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The Impact of Environmental Uncertainty and Accounting Information Systems on Managerial Performance of Micro, Small, and Medium Enterprises in Parepare City

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A B S T R A C T

This study investigates how accounting information systems and environmental uncertainty affect the managerial performance of UMKM in Parepare. Multiple linear regression techniques are used in this quantitative study. Purposive sampling was used to choose the 86 UMKM managers registered in the Rumah BUMN Parepare program as responders. Questionnaires were used to gather data, and SPSS was used for analysis to assess the model's validity, reliability, and significance. According to the study's findings, accounting information systems significantly and favorably affect management performance ($p < 0.001$), but environmental uncertainty has no discernible effect ($p = 0.918$). Other factors outside the model also have a considerable impact, as indicated by the coefficient of determination (R2) of 16.9%. This study advances the body of literature on managerial performance by emphasizing the significance of accounting information systems and the limited role of environmental uncertainty. UMKM managers and policymakers can learn from these findings how important it is to create integrated and structured accounting information systems to facilitate decision-making and operational efficiency. The findings may not accurately represent the circumstances of UMKM in other areas or industries because this study is restricted to UMKM in the city of Parepare. The empirical investigation of the variables influencing managerial performance in UMKM is the main topic of this quantitative study.

1. Introduction

1.1 Background

Micro, small, and medium enterprises (UMKM) are pivotal in national economic advancement. Micro, small, and medium enterprises (UMKM) are pivotal in generating employment, enhancing community income, and fostering people-centric economic development.

The government has implemented Law No. 20 of 2008 on UMKM to enhance the sector's contribution and provide a legal framework for its empowerment (Wiska & Colin, 2021). The enhancement of UMKM function essentially resides in their capacity for innovation and entrepreneurship, which can sustainably fortify the economic framework of society. Nonetheless, UMKM continue to encounter numerous obstacles, one of which is the constraint of managerial competencies (Alliyah & Hidayat, 2014). UMKM practitioners with diverse educational backgrounds want rules and methods to consistently deliver accounting information. Robust financial reporting standards facilitate precise managerial decision-making (Ananda et al., 2022).

Managerial performance, defined as the capacity of managers to execute their duties in alignment with their responsibilities, is essential for organizational success (Kamal et al., 2020). This performance is significantly affected by internal elements like the accounting information system (SIA) and external factors such as environmental uncertainty. In this respect, Rumah BUMN, as an organization promoting the enhancement of UMKM in Parepare City, has provided various training and managerial mentorship, especially in information systems. Nevertheless, the efficacy of that support has not yet been comprehensively evaluated by scientific methods. SIA is a crucial instrument in the administration of financial and operational data. Hansen and Mowen (2009), as cited in Qibtiyah (2018), define AIS as encompassing the activities of collecting, measuring, storing, analyzing, and reporting accounting information. An effective AIS facilitates the delivery of pertinent and precise information in ambiguous environmental circumstances (Herawati & Sari, 2022). Heidman (2008) asserts that the caliber of accounting information is significantly contingent upon the employed information system. Consequently, an efficient AIS will improve managers' comprehension of formulating strategic judgments (Rachmawati, 2017). Environmental uncertainty, characterized as a scenario in which company stakeholders struggle to forecast future conditions due to insufficient information (Bashirudin, 2015), can also influence management performance. In this scenario, organizational agility and adaptability to change are crucial for sustaining performance stability.

Prior studies have yielded incongruous findings. Semekto (2021), asserted that the breadth of accounting information systems significantly influences managerial performance, whereas environmental unpredictability exerts no effect. Conversely, Jumaidi et al. (2021) discovered that environmental ambiguity positively influences management performance, but accounting information systems exert a negative influence. The disparate outcomes signify a research gap that requires additional investigation.

This research is essential to examine and elucidate the relationship between environmental uncertainty and accounting information systems concerning management performance, specifically in UMKM situated in the city of Parepare. This research seeks to ascertain if adopting an improved accounting information system can augment the managerial competencies of UMKM in addressing uncertain environmental dynamics and offer policy recommendations for the sustainable empowerment of UMKM.

1.2 Problem Statement

This study presents the subsequent problem formulations:

a. How does environmental uncertainty influence managerial performance in UMKM in Parepare?
b. How do accounting information systems impact managerial performance in UMKM in Parepare?
c. How does environmental uncertainty and accounting information systems impact the managerial performance of UMKM in Parepare City?

1.3 Objectives and Scope

The objectives of this research are as follows:

a. To determine the effect of environmental uncertainty on managerial performance in UMKM in Parepare City.
b. To determine the effect of accounting information systems on managerial performance in UMKM in Parepare City.
c. To determine whether environmental uncertainty and accounting information systems simultaneously affect the managerial performance of UMKM in Parepare City.

The scope of this research is limited to UMKM players who are members of the Parepare BUMN House coaching program. The primary focus is on analyzing the relationship between environmental uncertainty variables, accounting information systems, and managerial performance. This research does not discuss other aspects such as financial conditions, access to financing, or marketing strategies of UMKM. The approach used is quantitative, with multiple linear regression analysis techniques to test the relationship between variables partially or simultaneously. The results of this study are expected to provide an empirical picture of the role of information systems and environmental resilience in supporting the managerial effectiveness of UMKM.

2. Literature Review

2.1 Related Work

Several previous studies have examined the effect of environmental uncertainty and accounting information systems on managerial performance, but have shown mixed results:

1. Hafid Kholidi Hadi (2022) found that environmental uncertainty significantly positively affects the performance of UMKM. This shows that UMKM that can adapt to uncertainty can improve performance.
2. Octalivia Jhosefine & Holiawati (2024) showed that business strategy and environmental uncertainty significantly affect business performance. This means an uncertain environment demands a more flexible strategy to improve performance.
3. Holisoh & Nuratama (2023) found that environmental uncertainty positively impacts the performance of UMKM, and accounting information systems can moderate this relationship.
4. Ayu Dinda Nadila Putri (2021) shows that accounting information systems partially affect managerial performance, with environmental uncertainty as a moderating variable.
5. In contrast to previous studies, Achmad Bashirudin (2024) found that environmental uncertainty and management accounting information systems had no significant effect on managerial performance.

2.2 Research Gap

Based on the results of previous studies that have been reviewed, several differences in findings indicate a research gap related to the influence of environmental uncertainty and accounting information systems on managerial performance.

Several studies, such as those conducted by Hafid Kholidi Hadi (2022) and Holisoh & Nuratama (2023), indicate that environmental uncertainty positively affects managerial performance, as business actors can adapt and make strategic decisions in uncertain conditions. On the contrary, Achmad Bashirudin's (2024) study shows that environmental uncertainty does not have a significant impact, which is also supported by the results of this research in Parepare City.

Meanwhile, in the field of accounting information systems, there are also differing results. Some studies significantly influenced managerial performance (Putri, 2021; Jhosefine & Holiawati, 2024), but other studies showed contrasting results. In this study, the accounting information system was proven to significantly impact managerial performance, reinforcing some previous findings. While also contradicting others.

Another important gap is the context of the location and the research object. Most previous studies were conducted on UMKM across various regions, without considering the involvement of development institutions such as Rumah BUMN. This research examines the UMKM fostered by Rumah BUMN in Parepare, one of the government's intervention efforts to improve managerial capacity and information systems in UMKM. However, the program's effectiveness in environmental uncertainty and using accounting information systems has not been extensively researched. Thus, this research fills the gap in the form of:

a. The differences in previous findings have not been consistent.
b. The specific local empirical context, namely the UMKM fostered by Rumah BUMN Parepare.
c. There is a need to evaluate accounting information systems as managerial tools in dynamic and uncertain environmental conditions.

3. Methodology

3.1 Data Collection

The data source in this study is primary data, which is obtained directly from respondents in the form of owners or managers of UMKM who are members of the Parepare BUMN House program. The sampling technique used was purposive sampling, with the criteria of UMKM actors who have been running a business for at least 2 years and actively participating in coaching activities from Rumah BUMN.

The number of respondents in this study was 86, and they were selected based on their involvement in managerial coaching programs and financial recording. Data was collected through a closed questionnaire distributed directly or online to the respondents. The questionnaire was structured based on indicators of each variable, which were measured using a Likert scale of 1-5.

3.2 Analysis Techniques

The data that has been collected is analyzed using the multiple linear regression method with the help of SPSS (Statistical Package for the Social Sciences) software version 25. This analysis model measures the effect of two independent variables, environmental uncertainty and accounting information systems, on one dependent variable, managerial performance.

Classical assumption tests, such as normality, multicollinearity, and heteroscedasticity tests, are conducted first to ensure that the regression model meets the statistical requirements. Next, a partial test (t-test) was conducted to see the effect of each independent variable, and a simultaneous test (F-test) was conducted to see the effect together. Finally, the coefficient of determination (R^2) determines how much the independent variable contributes to explaining the dependent variable.

3.3 Validation

To ensure the instrument's validity, a validity test was carried out on each question item using the Pearson correlation value, with the condition that the r value> 0.3 will be declared valid. In addition, a reliability test was conducted using Cronbach's Alpha, with an α value ≥ 0.6 considered reliable enough for social research. All tests were conducted through SPSS and showed that all items in the questionnaire were valid and reliable, so they were suitable for use as data collection tools in this study.

4. Results and Discussion

4.1 Key Findings

The results of this study indicate that of the two independent variables tested, namely environmental uncertainty and accounting information systems, only accounting information systems have a significant effect on the managerial performance of UMKM in Parepare City. Based on the results of multiple linear regression tests, a significance value is obtained for:

a. Environmental uncertainty is 0.918, which is greater than 0.05, so it is concluded that it has no significant effect on managerial performance.
b. The accounting information system is 0.000, smaller than 0.05, indicating a positive and significant effect on managerial performance.

In addition, the results of the simultaneous test (F test) show that the two independent variables have a significant effect on managerial performance, with a significance value of 0.000. However, the coefficient of determination (R^2) value of 16.9% indicates that the two variables only explain a small part of the managerial performance variable; other factors outside the model explain the rest.

4.2 Interpretation of Results

This finding indicates that accounting information systems are an important factor supporting the managerial effectiveness of UMKM. Accounting information that is well presented, timely, and accurate helps managers make operational and strategic decisions that are more rational and measurable. This result aligns with research by Putri (2021) and Rachmawati (2017), which states that the quality of accounting information contributes directly to improving management performance.

Meanwhile, the absence of a significant effect of environmental uncertainty on managerial performance in this study indicates that UMKM in Parepare City have not been fully adaptive or responsive to changes in the external environment. This can be caused by limited resources, a lack of a business environment monitoring system, or entrepreneurial training based on strategic adaptation. These results differ from previous studies, such as Hafid Kholidi Hadi (2022) and Holisoh & Nuratama (2023), which found that environmental uncertainty spurs innovation and performance.

Thus, this study emphasizes the importance of exemplary accounting information system implementation in improving the managerial performance of UMKM and shows the need to increase the adaptive capacity of UMKM to environmental uncertainty through more targeted training and mentoring.

5. Discussion

5.1 Comparison with Prior Research

The results of this study indicate that accounting information systems have a significant effect on managerial performance, while environmental uncertainty has no significant effect. This finding aligns with research by Putri (2021) and Jhosefine & Holiawati (2024), which also state that accounting information systems are important in supporting management performance in UMKM.

However, this result contradicts the studies of Holisoh & Nuratama (2023) and Hafid Kholidi Hadi (2022), which show that environmental uncertainty positively affects performance. This means that in the context of this study, UMKM players in Parepare City have not been able to make uncertainty a trigger for managerial innovation.

This finding also differs from Bashirudin's research (2024), which states that neither environmental uncertainty nor accounting information systems significantly affects managerial performance. So, this research provides a new empirical contribution, especially in the local context of UMKM assisted by the BUMN House in Parepare City.

5.2 Limitations

This study has several limitations that may affect its results and scope, including:

a. The research object is limited to UMKM that are members of the Rumah BUMN program in Parepare City, so it does not represent all UMKM in the region.
b. The number of samples is limited to 86 respondents, which, although it meets the statistical requirements, does not cover the UMKM population at large.
c. This study only uses two independent variables, namely, environmental uncertainty and accounting information systems, so that other variables potentially affecting managerial performance have not been analyzed.
d. Using a quantitative approach does not describe managerial behavior or the background of qualitative decision making.

5.3 Future Research

Based on the results and limitations, it is recommended for further research to:

a. Develop models by adding other variables affecting managerial performance, such as manager competence, organizational culture, leadership, or technology support.
b. Conduct research using a mixed methods approach to obtain a more holistic picture of quantitative data and qualitative insights from UMKM actors.
c. Involve a broader and more diverse sample from various business sectors and regions, making the results more nationally representative.
d. Examine more specifically the effectiveness of mentoring and training programs by Rumah BUMN in improving managerial adaptation to environmental uncertainty.

6. Conclusion

Based on the results of data processing, it is concluded that:

a. Environmental uncertainty has no significant effect on the managerial performance of UMKM. This shows that most UMKM actors do not have strong adaptive capabilities to changes in the uncertain external environment.
b. Accounting information systems have a positive and significant effect on the managerial performance of UMKM. This means that the better the accounting information system used by UMKM, the better the managerial performance achieved.
c. Simultaneously, environmental uncertainty and accounting information systems significantly affect managerial performance, but only explain 16.9% of the dependent variable, which means that other variables also affect managerial performance.

7. Recommendation

Based on the results of the study, the researcher provides the following recommendations:

a. For UMKM actors, it is advisable to increase the use and understanding of accounting information systems to plan, control, and evaluate business activities.
b. For fostering agencies such as BUMN Houses, it is important to expand managerial training materials that focus on financial recording and adaptation strategies to changes in the business environment.

c. Future researchers are expected to add other variables such as managerial competence, technological support, or business characteristics to gain a more comprehensive understanding of the factors that influence the managerial performance of UMKM.

Appendix
Tabel Hasil analisis regresi linear berganda

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.842	2.686		4.781	<.001
	X1	-.006	.061	.011	-.103	.918
	X2	.337	.083	.412	4.040	<.001
a. dependent variable: y						

Sumber: output SPSS 30

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