

The Impact of Digital Accounting Tools on Financial Reporting Accuracy and Efficiency: Evidence from Small and Medium-Sized Enterprises (SMEs) in Sichuan Province

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Abstract

The objectives of this study were (1) to explore how digital accounting tools are adopted and integrated into daily financial operations within small and medium-sized enterprises (SMEs) in Sichuan Province, (2) to examine stakeholders' perceptions of the impact of digital accounting tools on the accuracy and efficiency of financial reporting, and (3) to investigate the perceived influence of digital accounting tool usage on overall organizational performance in SMEs. This study employed a qualitative research design to obtain in-depth and context-specific insights into digital accounting practices. The population of the study consisted of SME owners, finance managers, and accounting practitioners operating in Sichuan Province, China. Purposive sampling was used to select 15 participants who had direct experience with digital accounting tools in their organizations. Data were collected using semi-structured, in-depth interviews and were analyzed through qualitative content analysis. The results of this study found that digital accounting tools have become increasingly integrated into SMEs' daily financial operations through gradual and phased adoption processes. Stakeholders perceived these tools as significantly enhancing the accuracy, efficiency, and timeliness of financial reporting by reducing human error, improving data consistency, and enabling real-time access to financial information. The use of digital accounting tools positively influences overall organizational performance by supporting managerial decision-making, strengthening cost control, enhancing transparency, and improving organizational competitiveness. The study highlights that digital accounting tools function not only as operational accounting systems but also as strategic enablers that contribute to sustainable performance and financial governance in SMEs.

Keywords: Digital accounting tools; Financial reporting accuracy; Organizational performance; Small and medium-sized enterprises (SMEs); Sichuan Province

Introduction

The rapid advancement of digital technologies has profoundly reshaped financial management and reporting practices across organizations worldwide. In recent years, digital accounting tools—such as cloud-based accounting software and automated bookkeeping systems—have become increasingly prevalent among small and medium-sized enterprises (SMEs). These tools are designed to improve the accuracy, efficiency, and timeliness of financial reporting by automating routine accounting tasks, reducing human error, enhancing data consistency, and enabling faster access to financial information. For SMEs operating in highly competitive and resource-constrained environments, the adoption of digital accounting tools is viewed as a strategic response to increasing regulatory requirements, intensifying market competition, and the growing demand for transparency, accountability, and timely financial information to support managerial decision-making (Afifeh & Çelebi, 2025; Al-Hattami et al., 2025; Gaurav & Ambar, 2025; Kahveci, 2025; Oanh et al., 2025).

In the context of China, SMEs play a vital role in driving economic growth, fostering innovation, and generating employment, particularly in rapidly developing regions such as Sichuan Province. As national governments actively promote digital transformation and smart business practices, many SMEs have begun to incorporate digital accounting tools into their daily financial operations. These tools are expected to support better compliance with accounting standards, improve internal controls, and enhance organizational responsiveness (Gao, 2024; Ozturk et al., 2024; Zhong et al., 2024). However, despite the growing availability and adoption of digital accounting technologies, the extent to which they are effectively implemented and fully embedded into routine accounting and reporting practices varies considerably across enterprises. Organizational readiness, employees' digital skills, managerial support, financial resources, and the broader technological and institutional environment all play critical roles in shaping how digital accounting tools are adopted, utilized, and perceived within SMEs (Abdo-Salloum & Al-Mousawi, 2025; Fitri et al., 2025; Hasan et al., 2025; Yousef & Sponem, 2025; Zotorvie et al., 2025).

Although existing empirical research on digital accounting adoption has generated valuable findings, much of the literature has relied predominantly on quantitative approaches, emphasizing measurable outcomes such as cost reduction, productivity improvement, or financial performance indicators. While such studies provide important statistical evidence, they offer limited insight into the processes through which digital accounting tools are adopted, integrated, and experienced by users in everyday organizational contexts. In particular, they often overlook the subjective experiences, challenges, and adaptive practices of SME stakeholders who interact with these tools on a daily basis. Moreover, qualitative studies that explore the perceived impact of digital accounting tools on financial reporting accuracy and efficiency remain relatively scarce. This gap is especially evident in research focusing on SMEs in Sichuan Province, despite the region's distinctive economic structure, industrial composition, and active engagement in digital development initiatives.

Addressing these limitations, the present study undertakes an in-depth qualitative investigation into the adoption, integration, and perceived impacts of digital accounting tools within SMEs in Sichuan Province. By focusing on the perspectives of SME owners, financial managers, and accounting practitioners, the study seeks to capture rich, contextualized insights into how digital accounting tools influence financial reporting accuracy, operational efficiency, and broader organizational performance. The study makes several key contributions. First, it contributes theoretically by enriching the digital accounting and technology adoption literature with qualitative evidence that illuminates the underlying processes, meanings, and contextual factors shaping digital tool usage in SMEs. Second, it contributes empirically by providing region-specific insights from Sichuan Province, thereby addressing an underexplored geographical context within existing research. Third, the study offers practical contributions by identifying common challenges, enabling conditions, and effective practices that can inform SMEs seeking to improve financial reporting through digital accounting tools. Finally, the findings provide policy-relevant contributions by offering evidence-based insights that may support policymakers and business support agencies in designing targeted interventions to promote digital transformation and strengthen financial reporting standards among SMEs in similar economic environments.

Research Methodology

Qualitative research seeks to explain how and why a particular social or organizational phenomenon operates within a specific context, thereby providing in-depth insights into underlying processes, practices, and influencing factors (Limna, 2025; Limna & Shaengchart, 2025). In line with this perspective, the present study adopted a qualitative

research methodology to gain a comprehensive understanding of how digital accounting tools influence financial reporting accuracy and operational efficiency among SMEs in Sichuan Province. A qualitative approach was considered particularly appropriate because the adoption and use of digital accounting systems extend beyond technical functionality and involve human judgment, organizational routines, and contextual decision-making processes that cannot be fully captured through quantitative measures alone. The population of the study comprised SME owners, finance managers, and accounting personnel in Sichuan Province who were actively involved in financial reporting and had direct experience using digital accounting tools. Purposive sampling was employed to select participants with relevant expertise and practical exposure to digital accounting systems within their organizations. A total of 15 participants were recruited to ensure the collection of rich, information-intensive data capable of illuminating diverse perspectives on system usage and reporting practices. Data were collected through in-depth, semi-structured interviews, allowing participants to articulate their experiences, perceptions, and evaluations of digital accounting tools in relation to reporting accuracy and efficiency. The interview-based approach facilitated flexibility and depth, enabling the exploration of issues such as system integration, workflow changes, and perceived benefits or challenges. The collected data were analyzed using qualitative content analysis, involving a systematic and iterative process of data familiarization, coding of meaningful textual segments, categorization of codes, and identification of overarching themes (Shaengchart et al., 2025). This analytical approach enabled the identification of recurring patterns and relationships across participants' accounts while preserving the contextual richness of their experiences. Through this rigorous qualitative methodology, the study generated credible, context-specific insights into the ways digital accounting tools shape financial reporting practices within SMEs in Sichuan Province, thereby contributing to a deeper understanding of how digitalization enhances reporting accuracy and operational efficiency in small and medium-sized business environments.

Result

The study drew on insights from 15 purposively selected respondents representing SMEs operating in Sichuan Province, all of whom had direct and practical experience with digital accounting tools. The participants included SME owners, finance managers, and accounting practitioners, ensuring representation of both strategic decision-makers and operational users of digital accounting systems. Respondents came from a range of industries, including manufacturing, trading, services, and technology-related sectors, and most possessed between 5 and 12 years of professional experience in accounting or financial management. This background enabled them to provide informed reflections based on comparisons between traditional manual accounting practices and digitally enabled systems.

The findings indicate that digital accounting tools have become an integral part of daily financial operations within SMEs, supporting activities such as bookkeeping, invoicing, expense management, payroll, tax filing, and periodic financial reporting. Adoption was generally characterized by a gradual and phased integration process rather than immediate full implementation. The depth and effectiveness of integration varied across organizations and were influenced by factors such as organizational readiness, availability of technological infrastructure, management support, and users' levels of digital competence. Training and managerial encouragement were widely viewed as critical in reducing resistance and facilitating smooth integration into routine workflows. In terms of financial reporting outcomes, all respondents perceived digital accounting tools as substantially enhancing both accuracy and efficiency. Automated calculations, standardized data entry, centralized data storage, and real-time system updates were reported to reduce human errors, improve data

consistency, and shorten the time required to prepare monthly and statutory financial reports. These improvements increased transparency, strengthened audit readiness, and enhanced managers' confidence in the reliability of financial information, allowing accounting staff to shift their focus toward analytical and decision-support activities. Beyond technical improvements in reporting, participants consistently emphasized the positive influence of digital accounting tools on overall organizational performance. Timely access to accurate financial information was seen to support faster and more informed decision-making, improved cost control, and more effective strategic planning. Additional benefits included enhanced coordination across departments, reduced compliance risks, and improved competitiveness. Collectively, these findings demonstrate that digital accounting tools not only strengthen core accounting functions but also play a broader strategic role in supporting operational efficiency, managerial effectiveness, and sustainable performance within SMEs.

Discussion and conclusions

The findings of this qualitative study provide rich, contextualized insights into how digital accounting tools are adopted, integrated, and perceived within SMEs in Sichuan Province, and they align closely with, while also extending, existing literature on digital accounting and SME digital transformation. Overall, the results demonstrate that digital accounting tools are not merely technical innovations but function as organizational enablers that reshape financial practices, managerial decision-making, and performance outcomes.

First, the findings related to the adoption and integration of digital accounting tools confirm prior research emphasizing that digital accounting implementation in SMEs is typically incremental and context-dependent rather than instantaneous. Participants described phased adoption processes, beginning with basic bookkeeping functions and gradually expanding to encompass invoicing, payroll, taxation, and integrated reporting. This observation is consistent with Gao (2024) and Ozturk et al. (2024), who argue that Chinese SMEs often adopt digital financial systems gradually due to resource constraints, skill gaps, and organizational learning curves. The present study adds qualitative depth to these arguments by illustrating how managerial support, employee training, and system usability facilitate smoother integration into daily financial operations. In line with Hasan et al. (2025), the findings further suggest that organizational culture and leadership commitment play a decisive role in overcoming employee resistance and embedding digital tools into routine workflows. Thus, adoption emerges not only as a technological decision but also as a socio-organizational process shaped by internal readiness and adaptive practices.

Second, the findings regarding the perceived impact on financial reporting accuracy and efficiency strongly support existing empirical evidence that digital accounting tools enhance reporting quality. Participants consistently emphasized reductions in human error, improved data consistency, and faster reporting cycles resulting from automation and standardized data processing. These perceptions align with Afifeh and Çelebi (2025) and Gaurav and Ambar (2025), who found that cloud-based accounting systems significantly improve reporting efficiency and reliability in SMEs. Moreover, the present study extends quantitative findings by revealing how users develop greater trust in financial reports generated by digital systems, particularly due to real-time updates and automatic calculation features. This enhanced trust reinforces internal control mechanisms and audit readiness, echoing the conclusions of Oanh et al. (2025), who highlight the intermediary role of accounting information quality in improving governance efficiency. By capturing practitioners' lived experiences, this study demonstrates that accuracy and efficiency gains are not abstract outcomes but are directly experienced in daily accounting practices.

Third, the study's findings on the influence of digital accounting tools on overall organizational performance underscore the strategic value of digital accounting beyond its technical accounting functions. Participants perceived clear links between timely financial information and improved decision-making, cost control, and strategic planning. These results are consistent with Fitri et al. (2025), who reported that digital accounting systems and accounting information quality positively influence SME performance. Similarly, Al-Hattami et al. (2025) and Al-Okaily et al. (2025) suggest that digital accounting systems can generate broader organizational benefits by supporting managerial and marketing performance. The present study contributes novel qualitative evidence by showing how SME practitioners explicitly connect digital accounting usage with enhanced competitiveness and organizational responsiveness. This finding reinforces Mick et al.'s (2024) and Kahveci's (2025) argument that digital transformation in SMEs enables sustainable competitive advantage when digital tools are strategically aligned with organizational goals.

Importantly, the integrated nature of the findings highlights that adoption, reporting quality, and performance outcomes are mutually reinforcing rather than isolated effects. Effective integration of digital accounting tools improves reporting accuracy and efficiency, which in turn strengthens managerial confidence in financial information and supports better organizational decisions. This interconnection supports the theoretical perspective advanced by Yousef and Sponem (2025), who emphasize that accounting innovations in emerging economies are shaped by the interaction of organizational, institutional, and market factors. In the Sichuan SME context, digital accounting tools appear to function as a central information infrastructure that links operational processes with strategic management.

In conclusion, the study not only confirms but also meaningfully extends existing scholarship by demonstrating that the adoption of digital accounting tools significantly enhances the accuracy, consistency, and efficiency of financial reporting processes, while at the same time contributing to improvements in overall organizational performance within SMEs. Beyond technical benefits, the findings highlight that digital accounting systems support faster information processing, improved internal controls, and more timely access to financial data, thereby enabling managers to make better-informed strategic and operational decisions. Moreover, the study reinforces the view that digital accounting adoption in SMEs should be understood as a holistic transformation process rather than a purely technological upgrade. Effective implementation requires the alignment of digital tools with human capabilities, organizational structures, and established work practices. Factors such as employee digital competence, managerial support, and organizational readiness play a crucial role in determining the depth and sustainability of integration. In this respect, digital accounting tools function not only as instruments for improving accounting efficiency but also as catalysts for broader organizational learning and process optimization.

Within the context of China's ongoing digital economy transformation, these findings underscore the strategic importance of digital accounting for SME development. By integrating technology, people, and organizational practices, SMEs are better positioned to enhance financial transparency, strengthen competitiveness, and achieve sustainable business growth in an increasingly data-driven and digitally enabled economic environment.

Suggestion

Several recommendations from this study are proposed for researchers, practitioners, and policymakers. First, future academic research should adopt mixed-method or longitudinal research designs that integrate qualitative insights with quantitative performance data in order to provide a more comprehensive understanding of the long-term effects of digital accounting adoption. Scholars are encouraged to explore the role of emerging technologies, such as

artificial intelligence and advanced analytics, in shaping the next phase of digital accounting transformation within SMEs. Second, SME owners and managers are advised to approach digital accounting adoption as a strategic organizational investment rather than merely a compliance or efficiency-driven initiative. Effective implementation should involve careful system selection, continuous training programs to enhance employees' digital competencies, and strong managerial support to ensure seamless integration into existing workflows. Such measures can help maximize the analytical value, accuracy, and decision-support potential of digital accounting systems. Finally, policymakers and business support institutions should develop targeted initiatives to promote digital accounting adoption among SMEs. These initiatives may include subsidized training programs, technical advisory services, and financial incentives aimed at reducing cost and skill-related barriers. Strengthening SMEs' digital accounting capabilities can enhance financial transparency, improve regulatory compliance, and contribute to greater organizational resilience and sustainable economic development at both regional and national levels.

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