
Driving MSMEs' Performance: The Impact of Social Media Adoption, Innovation Capability, and Government Support

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Abstract:

The purpose of this study is to investigate how social media adoption, innovation capability, and government support influence the business performance of micro, small, and medium enterprises (MSMEs) in Indonesia. Data were collected from 469 Indonesian MSME owners or managers via an online questionnaire and analyzed using structural equation models with the Partial Least Squares method. The results indicate that social media adoption positively impacts innovation capability and business performance. Additionally, innovation capability positively affects business performance and mediates the relationship between social media adoption and business performance. Moreover, government support acts as a moderator in the relationship between innovation capability and business performance. These findings provide practical insights for MSME owners or managers seeking to enhance their social media strategies and leverage innovation and government support to improve competitiveness in the digital market. The research also guides governments in formulating policies to boost MSMEs' business performance.

Keywords: Social Media Adoption; Innovation Capability; Government Support; MSMEs' Performance

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1. Introduction

Micro, Small, and Medium Enterprises (MSMEs') play a crucial role in national and regional development, serving as key economic drivers (Asgary et al., 2020). Their contribution to economic development includes job creation, poverty alleviation, and fostering innovation (Gherghina et al., 2020). In Indonesia, MSMEs' are particularly significant, numbering 64 million and representing 99 percent of total business activities. They contribute 61.1 percent to the national economy (GDP), while large businesses, which are only 5,550 in number, contribute the remaining 38.9 percent (Bank Indonesia, 2022).

Despite their importance, MSMEs in developing countries face various challenges, such as limited funding, constrained growth opportunities, and restricted access to

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technology and other resources compared to their counterparts in developed countries (Qalati et al., 2022). In Indonesia, these challenges are similarly prevalent, including difficulties accessing markets, a shortage of skilled human resources, limited technology adoption, and restricted access to financial services, particularly in remote areas. These issues are compounded by inadequate infrastructure (Bank Indonesia, 2022).

With the advancement of technology and increasing globalization, MSMEs in developing countries are increasingly turning to social media to bolster their business sustainability (Qalati et al., 2022; Amoah et al., 2023). Alraja et al. (2020) highlighted that MSMEs in developing countries opt for social media due to its cost-effectiveness, user-friendliness, direct interaction features, and ability to target specific markets. Moreover, Bruce et al. (2022) suggested that by enhancing social media adoption and leveraging existing opportunities, MSMEs' can enhance their competitiveness and achieve business growth. Social media also offers valuable insights into customers' interests, needs, and aspirations, aiding businesses in creating more targeted content (Patma et al., 2021).

In spite of the affordability, ease of use, and potential to reach a broad audience, MSMEs need to be faster to adopt social media marketing (Dwivedi et al., 2021). Many small business owners recognize the benefits of social media but have yet to effectively integrate it into their operations (Qalati et al., 2022). According to the MSMEs' Empowerment Report 2022, only approximately 40 percent of MSMEs' in Indonesia utilize social media for business purposes (DSInnovate, 2023). This hesitancy among MSMEs' owners to embrace social media can be attributed to their reluctance to adopt new technologies (Salam et al., 2021), limited experience with social media platforms (Hanafizadeh et al., 2021), and the absence of a clear social media strategy (Belás et al., 2021). The resistance to social media adoption in SMEs is unique because the adoption of social media technology is needed during difficult times, such as during the COVID-19 pandemic. However, many SMEs do not want to adopt it (Sugandini et al., 2020).

Given the substantial benefits of social media, MSMEs' owners and managers must develop a comprehensive social media strategy to enhance business performance. Several studies have demonstrated a positive relationship between social media usage and business performance (Foltean et al., 2019; Martín-Rojas et al., 2020; Oyewobi et al., 2021; Qalati et al., 2021; Tajvidi & Karami, 2021; Yasa et al., 2021; Le & Chakrabarti, 2023). However, Ahmad et al. (2019) found no significant impact of social media on MSMEs' performance in the United Arab Emirates, suggesting that many businesses engage in social media merely due to competitive trends. Similarly, Garrido-Moreno et al. (2020) concluded that social media does not significantly impact organizational performance.

In addition to social media, innovation plays a crucial role in driving superior performance (Migdadi, 2020; Purwati et al., 2021). Small companies are encouraged to adopt innovation in a structured manner to create value, foster growth, and enhance

welfare (Gherghina et al., 2020). However, innovation practices among MSMEs remain relatively low despite support from institutions and the private sector (De Carvalho et al., 2021).

The Indonesian government faces several challenges in supporting MSMEs' innovation, including difficulties related to digitalization, financial inclusion, and access to finance. The digitalization of MSMEs' is a crucial area of focus, as many small and medium-scale MSMEs' in Indonesia have yet to fully utilize digital technology despite the significant increase in the number of MSMEs' businesses (Apriani et al., 2023). Additionally, limited financial inclusion and restricted access to finance have been persistent barriers to inclusive growth in Indonesia, with over 70 percent of MSMEs needing access to credit and bank loans, accounting for only 6 percent of MSMEs' funding sources. These challenges impede the government's ability to support MSMEs' innovation and the digital transformation of businesses in Indonesia effectively (International Monetary Fund, 2021).

The OECD report, *SME and Entrepreneurship Policy in Indonesia 2018*, emphasizes the importance of government support for MSMEs' in Indonesia. The report highlights that government support can significantly impact business growth and internationalization and underscores the need for more support to enhance MSMEs' innovation capabilities and, consequently, their growth (OECD, 2018).

The Resource-Based View (RBV) theory posits that utilizing internal resources (i.e., social media and firm capability) enables firms to achieve a competitive advantage and higher profitability compared to competitors who do not (Ye et al., 2022). Additionally, social network theory suggests that building relationships with external entities, such as government agencies, can enhance access to valuable resources, thereby improving a firm's competitive position and profitability (Alkahtani et al., 2020).

The existing literature on social media adoption and business performance in Indonesian MSMEs' has primarily focused on the direct relationship between these variables. However, there needs to be more understanding of the underlying mechanisms that mediate and moderate this relationship. Specifically, previous studies have yet to adequately explore the mediating role of innovation capability and the moderating role of government support in this context.

The mediating role of innovation capability is particularly important, as it can elucidate how social media adoption influences business performance through the lens of organizational innovation. This is crucial, as MSMEs often face resource constraints and must rely on innovation to compete effectively in the market. Similarly, the moderating role of government support can provide valuable insights into how external factors influence the relationship between social media adoption and business performance.

The novelty of this study lies in its comprehensive approach to understanding the relationship between social media adoption and business performance in Indonesian MSMEs'. By incorporating both mediating and moderating variables, this study goes beyond existing literature to provide a more holistic view of this relationship. This not only advances academic knowledge but also has practical implications for MSMEs' and policymakers.

Furthermore, the study's focus on the Indonesian context adds to its novelty. Indonesia is a diverse and dynamic market with unique challenges and opportunities for MSMEs'. By conducting research in this context, the study will provide insights that are directly relevant to Indonesian MSMEs' and can help address the specific challenges they face in adopting social media and enhancing their business performance.

Based on RBV theory and social network theory, this study aims to explore the role of social media adoption, innovation capability, and government support in improving MSMEs' performance. Additionally, the study aims to explore the mediating role of innovation capability in the relationship between social media adoption and MSMEs' business performance and the moderating role of government support in strengthening the relationship between innovation capability and MSMEs' business performance.

2. Theoretical Background

Resource-Based View Theory: The Resource-Based View (RBV) theory was originally introduced by Wernerfelt (1984) and further refined by Barney (1991) and other researchers. The RBV is a strategic management framework emphasizing the significance of organizational resources and capabilities in achieving superior firm performance. According to the RBV, if a resource exhibits VRIO attributes (Valuable, Rare, Inimitable, and Organized), it enables the firm to gain and sustain a competitive advantage (Barney, 1991). The RBV focuses on the firm's internal resources and assets, arguing that sustainable competitive advantage derives from developing superior capabilities and resources. The theory also stresses that not all resources are equally important and that the sustainability of any competitive advantage depends on the extent to which resources can be imitated or substituted. Therefore, the RBV encourages managers to look at a firm's internal resources when engaging in the strategy development process, as these resources can provide a sustained competitive advantage that will endure (Barney, 1991; Ray et al., 2004).

The RBV holds that sustained competitive advantage can be achieved more easily by exploiting internal rather than external resources and that the whole is greater than the sum of its parts, meaning that strategic resources can be created by taking several strategies and resources that each are valuable, rare, inimitable, and organized, and combining them to create a competitive advantage (Barney, 1991; Rockwell, 2019). Therefore, the RBV theory is a valuable perspective for strategic management research, as it evaluates potential factors that can be deployed to confer a sustained competitive advantage (Amaya et al., 2022).

Since RBV is based on the idea that a firm's strategy is rooted in its resources and capabilities, which enable the achievement of competitive advantage and improved performance, RBV suggests that the resources and technological capabilities available to a firm can be leveraged for competitive advantage. This study adopts the RBV theory by identifying relevant constructs, namely social media adoption and innovation capability.

Social Network Theory: Social network theory is a theoretical framework that focuses on the role of social relationships in transmitting information, channeling personal or media influence, and shaping individual and group behavior. It is a construct useful in the social sciences to study relationships between individuals, groups, organizations, or even entire societies. Social network theory provides a set of methods for analyzing the structure of whole social entities and examining the social relationships between individuals, groups, and organizations (Nimmon et al., 2019). Social network theory is also valuable for describing and understanding complex structures and relationships within a group or organization (Adiyoso, 2022). Moreover, social networks are also recognized as an approach for analyzing policies in the public sector (Zhang et al., 2021). According to Zhang et al. (2021), social networks are particularly suitable for policy research, as policy networks represent a specific type of social network. This study utilizes social network theory by identifying relevant constructs, specifically government support.

Social Media Adoption on MSMEs' Business Performance: Social media is a term used to describe various technologies that facilitate sharing ideas and information among users through virtual networks and communities. Social media platforms allow individuals and businesses to communicate, share content, and engage with others in real time (Obar & Wildman, 2015). Social media enables entrepreneurs to gain knowledge about customers, mobilize resources to advance the business, and manage customer relationships (Abdelfattah et al., 2022).

Other benefits include marketing campaigns, providing businesses with direct communication with their customers and enabling them to gather valuable feedback and insights for product development and innovation (Aichner et al., 2021). MSMEs' can also utilize social media platforms to promote their products or services (Olanrewaju et al., 2020). While some literature has shown a positive relationship between social media usage and business performance (Foltean et al., 2019; Qalati et al., 2020; Martín-Rojas et al., 2020; Oyewobi et al., 2021; Qalati et al., 2021; Tajvidi & Karami, 2021; Yasa et al., 2021; Le & Chakrabarti, 2023), research by Ahmad et al. (2019) found that social media did not have a significant impact on the performance of MSMEs' in the United Arab Emirates, as many businesses adopted it only to follow existing competitive trends. Similarly, Garrido-Moreno et al. (2020) concluded that social media does not significantly impact organizational performance. Regarding the hypothetical relationship between social media adoption and MSMEs' business performance, based on the RBV theory, the authors reflect on social media adoption as a means that helps MSMEs gain a competitive advantage.

Based on the results presented in previous empirical research, it is evident that there needs to be a greater understanding of the relationship between MSMEs' performance and social media utilization. Therefore, we propose the following hypothesis:

Hypothesis 1: Social media adoption has a positive effect on MSMEs' business performance.

Social Media Adoption on Innovation Capability: To remain competitive in the market, every micro, small, and medium enterprise (MSMEs') must have the ability to develop and promote their new products. Continuous innovation is encouraged, drawing inspiration from external sources such as social media (Papa et al., 2018). This ability to innovate is particularly crucial in the context of social media, as it is a new technology, and companies' ability to innovate is essential in meeting competitive challenges.

Social media provides companies with access to dynamic social communities and new relevant knowledge that stimulates their innovative potential (Papa et al., 2018). Small businesses that have used social media effectively have been able to develop new products, reach a larger audience, and improve their innovation potential, allowing them to compete with larger corporations (Troise et al., 2021). Additionally, social media platforms offer robust analytics tools that allow entrepreneurs to gather and analyze data about their audience, content performance, and overall social media presence, which can drive business growth and innovation (Wang et al., 2020).

Several studies have demonstrated the relationship between knowledge gained through the use of social media and the innovation capabilities of companies (De Zubielqui et al., 2019). The strength of this relationship depends on the level of technological knowledge possessed by the company's human resources. Additionally, several other studies confirm the positive effect of social media usage on innovation capability (Papa et al., 2018; De Zubielqui et al., 2019; Alhaimer, 2021; Borah et al., 2022). Therefore, we propose the following hypothesis:

Hypothesis 2: Social media adoption has a positive effect on innovation capability.

Innovation Capability on Business Performance: There are two widely recognized conceptualizations of innovation in the business context: innovation as a process and innovation as an outcome. Innovation as a process refers to the steps taken to develop and implement new ideas, products, or services. This includes idea generation, research and development, testing, and commercialization. Innovation as an outcome, on the other hand, emphasizes the output that is sought, including product innovation, process innovation, marketing innovation, business model innovation, and more (Saunila, 2020).

In the context of MSMEs', both conceptualizations are important. MSMEs' must engage in a structured process of innovation that includes exploration and execution to achieve innovation as an outcome. Exploration involves generating ideas and

selecting promising ideas, while execution involves developing ideas into concepts and commercializing those concepts. (Kahn, 2018; Castela et al., 2018; Saunila, 2020). The firm's innovation capability is crucial for competitive advantage in highly turbulent market conditions. Innovation capability leads organizations to develop innovations continuously to respond to the changing market environment (Rajapathirana & Hui, 2018). Innovation capability can be defined as the ability to identify and create new value and assimilate initiatives back into existing processes and operations (Liao & Li, 2018).

In an organization, innovation capability integrates key capabilities and resources to stimulate innovation successfully, aiming for optimal organizational performance (Ferreira, 2020). It also reflects the ability to continuously transform knowledge and ideas into new products, processes, and systems for the organization's and stakeholders' benefit (Rumanti et al., 2023). Innovation capability helps organizations effectively form, manage, and integrate various capabilities or stimuli to innovate (Kahn & Candi, 2021). Innovation capability is fundamental to corporate strategy and is a significant resource that can lead to superior performance (Fan et al., 2021). Furthermore, Fan et al. (2021) revealed that innovation capability should be an integral part of corporate strategy because higher levels of innovation lead to improved cooperation and coordination within the company. A high level of innovation capability enables organizations to combine efficiency with creativity (Rumanti et al., 2022), allowing businesses to create and develop excellent new products essential for long-term survival and success. This is why innovation capability is considered a valuable asset for companies in terms of providing and maintaining a competitive advantage and implementing corporate strategy. Companies with limited innovation capabilities often need help to initiate and sustain innovative projects critical to improving competitive advantage, performance, and overall business operations (Alqershi, 2019).

The majority of studies find a positive relationship between innovation capability and firm performance in the context of small businesses (Zhang & Hartley, 2018; Ali et al., 2020; Fu et al., 2021; Otache & Usang, 2021; Rumanti et al., 2022; Apidana & Rusvinasari, 2024). This indicates that innovation capability plays a crucial role in determining company performance. Therefore, developing and analyzing innovation capabilities are important for facilitating performance evaluation in MSMEs' (Castela et al., 2018; Kim, 2021). This is significant because innovation is believed to be the most important driver of organizational performance and plays a key role in organizational survival and growth (Saunila, 2020). Innovative companies are expected to outperform companies that do not innovate, showing higher levels of economic growth and productivity (Rajapathirana & Hui, 2018). Furthermore, this study proposes the following hypothesis:

Hypothesis 3: Innovation capability has a positive effect on MSMEs' business performance.

Innovation Capability Mediates The Effect of Social Media Adoption on Business Performance: Previous studies have shown a direct relationship between social media adoption and MSMEs' performance (Foltean et al., 2019; Qalati et al., 2020; Martín-Rojas et al., 2020; Oyewobi et al., 2021; Qalati et al., 2021; Tajvidi & Karami, 2021; Yasa et al., 2021; Le & Chakrabarti, 2023), as well as between innovation capability and MSMEs' performance (Zhang & Hartley, 2018; Ali et al., 2020; Fu et al., 2021; Otache & Usang, 2021; Rumanti et al., 2022). However, research that includes innovation capability as a mediator is limited. For example, Borah et al. (2022) demonstrated that innovation capability mediates the relationship between social media adoption and MSMEs' business performance. Khaki & Khan (2023) also showed that innovation capability mediates the relationship between social media marketing and MSMEs' business performance. Fang et al. (2021) also proved that innovation capability mediates the relationship between social media adoption and MSMEs' business performance.

According to the RBV theory, social media adoption alone may not be sufficient to improve MSMEs' performance because it only represents the use of technology without actual involvement in organizational activities. This suggests that while social media adoption is important for MSMEs' performance (Qalati et al., 2021), MSMEs' must realize social media adoption through strong innovation capability to enhance their business performance. Therefore, we argue that innovation capability can mediate the relationship between social media adoption and MSMEs' business performance, leading to the following research hypothesis:

Hypothesis 4: Innovation capability mediates the effect of social media adoption on MSMEs' business performance.

Government Support Moderates The Effect of Innovation Capability on Business Performance: In developing countries, the government is crucial in enhancing competitiveness by mobilizing resources to improve technological capabilities (Alkahtani et al., 2020). Government support encompasses various forms of assistance, including technical support, commercialization, grants, and incentives, aimed at fostering the sustainable growth of MSMEs (Ngisau & Ibrahim, 2020; Seow et al., 2020).

Several government policies can enhance competitiveness in developing countries. For example, governments can provide financial and non-financial incentives. Financial and non-financial incentives provided by the government drive technological developments in the industrial sector, enhancing the innovation capabilities of MSMEs and maintaining their competitive position (Yang et al., 2018). Government investments in research and development (R&D) projects in emerging markets can positively impact firms' innovative performance and contribute to their superior performance (Afonso & De Sá Fortes Leitão Rodrigues, 2023). For example, firms receiving government support in China tend to outperform those without such support (Sheng & Montgomery, 2022).

In Indonesia, government policies, such as the MSMEs' digital transformation program and the government grant program, aim to empower MSMEs' and encourage innovation and business performance (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2022; Ministry of Finance of the Republic of Indonesia, 2023). These policies reflect the government's commitment to enhancing the innovation capabilities of MSMEs'.

However, research on the moderating role of government support in strengthening the relationship between innovation capability and MSMEs' business performance is limited. Taneo et al. (2023) found that government policies can strengthen the relationship between product innovation and competitiveness but weaken the relationship between process innovation and MSMEs' competitiveness. The study by Seow et al. (2020) and Otache and Usang (2021) also demonstrated a significant moderating relationship between government support and the effect of innovation capability on MSMEs' performance. Based on these findings, it is proposed that government support moderates the effect of innovation capability on MSMEs' business performance, leading to the following research hypothesis:

Hypothesis 5: Government support moderates the effect of innovation capability on MSMEs' business performance.

Based on previous research and the theoretical review described above, the research model proposed by the researcher can be seen in Figure 1 as follows:

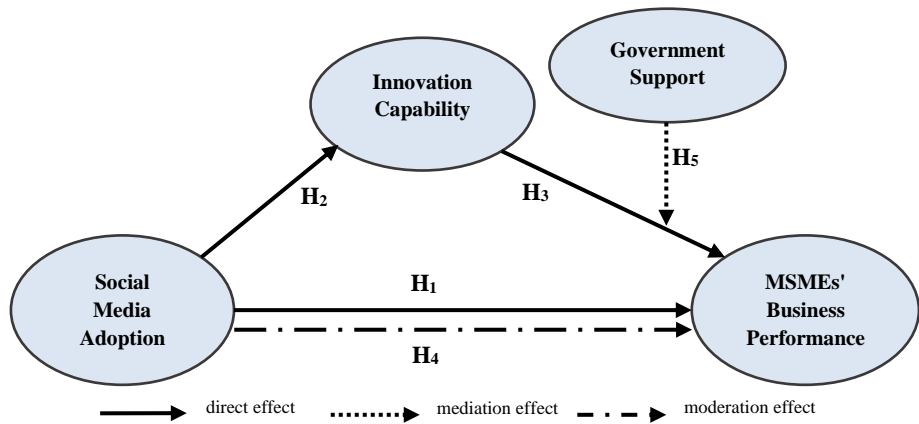


Figure 1. Relationship Model Between Variables In This Study
Source: Developed by the researcher (2024)

3. Methodology

This study utilizes a quantitative approach to gather information from respondents through a structured questionnaire survey. Data were collected online from MSMEs in Indonesia. The minimum sample size was determined using the Krejcie and Morgan

table, which suggested a minimum of 384 respondents for a population of 1,000,000 or more (Memon et al., 2020).

The researcher employed purposive sampling, a non-probability sampling technique, to select respondents. The criteria included owners or managers of MSMEs in Indonesia who use social media platforms as part of their marketing strategy and have received assistance from local and central government, both in financial and non-financial forms. Hypothesis testing was conducted using Partial Least Square (PLS) analysis processed with SmartPLS software version 3. PLS was chosen due to its suitability for testing complex path models and its ability to handle data with small sample sizes and high multicollinearity.

The measurement of constructs in this study was adapted from previous research. Social media adoption was measured using ten items adapted from Tajudeen et al. (2018), innovation capability was measured using five items adapted from Borah et al. (2022), and government support was measured using five items adapted from Seow et al. (2020). MSMEs' business performance was measured using five items adapted from Fan et al. (2021) and three additional items from Fang et al. (2022). All measurement items used a 5-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5). The complete measurement items used in the study are detailed in Table 1 below:

Table 1. Sources Of Construct Measurement

Constructs	Item Code	Item	Sources
Social Media Adoption	SMA.1	Social media helps in promoting business	Tajudeen et al. (2018)
	SMA.2	Social media makes it easy to find information	
	SMA.3	Social media makes it easy to build relationships with consumers	
	SMA.4	Social media makes it easy to communicate with customers	
	SMA.5	Social media facilitates customer service activities	
	SMA.6	Social media can reach new consumers	
	SMA.7	Social media makes it easy to receive feedback on existing products	
	SMA.8	Social media makes it easy to receive feedback on new products	
	SMA.9	Social media makes it easy to find information about competitors	
	SMA.10	Social media makes it easy to get information on trends in the market	
Innovation Capability	IC.1	Consistently generating new ideas	Borah et al. (2022)
	IC.2	Consistently introducing new products/services	
	IC.3	Creative in running the business	
	IC.4	Pioneer in the market	
	IC.5	Seeks new ways to innovate	
Government Support	GS.1	The government provides seminars or courses on digital marketing to MSMEs.	Seow et al. (2020)

MSMEs' Business Performance	GS.2	The government offers other training programs that benefit MSMEs' business growth.	Fan et al. (2021), Fang et al. (2022)
	GS.3	The government provides business consulting programs to assist MSMEs' business operations.	
	GS.4	The government provides financial support to MSMEs'.	
	GS.5	The government helps MSMEs to market their products/services.	
	MBP.1	Improved customer relations	
	MBP.2	Improved product/service quality	
	MBP.3	Increased company/brand visibility	
	MBP.4	Increased customer retention	
	MBP.5	Increased product/service awareness	
	MBP.6	Time-related cost savings in marketing or customer service	
	MBP.7	Increased sales transactions	
	MBP.8	Increased sales volume	

Source: Gathered from various articles (2024)

4. Empirical Findings/Result

Demographic Profile

The questionnaire for this study was distributed to MSME owners and managers from September 20, 2023, to January 4, 2024, using the SurveyMonkey online platform. The study received a robust response, with 469 respondents participating, exceeding the minimum required sample size of 384 respondents. This strong participation underscores the relevance and interest in the topic among MSMEs.

The collected data provided comprehensive demographic insights into the respondents, including their age, gender, education level, duration of social media use, frequency of social media use, business age, and business location, as detailed in **Table 2**.

Table 2. Demographic Profile

Factors	Frequency		Factors	Frequency	
		y			y
<u>Gender of Respondents</u>			<u>Duration of Using Social Media for Business</u>		
Male	305	65%	Less than 1 year	75	16%
Female	164	35%	1 to 2 years	245	52%
<u>Age of Respondents</u>			More than 2 years but less than 5 years.	109	23%
Less than 25 years old	56	12%	More than 5 years	40	9%
25 to 30 years	109	23%	<u>Social Media Most Used</u>		
31 to 40 years	200	43%	TikTok	84	18%
More than 40 years old	104	22%	Instagram	313	67%
<u>Educational Background</u>			Facebook	14	3%
No formal education	44	9%	Youtube	20	4%
Elementary School	45	10%	Others	38	8%
Junior high school	73	16%	<u>Age of Business</u>		
Diploma	89	19%	Less than 5 Years	3	1%
Bachelor (S1)	204	43%	More than 5 Years but less than 10 Years	189	40%

Master (S2)	14	3%	More than 10 Years	277	59%
			<u>Location of Business</u>		
			Java	448	96%
			Outside Java	21	4%

Source: Generated from 469 respondents (2024)

The results above present a comprehensive demographic and behavioral profile of the respondents, highlighting insights. The age distribution of the respondents reveals that the majority (43%) are between 31 and 40 years old. This age group likely represents a segment of business owners who have significant professional experience and are at a stage where they are actively seeking innovative methods to expand their businesses. The second largest group, comprising 23% of the respondents, is aged between 25 and 30 years. This younger cohort may bring fresh perspectives and a greater propensity to adopt new technologies, including social media, more swiftly than their older counterparts. The gender distribution among respondents is skewed towards males, who represent 65% of the sample, compared to 35% for females. This disparity may reflect broader trends in the ownership and management of MSMEs in Indonesia, where men might have more prevalent roles. It also highlights the need for gender-specific strategies to ensure that female business owners are equally equipped and encouraged to leverage social media for business growth.

In terms of education, a significant portion of the respondents (43%) hold a bachelor's degree, followed by those with a diploma (19%). This indicates that the majority of MSME owners and managers have attained a substantial level of formal education, which could correlate with a higher likelihood of adopting and effectively using digital tools like social media for business purposes. The education level of respondents suggests that they possess the foundational knowledge necessary to understand and implement advanced marketing strategies. In terms of social media usage for marketing, most respondents (52%) have been using these platforms for 1-2 years. This indicates a relatively recent but rapidly growing adoption of social media among MSMEs. An additional 23% have been using social media for more than one year but less than five years, reflecting a broader trend of increasing digital engagement over the past few years. Instagram emerges as the most frequently used platform, with 67% of respondents favoring it. This preference could be attributed to Instagram's visual nature, which is particularly effective for showcasing products and engaging with customers. TikTok, used by 18% of respondents, is also gaining traction, especially among younger audiences and businesses looking to leverage viral marketing techniques. Regarding the age of the businesses, a majority (59%) have been operational for more than 10 years, indicating a significant presence of established enterprises within the sample. This longevity suggests that these businesses have survived various market conditions and are now looking to innovate through digital means. Another 40% have been in business for more than five years but less than 10 years, signifying a strong representation of relatively well-established MSMEs that are likely seeking to scale their operations. Geographically, the majority of respondents (96%) are from Java, with only a small fraction (4%) coming from outside Java. This concentration in Java highlights the island's central role in Indonesia's

economy and its better access to infrastructure and digital technologies compared to other regions.

The demographic profile of the respondents provides a comprehensive understanding of the characteristics of MSME owners and managers who are engaging with social media for business purposes. The data indicates a trend towards increasing adoption of social media marketing among relatively well-educated and experienced business professionals, predominantly located in Java. This demographic insight is crucial for designing targeted strategies to enhance social media utilization and support the growth and sustainability of MSMEs across Indonesia.

The Measurement Model

In Partial Least Squares (PLS) analysis, reliability, and validity tests are critical for assessing the measurement model's quality. Researchers commonly employ two methods to measure the internal reliability of a construct or factor measured by a group of items in the model: Cronbach's alpha and Composite Reliability.

Cronbach's alpha calculates the correlation between each item and the total score of all items, comparing it with the correlation between each item and other items to measure internal reliability. A high Cronbach's alpha value above 0.700 indicates good internal reliability (Ghozali, 2021). The results in Table 3 demonstrated high reliability, with Cronbach's alpha values exceeding the recommended threshold of 0.700. Specifically, Cronbach's alpha values for each variable were as follows: social media adoption (0.965), innovation capability (0.920), government support (0.918), and MSMEs' business performance (0.906).

Composite Reliability is another method to measure internal consistency, with values above 0.700 indicating good reliability (Hair et al., 2019). The results, also presented in **Table 3**, indicated high reliability, with Composite Reliability values surpassing the recommended threshold of 0.700. Specifically, the Composite Reliability values for each variable were as follows: social media adoption (0.970), innovation capability (0.940), government support (0.938), and MSMEs' business performance (0.924).

Table 3. Measurement Model

Constructs	Item Code	Cronbach's Alpha	CR	Loadings	AVE
Social Media Adoption	SMA.1	0.965	0.970	0.787	0.763
	SMA.2			0.884	
	SMA.3			0.766	
	SMA.4			0.873	
	SMA.5			0.887	
	SMA.6			0.924	
	SMA.7			0.876	
	SMA.8			0.925	
	SMA.9			0.883	
	SMA.10			0.912	
Innovation Capability	IC.1	0.920	0.940	0.903	0.759
	IC.2			0.854	
	IC.3			0.894	
	IC.4			0.876	

Government Support	IC.5			0.826	
	GS.1			0.809	
	GS.2			0.881	
	GS.3	0.918	0.938	0.913	0.754
	GS.4			0.848	
	GS.5			0.885	
MSMEs' Business Performance	MBP.1			0.777	
	MBP.2			0.727	
	MBP.3			0.804	
	MBP.4	0.906	0.924	0.808	0.605
	MBP.5			0.759	
	MBP.6			0.801	
	MBP.7			0.702	
	MBP.8			0.837	

Source: Data analysis from 469 respondents using SmartPLS (2024)

Discriminant validity is also crucial to ensure that the constructs in a model are distinct from one another and do not overlap excessively. One method to assess discriminant validity is through the average variance extracted (AVE), which measures the variance explained among construct items. AVE values exceeding 0.500 are considered adequate (Hair et al., 2019). In this study, as shown in **Table 3**, all AVE values for the constructs exceed the recommended threshold of 0.500.

Table 4. Discriminant Validity Of The Measure

Constructs	Fornell and Larcker			
	GS	IC	MBP	SMA
Government Support	0.868			
Innovation Capability	0.573	0.871		
MSMEs' Business Performance	0.701	0.642	0.778	
Social Media Adoption	0.581	0.836	0.641	0.873

Source: Data analysis from 469 respondents using SmartPLS (2024)

Another approach to assess discriminant validity is the Fornell-Larcker criterion, which compares each construct's square root of the Average Variance Extracted (AVE) with the correlations between constructs. When the square root of the AVE is greater than the correlation between the constructs, discriminant validity is considered established (Ghozali, 2021). **Table 4** demonstrates that the square root of the AVE exceeds the correlation values between latent variables, indicating good discriminant validity. Therefore, all items in the research instrument are valid and suitable for use as measuring instruments.

Structural Model And Hypotheses Testing

Structural model assessment, or inner model, in Partial Least Squares (PLS) analysis is the next stage that aims to evaluate the model relationships between latent variables (constructs). This assessment ensures the validity and reliability of the structural model. The R-square (R²) in PLS analysis measures how well the model estimates the dependent variable, represented by the model's constructs. It indicates the proportion of variance in the dependent variable that can be explained by the independent variables (latent variables measured by constructs) (Ghozali, 2021). An R² value above 0.670 indicates a strong influence of the constructs on the dependent variable,

while an R^2 value between 0.330 and 0.670 indicates a moderate influence. A low R^2 value, ranging from 0.190 to 0.330, indicates a weak influence (Hair et al., 2019).

Table 5. R-Square Result

Constructs	R^2
MSMEs' business performance	0.594
Innovation capability	0.877

Source: Data analysis from 469 respondents using SmartPLS (2024)

Based on the bootstrapping results in **Table 5**, the R^2 value for the first research model is 0.877, indicating a strong level of influence. This suggests that approximately 87.700% of the variance in innovation capability can be explained by the construct of social media adoption and its interaction. The remaining 12.300% of the variance is attributable to other unexamined variables.

For the second research model, the R^2 value is 0.594, indicating moderate influence. This implies that around 59.400% of the variance in MSMEs' business performance can be explained by the constructs of innovation capability, social media adoption, and their interactions. The remaining 40.600% of the variance is attributed to other unexamined variables.

Table 6. Construct Cross-Validated Redundancy Result

Constructs	SSO	SSE	$Q^2 (=1 SSE/SSO)$
Government support	2345.000	2345.000	
Innovation capability	2345.000	802.000	0.658
MSMEs' business performance	3752.000	2445.000	0.348
Social media adoption	4690.000	4690.000	

Source: Data analysis from 469 respondents using SmartPLS (2024)

The next step in evaluating the inner model involves the blindfolding ratio test, which assesses the Q-square (Q^2) value to determine the model's relevance (Hair et al., 2019). According to Hair et al. (2019), Q^2 is a crucial measure for evaluating PLS structural models as it provides additional insights into the model's predictive quality. They also recommend using cross-validated redundancy as a measure of Q^2 . A high Q^2 value (above 0.050) indicates that the PLS model can effectively predict the dependent variable's value.

Table 6 demonstrates that the Q^2 value for the first research model is 0.658, and for the second research model, it is 0.348, both exceeding 0.050. These high Q^2 values indicate that the study's model can accurately predict outcomes based on the latent variables (constructs) measured in the model.

Table 7. F-Square Result

	Innovation capability	MSMEs business performance
Government support		0.033
Innovation capability		0.407
MSMEs' business performance		0.022
Social media adoption	7.130	0.020

Source: Data analysis from 469 respondents using SmartPLS (2024)

Another measure that can be utilized in evaluating the structural model is the F-square (F^2) value. F^2 measures the strength of the impact of independent variables (constructs) on the dependent variable in the model. An F^2 equal to or exceeding 0.350 indicates a strong effect in predicting the dependent variable, while 0.150 to 0.350 indicates a moderate effect, and 0.020 to 0.150 indicates a weak effect (Hair et al., 2019).

From **Table 7**, in the first research model, the social media adoption construct is considered to influence predicting innovation capability strongly (F^2 value is greater than 0.350). Conversely, the second research model shows that the four constructs used to predict MSMEs' business performance fall into the category of diverse influence (F^2 value between 0.407 - 0.020).

Table 8. Model Fit Index For a Structural Model

	Saturated Model	Estimated Model
SRMR	0.055	0.066

Source: Data analysis from 469 respondents using SmartPLS (2024)

Although PLS does not have a global model fit measure like SEM, model fit assessment in PLS can be accomplished using the SRMR (standardized root mean square residual) measurement, as advised by Hair et al. (2019). Hair et al. (2019) recommend an SRMR value of less than 0.080. Based on the data from **Table 8**, the SRMR value is 0.055, which is below the threshold of 0.080. This suggests the research model is well-suited for estimating the covariance matrix between observed variables.

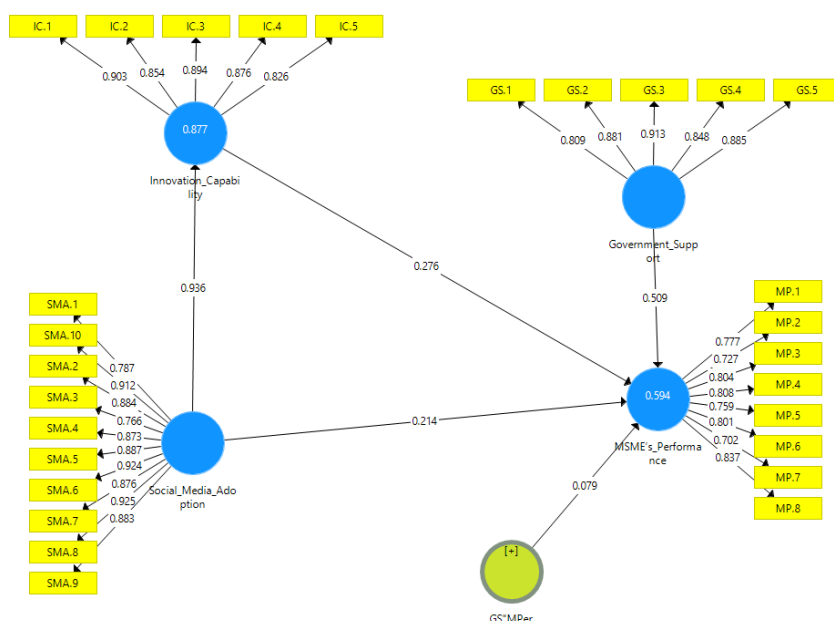


Figure 2. Structured Equation Modeling

Source: Data analysis from 469 respondents using SmartPLS (2024)

Hypothesis testing in this study utilizes the Bootstrapping feature of SmartPLS 3.3 software. A relationship is significant if the P-value is below the specified significance level of 0.05 and if the T-statistic value exceeds the minimum criterion of 1.640 (one-tailed). Conversely, if the P-value exceeds 0.050 and the T-statistic value is below 1.640, the effect is considered insignificant. These criteria help determine the significance of the relationship between the latent variables measured by the constructs in the model (Ghozali, 2021).

Table 9. Path Coefficient and Hypotheses Testing

Hypotheses	Relationship	Original Sample (O)	T-statistics (O/STDEV)	P-values	Decision
Direct Effect					
H ₁	SMA -> MBP	0.214	2.121	0.034	Supported
H ₂	SMA -> IC	0.936	73.904	0.000	Supported
H ₃	IC -> MBP	0.276	2.720	0.007	Supported
Mediation Effect					
H ₄	SMA -> IC -> MBP	0.259	2.698	0.000	Supported
Moderation Effect					
H ₅	IC -> GS -> MBP	0.079	2.554	0.011	Supported

SMA= social media adoption, IC= innovation capability, GS: government support, MBP= MSMEs' business performance

The analysis is conducted in a one-tailed test.

Source: Data analysis from 469 respondents using SmartPLS (2024)

Direct Effect

The results show that there is a positive and significant relationship between social media adoption and MSMEs' business performance ($\beta = 0.214$, $p < 0.05$, $T = 2.121$), as well as between social media adoption and innovation capability ($\beta = 0.936$, $p < 0.001$, $T = 73.904$), supporting Hypothesis 1 and 2. It implies that social media adoption directly impacts both innovation capability and MSMEs' business performance. Furthermore, the outcomes of this study also demonstrate that innovation capability has a positive and significant relationship with MSMEs' business performance ($\beta = 0.936$, $p < 0.01$, $T = 2.720$), supporting Hypothesis 3.

Mediation Effect.

Mediation represents the consideration of how a third variable affects the relation between two other variables. Mediating variables play a very prominent role in better understanding the relationship between two variables and providing an elaborate view of research. This study found that innovation capability mediates the relationship between social media adoption and MSMEs' business performance ($\beta = 0.174$, $p < 0.001$, $T = 2.698$), supporting Hypothesis 4.

Moderation Effect

Moderation describes a situation in which the relationship between two constructs is not constant but depends on the values of a third variable, referred to as a moderator variable. The moderator variable (or construct) changes the strength or even the direction of a relationship between two constructs in the model. This study found that government support moderates the relationship between innovation capability and MSMEs' business performance ($\beta = 0.127$, $p < 0.05$, $T = 2.554$), supporting.

5. Discussion

The analysis of the hypotheses reveals a positive impact of social media adoption on MSMEs' business performance. The results indicate that social media adoption facilitates several crucial business functions for MSMEs, including promotion, consumer and competitor information access, relationship building, customer service management, and feedback collection (e.g., suggestions, questions, complaints, and testimonials). Additionally, social media usage encourages MSME owners to enhance their digital marketing efforts, which subsequently boosts overall business performance.

Social media has emerged as a strategic tool for SMEs, providing a competitive advantage that translates into improved performance (Mujahid & Mubarik, 2021). It also plays a significant role in enabling MSMEs to innovate and compete with larger firms, thereby impacting business sustainability (Alayón et al., 2022; Setya et al., 2021). Research by Chatterjee and Kar (2020), Bruce et al. (2022), and Vrontis et al. (2022) further supports the view that social media and other digital technologies are instrumental in disseminating information, building brand image, and establishing customer relationships. These findings align with previous studies (Foltean et al., 2019; Qalati et al., 2020; Martín-Rojas et al., 2020; Oyewobi et al., 2021; Qalati et al., 2021; Tajvidi & Karami, 2021; Yasa et al., 2021; Le & Chakrabarti, 2023), which confirm the importance of social media adoption for business performance. Similarly, this study's results are consistent with the findings of Alraja et al. (2022) and Fang et al. (2022), which emphasize the positive effects of social media adoption on MSMEs' sustainability, including aspects such as customer relationship management, effective communication, knowledge creation, and value creation. However, these results diverge from previous findings by Ahmad et al. (2019) and Garrido-Moreno et al. (2020).

The hypothesis analysis also demonstrates a positive effect of social media adoption on innovation capability. The study suggests that social media adoption enables MSMEs to promote their business, access critical information, build consumer relationships, manage customer service, and collect feedback. This adoption stimulates MSME owners to improve their digital marketing efforts, thereby enhancing their innovative potential. Social media platforms offer valuable insights into customer preferences, competitor activities, and industry trends, allowing MSMEs to identify new opportunities, understand customer needs, and develop innovative products or services (Martínez-Peláez et al., 2023). Additionally, social media fosters direct interaction with customers, enabling businesses to test and refine ideas, understand customer needs in real-time, and adjust their offerings, thus promoting innovation (Alsharji et al., 2018). These findings corroborate previous research (Papa et al., 2018; De Zubielqui et al., 2019; Alhaimer, 2021; Borah et al., 2022), highlighting the role of social media adoption in enhancing MSMEs' innovation capabilities.

Furthermore, innovation capability positively impacts MSMEs' business performance. The study's results indicate that fostering innovation capabilities—such as generating new ideas, introducing new products or services, maintaining creativity, and exploring novel methods—improves overall business performance. The Resource-Based View theory posits that leveraging organizational resources, particularly innovation capabilities, is crucial for gaining a competitive edge. MSMEs must innovate to adapt to evolving market dynamics and changing customer demands (De Carvalho et al., 2021). Businesses that fail to adapt risk obsolescence. By continuously innovating and embracing new technologies, MSMEs can remain agile and responsive, ensuring a customer-centric approach. MSMEs that proactively embrace change and view challenges as opportunities are more likely to thrive in today's competitive market (Larios-Francia & Ferasso, 2023). This finding aligns with the notion that innovation positively impacts business performance (Strychalska-Rudzewicz & Rudzewicz, 2021; Bawa et al., 2023), with higher innovation capability correlating with better company performance (Rajapathirana & Hui, 2018). Saunila's (2020) study suggests that innovation capability is a multidimensional concept encompassing actions that enhance performance. MSMEs with higher innovation capabilities are better positioned to initiate and sustain innovative projects, crucial for competitive advantage and overall business operations. Research by Zhang & Hartley (2018), Ali et al. (2020), Fu et al. (2021), Otache & Usang (2021), Rumanti et al. (2022), and Apidana & Rusvinasari (2024) further supports the link between innovation capabilities and MSMEs' business growth.

An intriguing finding of this study is that established MSMEs, many with over a decade of operation, actively engage in innovative practices to enhance business performance. This underscores the importance of avoiding complacency, as resistance to adapting to changes can be detrimental to performance (Mitcheltree, 2023). It is plausible that MSME owners recognize innovation as a hallmark of successful entrepreneurship.

Moreover, this study reveals that innovation capability mediates the relationship between social media adoption and MSMEs' business performance. The findings suggest that merely adopting social media is insufficient to enhance business performance; improving innovation capabilities is crucial. This perspective aligns with Borah et al. (2022), who emphasize the importance of innovation capabilities in driving business performance growth. According to the resource-based view theory, adopting social media alone does not necessarily improve performance without engagement in organizational activities. This view is consistent with Qalati et al. (2021), who argue that while social media adoption is vital for performance, it must be coupled with strong innovation capabilities to enhance business outcomes.

Regarding the moderating role of government support, the results indicate that government support significantly moderates the impact of innovation capability on MSMEs' business performance. Government initiatives in Indonesia, including seminars or courses on digital marketing, beneficial training programs, business consulting services, financial assistance, and marketing aid, can bolster MSMEs'

innovation capabilities and improve performance. Government-led training in collaboration with universities on product innovation, packaging, and online practices has notably improved MSMEs' performance (Bappenas, 2020; Hanifawati & Listyaningrum, 2021; Noya et al., 2023). Various government policies, such as social assistance, tax incentives, credit relaxation, working capital financing expansion, and product support, have successfully enhanced MSMEs' resilience and performance during the Covid-19 pandemic (Taneo et al., 2021; Taneo et al., 2022). Research by Otache and Usang (2021) highlights the significance of government support during economic crises, underscoring the need for increased assistance for MSMEs. Social network theory further supports this view, suggesting that external institutional relationships significantly drive performance. Intensifying government policies and programs to promote innovation could therefore enhance MSMEs' business performance.

As MSMEs increasingly utilize social media for marketing and customer engagement, understanding its impact on business performance is essential. This research can guide Indonesian MSMEs in developing effective social media strategies and leveraging innovation and government support to enhance competitiveness in the digital market. Policymakers can use these insights to design targeted policies and programs to support MSMEs in harnessing social media for growth and success. Additionally, this study contributes to theory development by enriching the understanding of the interplay between social media adoption, innovation capability, government support, and MSMEs' business performance in developing countries. The study offers several recommendations: MSMEs should adopt innovative practices supported by social media platforms such as Facebook, Instagram, YouTube, WhatsApp, and TikTok to increase consumer awareness. Engaging and informative video content can effectively convey products, services, and business activities (Alhaimer, 2021; Apidana & Rusvinasari, 2024).

Second, given the positive link between innovativeness and business performance, owners and managers should encourage workplace creativity, reward innovative contributions, and embrace change as part of their innovation strategy. Fostering a culture that values fresh ideas is critical. Owners can conduct brainstorming sessions and recognize employees who contribute innovative ideas.

Third, MSMEs should integrate their social media strategies with innovation initiatives, using social media to gather customer feedback, generate ideas for new products or services, and collaborate with partners on innovation projects.

Fourth, central and local governments should continue to support MSMEs with both financial and technological resources. Improving internet infrastructure to support remote areas, enhancing digital marketing training, and offering financial assistance through credit schemes are essential. Programs such as digital-based MSME development schemes and digital skills improvement initiatives are recommended.

Fifth, MSMEs should actively seek government support programs to enhance their innovation capabilities, including grants, subsidies, tax incentives for innovation projects, and access to research institutions and technology transfer programs.

Finally, MSMEs should continuously monitor and evaluate the impact of their social media adoption and innovation efforts on business performance to identify areas for improvement and make informed decisions about resource allocation.

6. Conclusions

The findings of this study underscore the integral role of social media adoption, innovation capability, and government support in enhancing MSMEs' business performance. Social media adoption significantly boosts business performance by facilitating promotion, consumer and competitor insights, relationship building, and customer service. It also fosters innovation by providing valuable market intelligence and enabling real-time customer feedback. Innovation capability, in turn, positively impacts business performance by fostering creativity and adaptability in a dynamic market environment. Furthermore, government support plays a crucial moderating role, amplifying the effects of innovation on performance through targeted policies and training programs. The study highlights the necessity for MSMEs to integrate social media strategies with innovative practices and seek robust government support to achieve sustainable growth. These insights contribute to theoretical development and offer practical guidance for MSMEs and policymakers aiming to leverage digital tools and support mechanisms for enhanced business outcomes.

However, the study has several limitations that should be considered. The research does not differentiate between specific social media platforms, such as Instagram, Facebook, and TikTok, which have distinct characteristics and applications for MSMEs. Future studies could develop separate constructs for these platforms to offer more nuanced insights. Additionally, the findings may be context-specific to Indonesian MSMEs and may not generalize to other countries or industries. Research expanding into diverse contexts could enhance the generalizability of the results. The predominance of MSMEs from Java in the sample may also limit the findings' applicability to other regions of Indonesia with varying infrastructure levels. Including samples from different regions could provide a more comprehensive understanding of social media adoption and its impact. Moreover, the reliance on cross-sectional quantitative data constrains the ability to establish causal relationships; future research employing longitudinal or experimental designs could better elucidate these dynamics. Lastly, exploring the integration of open innovation with big data could yield further valuable insights. These considerations offer avenues for future research and provide practical guidance for MSMEs and policymakers seeking to leverage digital tools and support mechanisms for enhanced business performance.

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