Jurnal Ilmu Komputer Stikom Ambon (JIKOMSTIK)
E-ISSN: 2503-0957, Volume: 11, Issue: 01, Month: 04, Year: 2026
Available online at: https://jurnal.itbstikomambon.com/index.php/jikomstik



DIGITALIZATION OF ACCOUNTING IN MSMEs IN AMBON CITY: OPPORTUNITIES AND CHALLENGES IN IMPLEMENTING ACCOUNTING INFORMATION SYSTEMS

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Article Info

Article history:

Received:03-02-2026
Revised:03-03-2026
Accepted:10-04-2026
Published:15-04-2026

Keywords:

Accounting Digitalization
MSMEs
Accounting Information System
TOE
Ambon City

ABSTRACT

Accounting digitalization provides opportunities for Micro, Small, and Medium Enterprises (MSMEs) to improve transaction recording, financial information management, and decision-making processes. However, its utilization can face obstacles such as limited accounting competency and digital literacy, technology costs, system suitability, and data security. This article aims to analyze the opportunities and challenges of accounting digitalization in MSMEs using a Technology–Organization–Environment (TOE) perspective and formulate relevant implications for the context of Ambon City. The research uses a descriptive literature study method by reviewing scientific articles discussing accounting information systems, MSME digitalization, and technology adoption. The literature is analyzed thematically based on three TOE contexts: technology, organization, and environment. The literature synthesis indicates that technology can support the efficiency of financial recording and information availability, but its benefits depend on user readiness, business management support, and the supporting environment. This article does not present direct field findings from MSMEs in Ambon City; therefore, the discussed local implications need to be tested through further empirical research.

1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) require adequate financial information to manage cash flow, assess business performance, control costs, and plan for business development. Inconsistent record-keeping can make it difficult for business owners to differentiate personal and business finances, determine cash flow, and assess profits periodically. An accounting information system (AIS) plays a role in collecting, recording, processing, and presenting transaction information to support control and decision-making.

In Ambon City, the development of MSMEs has shown a positive trend in recent years. Data from the Ambon City Cooperatives and MSMEs Office (2023) shows that the number of MSMEs increased from 14,793 units in 2018 to 31,300 units in 2023, an increase of 16,507 units (approximately 111.59%). This growth reinforces the importance of effective business management, including transaction recording and financial information preparation. Hasmawati, Siahaya, and Aponno (2025) examined the use of QRIS in relation to the effectiveness and efficiency of MSMEs in Ambon City. This study is relevant in the context of transaction digitization, although the use of QRIS does not necessarily indicate that MSMEs have implemented a digital accounting information system. Therefore, accounting digitization requires a specific study in terms of recording, processing, and utilization of financial information.

The development of digital technology has opened up options for MSMEs to use electronic spreadsheets, accounting applications, and cloud-based services. Studies on accounting information systems in MSMEs show that digitalization can support information management, but its implementation remains influenced by user skills, resources, and organizational readiness [1], [2]. Digitalization, therefore, is not simply replacing paper records with applications, but rather changes the process of recording and using financial information.

Although research on MSME accounting digitalization continues to grow, findings from one region cannot be directly generalized to others. Business conditions, technology access, reporting needs, and mentoring support can vary across regions. For Ambon City, analysis needs to consider the local context without assuming that all MSMEs have adopted or experienced the same digitalization challenges.

This article aims to identify the opportunities and challenges of implementing digital accounting information systems in MSMEs through a literature review, then discusses factors relevant to the context of Ambon City. The Technology–Organization–Environment (TOE) framework is used to group technology adoption

factors into technological characteristics, organizational readiness, and environmental conditions [3]. The study questions include:**(1) what opportunities does accounting digitalization offer; (2) what challenges may arise in its implementation; and (3) how the TOE framework can help formulate the direction of development of accounting digitalization for MSMEs.**

2. MATERIALS AND METHODS

This research uses a qualitative descriptive approach through a literature review. The research data consists of secondary sources, primarily scientific articles discussing accounting digitalization, accounting information systems in MSMEs, and technology adoption. The TOE framework is used as an analytical lens to organize the findings related to technology characteristics, organizational readiness, and environmental support.

A literature search was conducted using relevant keywords, including "digital accounting," "accounting information systems," "MSMEs," "MSMEs," "technology adoption," and "TOE framework." Sources considered were publications directly relevant to the study's objectives and searchable bibliographic information. Literature unrelated to accounting digitalization or not providing sufficient information to assess its relevance was not used as the primary basis for the discussion.

The analysis was conducted thematically through the following stages: (1) identifying the main themes from relevant sources; (2) grouping the findings into technological, organizational, and environmental contexts; (3) comparing the opportunities and obstacles discussed in the literature; and (4) compiling a synthesis and implications for further research on MSMEs in Ambon City. Because this article is a literature study, the discussion does not claim to have interviews, observations, or direct measurements of MSMEs in Ambon City. This study is also not intended as a comprehensive systematic review because the selection process and the total number of articles have not been determined through a systematic review protocol.

3. RESULTS AND DISCUSSION

3.1 Opportunities for Accounting Digitalization

Efficient transaction recording and processing. Digital accounting applications and spreadsheets can help structure transactions, perform automated calculations, and simplify data retrieval. Efficiency is more likely to be achieved if users enter transactions consistently and understand the recording process. If input is incomplete or the wrong account is selected, digital systems can still produce erroneous information.

Improved regularity and availability of financial information. Digital record-keeping can help businesses monitor revenue, expenses, cash flow, receivables, payables, and inventory according to the system's features. Well-documented information can facilitate business evaluation and planning for funding needs. However, the quality of reports is still determined by the accuracy of the data, audit procedures, and the user's understanding of accounting.

Decision-making support. More regularly available financial information can help business owners assess costs, margins, sales patterns, and working capital needs. Thus, digitalization has the potential to drive more informed business decisions. However, the use of applications does not automatically improve financial performance; the impact depends on how the information is analyzed and acted upon.

Strengthening business administration. Well-organized transaction documentation and financial reports can help MSMEs meet administrative needs, evaluate performance, and prepare information when exploring financing or collaboration. Financial reports are not a guarantee of obtaining financing, but they can serve as one element of the required documentation.

3.2 Implementation Challenges

Accounting competencies and digital literacy. Users need to understand how to record transactions, select accounts, read reports, and operate application features. Training that focuses solely on application buttons or functions may be inadequate if it does not include an explanation of basic accounting principles. Studies related to the digitalization of MSMEs also highlight the importance of user skills and organizational readiness in implementing the system [1], [2].

System cost and suitability. The costs of devices, internet connections, app subscriptions, and training should be weighed against the needs and expected benefits. A feature-rich system may not be the best choice if it's too complex for your business's scale. A phased approach—starting with core transaction recording and expanding as needs arise—may be a more realistic option.

Infrastructure and technical support. Cloud-based systems can facilitate cross-device access but require adequate connectivity. Offline systems can be helpful in situations with limited connectivity but have consequences for data synchronization and collaboration. System selection should consider actual operational conditions, rather than assuming all businesses have uniform access to technology.

Data security and governance. Financial records are critical information that must be protected from loss, unauthorized access, and misuse. Using strong passwords, restricting access rights, backing up data, and choosing trusted application providers are all important practices.

Changing work habits. Concurrent use of manual and digital records without reconciliation can lead to data discrepancies. Sustainable implementation

requires clear recording procedures, division of responsibilities, and regular review.

3.3 Analysis Based on the TOE Framework

Technology context. Factors to assess include ease of use, feature suitability, cost, security, integration capabilities, and system reliability. Technology that aligns with business processes is more likely to be used consistently. Conversely, complex or incompatible systems can increase workload.

Organizational context. Organizational readiness includes owner support, employee competence, budget availability, and disciplined record-keeping procedures. Business owners play a critical role in setting priorities, allocating time for learning, and ensuring system use becomes part of operational routines.

Environmental context. External support can come from local governments, supporting institutions, universities, application providers, business communities, and business partners. Practical training and mentoring can help MSMEs select appropriate systems and overcome usability difficulties. The TOE framework positions technological, organizational, and environmental factors as interacting contexts in innovation adoption decisions [3].

These three contexts are not mutually exclusive. An affordable system won't necessarily be successful if users don't understand record-keeping, while even skilled users can still face obstacles if technical support or infrastructure is inadequate. Therefore, a digitalization program needs to combine appropriate technology selection, user capability development, and environmental support.

3.4 Implications for MSMEs in Ambon City

For MSMEs in Ambon City, the TOE framework can be used as an initial guide to map digitalization readiness, but local factors must be verified through further research. Field research can compare businesses still using manual record-keeping with those already using applications, as well as examine the type of system, frequency of use, perceived benefits, and challenges encountered.

Practically, business owners can start by consistently recording income and expenses, maintaining transaction records, conducting cash reconciliations, and regularly backing up data. Local governments, educational institutions, and the business community can support this through practice-based training. More specific recommendations should be made after understanding the actual needs and conditions of MSMEs in Ambon, so as not to generalize the characteristics of all business owners.

4. CONCLUSION

This literature review shows that accounting digitization has the potential to help MSMEs improve record-keeping, transaction processing efficiency, financial information availability, and decision-making support. These benefits are not automatic but are influenced by data quality, consistency of use, and users' ability to understand the resulting information.

Implementation challenges include accounting competency and digital literacy, system cost and suitability, infrastructure, data security, and changes to work procedures. The TOE framework helps explain that successful digitalization requires simultaneously considering technology suitability, organizational readiness, and environmental support.

For MSMEs, it is recommended to choose a system based on their needs, initiate implementation gradually, improve digital accounting competency, and implement data auditing and backup. Local governments, educational institutions, and technology providers can strengthen support through contextual training and mentoring. Future research should collect empirical data on MSMEs in Ambon City to test whether the opportunities and challenges discussed in the literature actually exist in the local context.

This article's limitations include the use of secondary sources without field data collection and the lack of a comprehensive systematic review protocol. Therefore, the study's results should be understood as an initial synthesis, not a comprehensive empirical picture of the condition of MSMEs in Ambon City.

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