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Research Article

Performance Measuring Factors in MSMEs in the Digital Era: Systematic Literature Review

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Abstract: This study aims to systematically review performance measuring factors in MSMEs in the digital era in Indonesia. The research method uses Systematic Literature Review (SLR) with the design of the PRISMA framework. The data sources used were obtained from various databases of quality scientific publications including emerald, taylor and francis, springerlink, and sciencedirect, with a time span from January 2020 to June 2025. A total of 24 international scientific articles published in the period were analyzed for further identification on the main trends, main topics, and research directions. The results of the study show that the role of digital transformation has become an important factor in shaping the performance of MSMEs in the modern era. The factors that measure the performance of MSMEs are related to entrepreneurial competence, adaptation to technology, innovation ability, and government support. Some of these supporting factors also support resilience and sustainability for micro, small, and medium enterprises (MSMEs). However, the success of work achievements for business actors cannot be separated from adequate organizational readiness and resources, as well as good governance. This study contributes academically in the form of a conceptual framework for performance improvement measures for MSMEs, as well as providing recommendations as strategies for micro, small, and medium business actors to increase productivity so that businesses can grow and be sustainable in the digital era.

Keywords: Entrepreneurial Competence; Technology Adaptation; Innovation Capabilities; MSME performance; SLR.

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1. Introduction

Micro, small, and medium enterprises (MSMEs) are widely recognized for making important contributions to economic development, especially in developing countries such as Indonesia. MSMEs are considered to be able to encourage innovation, and are significantly able to create jobs and economic growth (Fan, *et. al.*, 2021; Luthfi, *et al.*, 2022). In a rapidly evolving business landscape, as well as technological developments, the demand for the ability to innovate relevant to business development is one of the main things among MSMEs to meet the expectations of today's fast-paced market.

However, many MSME actors face various complex challenges in an effort to improve performance due to several factors such as deep managerial and technical skills in entrepreneurship, the business environment both internal and external, and the impact of dynamic digital transformation. Entrepreneurial activities cannot be separated from all uncertainties, so capable entrepreneurial competencies are needed to overcome them (Halim, et. al., 2021). Entrepreneurial competence is the ability possessed by business actors in dealing with business dynamics both in terms of knowledge, attitudes, and social roles to support the sustainability of the business being run.

Technology adaptation is important for long-term sustainability for MSMEs. (Kawane, et. al., 2024; Probbohudono, et. al., 2025). Another thing that has happened since the COVID-19 pandemic era is that digital technology adaptation is needed in response to changes in consumer behavior (Sumarliah, et. al., 2022). The current public consumption trend is starting to attract interest in local food as a cultural heritage with a touch of renewal of flavor variants and appearance as innovations as well as unique foods from other countries. The ability to innovate in the food sector allows MSME actors to increase their adaptability, and create added value from the products produced. The intended innovation capabilities are product innovation, process innovation, and work behavior innovations produced by MSMEs to open up new opportunities for their business development (Wijaya, et.al., 2025). The support of government agencies creates a corporate culture that allows companies to seek profits, which is an important part of the government's role in influencing the socio-economic and policy environment (Gnyawali and Fogel, 1994).

Government support refers to how the government plays a role in the development and development of the country and regions. The results of a study by Azim and Azlinna Binti Azizan (2013) stated that the dimensions of government support consist of financial support, policies, and incentives, as well as the government's attitude in financing and research. The theory emphasizes the fiscal and non-fiscal contributions of the government in improving company performance and development. fiscal policy and governance, which emphasizes the distribution of fiscal power between the central and regional governments as well as oversight and accountability mechanisms.

This study aims to systematically review the literature related to micro, small, and medium performance measuring factors in the time frame 2020 – 2025 using the PRISMA approach, and seeks to identify the main themes, focuses, trends and challenges faced as part of business dynamics, in increasing productivity for growing and sustainable businesses. The systematic review is expected to make an academic contribution by presenting a more specific mapping of the framework from the previous set of studies and becoming practical recommendations on policy development for stakeholders in an effort to improve business performance to provide an overall impact in terms of insights, social and economic.

2. Method

A systematic literature review using the PRISMA *(Preferred Reporting Item for Systematic Reviews and Meta Analysis)* design of search trends for articles relevant to the topic in the last 5 years, with the TCCM framework. This approach ensures comprehensiveness and literature review by showing transparent data related to the topic studied. The inclusion criteria that have been set are (1) articles published from January 1, 2020 to June 30, 2025, (2) publications in English from reputable international journals, (3) focusing on the topic of MSME performance. The integration of this approach is important in synthesizing findings from research to deepen understanding of the development, historical flow, and future direction of the research field, and is particularly useful in studies to gain insights comprehensively (Marzi, et. al., 2025; Wang & Yi, 2025).

The initial stage of the study uses a macro (top-down) methodology, which starts with a broad search path and then focuses on more specific studies and topics. Therefore, after evaluating the limitations that existed in previous research and the scarcity of studies that discussed MSME performance, this study integrated the keyword "MSME performance" as a focal point in the article title, abstract, and keyword section. In addition, the article database is used in research for a variety of investigative purposes, including conducting a literature review, identifying subject matter experts, and monitoring research trends.

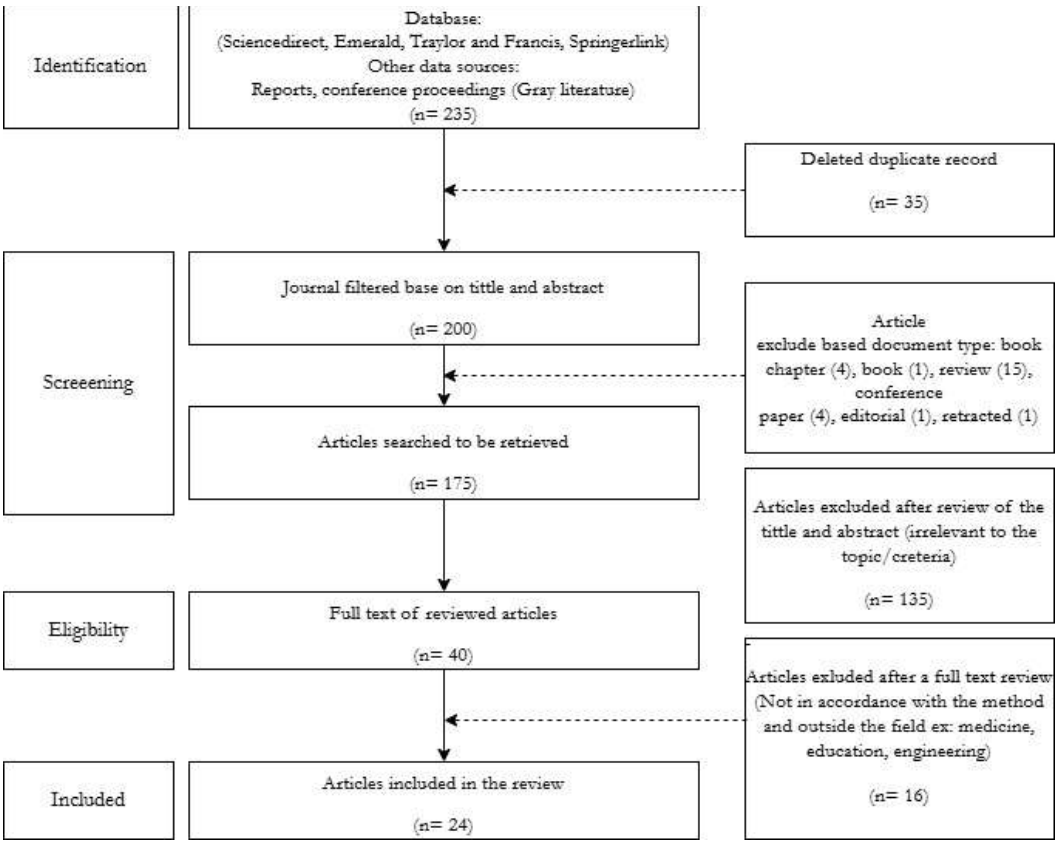

Figure 1. PRISMA framework.

Based on search results taken from the sciendirect, emerald, taylor and France, and springerlink databases across various sciences, starting from the earliest publication in 2020 to the latest in 2025, the number of articles on the performance of MSMEs is 235 (see Figure 1). Based on these findings, the process of screening documents is based on their classification. Articles were eliminated by document type: book chapters (4), books (1), reviews (15), conference papers (4), editorials (1), and retracted (1), total elimination 25. The results of the screening by document type, resulted in 24 articles. This document was then used further in this study to answer:

RQ1: Is the exploration of MSME performance measurement a subject that should be a research standard in the future? RQ2: What is the allocation of research investigations related to MSME performance measurement in the current digital era? RQ3: What are the practical and theoretical implications of future research perspectives?

3. Results and Discussion

Results

The results of this study focused on the findings of a total of 24 database articles on MSME performance. Data were identified from articles that have been published over the past 5 years, and journal sources. The study also highlights important elements that influence the performance of MSMEs, including the authors, affiliates, and countries involved.

RQ1: Is the exploration of MSME performance measurement a subject that should be a research standard in the future?

Based on data obtained from the database, it is known that over the past five years, scientific papers on MSME performance measurement have reached 24 articles. This shows that there is still relatively little research related to MSME performance measurement, as illustrated in Figure 1. The performance of MSMEs in the digital era has been increasingly progressive since the last 5 years, especially in 2025.

The following are the results of mapping trends based on the findings of the literature described in the table below.

Table 1. Mapping trends based on literature findings.

No	Peneliti, Tahun	Research Title	Method	Key findings
1.	Taleb T S, et. al., (2023)	Mediating effect of innovation capability between entrepreneurial resources and micro business performance	PLS – SEM	The results show that entrepreneurial resources, particularly technical resources, positively and significantly influence innovation capabilities and improve business performance. Furthermore, innovation capabilities mediate the relationship between entrepreneurial resources and microenterprise performance.
2.	Mokbel, et. al. (2022)	Linking entrepreneurial competencies, innovation and sustainable performance of manufacturing SMEs	PLS – SEM	The results of the study indicate that entrepreneurial competence plays a strong and important role in driving innovation and sustainable performance in manufacturing SMEs.
3.	Yun, M. (2021).	The Impact of Technological Capability on MSME innovation: a case study of Vietnam.		
4.	Yetti, et. al. (2025)	The Influence of Entrepreneurship Education and Technology Adaptation on Microenterprise Performance through Innovation Capability and Moderated by Mentorship (A Study in Agam Regency, West Sumatra Province).	PLS – SEM	The findings of the study show that innovation capabilities significantly mediate the relationship between entrepreneurial education and technology adaptation and business performance.
5.	Shen, W., et. al. (2025).	The effect of digitalization on total factor productivity: a dynamic capabilities perspective.	Analisis model efek tetap panel	The findings of this study show that the influence of digitalization on TFP is positively moderated by absorbive, innovative, and adaptive capabilities. Among these capabilities, adaptive capabilities have the strongest moderation effect, followed by innovative capabilities, while absorptive capabilities have the weakest moderation effect. The strength of this moderation effect is closely related to industrial competition and the level of government intervention in the markets in which the company operates.
6.	Li, X., et. al. (2024).	Does digital platform capability enable Chinese SMEs' business model innovation? The role of complementary assets and entrepreneurial orientation.	PLS - SEM	The findings show that the capabilities of digital platforms positively influence both types of innovation, with generic and specialized complementary assets serving as mediators. In addition, entrepreneurial orientation strengthens the relationship between digital platform capabilities and business model innovation.

7.	Soomro, R, et.al. (2024).	Impact of entrepreneurial knowledge, skills, and competencies on MSME performance: anevidence from a developing country.	PLS-SEM	The findings show that the capabilities of digital platforms positively influence both types of innovation, with generic and specialized complementary assets serving as mediators. In addition, entrepreneurial orientation strengthens the relationship between digital platform capabilities and business model innovation
8.	Sakib, M. N., et. al. (2022)	Entrepreneurial Competencies and SMEs' Performance in a Developing Economy.	PLS – SEM	The results reveal that entrepreneurs' organizational and leadership competencies, learning, relationships, and commitment have a significant impact on SME performance. Conversely, strategic competencies and opportunities have no effect on SME performance.
9.	Seraj, et. al. (2022)	Entrepreneurial Competency, Financial Literacy, and Sustainable Performance—Examining the Mediating Role of Entrepreneurial Resilience among Saudi Entrepreneurs.	PLS – SEM	The results of this study reveal that entrepreneurial competence has a significant positive effect on entrepreneurial resilience and MSME performance. Entrepreneurial resilience was simultaneously found to have a considerable impact on sustainable performance while mediating the influence of financial literacy and competence on sustainable performance across all Saudi SMEs.
10.	Gunawan, A. F. (2024)	Impact of entrepreneurial characteristics and competencies on business performance in the creative industry in Indonesia.	Structural Equating Modeling (SEM)	The findings of this study indicate that entrepreneurial characteristics and competencies have a significant positive influence on business performance. Creativity and innovation emerge as the most influential characteristics, while strategy is the most influential competency.
11.	Fazal, S. A., et. al. (2022).	Entrepreneurial Motivation, Competency and Micro-Enterprise Sustainability Performance: Evidence from an Emerging Economy.	PLS – SEM	The findings indicate that entrepreneurial competence affects business sustainability performance. Furthermore, entrepreneurial competence significantly mediates the influence of self-confidence, openness to change, and attractiveness on business sustainability performance.
12.	Supatminingsih, et. al. (2025).	Entrepreneurial Competencies and SMEs' Performance in a Developing Economy.	PLS – SEM	The results of this study show that technology variables have a significant influence on the performance of MSMEs. efficient technology increases productivity and innovation capacity as well as business performance in MSMEs. Technology can reduce operational costs and improve the speed and accuracy of decision-making, which impacts business performance.
13.	Tsou, H.-T., & Chen, J.-S. (2023).	How does digital technology usage benefit firm performance? Digital transformation strategy and organisational innovation as mediators.	PLS – SEM	Findings show that the use of digital technology has a positive influence on digital transformation strategies and organizational innovation, which in turn affects company performance. Furthermore, digital transformation strategies and organizational innovation play a mediating role between the use of digital technology and company performance.

14.	Jalil, M. F., et. al. (2021)	Does improve SME performance in Malaysia? The mediating effect of technology adoption.		The findings of the study show that innovation capabilities and technology adoption respectively have a significant positive impact on the performance of SMEs. Technology adoption partly mediates the relationship between innovation capabilities and SME performance. SMEs are required to produce operative innovation models to gain sustainable performance and competitive advantage in the Malaysian market.
15.	Panya F, Petchsawang P (2025)	Innovation capability as a mediator of the relation between talent management and entrepreneurial firm performance	Structural Equating Modeling (SEM)	The results of this study indicate that innovation capability has a positive effect on MSME performance and fully mediates the positive relationship between talent management and MSME performance.
16.	Wolor, C. W., *et. al.* (2024)	Examining the Impact of Knowledge Management Use and Innovation on Business Performance of MSMEs in the Digital Age. Case Study MSMEs in Indonesia	Data Analysis using PLS – SEM	The findings show that knowledge management has a positive effect on innovation, which in turn has a positive impact on the performance of these businesses. The intended innovation is the ability to develop a business by paying attention to rapid technological developments.
17.	Al-Omar S, Alalawneh A, Harb A (2024)	The impact of entrepreneurship education on entrepreneurial intention: the moderating role of perceived governmental support.	PLS-SEM	This study reveals that perceived government support in the form of financial, policy, and regulatory support has a moderate role that is not significant in the relationship between entrepreneurial education and student entrepreneurial intention.
18	Hashim, N., et. al. (2023)	Entrepreneurial bricolage and micro-business performance: A moderated mediation of innovation capability and digital marketing capabilities**.**	PLS-SEM	This study shows that innovation capability is an important path to business performance influenced by Entrepreneurship Bricolage Therefore, women entrepreneurs in micro businesses that use bricolage need innovative ideas to recombine existing resources to introduce new products or services.
19	Probohudono, A. N., *et. al.,* (2025)	Navigating MSMEs' performance through innovation and digital IT capabilities in business strategy.	PLS-SEM	The results of the analysis in this study indicate that innovation capability has a positive impact on MSME performance.
20.	Kyal, H., Mandal, A., Kujur, F., & Guha, S. (2021).	Individual entrepreneurial orientation on MSME's performance: the mediating effect of employee motivation and the moderating effect of government intervention	CFA dan SEM	This study shows a positive relationship between entrepreneurial orientation, business financing, management, market practices, and the growth performance of MSMEs. These results support the idea that government policy plays an important role as a full moderator.
21	Otache I, Usang OUE (2022)	Innovation capability and SME performance in times of economic crisis: does	PLS – SEM	The results show that IC is positively correlated with SME performance. Further analysis shows that GS has a strong positive impact on SME

		government support moderate?		performance and positively moderates the relationship between IC and SME performance.
22	Mai, B. T., et. al. (2024)	Government policy, IT capabilities, digital transformation, and innovativeness in Post-Covid context: case of Vietnamese SMEs.		This study shows that government policies support innovation and information technology (IT) capabilities among Vietnamese SMEs. Government policy assistance also encourages IT capabilities and innovation. Furthermore, the mediating effect shows that digital transformation fully mediates the relationship between innovation and company performance, while IT capabilities only partially mediate this relationship.
23	Shukla, M., Shankar, R. (2024)	Impact Assessment of Smart Manufacturing System Implementation in Small and Medium Enterprises: Moderating Role of Enabling Technology and Government Support.	Exploratory factor analysis (EFA) Confi rmatory factor analysis (CFA) and SEM	This study found that technology plays an important role in advancing India's economy, with the impact being evaluated as largely positive. Negative implications are also discussed, making this study a valuable resource for government officials and policymakers to make informed decisions by understanding the potential post-implementation impacts.
24	Kurniawan, et. al. (2023)	The Effect of Technology Adaptation and Government Financial Support on Sustainable Performance of MSMEs during the COVID-19 Pandemic.	PLS – SEM	The results show that the agility of MSMEs in adapting to technology and innovative financial practices significantly affected their sustainable financial performance during the COVID-19 pandemic. Government financial support also significantly affected the sustainable financial performance of MSMEs through the mediating role of policy effectiveness perceptions.

Source: Processed data (2025)

Findings from various studies in Table 1 show that MSME performance measurement is related to entrepreneurial competence, adaptation to technology, innovation capabilities, and government support. Several of these supporting factors also contribute to the resilience and sustainability of micro, small, and medium enterprises (MSMEs).

Discussion

The discussion on the results of the literature review shows that digital transformation has become an important factor in shaping the performance of MSMEs in the modern era. Driving factors in improving the performance of micro, small, and medium enterprises (MSMEs) include entrepreneurial competence, technological adaptation, *innovation capability,* and government support. MSME performance indicators in the digital era are supported through the integration of digital aspects to support the completion of business operational activities. The findings show that out of 24 high-quality publications, for further analysis, there are 14 categories of indicators that consistently appear in various organizations in the manufacturing sector, IT, and small and medium business organizations with business performance entreprises being the dominant indicator, namely a total of 20 publications out of a total of 24, while the category of Technology adaptation is 9 articles, followed by the innovation capability category of 11 articles, Government support amounted to 5 articles, and entrepreneurial competence amounted to 7 articles.

The mechanism of the influence of entrepreneurial competence on the performance of MSMEs can be seen from 3 main aspects: (1) attitudes towards behavior, (2) subjective norms (3) perceived behavior control. The effect of mediation through innovation capability refers to the ability to create and develop product value, processes, systems, policies, or services for organizations, as well as the moderation effect of government support from the dimensions of fiscal and non-fiscal policy support.

4. Comparison

Based on the results of a systematic review related to the performance measuring factors of MSMEs, the comparison of the results of the review underlines that in the digital era, entrepreneurial competence is fundamental to improve business performance. Owners who are capable and master technical and intrapersonal skills, will be more adaptive in managing their business. Competence not only includes the ability to run a business operationally, but also includes the ability to respond to all forms of changes in the surrounding environment quickly and effectively, so that there is more opportunity to get added value.

Adaptation to technology and innovation capabilities are other factors that are also important in terms of measuring the performance of MSMEs. Business people who have the ability and are successful in adopting various tools to support business activities based on digital technology such as social media, digital buying and selling platforms, electronic payment instruments, delivery services can show increased business operational efficiency and expand market reach. Innovation capability refers to the ability of business people to develop new products, business models, and creative strategies as important for the business to survive and grow in a dynamic business environment.

Government support has an important role as a driver for business actors in terms of policies, facilities and access to financing that are relevant to the development of the times so that business actors can face various challenges as business dynamics in the modern era which are always rapidly changing. The form of support can be in the form of training and mentoring programs according to the needs of MSMEs. Coordination between interested institutions is also established so that strategic collaboration emerges to encourage inclusive and sustainable productivity of business actors.

5. Conclusion

The systematic review concluded that factors as a measure of MSME performance in the digital era provide strategically significant benefits, especially in management aspects related to entrepreneurial competence, technological adaptation, innovation capacity, and encouragement from government support. However, the success of work achievements for business actors cannot be separated from adequate organizational readiness and resources, as well as good governance. The government's important role as a driver of performance improvement for business people in the form of training, digital capital access facilities, and infrastructure development, especially in terms of ensuring the inclusivity of performance improvement programs for business people in various regions, including those in disadvantaged areas, to develop through digitalization.

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