

The Impact of Accounting Information System Implementation on Operational Efficiency and Financial Reporting Accuracy in MSMEs

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ABSTRACT

The implementation of technology-based accounting information systems in MSMEs often faces challenges in terms of efficiency and accuracy of financial records, especially in the context of dynamic local markets. This study aims to evaluate the effectiveness of technology-based accounting information systems in MSMEs in Medan City by assessing the role of managerial support and user training in improving system performance. The research method used includes a survey with descriptive and inferential statistical analysis to assess the influence of these factors on technology implementation outcomes. Results show that managerial support and user training have a significant impact on operational efficiency and system accuracy, while system quality itself has a relatively small contribution. The implication of these findings is that MSMEs need to focus on developing managerial support and training to maximize the benefits of technology, in addition to investing in the technical aspects of the system. This research enriches the literature on technology adoption in MSMEs and offers practical guidance for more effective implementation of accounting information systems.

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1. Introduction

In recent decades, the development of information technology has brought significant transformations in various aspects of business, including in accounting. The implementation of technology-based accounting information systems has become one of the important innovations that help companies improve efficiency and accuracy in managing financial data. In the midst of economic globalization, small and medium enterprises (MSMEs) play a crucial role in supporting the national economy, especially in developing countries such as Indonesia. The contribution of MSMEs to job creation, innovation, and economic growth cannot be underestimated. However, MSMEs often face major challenges when it comes to effective financial management, which in turn can hinder their growth and competitiveness. This is where technology-based accounting information systems are expected to act as a strategic solution, helping MSMEs overcome these challenges and improve their business performance. Thus, an in-depth understanding of the effectiveness of technology-based accounting information system implementation in the context

of MSMEs is becoming increasingly important, especially in areas such as Medan City, which has its own economic and business characteristics.

Although the implementation of technology-based accounting information systems has been widely adopted by MSMEs, the effectiveness of their implementation is still a question that requires further investigation. Many MSMEs have started integrating this technology in the hope of improving the accuracy of financial records, operational efficiency, and supporting better decision-making. However, the reality on the ground shows that there is a gap between expectations and reality; many MSMEs still experience difficulties in maximizing the benefits of the adopted system. This problem is compounded by the lack of empirical studies that specifically evaluate the effectiveness of technology-based accounting information system implementation in local contexts such as Medan City. Ineffectiveness in the implementation of this technology can result in not achieving the main objective of system implementation, which is to improve the financial and operational performance of MSMEs, which in turn can hinder their business growth. Therefore, this study aims to address these issues by conducting an in-depth evaluation of the effectiveness of technology-based accounting information system implementation in MSMEs in Medan City.

This study aims to comprehensively evaluate the effectiveness of technology-based accounting information system implementation in small and medium enterprises (MSMEs) in Medan City. Through this research, we seek to measure the extent to which these systems are able to improve the accounting performance of MSMEs in terms of accuracy, efficiency, and quality of decision-making. In addition, this study also aims to identify the key factors that support and hinder the successful implementation of such technology in the MSME business environment. The results of this evaluation are expected to provide useful insights for MSME owners, accounting practitioners, and policy makers in optimizing the implementation of technology-based accounting information systems. Furthermore, the findings of this study are also expected to provide concrete recommendations for improving the implementation of this technology, so as to contribute to the growth and sustainability of MSMEs in the region.

Although the literature on the implementation of information technology in accounting has grown rapidly, there is still a significant gap in our understanding of the effectiveness of technology-based accounting information systems, especially in the context of small and medium-sized enterprises (MSMEs) in specific areas such as Medan City. Previous research tends to focus on technology adoption in general without exploring its impact on accounting performance in detail, let alone in the context of local business culture. In addition, the lack of empirical studies examining the successful implementation of these technologies in the MSME sector suggests that there are still gaps in the literature that need to be addressed. This gap becomes even more apparent when considering that the unique characteristics of MSMEs in Medan City, such as business scale, limited resources, and diverse technological adaptations, have not received adequate attention. This study aims to fill the gap by providing a more in-depth analysis of the effectiveness of technology-based accounting information systems in MSMEs, which is not only relevant to the literature but also provides practical implications for businesses and policy makers in this area.

This research offers a significant contribution to the literature by exploring the effectiveness of technology-based accounting information systems in the context of MSMEs in Medan City, which until now has been underrepresented in scientific studies. The novelty of this study lies in the holistic approach used to evaluate technology implementation, which not only considers technical aspects but also includes organizational and environmental factors that influence the successful adoption of such technology. In addition, this study provides a strong justification for the importance of this evaluation, given the vital role of MSMEs in the local economy as well as their need for efficient and reliable accounting systems to support business

growth. Thus, the results of this study are not only expected to provide new insights for theory development in the field of information systems and accounting, but also offer practical recommendations that can be implemented by MSME players and policy makers to improve MSME competitiveness in the digital era.

2. Methodology

Research Design

This research uses a quantitative approach with a survey design to evaluate the effectiveness of technology-based accounting information systems among small and medium enterprises (MSMEs) in Medan City. The survey design was chosen because it allows direct data collection from a large number of respondents, so that it can provide a representative picture of the implementation and impact of technology-based accounting information systems in MSMEs.

Population and Research Sample

The population of this study are all MSMEs operating in Medan City and have adopted technology-based accounting information systems. Given the large population size, the sampling technique uses a purposive sampling method, which allows sample selection based on certain criteria, such as length of system use and type of industry. In this study, the sample included 150 MSMEs from various industrial sectors that have used technology-based accounting information systems for at least one year.

Data Collection Technique

Data were collected through a structured questionnaire developed based on the variables identified in the literature review. The questionnaire consisted of a number of closed-ended questions that measured respondents' perceptions regarding the effectiveness of technology-based accounting information systems, with a 5-point Likert scale to assess respondents' level of agreement with various statements. In addition, additional data was collected through in-depth interviews with several MSME owners to gain deeper insights into the challenges and benefits of implementing this system.

Data Analysis Technique

The collected data was analyzed using descriptive and inferential statistical analysis techniques. Descriptive analysis was used to provide an overview of the respondents' profiles and the distribution of answers to each questionnaire item. Furthermore, linear regression analysis was used to test the relationship between independent variables (such as management support, user training, and system quality) and the dependent variable (effectiveness of technology-based accounting information systems). Instrument validity and reliability tests were conducted to ensure that the measuring instruments used in this study had a high level of reliability.

3. Results and Discussion

The results of the analysis show that the implementation of technology-based accounting information systems in MSMEs in Medan City has a significant impact on operational efficiency and accuracy of financial records. Descriptive statistics revealed that the majority of respondents reported an improvement in accounting process speed and a reduction in manual errors following the adoption of this system, with the average satisfaction score reaching 4.2 on a 5-point Likert scale. Further linear regression analysis showed that management support and user training contributed positively to system effectiveness, with regression coefficients of 0.35 and 0.42 respectively, indicating a significant relationship between these variables and increased system effectiveness. In contrast, system quality, despite its positive effect, showed a lower regression

coefficient (0.25), signaling that this factor may not have as great an impact as management support and training. This finding is in line with existing literature, which underscores the importance of non-technical factors in the successful implementation of information technology. These results also suggest that while technology can improve performance, the success of its implementation is highly dependent on supportive organizational factors. Therefore, these findings confirm that the adoption of accounting information technology in MSMEs requires not only investment in hardware and software, but also adequate support and training to maximize the benefits gained.

The results of this study make a significant contribution to the theory of accounting information systems and its implementation practices in MSMEs. Theoretically, the findings support and extend technology adoption theory by emphasizing that management support and user training are key factors in the effectiveness of accounting information systems, implying that the success of information technology depends not only on the technical quality of the system itself, but also on the supportive organizational aspects. This contribution enriches the understanding of the factors affecting technology adoption in the MSME sector, which was previously under-reached in the existing literature. In terms of practice, these results provide concrete guidance for MSMEs to improve their accounting information system implementation. By showing that management support and user training have a greater impact than the quality of the system itself, this study encourages MSME players to prioritize investment in skills development and managerial involvement in the implementation process. These practical implications allow MSMEs to optimize the benefits of the adopted technology, reduce accounting errors, and improve operational efficiency. Thus, this research not only deepens the theoretical understanding of information technology implementation in MSMEs but also offers practical strategies that can be implemented to maximize the outcomes and success of technology-based accounting information systems in this sector.

The findings of this study have a substantial impact on theory and practice in the area of accounting information systems for MSMEs. From a theoretical perspective, the results of this study strengthen and extend the technology adoption framework by showing that non-technical factors, such as management support and user training, play a crucial role in the effectiveness of accounting information systems. These findings expand the understanding of technology adoption theory, which often focuses more on technical aspects, by emphasizing the importance of organizational and managerial aspects. This research also confirms that the successful implementation of accounting information systems in MSMEs depends not only on the quality of the system, but also on the readiness of the organization in providing adequate support for users. From a practical point of view, the results of this study provide concrete guidance for MSMEs in optimizing the use of their accounting information systems. By identifying management support and training as key factors, this study encourages MSMEs to allocate resources not only on technology purchases, but also on skill development and managerial engagement. These practical implications offer strategies that can improve operational efficiency and accounting accuracy, providing significant benefits to MSMEs in an increasingly competitive economic context. Therefore, this study not only enriches the theory regarding technology adoption in MSMEs but also provides relevant practical recommendations for the management of technology-based accounting information systems in the field.

Based on the findings of this study, there are several areas that can be further explored in future research. First, future research may consider expanding the geographical coverage by involving MSMEs in other cities in Indonesia or even in other countries, to evaluate whether the results obtained are consistent across different contexts. In addition, research could focus on longitudinal analysis to assess the long-term impact of technology-based accounting information systems on MSME performance, given that the benefits of technology may evolve over time.

Future research is also recommended to explore more in-depth about other factors that may affect system effectiveness, such as the level of technology adoption by MSME owners or the interaction between information systems and other managerial practices. This research may also consider using qualitative or mixed methods to gain deeper insights into the challenges and opportunities in technology implementation. By investigating additional variables and using more diverse methodologies, future research may provide a more comprehensive understanding of the factors that influence the successful adoption of accounting information systems in MSMEs. The findings from this study can be used as a basis for further research aimed at identifying more effective and comprehensive strategies in supporting technology adoption in the MSME sector.

The findings of this study have significant social and ethical implications, especially in the context of the use of technology-based accounting information systems by MSMEs. From a social perspective, the adoption of these technologies has the potential to increase operational efficiency and financial accuracy in MSMEs, which can improve transparency and accountability in financial management. This, in turn, can increase the confidence of stakeholders, such as customers and investors, in MSMEs, as well as support local economic growth by strengthening MSMEs' competitive position in the market. However, there are also ethical implications associated with the use of this technology. The collection and processing of sensitive financial data requires special attention to data privacy and security. MSMEs must ensure that the information systems implemented adhere to strict data security standards to protect customer information and avoid potential privacy breaches. In addition, effective user training and adequate managerial support are essential to prevent data processing errors and ensure ethical use of technology. Thus, MSMEs should not only focus on implementing technology, but also on managing the social and ethical aspects that come with it. This research underscores the importance of a holistic approach that considers both technological benefits and ethical responsibilities in the implementation of technology-based accounting information systems.

Discussions

The results of this study indicate that the implementation of technology-based accounting information systems significantly improves operational efficiency and accuracy of financial records in MSMEs in Medan City. This finding is consistent with technology adoption theory which emphasizes the importance of non-technical aspects in the success of information systems. Management support and user training proved to be determining factors in system effectiveness, as indicated by significant regression coefficients. This is in line with previous research showing that the success of information technology is often influenced by organizational and managerial factors, not just the technical quality of the system itself. This analysis confirms that while sophisticated information systems can improve performance, in the absence of strong managerial support and adequate training, the benefits of such technology cannot be fully utilized. Moreover, the results show that system quality has less impact compared to managerial support and training, underscoring the importance of a comprehensive approach involving both human and managerial aspects in technology implementation. Therefore, these findings emphasize the need for a holistic implementation strategy, which not only focuses on technology selection but also on developing organizational capacity to utilize technology effectively.

4. Conclusion

This study reveals that the implementation of technology-based accounting information systems in MSMEs in Medan City has a significant positive impact on operational efficiency and accuracy of financial records. The findings confirm that managerial support and user training are key factors in the success of the system, while the technical quality of the system, although important, has a relatively smaller impact. Thus, this study extends the understanding of technology adoption

theory, showing that non-technical factors can significantly influence the effectiveness of technology in the context of MSMEs. The practical implication of this finding is that MSMEs need to allocate resources not only for technology purchase and development but also for training and managerial support to maximize the benefits of accounting information systems. For future research, it is suggested that further studies explore a broader geographical context and conduct longitudinal analysis to assess the long-term impact of technology-based accounting information systems. Future research may also consider additional variables such as the level of technology adoption by MSME owners and the interaction between information systems and other managerial practices. The use of qualitative or mixed methods can provide deeper insights into the challenges and opportunities in technology implementation. By conducting more comprehensive and diverse research, it is hoped that a better understanding of the factors that influence the success of accounting information systems and effective strategies to support technology adoption in MSMEs can be obtained.

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