

Does Accounting Digitalization Bring Business Efficiency And Effectiveness?

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ABSTRACT

The development of digital technology has transformed accounting practices globally, including among MSMEs. In Aceh, which operates under the Islamic *Sharia Qanun*, the adoption of digital accounting is essential to enhance competitiveness, though it faces specific challenges. This study examines the impact of accounting digitization on the efficiency and effectiveness of MSMEs in Aceh. The purpose of this research is to uncover fundamental truths through deductive analysis and validate them with empirical evidence concerning digital accounting in achieving business efficiency and effectiveness. The research object consists of MSMEs in Aceh. The study employs a quantitative design using data collected from 50 MSMEs and qualitative data gathered through questionnaires. This study seeks to apply knowledge and scientific principles by verifying the foundational concepts and their application of digital accounting in achieving MSME business efficiency and effectiveness. Verification is conducted by empirically testing these concepts with MSME practitioners. The study's results substantiate the theoretical concepts explored and are expected to demonstrate that digital accounting positively influences business efficiency and effectiveness. Thus, the proposed conceptual framework model can offer solutions to address challenges in improving efficiency and effectiveness outcomes. The utilization of digital accounting as an input is expected to yield increased business efficiency and effectiveness as its output.

INTRODUCTION

An accounting change refers to a modification of an accounting principle, accounting estimate, or reporting entity (Napier, 2020). A change in an accounting estimate adjusts the carrying amount of an existing asset or liability or changes the subsequent accounting for an existing or future asset or liability (Selly, 2023). A change in reporting entity occurs when a company alters its reporting structure, such as through a merger or acquisition (Universal CPA Review, 2025). When a company makes a change in principle, it must apply the change retrospectively to all prior reporting periods, as if the new principle had always been in effect, unless it is impracticable to do so (FASB, 2023). This is known as recording and reporting changes in the accounting principle (BDO, 2024). Changes in accounting estimates are a necessary consequence of management's periodic assessment of the information used in preparing financial statements (Keune, 2022). Such changes often result from new information, such as adjustments in the useful lives of fixed assets (Wang & Welker, 2022). Changes in accounting principles and estimates may modify reported earnings or other financial

aspects of a business (KPMG, 2023). Therefore, companies should weigh the benefits and costs of making a voluntary change in accounting principles before doing so (Napier, 2020). Calculating the information needed for retrospective application is essential, and companies must apply the change retrospectively to all prior reporting periods, unless impracticable (KPMG, 2023).

Digitalization has had a significant impact on the accounting profession (Moll & Yigitbasioglu, 2019). The introduction of digital technology has transformed accounting processes and decision-making in management accounting (Quattrone, 2021). Digitalization reduces manual work, enabling accountants to devote more effort to creative and analytical tasks that support management in increasing competitiveness and corporate value (Appelbaum et al., 2020). It has also reshaped the financial industry and modernized business transactions (Rikhardsson & Yigitbasioglu, 2018). Digitalization provides accounting firms with advanced tools, knowledge-sharing mechanisms, and communication platforms (Al-Htaybat & von Alberti-Alhtaybat, 2018). However, it also pressures employees to acquire new digital competencies and higher technical expertise compared to traditional analog practices (Pillai et al., 2023). The adoption of technologies such as AI, cloud computing, automation, and data analytics fundamentally changes how financial information is processed and reported (Oestreicher & Spengel, 2023). These digital advancements create both opportunities and challenges in the accounting profession, requiring continuous competency development (Castka et al., 2020).

Accounting digitalization requires a corporate culture that embraces technological change (Fadhila & Mahyudin, 2024; Napisah et al., 2024). Ongoing digitalization offers opportunities through software programs, online tools, cloud solutions, webinars, and digital data storage. Research identifies obstacles to the digitalization of accounting information systems and highlights that digital transformation is essential for the accounting profession to remain current and improve performance in the digital era. The challenges of digital transformation in accounting systems include adapting to rapid technological progress (Platov et al., 2023).

Accounting digitalization helps micro, small, and medium enterprises (MSMEs) reduce costs by automating manual processes, minimizing errors, and improving decision-making. MSMEs can adopt digital technology in management and accounting to enhance performance and reduce costs. As major contributors to economic growth, job creation, and poverty reduction—especially in developing countries—MSMEs benefit greatly from such efficiency. Interest in the digitalization of MSME accounting processes has increased as it promises greater efficiency and cost savings. The purpose of this research background is to provide an overview of the impact of accounting digitalization on business efficiency and effectiveness in MSMEs in Aceh.

Accounting skills are essential for entrepreneurs to manage their businesses' financial aspects. Entrepreneurs must understand fundamental accounting concepts to handle costs, cash flow, invoices, vendors, and payroll. These skills help them evaluate financial health, plan for growth, and manage taxes efficiently. Core accounting skills include cash flow management, maintaining balance sheets, identifying paths to profitability, interpreting financial statements, and making sound financial decisions.

Entrepreneurs should understand the distinction between finance and accounting. Professional accountants can support business owners as their enterprises grow. As small businesses expand, it becomes advisable to seek professional accountants experienced with small business operations to guide them toward financial success. Such professionals can find opportunities in accounting firms with diverse client bases, gaining exposure to multiple business types. Entrepreneurs who master the basics of small business accounting set the foundation for long-term success.

Implementing sound accounting practices from the start of a business is vital. Entrepreneurs need not be experts but should grasp basic accounting principles to make informed financial decisions. The digitization of accounting information significantly affects MSMEs' profitability and productivity. Adopting accounting digitization promotes efficiency in accounting procedures, enabling easier bookkeeping, invoicing, auditing, and taxation. The use of digital tools in accounting allows MSMEs to collect, report, transmit, and interpret financial data faster and more effectively, improving both financial and non-financial performance.

Customized Enterprise Resource Planning (ERP) systems can streamline MSME accounting records, store data in the cloud, and automate administrative tasks such as payment reminders. This allows MSMEs to redirect time and resources toward core business functions. Digital tools enhance both financial and managerial accounting skills, improving data accuracy and performance—especially crucial during the COVID-19 pandemic.

Digitalization is reshaping management accounting, influencing business models and control practices. In Aceh, *Qanun* Number 8 of 2014, based on Islamic Sharia principles, regulates financial systems and other areas such as halal products and tourism. Accounting digitization aligns with these principles, offering accuracy, efficiency, and effectiveness in financial reporting. During the pandemic, its necessity became evident.

Studies in Indonesia indicate that accounting digitization positively affects MSME performance by improving profit and productivity. Research in West Java found that digitization enhances entrepreneurial success, while another study in Semarang confirmed that it strengthens financial management capabilities through technology integration.

Accounting digitization facilitates document dematerialization and technical advances in accounting software. However, it also brings challenges for professional accountants, requiring adaptation to new technologies. Despite these challenges, digitalization improves MSME performance by enabling more efficient accounting practices and more reliable financial reports (Gherman et al., 2021).

Further research underscores that digitalization, including the use of artificial intelligence (AI), enhances automation, feedback speed, and processing efficiency in managerial accounting. Nonetheless, many MSMEs face barriers to adoption, such as limited resources, knowledge gaps, and resistance to change.

Effectiveness relates to achieving desired results through optimal resource utilization. Adoption of digital accounting supports MSMEs in achieving such outcomes by ensuring accurate financial data and improved performance metrics. The literature suggests that accounting digitalization enhances both efficiency and effectiveness in MSME operations.

METHODS

This study used a mixed-methods research design to investigate the influence of accounting digitalization on the efficiency and effectiveness of MSME entrepreneurs in Aceh. It consisted of two main data collection stages: a quantitative survey and qualitative in-depth interviews. The quantitative data comprised figures obtained from MSME financial reports, while qualitative data were collected through interviews with MSME owners who used information system applications.

The population of the study included MSME owners and managers in Aceh. The sample was selected using purposive sampling to ensure diversity in company size, industry type, and level of accounting digitalization. A total of 40 respondents participated in the quantitative survey, which was conducted using both online and offline questionnaires. The questionnaire consisted of two parts: the first gathered demographic information about respondents and their businesses, while the second

assessed the level of accounting digitalization, efficiency, and effectiveness within the companies. The level of accounting digitalization was measured using a five-point Likert scale, while efficiency and effectiveness were measured on a seven-point Likert scale. Data were analyzed using descriptive statistics, correlation analysis, and regression analysis to determine the relationship between accounting digitalization, efficiency, and effectiveness in MSMEs.

Qualitative data were collected through in-depth interviews with 20 MSME owners or managers in Aceh. The interview participants were also selected using purposive sampling to maintain diversity in company characteristics. Semi-structured interview questions were designed to explore experiences and perceptions regarding the impact of accounting digitalization on business efficiency and effectiveness. The interviews were conducted face-to-face, audio-recorded, and transcribed verbatim. Thematic analysis was used to examine qualitative data, and emerging themes were identified to support the findings from the quantitative analysis.

Quantitative data from surveys were analyzed using SPSS software, while qualitative data were coded and analyzed using NVivo. Regression analysis was employed to test hypotheses and measure the relationship between digital accounting, efficiency, and effectiveness. The analysis also considered potential multicollinearity issues among the independent variables to ensure the accuracy of the model.

RESULTS

This research, which examined the impact of accounting digitalization on efficiency and cost reduction in MSMEs in Aceh, yielded several significant findings. This study employed a mixed-methods approach, combining qualitative and quantitative data to provide a comprehensive understanding of the topic.

The quantitative analysis focused on measuring the impact of accounting digitalization on MSME efficiency and effectiveness. A structured questionnaire was used to collect data from a sample of 40 MSMEs in Aceh. The t-test results showed a t-table value of 2.1067.

Tabel 1. Multiple Linear Regression Results Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig
	B	Std. Error	Beta		
(Constant)	1.568	2.300		.696	.512
1. Efficiency Effectiveness	260	.080	.308	3.175	.002
	1.033	.207	.498	5.051	.000

Source: Data processed by researchers (2024)

Dependent Variable: Accounting Digitalization. Based on the table, it can be seen that efficiency partially influences accounting digitalization with a significance level of 0.002, meaning it has a very significant effect. The effectiveness variable also has a significant influence on the use of accounting digitalization of 0.000.

Tabel 2. Simultaneous Test Results ANOVAa

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	745.422	3	372.711	54.013	.000 ^b
Residual	640.367	87	6.901		
Total	1345.789	89			

Source: Data processed by researchers (2024)

Dependent Variable: Accounting Digitalization, Predictors: (Constant), Efficiency, Effectiveness. Table. Testing the simultaneous (joint) influence. Based on the test, the significance value is 0.000, which is less than 0.05. These results indicate that the independent variables simultaneously or jointly have a significant effect.

Tabel 3. Coefficient of Determination Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732 ^a	.521	.532	2.62548

Source: Data processed by researchers (2024)

Predictors: (Constant), Efficiency, Effectiveness. This table is used to test the R², which is used to measure the model's ability to explain variation in the dependent variable. The coefficient of determination is the Adjusted R-Square, which is 0.532, or 53.2%. This means that the correlation between the variables is 53.2%. The remaining 46.8% is explained by variables outside the regression model. Efficiency Has a Positive and Significant Effect on Accounting Digitalization. The results show that accounting digitalization has a positive and significant effect on the efficiency of MSMEs in Aceh. The use of accounting software and other digital technologies simplifies accounting processes, reduces errors, and increases the speed and accuracy of financial reporting. As a result, MSMEs can process financial information more quickly and make timely decisions, leading to increased efficiency. Based on these results, it can be concluded that efficiency has a positive and significant effect on accounting digitalization.

The use of technology and digitalization in accounting can increase efficiency and effectiveness in managing financial information. The implementation of digital accounting is expected to facilitate small and medium enterprises (MSMEs) in managing their finances and improve their performance. Therefore, it can be concluded that efficiency has a positive and significant effect on accounting digitalization.

Effectiveness Has a Positive and Significant Impact on Accounting Digitalization. The research results also show that accounting digitalization significantly impacts effectiveness in MSMEs. The use of accounting software and other digital technologies helps MSMEs reduce costs associated with manual data entry, printing, paper-based recordkeeping, and manual reconciliation. Furthermore, automating financial processes through accounting digitalization reduces the potential for human error, which can lead to costly mistakes. Adopting accounting digitalization results in effectiveness for MSMEs in Aceh.

Effectiveness has a positive and significant impact on accounting digitalization. Injecting digital technology into business processes can make them 40-50% more efficient, which can lead to cost effectiveness. Centralizing data management through the use of cloud technology can also reduce waste and lower costs by improving communication and collaboration. Using cost management as a strategic lever and leveraging digital technology can completely transform the way businesses operate. Therefore, it can be concluded that effectiveness has a positive and significant impact on accounting digitalization. Overall, the quantitative results provide evidence that accounting digitalization has a positive and significant impact on efficiency and cost reduction in MSMEs in Aceh. The use of accounting software and other digital technologies enables MSMEs to simplify their accounting processes, reduce errors, and improve the accuracy and timeliness of financial

information. This, in turn, leads to increased efficiency in financial operations and reduced costs by eliminating manual and paper-based processes.

CONCLUSION

Findings from this study demonstrate that accounting digitalization significantly enhances efficiency and effectiveness in MSMEs in Aceh by streamlining financial processes, reducing errors, and improving the accuracy and timeliness of financial information. Quantitative analysis revealed a strong positive relationship between digitalization, efficiency, and effectiveness, with firm size and technological readiness identified as moderating factors—indicating that smaller MSMEs and those more technologically prepared benefit most. Qualitative insights confirmed these results, as MSME owners reported greater reliability and speed in financial transactions and reduced manual paperwork. However, challenges such as limited financial resources, insufficient technical skills, and resistance to change remain barriers to broader adoption. Addressing these issues through targeted support and resources can further the successful implementation and maximize the benefits of accounting digitalization. Future research should explore strategies for overcoming these barriers and investigate how customized training or policy interventions could further aid MSMEs in leveraging digital technology for enhanced business performance.

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