

# The Role of Artificial Intelligence in the Development of Accounting for UMKM

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## ABSTRACT

The presence of Artificial Intelligence (AI) technology helps many people complete their work. The assistance of Artificial Intelligence is a strategic activity in the accounting development process for Micro, Small, and Medium sized Enterprises. This study aims to examine the impact of Artificial Intelligence on the accounting practices of Micro, Small, and Medium sized Enterprises. This study employs a literature review to identify books and scientific articles regarding the use of Artificial Intelligence in accounting. This study's findings indicate that Artificial Intelligence can analyze financial data, generate financial statement, and optimize decision making. However, the adoption of Artificial Intelligence by Micro, Small, and medium sized Enterprises still faces various challenges, including low digital literacy among their workforce and limited budgets. If Micro, Small, and Medium sized Enterprises players rely on Artificial Intelligence for their accounting practices without understanding core principles like creating financial statements and analyzing financial data, the technology will ultimately prove to be a crutch rather than a tool for empowerment. This research implies that it is necessary to enhance human capital and secure sufficient funding. Future research should utilize a field study to gather more comprehensive data

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## 1. INTRODUCTION

Information Technology (IT) refers to the use of technology to manage data, encompassing processing, acquisition, organization, storage, and manipulation of data in various forms to generate high-quality information. This information is characterized by its relevance, accuracy, and timeliness, serving personal, business, and governmental needs, and plays a strategic role in decision-making processes (Simarmata, 2020). Artificial Intelligence (AI) is one of the most talked-about technologies today. As defined by Purnama et al (2021), Artificial Intelligence is a technology that allows machines to mimic human behavior.

According to the 2023 report by the Coordinating Ministry for Economic Affairs of the Republic of Indonesia, the Micro, Small, and Medium Enterprises (UMKM) sector contributes IDR 9,580 trillion, equivalent to 61% of the Gross Domestic Product, and absorbs 97% of the total workforce. Additionally, based on data from the Ministry of Cooperatives and SMEs, Indonesia has 65.5 million UMKM, accounting for 99% of all business units. One of the greatest challenges faced by MSMEs is surviving and adapting to the rapidly evolving digital landscape. In accounting, specifically financial reporting, the key challenge is harnessing the power of artificial intelligence while upholding core accounting principles and standards (Fauziyyah, 2022). In critical decision-making processes, decision-makers frequently encounter obstacles and challenges. Consequently, technology adoption is crucial for MSMEs to maintain their competitiveness in an increasingly crowded market. The use of Artificial Intelligence-powered accounting tools simplifies accounting tasks. AI-driven systems can automatically process data in real-time, facilitating the preparation of more accurate and timely financial reports (Khasanah et al., 2024). Artificial Intelligence has enabled more accurate automation of accounting and financial record-keeping, thereby reducing

administrative burdens (Resalia et al., 2024).

Research by (Yusuf et al., 2023; Thanasas et al., 2024) revealed that the use of artificial intelligence to automate routine accounting tasks has a direct impact on productivity and work efficiency. According to Novichenko et al. (2024) and Krispradana et al. (2024), AI can facilitate decision-making by providing data-driven insights and analysis.

This study seeks to investigate the potential of Artificial Intelligence in advancing accounting practices among micro, small, and medium enterprises (MSMEs), particularly in financial data analysis, financial reporting, and decision-making, with the goal of improving productivity and efficiency. Furthermore, it is anticipated that this research will enable MSME stakeholders to drive national economic growth by developing novel, adaptive, and innovative business models.

## 2. METHODS

This research utilizes a literature review approach to synthesize existing knowledge on the application of AI in accounting, drawing from books and other relevant scientific articles. The literature review serves as a critical instrument in research synthesis, offering a contextual framework and imbuing meaning into the current study. By conducting a thorough literature review, researchers can clearly articulate the justification for their inquiry, thereby informing readers of the significance and relevance of the research question. Furthermore, this process enables researchers to position their investigation within the context of extant literature, highlighting relationships with prior studies and underscoring the importance of the research topic (Afifuddin, 2012). The purpose of this method is to acquire a comprehensive insight into the advantages and obstacles associated with the adoption of AI in corporate accounting practices (Habsy, 2017).

## 3. RESULTS AND DISCUSSION

Artificial intelligence (AI), a vital component of information technology, assumes a pivotal role in multiple facets of MSME business operations, encompassing data analysis, decision-making, customer service, product development, and financial management. The integration of AI yields significant benefits, including enhanced efficiency, productivity, cost reduction, and a sustained competitive edge. This research delineates the multifaceted roles of Artificial Intelligence (AI) in augmenting accounting practices among MSMEs, specifically highlighting the following aspects:

### 1. Financial Analysis and Compliance

AI also assumes a pivotal role in augmenting the quality of financial reporting. As evidenced by Yang (2024), AI systems are capable of producing financial reports that conform to IFRS or PSAK with heightened accuracy and consistency. Moreover, Resalia et al. (2024) provide empirical evidence that machine learning algorithms embedded in AI systems can identify anomalous transaction patterns suggestive of potential fraudulent activity, thereby enhancing financial compliance and transparency.

### 2. Automation of Accounting Processes

According to the research findings of Yusuf et al. (2023) and Thanasas et al. (2024), AI has facilitated the automation of transaction recording, data entry, and financial reporting in real-time. This automation mitigates the reliance on manual input, which is often prone to recording errors, while concurrently expediting the reporting cycle. Furthermore, Gupta et al. (n.d.) posit that the diminished administrative burden enables MSME accountants to devote more attention to strategic analysis and data-driven decision-making. This assertion is corroborated by a study conducted by Zhang et al. (n.d.), which demonstrates that the implementation of chatbots and AI software in internal accounting processes for MSMEs in China yields a reduction in administrative workload and an enhancement in the efficiency of monthly and annual reporting.

### 3. Strengthening of Decision-Making Processes

The integration of AI in big data processing empowers MSMEs to derive financial insights with rapidity and precision. Studies conducted by Novichenko et al. (2024) and Krispradana et al. (2024) provide evidence that AI facilitates decision-making through predictive analytics, encompassing liquidity risk evaluation, cash flow forecasting, and investment scenario simulation. Additionally, research by Zhang et al. (n.d.) indicates that the deployment of AI in managerial accounting for small firms in Taiwan yields improved precision in both short-term and long-term strategic decision-making.

#### 4. Challenges in Human Resource Adaptation

Although AI offers numerous benefits, the greatest challenge in its implementation is the readiness of human resources. Accountants, particularly those with extensive experience in traditional practices, must be able to adapt to this new technology. Training and skill development are necessary to enable them to maximize the use of AI in their daily tasks (Nisaa et al., 2024).

#### 5. Technical Limitations and System Complexity

Large companies with complex accounting needs may experience difficulties in adopting AI, particularly due to system limitations that do not yet fully support their requirements. This creates a challenge for AI technology developers to continually improve the system to meet the broader business needs (Titiek, 2016).

## 4. CONCLUSION

The research results indicate that AI is capable of analyzing financial data, generating financial reports, and optimizing decision-making. This technology can simplify processes that were previously complex and time-consuming, but its implementation requires attention to human resource readiness and data security.

Artificial Intelligence (AI) presents MSMEs with opportunities to automate mundane tasks, enhance customer service via chatbots, and conduct market trend analyses to inform innovative product development. In the financial domain, AI is leveraged to improve customer service, assess credit risk, and modernize operational processes. The adoption of AI has proven beneficial for numerous MSME entrepreneurs, facilitating product innovation, such as the creation of visually appealing product designs. Furthermore, AI-powered chatbots enable MSMEs to optimize operational efficiency by responding to customer queries and requests. The integration of AI has also expanded MSME product promotion channels, including websites and e-commerce platforms, thereby augmenting sales and expanding customer reach.

However, the adoption of AI in MSMEs still faces various challenges, such as low digital literacy among human resources and limited budgets. If MSME entrepreneurs continually rely on Artificial Intelligence in accounting practices without understanding the underlying accounting principles, such as financial reporting and financial data analysis, the use of AI would be considered a disservice. This study underscores the imperative of enhancing human resource capacity and securing adequate funding. Future research should prioritize field studies to gather more nuanced data, thereby providing a more comprehensive understanding of the topic

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