

Adoption of Accounting Information Systems in Owner-Managed MSMEs: A Case Study of Rav Harrèn in Indonesia

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ABSTRACT

This qualitative case study explores the adoption and utilisation of Accounting Information Systems (AIS) in an owner-managed micro, small, and medium enterprise (MSME) named Rav Harrèn in Indonesia. Data were collected through in-depth interviews with the owner and staff, participatory observation of accounting practices, and document analysis. Thematic analysis was applied to identify behavioural, organisational, and technological factors influencing AIS adoption. Findings reveal that the enterprise relies primarily on Microsoft Excel for transaction recording and financial reporting, with limited internal controls and no audit-trail mechanisms. Although the perceived usefulness of digital tools is acknowledged, the perceived ease of use and human resource capability remain key obstacles to full adoption. Integrating the Technology Acceptance Model (TAM) and Resource-Based View (RBV), the study explains how limited technical resources and managerial readiness affect digital transformation in owner-managed MSMEs. The study contributes to the AIS literature by highlighting context-specific adoption barriers and proposing a phased digitalisation roadmap through structured training, standardised procedures, and selective software implementation. Practical implications suggest that strengthening accounting competencies and establishing digital literacy programmes are essential to improving reliability, transparency, and accountability in small enterprises.

Keywords: Accounting Information System; MSME; Owner-managed firm; Technology Acceptance Model; Resource-Based View; Digitalisation.

INTRODUCTION

The development of accounting information systems (AIS) has become an integral component in supporting business activities, enabling firms to record, process, and report financial data more accurately and efficiently (Romney & Steinbart, 2018). In today's digital era, the use of AIS is no longer limited to large-scale corporations. However, it has also become essential for micro, small, and medium enterprises (MSMEs) to enhance competitiveness and ensure operational sustainability (Susanto, & Rahardjo, 2020). MSMEs are a major driver of national economies, contributing to employment creation, income generation, and the growth of gross domestic product (GDP). In Indonesia, MSMEs account for over 99% of business entities, playing a crucial role in supporting economic resilience and local development (Kementerian Koperasi dan UKM, 2023).

Despite their strategic importance, many MSMEs still rely on manual or semi-digital accounting processes, such as spreadsheets or handwritten records, which limit their ability to report accurately and make timely decisions (Putra & Winarno, 2020). The absence of structured AIS implementation exposes MSMEs to various risks, including data inaccuracy, inefficient transaction recording, and weak internal control systems (Hamdani et al., 2025). Furthermore, the owner-managed nature of many MSMEs—where the owner assumes multiple roles such as manager, bookkeeper, and decision-maker—intensifies the challenge of system adoption and maintenance (Napitupulu, 2019).

According to the Technology Acceptance Model (TAM), users' behavioural intention to adopt technology is influenced by perceived usefulness and perceived ease of use (Davis, 1989). Meanwhile, the Resource-Based View (RBV) explains that a firm's resources—such as technical knowledge, financial capability, and managerial skills—serve as a source of sustained competitive advantage when effectively utilised (Barney, 1991). Integrating TAM and RBV perspectives provides a more comprehensive understanding of how technological perceptions and resource availability jointly determine AIS adoption, particularly in resource-constrained enterprises (Utami et al., 2021).

Previous studies on AIS implementation have primarily focused on medium to large enterprises, often employing quantitative approaches to measure adoption factors (Almaiah et al., 2020; Handayani et al., 2022). However, research examining AIS utilisation in owner-managed MSMEs remains limited, especially in contexts where digital transformation is hindered by low digital literacy and insufficient infrastructure (Ramdani et al., 2022). This gap underscores the need for qualitative inquiry into the lived experiences, motivations, and challenges MSME owners face in adopting accounting technologies (Di Silva et al., 2023).

This study, therefore, aims to examine the implementation of accounting information systems within Rav Harrèn, a micro-enterprise managed directly by its owner. It explores how behavioural, organisational, and technological factors influence AIS adoption and how these elements interact within daily operational practices. Through a qualitative case study approach, this research seeks to expand the theoretical discourse on AIS adoption

by integrating TAM and RBV frameworks while providing practical insights for improving accounting digitalisation among owner-managed MSMEs in Indonesia (Alkahfi et al., 2024).

The findings are expected to contribute both theoretically and practically: theoretically, by enriching the understanding of AIS adoption behaviour in resource-limited contexts; and practically, by proposing a stepwise digitalisation roadmap for MSMEs that emphasises training, standardised accounting procedures, and selective software implementation to enhance accountability and accuracy in financial reporting.

METHOD

This study employed a qualitative approach to obtain an in-depth understanding of the implementation of Accounting Information Systems (AIS) in an owner-managed micro, small, and medium enterprise (MSME). The qualitative approach was chosen because it allows researchers to explore complex social phenomena and to understand behavioural and contextual dimensions within real-life situations (Creswell, 2018). The study adopted a case study design as it provides the opportunity to examine in detail how AIS is adopted, utilised, and perceived in a specific organisational setting (Yin, 2018). The single-case design of this research focused on Rav Harrèn, an MSME that manages its financial operations manually and is directly controlled by the owner. Such a design enables the researcher to analyse the interaction between human factors, resources, and technology within a specific context, which aligns with the theoretical frameworks of the Technology Acceptance Model (TAM) and the Resource-Based View (RBV) (Davis, 1989; Barney, 1991).

The research site was selected purposively to ensure its relevance to the research objective. Rav Harrèn was chosen because of its manual accounting practices, limited digital infrastructure, and the owner's direct involvement in financial and operational decisions. The participants included the business owner and key employees who were responsible for bookkeeping and daily operational management. Involving more than one participant provided varied perspectives on how AIS was understood and applied, thereby enhancing the depth and credibility of the collected data (Miles & Huberman, 1994).

The data collection process involved three techniques, namely in-depth interviews, direct observation, and document analysis. Interviews were conducted with the owner and staff to gain insight into their accounting activities, perceptions of AIS usefulness and ease of use, and the obstacles to its potential adoption. Observations were made within the enterprise to directly record accounting workflows, document movements, and interactions between manual and digital processes. Supporting documents such as financial records, transaction evidence, and reporting sheets were also examined to complement the primary data. These techniques were carried out simultaneously to allow for data triangulation, which strengthens the validity and reliability of the research findings (Creswell, 2018; Yin, 2018). Each interview lasted approximately 45 to 60 minutes and was recorded with participants' consent, while field notes were written to capture contextual nuances and behavioural observations that were not verbally expressed.

All collected data were analysed using thematic analysis, following the principles suggested by Braun and Clarke (2006). The analysis process began with transcription of interview recordings and observation notes. Data analysis followed Braun and Clarke's (2006) thematic approach, beginning with open coding to identify recurring patterns and concepts. Initial codes were refined into broader categories representing key themes such as technological readiness, perceived usefulness, resource constraints, and managerial attitudes. Coding and interpretation were conducted repeatedly to ensure consistency and depth, with empirical data continually compared to the theoretical constructs of TAM and RBV (Davis, 1989; Barney, 1991). Discussions among researchers validated the emerging themes and minimised subjectivity (Creswell, 2018).

Reliability and confirmation are maintained through an audit trail that allows for independent verification (Yin, 2018). Ethical principles are adhered to by obtaining informed consent, ensuring confidentiality and anonymity, and securely storing data for academic purposes (Creswell, 2018).

Through this methodological framework, this study provides a comprehensive understanding of how behavioural, organisational, and technological factors influence the implementation of AIS in owner-managed SMEs, ensuring empirical accuracy and theoretical relevance.

RESULTS AND DISCUSSION

The study found that Rav Harrèn's accounting processes are still largely manual, with Microsoft Excel being the primary tool used to record and report transactions. This reflects the early stages of technology adoption commonly seen in micro-enterprises, where owners manage all financial activities, including transaction recording, reporting, and cash flow control. This centralisation limits the separation of duties and increases the risk of errors (Napitupulu, 2019). Although Excel offers flexibility and efficiency, it also makes businesses vulnerable to data entry errors, lack of audit trails, and weak data security. Previous studies have also noted that MSMEs often face challenges in adopting formal accounting systems due to limited technical skills and low awareness of the benefits of digitisation (Putra & Winarno, 2020; Handayani et al., 2022).

From a behavioural perspective, owners demonstrate a positive attitude towards the usefulness of Accounting Information Systems (AIS) but doubt their ease of use. This is in line with Davis's Technology Acceptance Model (TAM) (1989), which suggests that perceptions of usefulness and ease of use both influence adoption intentions. Owners recognise that digital systems can improve the accuracy and efficiency of reporting, but consider their implementation to be time-consuming, costly, and requiring training. Limited exposure to technology has led to a cautious approach to digital adoption. Similar behavioural barriers are also found in SMEs, where readiness and trust influence innovation adoption (Almaiah et al., 2020; Utami et al., 2021).

Organisationally, Rav Harrèn operates informally with minimal task specialisation. Most administrative and operational tasks are handled by the owner and a few non-accounting staff. This limits the company's ability to maintain accurate records and implement internal controls. The absence of standard operating procedures (SOPs) in accounting reinforces the reliance on the owner's judgement. From a Resource-Based View (Barney, 1991) perspective, this dependence indicates weak human resources and knowledge, which limits the company's ability to use AIS strategically. Although the owner's managerial experience is a valuable resource, the lack of accounting knowledge and digital literacy hinders sustainable efficiency through technology. The combined insights from TAM and RBV thus explain the limited adoption of AIS in this company.

Technological factors also play a crucial role in shaping the adoption trajectory. The findings indicate that Rav Harrèn operates without dedicated accounting software, relying solely on Microsoft Excel and manual ledger books for financial documentation. The enterprise does not possess the necessary infrastructure—such as adequate hardware, reliable internet connection, or accounting software licences—to support a full-scale digital system. The owner has explored several software alternatives but expressed concerns regarding subscription costs, data security, and the learning curve required to operate the system effectively. This finding corresponds with previous research suggesting that cost perception and complexity of implementation are among the primary deterrents to AIS adoption in small businesses (Ramdani et al., 2022). In line with the Resource-Based View, limited tangible and intangible resources constrain the firm's capacity to acquire and sustain technological innovations (Barney, 1991).

Despite these challenges, the study identifies emerging awareness and motivation to move gradually towards digitalisation. The owner has shown interest in adopting a more structured recording mechanism and in receiving training related to accounting software. This readiness signals a positive behavioural shift that aligns with the perceived usefulness dimension of TAM (Davis, 1989). However, to translate this awareness into practice, external support—including training, mentoring, and affordable access to technology—is necessary. Previous research also suggests that successful AIS implementation in MSMEs often depends on external interventions, such as government assistance or collaboration with educational institutions, to build capacity and digital competence (Susanto & Rahardjo, 2020; Handayani et al., 2022).

The findings further demonstrate that the absence of internal control mechanisms and verification systems has implications for the quality of accounting information produced. Errors in transaction recording, delays in report compilation, and inconsistencies in data storage were frequently observed. These weaknesses not only affect decision-making but also reduce the reliability of financial information, particularly when used for external reporting or financing purposes. According to Romney and Steinbart (2018), effective AIS design must ensure data accuracy, reliability, and security through integrated control procedures. Therefore, improving Rav Harrèn's accounting process requires not only system adoption but also procedural and structural adjustments to align with accounting standards and information system principles (Lutfi et al., 2020).

In synthesising the findings with theoretical perspectives, the integration of TAM and RBV offers a comprehensive explanation of the current state of AIS adoption within Rav Harrèn. TAM explains the psychological and behavioural aspects influencing technology acceptance, whereas RBV clarifies the resource-related constraints that affect system sustainability. Together, these frameworks illustrate that the success of AIS implementation in MSMEs depends not only on technological availability but also on human resource capability, financial strength, and managerial commitment. The results imply that AIS adoption within owner-managed MSMEs follows a gradual path that begins with awareness and basic digital literacy, proceeds through partial adoption (such as Excel-based systems), and culminates in structured digital integration once resource conditions and skills improve.

The case of Rav Harrèn therefore highlights the need for a phased digitalisation strategy that accounts for behavioural, organisational, and resource readiness. A structured roadmap that combines training, standardisation of accounting procedures, and the selective use of affordable accounting software can serve as an effective model for similar MSMEs. This recommendation is consistent with previous studies that emphasise the importance of capacity-building and adaptive implementation in ensuring long-term digital transformation among small enterprises (Utami et al., 2021; Handayani et al., 2022). Through this integration of empirical evidence and theoretical insights, the study contributes to a deeper understanding of how microenterprises in developing contexts can progressively transition from manual bookkeeping to reliable, technology-driven accounting practices.

CONCLUSION

This study examined the implementation of Accounting Information Systems (AIS) within an owner-managed micro, small, and medium enterprise (MSME), Rav Harrèn, by exploring behavioural, organisational, and technological factors influencing its adoption. The findings demonstrate that the enterprise's accounting practices remain dominated by manual and Excel-based processes, reflecting both the potential and the limitations of technological engagement at the micro-enterprise level. Although the owner recognises the usefulness of AIS for improving accuracy, efficiency, and transparency, perceptions of complexity, cost, and limited digital competence continue to hinder full adoption. These results confirm the relevance of the Technology Acceptance Model (TAM) and the Resource-Based View (RBV) as complementary frameworks for explaining AIS adoption behaviour, where technology acceptance depends not only on attitudes and perceptions but also on the availability and quality of organisational resources (Davis, 1989; Barney, 1991).

The case of Rav Harrèn illustrates that the intersection of behavioural intentions, resource capabilities, and contextual constraints shapes AIS implementation in owner-managed MSMEs. Behavioural factors, such as trust and perceived ease of use, influence the owner's willingness to innovate. At the same time, organisational limitations in human capital and procedural structures restrict the continuity of digital practices. Resource constraints, including financial capacity and technical infrastructure, further moderate the pace of adoption. Together, these elements reinforce the need for a contextual understanding of digital transformation processes in small enterprises, where managerial readiness and incremental learning play decisive roles (Handayani et al., 2022; Utami et al., 2021).

Theoretically, this study contributes to the AIS literature by extending the application of TAM and RBV to owner-managed MSMEs in developing economies, offering a nuanced understanding of how behavioural and resource-based dimensions jointly determine system adoption. In practice, the findings highlight the importance of gradual digitalisation, supported by capacity-building initiatives, structured accounting procedures, and the integration of affordable, user-friendly technologies. Collaboration between MSME owners, government agencies, and educational institutions is essential to build digital competence and sustain long-term adoption (Susanto & Rahardjo, 2020; Putra & Winarno, 2020).

In conclusion, the transition from manual to digital accounting practices among MSMEs such as Rav Harrèn requires not only technological tools but also the development of supportive ecosystems that enhance readiness, capability, and trust. Strengthening human resources and institutional support mechanisms will enable small enterprises to achieve greater transparency, accountability, and competitiveness by effectively utilising Accounting Information Systems.

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