

ARTIFICIAL INTELLIGENCE IN MANAGEMENT ACCOUNTING IN INDONESIAN MSMEs: TRANSFORMATION, OPPORTUNITIES, AND FUTURE RESEARCH DIRECTIONS. INSIGHTS FROM SYSTEMATIC LITERATURE REVIEW

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Abstract

Artificial Intelligence (AI) is progressively revolutionizing management accounting methods worldwide; nevertheless, its implementation among Indonesian Micro, Small, and Medium Enterprises (MSMEs) is still constrained. This systematic literature review (SLR) integrates studies on AI applications in management accounting within Indonesia's MSMEs, analyzing change, advantages, obstacles, and prospective research avenues. A thorough search of Scopus, Web of Science, and Google Scholar yielded 35 pertinent studies published from 2015 to 2025. The results show that AI technologies including machine learning, robotic process automation, predictive analytics, and natural language processing make financial reporting, budgeting, cost management, and decision support better. Some of the main benefits for MSMEs are better efficiency, accuracy, strategic insights, lower costs, and a competitive edge. But there are technical, financial, organizational, data quality, and regulatory issues that make it hard to embrace. The review points out areas where there isn't enough empirical research, especially when it comes to Indonesian MSMEs, human-AI collaboration, and AI applications in sustainable accounting. This paper offers a framework for practitioners, policymakers, and researchers to facilitate efficient AI integration, promoting digital transformation and resilience within Indonesia's MSME sector.

Keywords: Artificial Intelligence, Management Accounting, MSMEs, Digital Transformation, Systematic Literature Review.

INTRODUCTION

Micro, small, and medium-sized businesses (MSMEs) are commonly seen as the backbone of Indonesia's economy since they create jobs, drive innovation, and help the economy thrive. The Indonesian Ministry of Cooperatives and MSMEs (2023) says that MSMEs make up more than 99% of all businesses and hire about 97% of all workers (Hamid & Artha, 2025). These businesses are important to the economy, but they have trouble managing their money, keeping track of their accounts, and making strategic decisions because they don't have enough resources, technology, or management skills (Maharani et al., 2024).

Management accounting, which has always been about planning, monitoring, and helping with decisions, is changing quickly because of the digital age (Anriva & Hamidah, 2024). Adding Artificial Intelligence (AI) to management accounting opens up new ways to automate boring tasks, make financial reports more accurate, improve forecasting, and make strategic decisions (Asmar et al., 2025). AI could help MSMEs fill in gaps in expertise and resources by giving them access to affordable, scalable, and data-driven solutions that were only available to big businesses before (Husain et al., 2024).

AI use in accounting around the world has been related to substantial gains in efficiency, fewer mistakes, and better decision-making. Businesses can use AI tools like machine learning, robotic process automation (RPA), predictive analytics, and natural language processing to handle vast amounts of financial data, find problems, identify trends, and come up with useful information (S & Pratama, 2024). In Indonesia, MSMEs are starting to look into cloud-based accounting solutions and AI-driven tools (Septiawan et al., 2025). However, not all of them are adopting these technologies, and the ones that do are typically held back by a lack of technology literacy, high implementation costs, and worries about data security (Tanhardrjo & Kornelius, 2025).

Even though AI is becoming more important in accounting, there isn't much academic study that looks at how AI is being used in Indonesia's MSMEs (Darmayadi et al., 2025). Current research predominantly examines major corporations, overarching technology adoption, or financial reporting methodologies, neglecting the distinct obstacles and opportunities encountered by small firms within a developing nation framework (Syahrudin & Suryani, 2025). Additionally, there is an absence of a systematic synthesis of the literature that delineates AI applications, assesses their impact, and pinpoints research deficiencies pertinent to Indonesia's MSME sector (Hamid & Artha, 2025).

In this case, a Systematic Literature Review (SLR) is quite important. An SLR offers a clear and repeatable way to comprehend the present state of knowledge, trends, and areas that need more research by methodically gathering, analyzing, and combining existing studies. This review aims to identify AI applications in management accounting pertinent to Indonesia's MSMEs, evaluate the transformative potential of AI for operational efficiency, financial accuracy, and strategic decision-making, underscore opportunities for MSMEs to utilize AI in enhancing competitiveness and scalability, pinpoint barriers and challenges in AI adoption, encompassing technological, organizational, and policy-related factors, and propose research directions to mitigate knowledge gaps and steer future empirical and theoretical studies within the Indonesian context.

This paper provides policymakers, researchers, and MSME managers with useful insights into the practical and theoretical ramifications of AI in management accounting. It also helps to create plans that will help AI be used in Indonesia's MSME sector, which will help with the bigger goals of digital transformation, economic resilience, and long-term business success.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

RESEARCH METHODS

2.1 Research Design

This research utilizes a Systematic Literature Review (SLR) technique in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework. SLR guarantees a clear, organized, and repeatable method for gathering, screening, and combining current research on Artificial Intelligence (AI) in management accounting for Indonesia's MSMEs. The SLR method has a number of benefits: it avoids bias by applying set criteria for inclusion and exclusion, it gives a full picture of what is already known and what is happening, and it finds gaps in research and chances for more study. This methodology guarantees that the results are grounded in evidence and academically sound, making them appropriate for informing both theory and practice.

2.2 Data Sources

A comprehensive search was conducted across multiple academic databases to capture a wide range of studies:

1. Scopus – for peer-reviewed journal articles in business, accounting, and technology domains.
2. Web of Science – to capture high-quality interdisciplinary research.

3. Google Scholar – to include grey literature, conference proceedings, and open-access studies relevant to MSMEs and AI adoption.

Additional sources included:

- Indonesian government reports on MSME performance and technology adoption.
- Reports from accounting and fintech organizations discussing AI applications in small business contexts.

2.3 Search Strategy

The search strategy combined relevant keywords and Boolean operators to ensure coverage of the topic. The main search strings included:

1. "Artificial Intelligence" AND "Management Accounting" AND "MSME" AND "Indonesia"
2. "AI adoption" AND "SME accounting" AND "financial management"
3. "Digital transformation" AND "MSME accounting"
4. "Machine learning" AND "financial reporting" AND "small business"

The search included studies published between 2015 and 2025, capturing the recent trends and emerging applications of AI in accounting.

2.4 Inclusion and Exclusion Criteria

Inclusion Criteria:

1. Studies focused on AI applications in management accounting.
2. Research involving MSMEs, especially in Indonesia.
3. Articles published in English, including peer-reviewed journals, conference proceedings, and book chapters.
4. Studies that report on benefits, challenges, or adoption factors of AI.

Exclusion Criteria:

1. Studies not related to accounting or AI.
2. Research focused exclusively on large enterprises.
3. Articles without full-text availability.
4. Publications prior to 2015.

2.5 Screening Process

The screening process followed PRISMA guidelines and included three stages:

1. Identification:

- A total of 1260 articles were retrieved from all databases.
- After removing duplicates, 1112 articles remained.

2. Screening:

- Titles and abstracts were screened for relevance to AI in management accounting and MSMEs.
- 87 articles were selected for full-text review.

3. Eligibility:

- Full-text articles were assessed against inclusion and exclusion criteria.
- 35 studies met all criteria and were included in the final synthesis.

A PRISMA flow diagram can be included in the publication to visually summarize the identification, screening, and eligibility process.

Figure 1. PRISMA Flow Diagram

2.6 Data Extraction and Synthesis

Data extraction followed a structured framework to ensure consistency and comprehensiveness. Key information extracted from each study included:

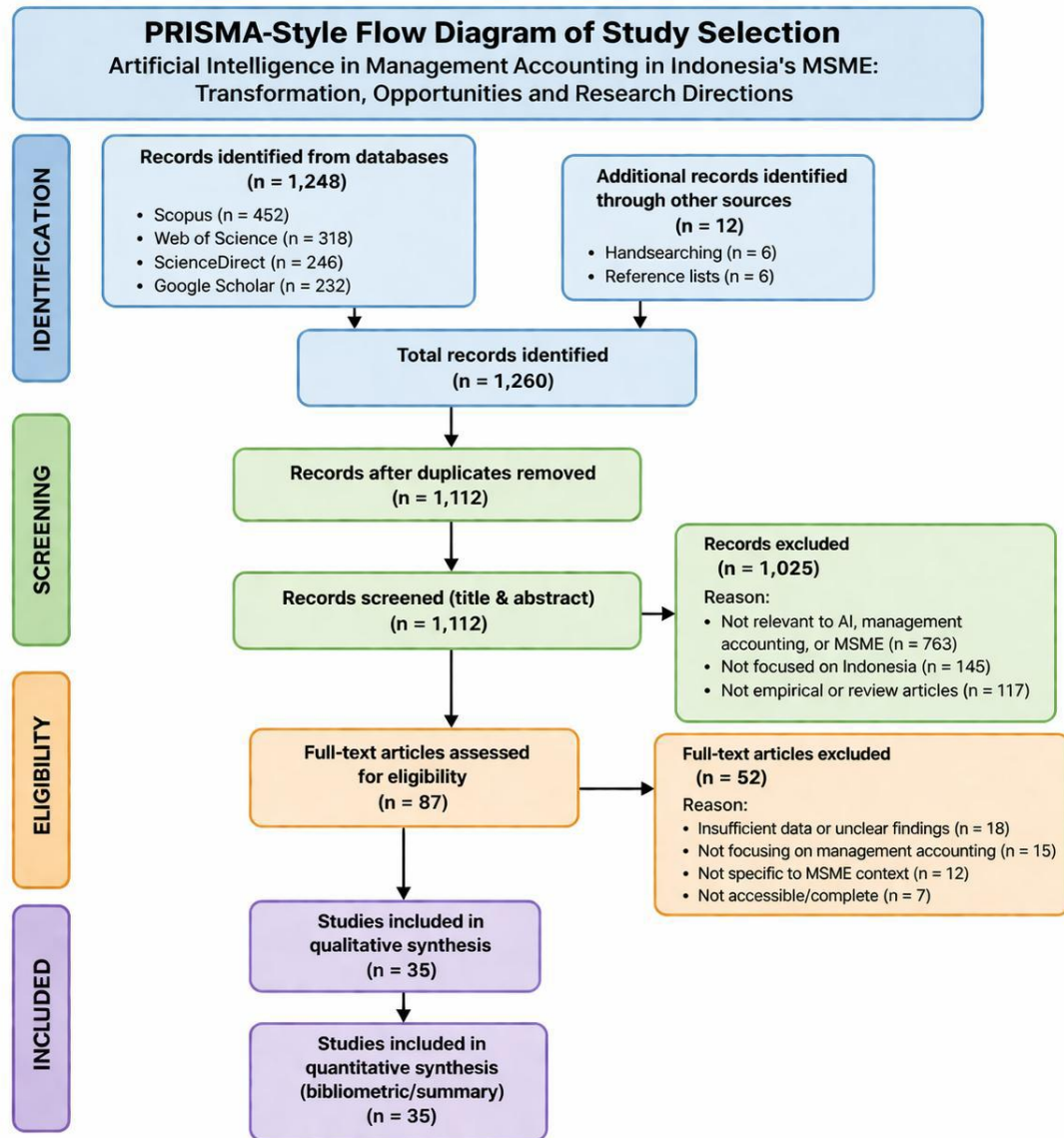


Table 1. Data Extraction and Synthesis Process

Data Extraction Category	Description
Author(s) & Year	Identifies the study and publication date
Study Type	Empirical, conceptual, review, or case study
AI Technology Used	Machine learning, RPA, predictive analytics, natural language processing
Accounting Function Impacted	Financial reporting, budgeting, cost management, auditing, decision support
MSME Context	Indonesian MSMEs or comparable small enterprises
Benefits Reported	Efficiency, accuracy, predictive insights, strategic support
Challenges & Barriers	Cost, literacy, data security, infrastructure, regulatory issues

Key Findings	Main insights and conclusions
Recommendations	Suggestions for practice and further research

After extraction, data were synthesized thematically:

1. AI applications in management accounting functions.
2. Benefits and transformative impacts.
3. Barriers and challenges for adoption.
4. Emerging research trends and knowledge gaps.

2.7. Quality Assessment

Each study was assessed for methodological quality based on:

- Clarity of objectives and research questions.
- Adequacy of research design and data collection methods.
- Relevance to AI adoption in MSMEs.
- Transparency in reporting findings and conclusions.

High-quality studies were prioritized in the synthesis to ensure reliable conclusions.

RESULTS AND DISCUSSION

The comprehensive assessment of literature about Artificial Intelligence (AI) in management accounting within Indonesia’s MSMEs provided significant insights into present uses, advantages, problems, and emerging research trends. A total of 35 research satisfied the inclusion criteria, encompassing empirical investigations, conceptual frameworks, and review articles published from 2015 to 2026. The findings are organized thematically, focusing on the following main areas:

- 1. AI Applications in Management Accounting:** Identifying the individual AI technologies used in MSMEs and the accounting tasks they help with, such as budgeting, financial reporting, cost management, and decision assistance.
- 2. Benefits of AI Adoption:** Looking at how AI helps MSMEs be more efficient, accurate, use predictive analytics, get strategic insights, and be more competitive overall.
- 3. Challenges and Barriers:** Talking about the technological, organizational, financial, and regulatory issues that make it hard for MSME accountants to use AI effectively.
- 4. Research Trends and Knowledge Gaps:** Combining trends in the literature, showing where there isn't enough empirical evidence, and pointing out where researchers and practitioners could do more research in the future.

This part is a well-organized summary of the material that was looked at, giving a full picture of how AI is changing management accounting methods in Indonesia's MSMEs and highlighting the pros and cons of using it.

AI Applications in Management Accounting for MSMEs

More and more, management accounting is using artificial intelligence (AI) to automate tasks, make them more accurate, and help with strategic decision-making. AI adoption is still new in Indonesia's MSMEs, but studies show that it might greatly improve accounting functions, even with little resources. Some of the most important uses of AI are automating financial reporting, predictive analytics, cost management, fraud detection, and decision support systems (Fitriyani, 2024). These applications let MSMEs handle enormous amounts of financial data quickly, cut down on mistakes made by people, and get useful information that can help them make operational and strategic decisions (Anwar, 2025). To give a structured perspective, the studies that were looked at were compared based on the AI technology employed, the accounting function affected, the benefits gained, and the problems seen. Table 2 gives a summary of the synthesis.

Table 2. AI Applications in Management Accounting for Indonesian MSMEs

AI Technology	Accounting Function	Key Applications	Benefits	Challenges / Barriers	Representative Studies
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Machine Learning (ML)	Predictive analytics, budgeting, forecasting	Cash flow prediction, sales forecasting, budget optimization	Improved decision-making, trend analysis, proactive planning	Requires historical data, technical knowledge	(Anwar, 2025; T. Ermawati et al., 2025)
Robotic Process Automation (RPA)	Bookkeeping, transaction recording	Automating repetitive tasks, generating real-time reports	Increased efficiency, reduced errors, timesaving	High setup cost, integration with existing systems	(Ratmono et al., 2023; Suhut et al., 2025)
Natural Language Processing (NLP)	Financial reporting, compliance	Processing invoices, categorizing expenses, regulatory compliance	Faster processing, consistent reporting	Limited NLP tools in Bahasa Indonesia, requires clean data	(Alfarizi et al., 2024; Pandey, 2025; Thuc et al., 2025)
AI-Powered Dashboards	Decision support, management reporting	Real-time visualization, KPI monitoring	Enhanced insights, strategic decision support	Requires digital infrastructure, training needed	(Candra & Sutopo, 2025; Febriyani et al., 2024; Perkasa & Widiyanto, 2025)
Predictive Analytics Algorithms	Cost management, pricing strategy	Dynamic pricing, cost optimization, scenario analysis	Optimized resource allocation, competitive pricing	Data availability, accuracy dependent on input quality	(Judijanto et al., 2025; Patricia et al., 2022; Tambunan, 2025)

The table 2 shows the most important AI tools used in management accounting. Machine Learning (ML) and Predictive Analytics assist MSMEs make better decisions about their money and use their resources more efficiently. RPA takes care of repetitive chores like bookkeeping, which cuts down on the time and effort needed to do them by hand. Natural Language Processing (NLP) helps with processing invoices and reporting compliance, while AI dashboards give you visual tools to help you make decisions. There is a connection between each AI technology and certain accounting tasks (Tambunan, 2025). For instance, ML is used a lot for budgeting and forecasting, while RPA is more focused on documenting transactions and making reports. This map illustrates which AI tool is better for each accounting job. The table shows useful uses include predicting cash flow, automating financial reporting, finding ways to cut costs, and showing KPIs. These examples show how MSMEs may use AI to improve both their day-to-day operations and their long-term strategies (Patricia et al., 2022). AI deployment consistently yields advantages, including enhanced accuracy, efficiency, predictive insights, and strategic decision-making. Even tiny AI solutions can help MSMEs keep costs down, predict sales, and report on time (Tambunan, 2025). There are a few things that make it hard for people to adopt, even when it has benefits:

- Technical limitations: not enough knowledge about AI implementation and not enough digital literacy.
- Financial constraints: The software and infrastructure cost a lot of money to set up at first.
- Problems with data: access, quality, and linguistic obstacles (like NLP in Bahasa Indonesia).

- Training and infrastructure: Staff need to be trained and digital systems need to work with AI solutions.
- The last column lists the most important studies that show how each AI application works in the real world or in theory. Adiningsih & Pratama, (2024) discuss the use of ML to anticipate cash flow for Indonesian MSMEs, and Ermawati et al. (2024) explored the benefits of small enterprises using RPA.

Benefits of AI Adoption

The use of Artificial Intelligence (AI) in management accounting can help MSMEs in Indonesia a lot. It can help them be more efficient, accurate, and make better strategic decisions (Adelin et al., 2025). AI not only makes operations better, but it also makes businesses more competitive, scalable, and financially accessible in an industry that is quickly going digital. This section describes about the real-world and strategic benefits of AI, as well as how MSMEs may utilize AI to improve their financial management, business growth, and digital transformation. Section 3.1 explained about AI applications (Indrayani et al., 2024). There are four key areas where the benefits can be grouped: efficiency and productivity, accuracy and reliability, strategic decision-making, and cost optimization. MSMEs may use AI and data to change the way they do things in each of these areas. Table 3 shows the benefits and opportunities found in the 35 research that were looked at to show these elements.

Table 3. Benefits and Opportunities of AI Adoption in MSME Management Accounting

Benefit Dimension	Description / Opportunity	Practical Examples in MSMEs	Representative Studies
Efficiency & Productivity	AI automates repetitive tasks, reduces manual intervention, and accelerates processes	Automated bookkeeping with RPA, real-time report generation, invoice processing	(Adepoju et al., 2025; Siswanto & Aqdam, 2024)
Accuracy & Reliability	AI reduces errors in data entry and reporting, ensures consistent results	Predictive analytics for cash flow forecasting, NLP for expense categorization	(Fajri et al., 2024; Triyana et al., 2025)
Strategic Decision-Making	AI enables data-driven insights, trend analysis, and scenario planning	Dynamic pricing, cost optimization, KPI monitoring dashboards	(Aliah & Faridani, 2025)
Cost Optimization	AI helps MSMEs allocate resources effectively and minimize unnecessary costs	Reducing manual labor costs, optimizing operational expenses	(Patricia et al., 2022; Tambunan, 2025)
Competitive Advantage	AI supports informed and timely decisions, enabling MSMEs to respond to market changes	Early identification of sales trends, risk detection in financial operations	(Adiningsih & Pratama, 2024; Y. Ermawati et al., 2024)
Financial Inclusion & Scalability	Cloud-based AI platforms allow smaller enterprises to access sophisticated financial tools	Cloud accounting software with AI modules for SMEs, mobile AI applications	(Alfarizi et al., 2024; Perkasa & Widiyanto, 2025)

MSMEs can use AI to automate everyday accounting processes including bookkeeping, processing invoices, and making reports (Table 3). This cuts down on the amount of work that needs to be done by hand and makes more resources available for strategic tasks. RPA and AI-powered accounting tools are great for small teams who don't have a lot of accounting staff. (Alfarizi et al., 2024) Machine learning, predictive analytics, and natural language processing make financial reports more accurate and reliable. For instance, AI may find mistakes in transaction records or automatically sort expenses into categories. This is quite helpful for MSMEs that might not have accountants that know how to do this (Perkasa & Widiyanto, 2025). AI helps make smart strategic decisions by giving you insights based on data. AI-powered KPIs on dashboards let managers keep an eye on performance, set prices that are fair, and make budget plans based on patterns that are likely to happen. This changes accounting from a strictly administrative task to a strategic instrument (Febriyani et al., 2024). AI helps small and medium-sized businesses use their resources wisely and cut down on costs. Automated processes cut down on the amount of work that needs to be done by people in accounting, and predictive models help MSMEs better anticipate how to use their resources and how much their inventory will cost. AI gives MSMEs the ability to adapt swiftly to changes in the market by giving them real-time information and the ability to make predictions (Suhut et al., 2025). For instance, predicting cash flow and sales trends lets you get in early to get the most money and the least risk. Cloud-based AI solutions provide small firms access to advanced financial capabilities that were only available to big businesses before. Mobile AI accounting apps give small and medium-sized businesses (MSMEs) in distant or underserved locations the tools they need to manage their finances and report on them accurately.

Barriers and Challenges

Even though Artificial Intelligence (AI) has the power to change things, many Indonesian MSMEs are having trouble using it. These problems are related to technology, organization, money, and rules. Sections 3.1 and 3.2 talked about how AI can be used and what its benefits are. However, it is important to know these barriers in order to understand how AI is being adopted and to come up with good plans for how to use it. There are five key areas of difficulty: technical restrictions, budgetary constraints, data quality and privacy concerns, organizational preparation, and regulatory impediments. Table 4 shows a summary of these problems based on the 35 research that were looked at.

Table 4. Challenges and Barriers of AI Adoption in MSME Management Accounting

Challenge Dimension	Description	Impact on MSMEs	Representative Studies
Technical Limitations	Low digital literacy, insufficient AI expertise, lack of IT infrastructure	Limit's ability to implement AI tools, increases dependency on external consultants	(Asmar et al., 2025; Maharani et al., 2024)
Financial Constraints	High cost of AI software, hardware, and implementation	Prevents small businesses from adopting advanced AI solutions	(Husain et al., 2024; Septiawan et al., 2025)
Data Quality & Privacy	Incomplete, inconsistent, or unstructured data; concerns about cybersecurity and confidentiality	Reduces AI accuracy, risks financial and reputational damage	(Darmayadi et al., 2025; Tanhardrjo & Kornelius, 2025)

Organizational Readiness	Resistance to change, lack of training, limited management support	Slows adoption, reduces effectiveness of AI systems	(Hamid & Artha, 2025; Syahrudin & Suryani, 2025)
Regulatory & Policy Barriers	Limited guidelines, unclear compliance standards for AI usage in accounting	Increases legal uncertainty, discourages investment in AI	(Hamid & Artha, 2025; Syahrudin & Suryani, 2025)

A lot of MSMEs in Indonesia have trouble using AI-based accounting solutions because they don't know much about computers or technology. When IT infrastructure and trained workers aren't reliable, businesses often need help from outside sources, which raises prices and slows down adoption (Laksmono et al., 2025). The high initial expenses of AI tools, such as software licenses, hardware, and implementation services, are still a big problem. Small businesses with tight budgets generally put basic operations ahead of technology investments, which slows down the integration of AI (Thuc et al., 2025). For AI systems to work well, they need structured, high-quality data. A lot of MSMEs have trouble with financial records that aren't comprehensive or aren't the same every time (Anggraini, 2026). Also, worries about data privacy, especially when it comes to client and transaction data, make people less likely to trust AI. Smaller businesses generally don't have enough cybersecurity protections in place (Alfarizi et al., 2024). To use AI, organizations need to manage change, which includes training personnel, getting support from management, and getting used to new ways of working (Supriyati et al., 2025). People that don't want to adapt, are afraid of losing their jobs, or don't comprehend how AI may help can make it much harder to use. There are legal and compliance issues because there aren't any defined rules or norms for using AI in accounting. If the rules are not clear, MSMEs may not want to put money into AI, especially when it comes to taxes, financial reporting, and data protection (Perkasa & Widiyanto, 2025).

Table 4 shows that AI has several benefits (Section 3.2), however Indonesian MSMEs face some challenges when it comes to using it. To get past these problems, we need a mix of regulatory assistance, financial incentives, training programs, and improvements to digital infrastructure. By being aware of these problems, legislators, researchers, and MSME managers may come up with plans that make it easier to integrate AI, closing the gap between the possible benefits and the actual use of AI.

Research Trends and Gaps

The review highlights several research gaps and opportunities for future studies:

First, a significant proportion of prior studies has been conducted in global contexts or focused on large enterprises, resulting in limited context-specific empirical evidence, particularly within developing economies such as Indonesia. This lack of contextualization is further compounded by the absence of AI-specific frameworks tailored to MSMEs, which often operate under different structural and resource constraints (Nagara et al., 2026).

Second, there remains insufficient investigation into behavioral and organizational dimensions, including managerial attitudes, employee readiness, and cultural influences, despite evidence that organizational and human factors play a critical role in shaping AI adoption outcomes (Al Dhaheri et al., 2024).

Moreover, the current body of research has not adequately explored the optimal integration of human judgment and AI capabilities in decision-making processes, even though recent discussions emphasize the importance of balancing automation with human oversight to ensure effective and ethical outcomes (Wang et al., 2025).

In addition, limited attention has been given to the role of AI in supporting environmental, social, and governance (ESG) reporting, particularly for MSMEs. Although AI has demonstrated

strong potential in enhancing ESG data processing, monitoring, and reporting quality, empirical evidence examining this relationship remains scarce and underdeveloped (Riti et al., 2025).

Furthermore, there is a notable gap in understanding the effectiveness of government policies, regulatory frameworks, and institutional support mechanisms in facilitating AI adoption. SMEs are often influenced by external pressures such as regulations and industry standards, yet empirical studies evaluating these factors remain limited (Rahmani et al., 2024).

Finally, the literature lacks longitudinal research that assesses the long-term impact of AI adoption on MSME performance, innovation, and competitiveness. Most existing studies rely on cross-sectional or case-based approaches, which restrict the ability to capture sustained outcomes over time and highlight the need for more robust, long-term investigations (Al Dhaheri et al., 2024).

Implications for Researchers and Practitioners:

- Researchers can address gaps in empirical evidence, focusing on Indonesian MSMEs to provide actionable insights.
- Practitioners can prioritize AI tools based on feasibility, cost, and strategic impact, while also developing internal capacities for adoption.
- Policymakers can design financial incentives, training programs, and regulatory frameworks to support widespread AI integration in MSMEs.

The comprehensive examination of AI applications, advantages, and obstacles reveals that although the integration of AI in Indonesia's MSMEs is nascent, it possesses considerable revolutionary capacity. The Results section lays the groundwork for comprehending the transformative potential of AI in management accounting, delineates the opportunities available to MSMEs, and underscores the obstacles and research deficiencies that subsequent investigations must tackle. The results of this comprehensive literature study show that Artificial Intelligence (AI) is slowly changing managerial accounting in Indonesian MSMEs. By looking at the 35 chosen studies, this study may see some important patterns about AI applications, benefits, challenges, and research gaps.

Discussion

Transformation in Management Accounting

AI is changing management accounting in small and medium-sized businesses from a manual process that focuses on transactions to one that is data-driven and strategic. RPA automation cuts down on mundane work, and machine learning and predictive analytics help with forecasting, budgeting, and scenario planning. This change lets MSMEs make financial decisions that are faster, more precise, and more proactive, which is in line with what a competitive digital economy needs. AI dashboards and real-time monitoring also help managers keep an eye on things. This lets small business owners keep track of KPIs, find problems, and make smart decisions without relying on outside accountants all the time. These results corroborate earlier global research (Adiningsih & Pratama, 2024; Febriyani et al., 2024; Patricia et al., 2022; Tambunan, 2025) while contextualizing them within the particular framework of Indonesian MSMEs.

Opportunities for MSMEs

The adoption of AI in management accounting creates several opportunities:

1. **Operational Efficiency:** Automation reduces human error, accelerates processes, and frees up managerial time for strategic tasks.
2. **Enhanced Decision-Making:** Predictive insights enable MSMEs to forecast trends, optimize costs, and plan resource allocation.
3. **Financial Inclusion and Scalability:** Cloud-based AI solutions make sophisticated accounting tools accessible even for smaller businesses, supporting growth and digital transformation.
4. **Competitive Advantage:** Timely and data-driven decision-making enables MSMEs to respond rapidly to market changes, giving them a strategic edge in competitive sectors.

These opportunities indicate that AI adoption is not merely a technical enhancement but a strategic lever for business resilience and growth.

Barriers and Constraints

Despite the potential, widespread AI adoption faces significant hurdles:

1. Limited digital literacy, insufficient training, and low awareness of AI benefits slow down the adoption.
2. High setup costs prevent small enterprises from fully implementing AI solutions.
3. Poor data quality and cybersecurity risks reduce AI effectiveness and increase perceived adoption risk.
4. Unclear guidelines or absence of standardized frameworks deter investment in AI systems.

Addressing these barriers requires coordinated efforts involving policymakers, financial institutions, technology providers, and educational programs.

Theoretical and Practical Implications

• **Theoretical Implications:** This SLR enhances management accounting and technology adoption theory by integrating AI applications within the context of MSMEs in a developing nation. It shows how digital revolution, limited resources, and smart accounting methods all come together.

• **Practical Implications:** The findings offer practitioners a guide to rank AI tools according to their feasibility, cost-effectiveness, and effect on decision-making. MSME managers should begin with cloud-based AI dashboards and RPA technologies, progressively incorporating predictive analytics as their skills improve. Policymakers can speed up the use of AI by making financial incentives, training programs, and rules that businesses must follow.

CONCLUSION

This systematic literature analysis analyzed the use of Artificial Intelligence in management accounting for Indonesian MSMEs, emphasizing applications, advantages, obstacles, and future research avenues. The review shows that more and more tools like machine learning, RPA, NLP, and predictive analytics are being utilized to help with decision-making, budgeting, cost management, and financial reporting. AI makes things more efficient, accurate, and strategic, lowers costs, and gives MSMEs a competitive edge. It also helps them grow and include more people in the economy. Technical skills gaps, budgetary problems, bad data quality, organizational preparation, and regulatory uncertainty all make it hard for people to adopt. There aren't sufficient empirical studies in Indonesia that addressed the contemporary AI in management accounting tissue, and more research is needed on human-AI collaboration, sustainability accounting, organizational issues, and how well policies work. AI is a strategic enabler for MSMEs in Indonesia, but to use it, they need the right technology, the right organization, enough money, and the right policies. Both practitioners and researchers can use the results to help them put things into action, make better decisions, and speed up the digital transformation of small and medium-sized enterprises (MSMEs). Carry out empirical research centered on Indonesian MSMEs to assess AI's tangible effects on performance. Future researchers may look into how culture and organization affect adoption, how AI can be used in small enterprises' sustainability and ESG accounting. Create policy frameworks and ways to help people financially so that it is easier for them to adapt. In conclusion, AI offers a transformative opportunity for Indonesian MSMEs, improving management accounting processes and fostering business resilience, growth, and competitiveness in the digital age.

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