations. MSMEs should close their businesses rather than lose more and more.

Environmental Uncertainty Moderates the Leading Period on the Use of Accounting Information

The eighth hypothesis states that environmental uncertainty moderates the leading period on the use of accounting information. Table 6 shows that the test results obtained a p-value of 0.264. The results of hypothesis testing lead to the conclusion that the hypothesis is rejected. It indicates that environmental uncertainty cannot moderate the effect of the leading period on the use of accounting information. The prevailing state of environmental uncertainty, exemplified by the ongoing COVID-19 pandemic, fails to support MSME leaders who have been at the helm for an extended duration to be motivated to use accounting information. MSMEs leaders might be overwhelmed by the immediate external challenges, focusing more on survival strategies and coping with the crisis rather than utilizing accounting information for strategic decision-making (Pires & Alves, 2022).

CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

This study investigates the impact of business scale, company age, organizational culture, and leading period on accounting information use and whether environmental uncertainty moderates these factors. The findings indicate that business scale positively influences the use of accounting information, as larger-scale MSMEs demonstrate a higher motivation to incorporate accounting information in their business operations. This observation aligns with motivation theory, suggesting that MSMEs are inclined to manage and expand their businesses when operating on a larger

scale. Conversely, company age does not impact the use of accounting information. A longer company age does not necessarily guarantee using accounting information systems. This is due to the relatively young average age of MSMEs in this study, indicating a lack of inclination towards using accounting information systems. On another note, organizational culture positively affects the use of accounting information. MSMEs with a stronger and more positive organizational culture are motivated to enhance their performance, leading to increased motivation to use accounting information. Similarly, the leading period positively impacts the use of accounting information. The longer an individual's leadership period, the greater their experience, resulting in heightened motivation to leverage accounting information.

As a moderating variable, environmental uncertainty demonstrates an inability to moderate the impact of business scale, company age, organizational culture, and leading period on the use of accounting information. Even in the face of the COVID-19 pandemic as a form of environmental uncertainty, its presence does not strengthen or weaken the influence of business scale on accounting information. This is attributed to the perception of MSMEs during the pandemic, where they deemed using an accounting information system unnecessary. During this time, they focused primarily on business maintenance and compliance with government regulations. MSMEs did not prioritize accounting information systems because they perceived them as requiring a relatively complex learning process.

Certain limitations constrain the study. Firstly, it is centered solely on MSMEs in the Kudus Regency, particularly those affected by the COVID-19 pandemic in a black zone. Additionally, the research duration is relatively short. Two suggestions are proposed to improve future studies. Firstly, further research could explore environmental uncertainty as an intervening variable, as the current research model lacks adequate evidence to support its role as a moderating variable. If some previous findings between the independent and dependent variables resulted in inconsistent research, other factors bridge the variable through the mediating variable (Sarstedt *et al.*, 2021). Secondly, expanding the sample size could enhance the research's robustness.

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