

Strategic Management of MSMEs: Market Orientation, Learning Orientation, and Business Performance, Mediated by Technology Orientation

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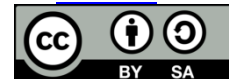
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ABSTRACT

This study aims to analyst the influence of market orientation and learning orientation on business performance, with technology orientation serving as a mediating variable. Technology orientation is vital for SMEs to adapt to technological advancements and maintain competitiveness. Data collection was conducted via questionnaires distributed to MSMEs supported by LAZISMU East Java, and the data were processed using SmartPLS with PLS-SEM analysis. The results indicate that market orientation and learning orientation directly influence both technology orientation and business performance. Furthermore, technology orientation mediates the impact of market orientation and learning orientation on business performance. Integrating market orientation, learning orientation, and technology orientation results in MSMEs that are not only capable of responding to market needs but are also adaptive, innovative, and highly competitive. Consequently, a development strategy combining market-based and learning-based approaches is expected to foster sustainable business growth and strengthen MSME resilience in the face of increasingly complex business environment dynamics.

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1. Introduction

Empirical evidence further highlights the strategic importance of SMEs in Indonesia. According to the Ministry of Cooperatives and SMEs of the Republic of Indonesia, MSMEs account for more than 99% of all business entities, contribute approximately 61% of Indonesia's Gross Domestic Product (GDP), and absorb around 97% of the national workforce. Despite their substantial economic contribution, many SMEs continue to face structural constraints, including limited technological capability, weak innovation capacity, inadequate access to financing, and insufficient managerial competencies. These limitations reduce their ability to respond effectively to rapidly changing market conditions and intensifying competition. MSMEs play a vital role in the Indonesian economy because they make a significant contribution, particularly to gross domestic product and employment. MSMEs are also believed to possess high economic resilience, making them a pillar of stability for the financial system and the economy (Tjahjadi et al., 2022). However, the development of MSMEs still faces various challenges, one of which relates to business strategy development (D'souza et al., 2021).

Strategic management generally implies the process of managing, improving, and expanding products, processes, markets, and management to enhance business performance in the market. Companies need to comprehensively develop a strategic orientation that encompasses: leadership, processes, products, and implementation. Strategic orientation guides the ability to manage organizational resources, expertise in analyzing, marketing, and seizing opportunities, as well as managing access to information—both market-related and capital-related. The implementation of strategic innovation must be carried out by companies, serving as a strategic tool to enhance competitiveness and improve business performance (Cho & Lee, 2020; Herath & Mahmood, 2014; Ibarra-Cisneros et al., 2021; Sahi et al., 2020; Syahdan et al., 2020).

Business strategy management is essential for SMEs to achieve optimal performance. Business strategy guides the ability to manage organizational resources, expertise in analyzing, marketing, and seizing opportunities, as well as managing access to information—both market-related and capital-related (Khan et al., 2022; Rashid et al., 2020). Current business dynamics present both opportunities and challenges for every enterprise. Therefore, SME operators must be able to compete in the face of complex changes to generate sustainable competitive advantages that can grow and develop (Ferreira & Coelho, 2020). Business performance is crucial for every enterprise, including SMEs. Maximizing performance can be achieved by accurately determining business strategies. One approach to developing business strategies is through strategic orientation (Frambach et al., 2016). Strategic orientations that SMEs can adopt include market orientation, learning orientation, and technology orientation.

SMEs are required to understand market needs and be able to provide customer satisfaction that exceeds what competitors can offer. Market orientation involves understanding the short-term strengths and weaknesses, as well as the long-term capabilities and strategies, of existing and potential competitors (Falahat et al., 2021). In today's competitive landscape, no company operates without competitors; all are constantly vying for opportunities and customers. Therefore, marketing concepts must be operationalized to understand customer needs while assessing the presence of competitors (Puspita et al., 2020). Research demonstrates that the stronger the implementation of market-oriented concepts, the greater the improvement in company performance (Tsetse et al., 2021; Zhao, 2022). However, other studies suggest that market orientation does not have a direct impact on performance (D'souza et al., 2021; Frambach et al., 2016; Oluwatoyin et al., 2018; Sahi et al., 2020). Learning orientation can be defined as organizational activities that create and utilize knowledge to enhance competitive advantage. This includes acquiring and sharing information about customer needs, market changes, and competitor actions, as well as developing new technologies to create superior products compared to competitors' offerings

(Calantone et al., 2004; Karimi & Ahmadpour Daryani, 2017; Nasir et al., 2017; Nybakk, 2012; Ratnawati et al., 2018; Sajjad et al., 2022; Samson, 2015; Vega Martinez et al., 2020; Wahyono & Hutahayan, 2021). Learning-oriented organizations possess the capacity to assess, evaluate, and share information (Gong et al., 2009). Other empirical studies indicate that learning orientation does not influence performance (Amin, 2015; Meekaewkunchorn et al., 2021; Sawaeen & Ali, 2020).

Previous research findings exhibit inconsistencies, leaving a research gap from prior studies (Falahat et al., 2022; Sahi et al., 2020). Technology orientation is considered crucial for enhancing the performance of SMEs over time. Technology-oriented SMEs can implement production processes aligned with market needs, produce innovative products, and deliver the best value to consumers, thereby securing a higher market share and achieving better SME performance (Ibarra-Cisneros et al., 2021; Ramdani & Hidayati, n.d.).

LAZISMU is a national-level zakat institution dedicated to community empowerment through the productive utilization of zakat, infaq, waqf, and other charitable funds from individuals, institutions, companies, and other organizations. One of LAZISMU's programs is SME Empowerment, an initiative launched and dedicated by LAZISMU to develop the economic potential of families and communities to boost productivity in the effort to alleviate poverty. Currently, LAZISMU East Java supports approximately 62 SMEs spread across districts and cities in East Java.

This study focuses on MSMEs under the guidance of LAZISMU East Java. Improved performance among these MSMEs can serve as an indicator of the success of the programs implemented by LAZISMU. MSME performance can be enhanced through the effective implementation of business strategies. The business strategies that can be implemented include competitor orientation, customer orientation, and learning orientation. Learning orientation is used as a mediator because LAZISMU's efforts in providing guidance and training to MSMEs are expected to contribute to improved MSME performance.

2. Methods

This study was conducted using a quantitative-explanatory research approach. Explanatory research aims to explain the relationships among the variables under study and the effects of one variable on another. The research model is illustrated in the following figure:

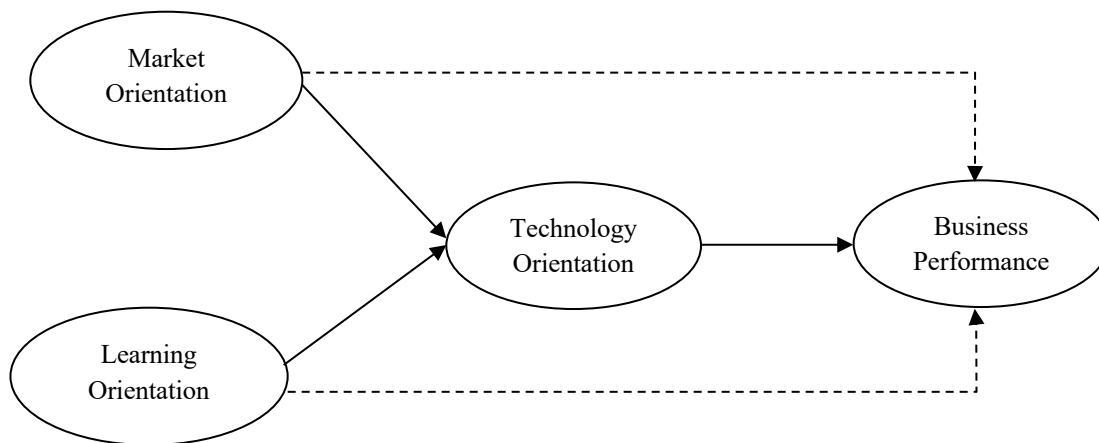


Figure 1. Research Model

The questionnaire was developed through the following stages (Saris, 2020): a) The questionnaire was developed by adapting items from various previous studies and subsequently modifying them to suit the characteristics of the tourism village, utilizing a Likert scale; b) The questionnaire underwent review by experts relevant to the research topic—specifically, academics and practitioners. The academics were lecturers from the Faculty of Economics and Business at Universitas Muhammadiyah Surabaya, while the practitioners were from the tourism agency's division responsible for tourism destination governance and development; c) A pilot test was conducted to ensure the research instrument met validity and reliability criteria. This pilot test involved administering the questionnaire to tourism village managers.

The population in this study consists of all 62 MSMEs under the guidance of LAZISMU East Java. The sampling technique used was census sampling, meaning the entire population served as the study's respondents. The unit of analysis in this study is the SME operators under the guidance of LAZISMU. The research context focuses on the SME empowerment program implemented by LAZISMU, which not only provides financial assistance but also business mentoring and training.

Research data was collected using a questionnaire distributed to all SMEs under the guidance of LAZISMU East Java. The questionnaire instrument was developed from previous research and adapted to the research context. The measurement scale used is a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Before use, the research instrument was tested through: 1) Validity testing to ensure measurement accuracy. 2) Reliability tests to ensure the instrument's consistency.

Table 1. Variable and Measurement

Variable	Measurement	Refferences
Market Orientation	- Has a goal to satisfy customers - Has a commitment and orientation to serve customers - Customer satisfaction is important in surviving against competitors - Has a strategy in creating customer satisfaction - Responds to competitors' actions that are considered to affect business growth - Has a uniqueness that is different from competitors	(Narver & Slater, 1990)
Technology Orientation	- Committed to R&D - Acquisition of new technologies - Implementation of the latest technologies in business processes	Ramdani, 2020

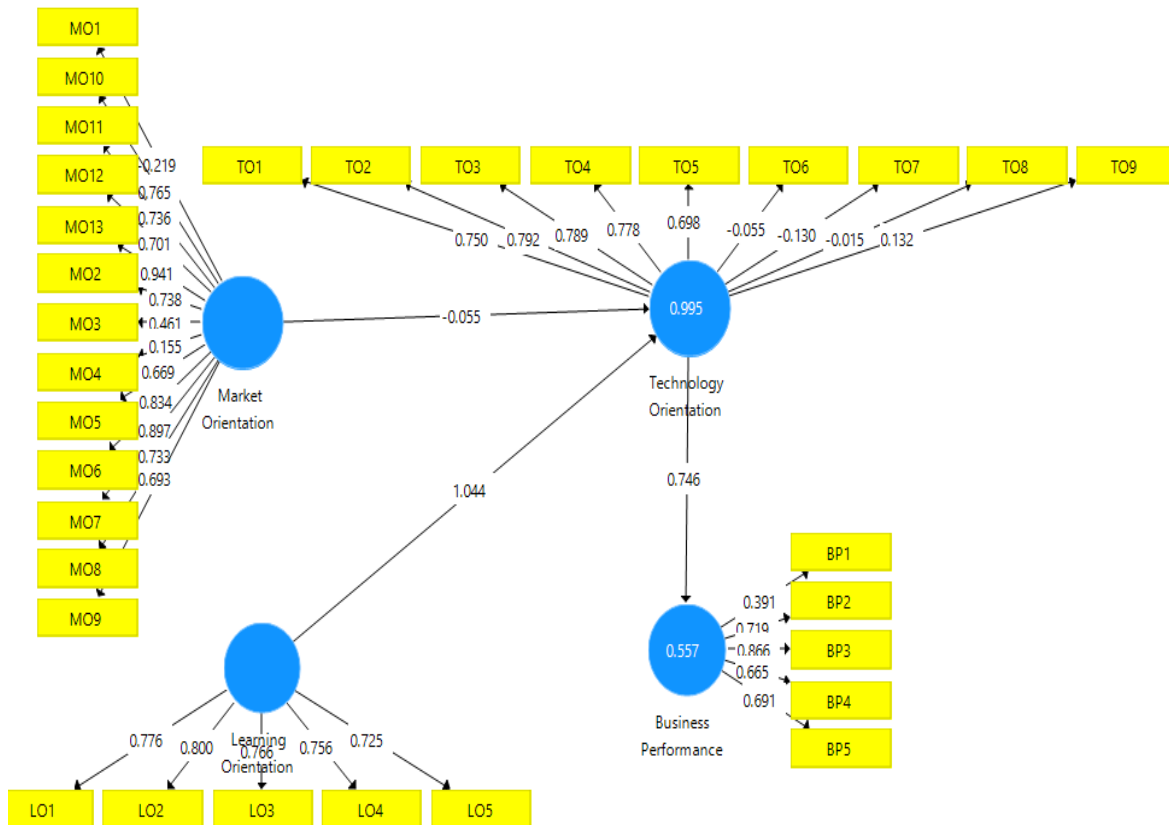
Learning Orientation	1. Committed to learning and developing	(Calantone et al., 2004)
	2. Committed to support in achieving goals	
	3. Willingness to evaluate activities	
	4. Accepting new input/ideas	
	5. Sharing knowledge	
Business Performance	1. Revenue Growth	(Sahi et al., 2020)
	2. Increase in visitors	
	3. Increase in profit	
	4. Increase in employees/employees	

Data analysis was conducted using the Partial Least Squares – Structural Equation Modeling (PLS-SEM) method with the assistance of SmartPLS software versi 3.0.

3. Results

Measurement Model Evaluation (Outer Model)

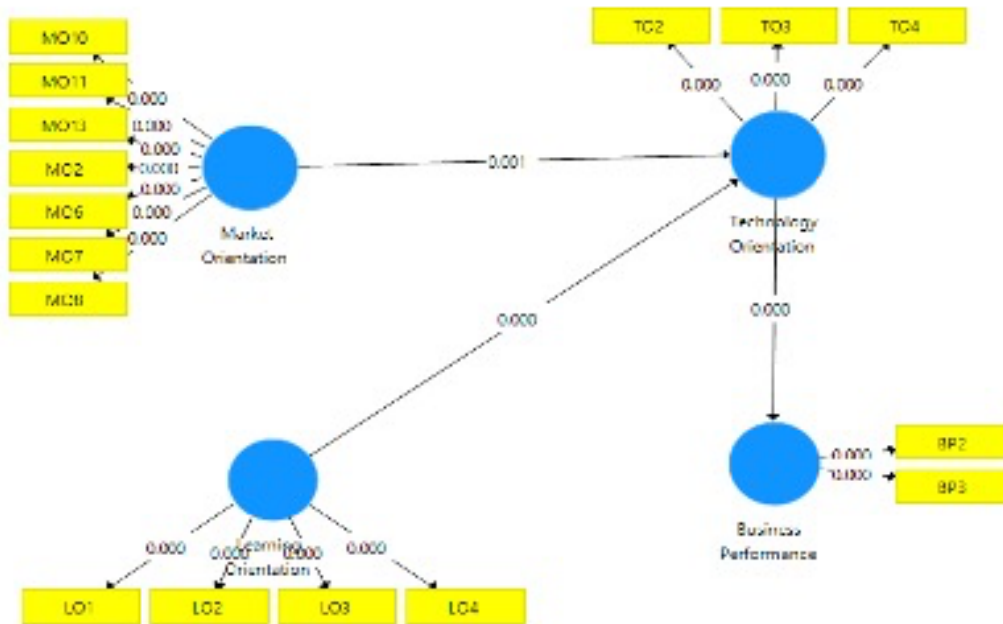
The first step in PLS-SEM evaluation is to conduct measurement model testing. This initial step involves analyzing the reliability of the measurement model; in PLS-SEM analysis, all measures within each construct must demonstrate reliability, as evidenced by convergent validity, discriminant validity, and composite reliability. Convergent validity indicates the extent to which an indicator positively correlates with alternative indicators of the same construct. Several procedures must be followed to evaluate convergent validity, specifically by examining outer loading scores and the Average Variance Extracted (AVE). Figure 2 presents the outer loading test results regarding convergent validity standards. Test results are considered to satisfy convergent validity if the outer loading value exceeds 0.70 (Hair et al, 2017).



Source: Output SmartPLS 3.0

Figure 2. Results of data analysis using SmartPLS

Based on the results of the Structural Equation Modeling (SEM) analysis using the Partial Least Squares (PLS) approach, factor loadings should ideally be above 0.7. As shown in the figure above, nearly all items meet this criterion. Next, items with outer loadings < 0.7 were eliminated. Figure 3 shows the results of the hypothesis testing following the elimination process.



Source: Output SmartPLS 3.0

Figure 3. Results of Hypothesis Testing After Elimination

Next, convergent validity was evaluated by examining the Average Variance Extracted (AVE) values, with an acceptable cut-off value of greater than 0.500. The table below shows that the AVE values for each construct exceed 0.500; therefore, it can be concluded that each construct meets the criteria for convergent validity.

Table 2. The Average Variance Extracted (AVE)

	Average Variance Extracted (AVE)	Result
MO	0,655	Valid
LO	0,679	Valid
TO	0,602	Valid
BP	0,701	Valid

Source: Output SmartPLS 3.0

Internal consistency reliability testing was conducted by examining Cronbach's alpha and composite reliability scores. Each indicator is considered reliable if the Cronbach's alpha and composite reliability values exceed 0.60 (Hair et al, 2017). Table 3 shows composite reliability values above 0.60; thus, it can be concluded that all constructs meet the criteria for internal consistency reliability. Once all statement items have met the criteria for convergent validity, the next step is to assess discriminant validity. Discriminant validity testing is conducted using two approaches: examining the Fornell-Larcker Criterion scores.

Table 3. Discriminant validity test results (Fornell-Larcker)

	MO	BP	LO	TO
MO	0,804			
BP	0,620	0,843		
LO	0,745	0,625	0,824	
TO	0,781	0,491	0,682	0,810

Source: Output SmartPLS 3.0

The fulfillment of the Fornell-Larcker criterion is evidenced by the fact that the square root of the AVE for each construct is higher than that of the other constructs. The next step in the measurement evaluation is to test internal consistency reliability. This procedure is conducted to ensure that all question items consistently measure the indicators. Internal consistency reliability is assessed by examining Cronbach's alpha and composite reliability scores. An indicator is considered reliable if the Cronbach's alpha and composite reliability values exceed 0.60 (Hair et al., 2017).

Table 4. Reliability testing

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Result
MO	0,890	0,891	0,916	Reliabel
BP	0,858	0,870	0,904	Reliabel

LO	0,843	0,843	0,894	Reliabel
TO	0,889	0,893	0,914	Reliabel

Source: Output SmartPLS 3.0

The table shows composite reliability values above 0.60; therefore, it can be concluded that all constructs meet the criterion for internal consistency reliability.

Structural Model Evaluation (Inner Model)

Upon confirmation, all constructs demonstrated reliable and valid results. The next step was to analyze the structural model. This stage involved examining the model's predictive capability and the relationships between constructs. Table 5.21 shows VIF values greater than 0.02 and less than 5 (Hair et al., 2017); thus, it can be concluded that no collinearity issues were found based on the VIF values.

The next stage in PLS-SEM analysis is hypothesis testing. This step is carried out after achieving satisfactory results in the measurement model (outer model) evaluation phase. Evaluation of the structural model (inner model)—which forms part of the hypothesis testing—is conducted using bootstrapping with 10,000 resamples to examine direct effects (Hair et al., 2017). To determine the relationships among the variables in the research model, path coefficient tests were conducted using the PLS-SEM method. The results of these tests are presented in Table 5 below.

Table 5. Path Coefficient Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Learning Orientation -> Business Performance	0,595	0,606	0,108	5,494	0,000
Learning Orientation -> Technology Orientation	1,155	1,155	0,058	19,806	0,000

Market Orientation -> Business Performance	0,109	-0,106	0,030	3,617	0,000
Market Orientation -> Technology Orientation	0,211	-0,207	0,062	3,412	0,001
Technology Orientation -> Business Performance	0,515	0,527	0,105	4,900	0,000

Source: Output SmartPLS

The results of the hypothesis testing based on the path coefficient analysis are presented as follows: 1) Learning Orientation → Business Performance; Learning Orientation has a significant effect on Business Performance ($\beta = 0.595$; $p < 0.05$). 2) Learning Orientation → Technology Orientation; Learning Orientation has a significant effect on Technology Orientation ($\beta = 1.155$; $p < 0.05$). 3) Market Orientation → Business Performance; Market Orientation has a significant effect on Business Performance ($\beta = 0.109$; $p < 0.05$). 4) Market Orientation → Technology Orientation; Market Orientation has a significant effect on Technology Orientation ($\beta = 0.211$; $p < 0.05$). 5) Technology Orientation → Business Performance; Technology Orientation has a significant effect on Business Performance ($\beta = 0.515$; $p < 0.05$).

Furthermore, the mediating effect was examined using the specific indirect effects analysis. The results are presented in table 6.

Table 6. Results of Indirect Effect Analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Learning Orientation -> Technology Orientation -> Business Performance	0,595	0,606	0,108	5,494	0,000
Market Orientation -> Technology Orientation -> Business Performance	0,609	0,706	0,030	3,617	0,000

Source: Output SmartPLS 3

The results of the mediation test indicate that the indirect effects of Market Orientation and Learning Orientation on Business Performance through Technology Orientation are significant. This is evidenced by the original sample values of 0.595 and 0.609, with T-statistics of 5.494 and 3.617 and p-values of 0.000, which are below the significance level of 0.05. These results confirm that Technology Orientation mediates the relationship between Market Orientation and Learning Orientation on Business Performance.

4. Discussion

The Impact of Market Orientation on Business Performance

The findings of this study reveal that market orientation has a positive and statistically significant effect on business performance. These results indicate that MSMEs that consistently focus on understanding customer needs, monitoring competitor activities, and responding to market changes are more likely to achieve superior business performance. Although the standardized coefficient is relatively modest, the significant relationship demonstrates that market orientation remains an essential strategic capability for enhancing organizational performance among MSMEs.

From the perspective of the Resource-Based View (RBV), market orientation represents a valuable intangible organizational resource that enables firms to acquire and utilize market knowledge more effectively than competitors. According to the RBV, sustainable competitive advantage arises from valuable, rare, inimitable, and non-substitutable (VRIN) resources. Market-oriented firms continuously generate, disseminate, and respond to market intelligence regarding customers and competitors, allowing them to allocate resources efficiently and create superior customer value. Consequently, market orientation enhances firms' capability to identify market opportunities, anticipate

environmental changes, and formulate appropriate competitive strategies that ultimately improve business performance.

Furthermore, the findings are consistent with those reported by (Falahat et al., 2021), who concluded that market orientation strengthens business capability and international performance by enabling firms to recognize market opportunities and develop appropriate strategic responses. Similarly, (Cho & Lee, 2020; Herath & Mahmood, 2014; Ibarra-Cisneros et al., 2021; Sahi et al., 2020; Syahdan et al., 2020) reported that strategic orientation, including market orientation, positively influences SME performance by enhancing firms' ability to adapt to competitive environments. These studies collectively suggest that market orientation serves as a strategic resource that improves organizational effectiveness through superior market intelligence and responsiveness.

Overall, the findings confirm that market orientation remains a fundamental strategic capability for MSMEs. Consistent with the Resource-Based View, firms that effectively acquire, disseminate, and utilize market intelligence can develop superior value propositions and improve organizational performance. More importantly, the study demonstrates that the performance-enhancing effect of market orientation becomes substantially stronger when supported by technology orientation, highlighting the importance of integrating market knowledge with technological capability to achieve sustainable competitive advantage in increasingly dynamic business environments.

The Impact of Market Orientation on Technology Orientation

Market orientation has also been shown to significantly influence technology orientation. This indicates that an understanding of market dynamics drives SMEs to adopt relevant technologies to meet customer needs and enhance competitiveness. Market-oriented SMEs will be more proactive in utilizing technology as a tool to improve efficiency, product quality, and speed in responding to market changes.

From the perspective of the Resource-Based View (RBV), market orientation can be considered a valuable intangible organizational resource that enables firms to identify market opportunities and respond effectively to environmental changes. Firms that possess strong market intelligence are more capable of recognizing technological developments that can enhance operational efficiency, improve product quality, and strengthen customer satisfaction. As a result, market-oriented firms are more likely to invest in and adopt new technologies as strategic tools for maintaining competitiveness.

The findings of this study support the argument that market orientation serves as an important antecedent of technology orientation. SMEs that actively gather information about customer preferences and competitor activities tend to recognize the need for technological solutions that improve responsiveness to market demands. Consequently, market knowledge stimulates the adoption of digital tools, modern production techniques, and innovative technologies that support business growth.

These results are consistent with previous studies. (Ibarra-Cisneros et al., 2021; Syahdan et al., 2020). Business strategy management is found that strategic orientations, including market orientation, contribute to the development of organizational capabilities that support technological advancement and firm competitiveness. Likewise, (Falahat et al., 2021) reported that market-oriented firms are more capable of building business capabilities that enhance organizational performance through innovation and technology adoption. Furthermore, D'Souza et al. emphasized that market orientation encourages firms to pursue innovation as a response to customer needs and market opportunities, which often requires the utilization of advanced technologies.

In the context of SMEs, a strong market orientation encourages business owners to continuously observe market trends, customer expectations, and competitor actions. This awareness motivates them to adopt appropriate technologies that enhance productivity, improve service quality, and accelerate responses to market changes. Therefore, technology orientation emerges as a strategic consequence of market orientation, enabling SMEs to

transform market knowledge into technological capabilities that support sustainable competitive advantage and long-term business development.

The Effect of Learning Orientation on Business Performance

The results of the study indicate that learning orientation plays a significant role in improving the business performance of MSMEs. MSMEs with a high level of learning orientation tend to be more open to new knowledge, capable of evaluating past experiences, and more adaptable in facing changes in the business environment. From a theoretical perspective, this prominent relationship is deeply rooted in the Resource-Based View (RBV) of the firm, which posits that sustainable competitive advantages and superior performance are achieved through the possession and strategic deployment of valuable, rare, inimitable, and non-substitutable resources. Within this framework, a learning orientation functions as a vital intangible resource and organizational capability. It allows small firms to continuously update their knowledge base, challenge outdated operational routines, and optimize their restricted physical assets to better adapt to complex, shifting market environments. By treating learning as a strategic tool, these enterprises can successfully translate internal knowledge acquisition into practical, value-creating market behaviors that drive sustainable economic growth.

This study's positive results strongly align with several landmark investigations in strategic management literature. For instance, (Rusmawati et al., 2025) famously established that a firm's learning orientation directly enhances its innovation capabilities, which sequentially yields higher corporate performance. Similarly, (Vega Martinez et al., 2020; Wahyono & Hutahayan, 2021). demonstrated that dimensions of learning orientation serve as critical drivers for organizational competitiveness and performance in small and medium-sized industries. The ability to continuously learn enables SME operators to develop more effective and innovative business strategies. Thus, learning orientation becomes a key factor

in creating sustainable competitive advantage and contributes to an overall improvement in business performance.

The Effect of Learning Orientation on Technology Orientation

In addition to influencing business performance, learning orientation has also been shown to have a significant impact on technology orientation. This indicates that SMEs with a strong learning culture tend to be more receptive to, better able to understand, and more willing to adopt new technologies. Theoretically, this relationship is rooted in the Resource-Based View (RBV) and Dynamic Capabilities perspective, where learning orientation acts as a high-order intangible resource. Dynamic capabilities dictate that for an enterprise to effectively absorb and deploy technological assets, it must first possess the capacity to learn, unlearn, and reconfigure its routines. Consequently, a technology orientation does not emerge in isolation; it is an operational capability that develops naturally when a firm accumulates the necessary knowledge assets to recognize and implement new technological trends.

This finding strongly aligns with the foundational work of (Rusmawati et al., 2025) which states that a firm's capacity to learn is the primary driver of its technological and innovative capabilities. It also supports studies by (Ibarra-Cisneros et al., 2021; Ramdani & Hidayati, 2025.). which argue that an active internal learning culture is a vital prerequisite for successful technological integration. Ultimately, this analysis confirms that technology cannot be adopted effectively in a vacuum; a continuous learning process is what transforms technology from a standalone expense into an integrated, value-generating enabler of business strategy. A continuous learning process encourages business owners to be more responsive to technological advancements, enabling them to integrate technology into their

business operations. Consequently, learning orientation can serve as a foundation for enhancing SMEs' technological readiness.

The impact of technology orientation on Business Performance

The results of this study demonstrate that technology orientation has a significant positive impact on business performance. This finding suggests that SMEs that actively adopt, develop, and utilize technology in their business operations are more likely to achieve superior performance outcomes. Technology-oriented firms are better positioned to improve operational efficiency, enhance product quality, accelerate innovation processes, and respond more effectively to changing customer demands and market conditions. As a result, these firms can strengthen their competitive position and generate higher levels of business growth.

From a theoretical perspective, the relationship between technology orientation and business performance can be explained through the Resource-Based View (RBV) theory. RBV argues that firms achieve sustainable competitive advantages when they possess valuable, rare, inimitable, and non-substitutable resources. Technology orientation represents an important organizational capability that enables firms to acquire, integrate, and exploit technological resources to create value. In the context of SMEs, technology orientation facilitates the development of innovative products, more efficient production processes, and improved customer service, all of which contribute to enhanced business performance.

The results of this study support previous empirical findings. For example, (Ibarra-Cisneros et al., 2021; Ramdani & Hidayati, 2025).found that strategic orientations, including technology orientation, significantly contribute to firm performance by enhancing firms' ability to adapt and innovate. Similarly, Ramdani and Hidayati argued that technology-oriented SMEs are capable of aligning production processes with market needs,

developing innovative products, and delivering superior value to customers, which ultimately improves business performance. In addition, (Sahi et al., 2020).highlighted that technology-related strategic orientations enable SMEs to achieve operational ambidexterity and enhance organizational performance in the era of Industry 4.0. These studies collectively indicate that technology orientation serves as a strategic mechanism that supports innovation, efficiency, and long-term competitiveness.

In the context of SMEs assisted by LAZISMU East Java, technology orientation plays an essential role in helping business operators improve productivity and competitiveness. Through training, mentoring, and technology adoption initiatives, SMEs can better utilize digital tools, modern production techniques, and information systems to support business development. Consequently, strengthening technology orientation can become an effective strategy for enhancing SME performance and ensuring sustainable business growth in increasingly competitive markets.

The Effect of Market Orientation on Business Performance is Mediated by Technology Orientation

The results of this study demonstrate that technology orientation significantly mediates the relationship between market orientation and business performance. This finding indicates that market orientation alone is insufficient to maximize business performance. Instead, firms that successfully transform market knowledge into technological capabilities are more likely to achieve superior business outcomes. In other words, technology orientation serves as a strategic mechanism through which market orientation enhances business performance.

From the perspective of the Resource-Based View (RBV), market orientation provides firms with valuable market intelligence regarding customer needs and competitor strategies, while technology orientation enables firms to convert this knowledge into

innovative products, efficient business processes, and competitive advantages. RBV argues that sustainable business performance is achieved not only through the possession of strategic resources but also through the firm's capability to integrate and deploy these resources effectively. Therefore, technology orientation complements market orientation by transforming market information into innovation and operational improvements that generate superior performance.

The results are consistent with previous empirical studies. (Falahat et al., 2021) found that market orientation improves firm performance through innovation capability and technological competence. Similarly, Tjahjadi et al. reported that market-oriented firms achieve higher business performance when supported by technological capabilities that enhance responsiveness to market changes. Likewise, Syahdan et al. concluded that strategic orientations create greater organizational performance when combined with innovation and technology adoption.

The findings also support recent studies highlighting technology orientation as a mediating capability. (Rusmawati et al., 2025) demonstrated that market orientation encourages technology adoption, which subsequently improves MSME competitiveness and business performance. Similarly, (Tsetse et al., 2021; Zhao, 2022) emphasized that firms capable of integrating customer knowledge with technological innovation are better positioned to achieve sustainable competitive advantage.

Practically, these findings imply that MSMEs should not only focus on understanding customer preferences and monitoring competitors but also invest in technology adoption, digital transformation, and innovation. Market information becomes more valuable when it is translated into technological improvements, such as digital marketing, production innovation, and process automation. Therefore, technology orientation acts as a critical bridge that converts market knowledge into superior business performance, enabling MSMEs to achieve sustainable growth and long-term competitiveness.

The Effect of Market Orientation on Business Performance is Mediated by Technology Orientation

The findings of this study indicate that technology orientation significantly mediates the relationship between learning orientation and business performance. This result suggests that learning orientation not only directly enhances business performance but also indirectly improves performance by fostering technology orientation. Firms that continuously acquire, share, and utilize knowledge are more capable of adopting and exploiting new technologies, which ultimately leads to superior business performance. Thus, technology orientation acts as an important mechanism that transforms organizational learning into tangible competitive outcomes.

From the perspective of the Resource-Based View (RBV), learning orientation represents a strategic intangible resource that enables firms to develop valuable organizational knowledge, while technology orientation reflects the firm's capability to leverage this knowledge through technological innovation. RBV argues that sustainable competitive advantage is achieved when organizations effectively integrate valuable resources and capabilities. In this context, learning orientation provides the knowledge foundation, whereas technology orientation converts that knowledge into innovative products, efficient processes, and improved organizational performance.

The findings are consistent with previous empirical studies. (Calantone et al., 2004) found that learning orientation strengthens firms' innovation capability, which subsequently improves organizational performance, that learning-oriented firms are more capable of developing new technologies and innovations, resulting in superior business performance. Furthermore, (Falahat et al., 2021) reported that technology capability serves as an important mechanism linking strategic orientations with firm performance, while (Tjahjadi et al., 2022) emphasized that organizational learning enhances technology adoption and organizational competitiveness.

The results also support the findings of Rusmawati et al., who found that learning orientation encourages MSMEs to adopt digital technologies and innovation, thereby strengthening competitiveness and business performance. The significant indirect effect found in this study confirms that firms with strong learning cultures are more willing to embrace technological change, enabling them to improve productivity, operational efficiency, and customer value.

From a practical perspective, these findings imply that MSMEs should strengthen learning orientation by promoting continuous learning, knowledge sharing, employee training, and organizational experimentation. However, learning activities alone are insufficient unless they are translated into technology adoption and innovation. Therefore, MSMEs should integrate learning programs with digital transformation initiatives, technological investment, and innovation strategies to maximize business performance. By combining learning orientation with technology orientation, firms can develop sustainable competitive advantages and achieve long-term business growth in increasingly dynamic and technology-driven markets.

5. Conclusion

The findings of this study confirm that market orientation and learning orientation are strategic capabilities that play a crucial role in improving the business performance of MSMEs. These two orientations not only have a direct impact on performance but also contribute to fostering a technology orientation as a reinforcing mechanism. From a Resource-Based View (RBV) perspective, learning orientation and market orientation can be viewed as intangible resources capable of creating sustainable competitive advantage when managed effectively.

The research findings also indicate that technology orientation does not have a significant direct impact on business performance; however, it plays a crucial role as a

mediating variable. This suggests that technology is not a standalone factor but must be integrated with learning capabilities and market understanding to achieve optimal impact on performance. In other words, technology functions as an enabler that reinforces the influence of business strategies already possessed by SMEs. This study contributes to the strategic management literature by extending the application of the Resource-Based View (RBV) in the context of SMEs operating within community-based empowerment programs. The findings demonstrate that both market orientation and learning orientation function as valuable intangible organizational resources that significantly enhance business performance, either directly or indirectly through technology orientation

The findings provide important implications for SME managers, policymakers, and institutions responsible for SME development. First, SME owners should strengthen both market orientation and learning orientation simultaneously instead of relying solely on technology adoption. Understanding customer needs, continuously monitoring competitors, and fostering organizational learning are essential prerequisites for maximizing the benefits of technological investments. Several limitations should be acknowledged. First, this study was conducted using a relatively small population consisting of 62 SMEs participating in a single empowerment program, which may limit the generalizability of the findings to other SME sectors or geographical regions. Second, all variables were measured using self-reported questionnaires completed by SME owners, creating the possibility of common method bias and subjective evaluation of business performance. Finally, the research focused primarily on three strategic orientations. Other organizational capabilities and environmental factors that may influence SME performance were not incorporated into the research model.

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7. References

- Amin, M. (2015). The effect of entrepreneurship orientation and learning orientation on SMEs' performance: an SEM-PLS approach. *J. for International Business and Entrepreneurship Development*, 8(3), 215. <https://doi.org/10.1504/jibed.2015.070797>.
- Calantone, R. J., Tamer, C. S., & Yushan, Z. (2004). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31, 515 citation_lastpage=524.
- Cho, Y. H., & Lee, J. H. (2020). A study on the effects of entrepreneurial orientation and learning orientation on financial performance: Focusing on mediating effects of market orientation. *Sustainability (Switzerland)*, 12(11), 1–19. <https://doi.org/10.3390/su12114594>.
- D'souza, C., Nanere, M., Marimuthu, M., Arwani, M., & Nguyen, N. (2021). Market orientation, performance and the mediating role of innovation in Indonesian SMEs. *Asia Pacific Journal of Marketing and Logistics*. <https://doi.org/10.1108/APJML-08-2021-0624>.
- Falahat, M., Lee, Y. Y., Soto-Acosta, P., & Ramayah, T. (2021). Entrepreneurial, market, learning and networking orientations as determinants of business capability and international performance: the contingent role of government support. *International Entrepreneurship and Management Journal*, 17(4), 1759–1780. <https://doi.org/10.1007/s11365-020-00738-y>.

- Falahat, M., Soto-Acosta, P., & Ramayah, T. (2022). Analysing the importance of international knowledge, orientation, networking and commitment as entrepreneurial culture and market orientation in gaining competitive advantage and international performance. *International Marketing Review*, 39(3), 463–481. <https://doi.org/10.1108/IMR-02-2021-0053>.
- Ferreira, J., & Coelho, A. (2020). Dynamic capabilities, innovation and branding capabilities and their impact on competitive advantage and SME's performance in Portugal: the moderating effects of entrepreneurial orientation. *International Journal of Innovation Science*, 12(3), 255–286. <https://doi.org/10.1108/IJIS-10-2018-0108>.
- Frambach, R. T., Fiss, P. C., & Ingenbleek, P. T. M. (2016). How important is customer orientation for firm performance? A fuzzy set analysis of orientations, strategies, and environments. *Journal of Business Research*, 69(4), 1428–1436. <https://doi.org/10.1016/j.jbusres.2015.10.120>.
- Gong, Y., Huang, J. C., & Farh, J. L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of Management Journal*, 52(4), 765–778. <https://doi.org/10.5465/AMJ.2009.43670890>.
- Hair, J., Hult, G. T., Ringle, C., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) - Joseph F. Hair, Jr., G. Tomas M. Hult, Christian Ringle, Marko Sarstedt. In *Sage*.
- Herath, H. M. A., & Mahmood, R. (2014). Strategic orientations and SME performance: Moderating effect of absorptive capacity of the firm. *Asian Social Science*, 10(13), 95–107. <https://doi.org/10.5539/ass.v10n13p95>.
- Ibarra-Cisneros, M. A., Demuner-Flores, M. del R., & Hernández-Perlines, F. (2021). Strategic orientations, firm performance and the moderating effect of absorptive capacity. *Journal of Strategy and Management*, 14(4), 582–611. <https://doi.org/10.1108/JSMA-05-2020-0121>.

- Karimi, A., & Ahmadpour Daryani, M. (2017). Effect of corporate entrepreneurship on firm performance in Iranian ASMEs: The mediation role of knowledge creation and learning orientation. *Journal of Agricultural Science and Technology*, 19(2), 261–277.
- Khan, R. U., Salamzadeh, Y., Abbasi, M. A., Amin, A., & Sahar, N. E. (2022). Strategic Orientation and Sustainable Competitive Performance of Family Firms: Evidence of an Emerging Economy. *Journal of Small Business Strategy*, 32(2), 67–82. <https://doi.org/10.53703/001c.32406>.
- Meekaewkunchorn, N., Szczepańska-Woszczyzna, K., Muangmee, C., Kassakorn, N., & Khalid, B. (2021). Entrepreneurial orientation and sme performance: The mediating role of learning orientation. *Economics and Sociology*, 14(2), 294–312. <https://doi.org/10.14254/2071-789X.2021/14-2/16>.
- Narver, J. C., & Slater, S. F. (1990). The Effect of a Market Orientation on Business Profitability. In *Source: Journal of Marketing* (Vol. 54, Number 4).
- Nasir, W. M. N. bin W. M., Al Mamun, A., & Breen, J. (2017). Strategic Orientation and Performance of SMEs in Malaysia. *SAGE Open*, 7(2). <https://doi.org/10.1177/2158244017712768>.
- Nybakk, E. (2012). Learning orientation, innovativeness and financial performance in traditional manufacturing firms: A higher-order structural equation model. *International Journal of Innovation Management*, 16(5). <https://doi.org/10.1142/S1363919612003873>.
- Oluwatoyin, A. M., Olufunke, A. P., & Salome, I. O. (2018). The Impact of Market Orientation on Performance of Selected Hotels in Ondo State, Nigeria. *Open Journal of Business and Management*, 06(03), 616–631. <https://doi.org/10.4236/ojbm.2018.63047>.
- Puspita, L. E., Christiananta, B., & Ellitan, L. (2020). The effect of strategic orientation, supply chain capability, innovation capability on competitive advantage and performance of furniture retails. *International Journal of Scientific and Technology Research*, 9(3), 4521–4529.

- Ramdani, R. A., & Hidayati, R. (n.d.). INTERVENING (Studi pada Industri Kecil dan Menengah Bordir di Kota Tasikmalaya). *DIPONEGORO JOURNAL OF MANAGEMENT*, 12(1).
- Rashid, M. M., Ali, M. M., & Hossain, D. M. (2020). Strategic management accounting practices: a literature review and opportunity for future research. *Asian Journal of Accounting Research*, 6(1), 109–132. <https://doi.org/10.1108/AJAR-06-2019-0051>.
- Ratnawati, Soetjipto, B. E., Murwani, F. D., & Wahyono, H. (2018). The Role of SMEs' Innovation and Learning Orientation in Mediating the Effect of CSR Programme on SMEs' Performance and Competitive Advantage. *Global Business Review*, 19(3_suppl), S21–S38. <https://doi.org/10.1177/0972150918757842>.
- Rusmawati, Z., Oktaviani, M., & Solehah, A. R. (2025). The Mediating Role of Learning Orientation on the Effect of Customer and Competitor Orientation on MSME Business Performance. *Jurnal Sentralisasi*.
- Sahi, G. K., Gupta, M. C., & Cheng, T. C. E. (2020). The effects of strategic orientation on operational ambidexterity: A study of indian SMEs in the industry 4.0 era. *International Journal of Production Economics*, 220(May), 107395. <https://doi.org/10.1016/j.ijpe.2019.05.014>.
- Sajjad, A., Ibrahim, Y., & Shamsuddin, J. (2022). The Moderating Role of Environmental Turbulence between Learning Orientation and SME Performance in the Manufacturing Sector of Pakistan. *Journal of Distribution Science*, 20(5), 1–11. <https://doi.org/10.15722/jds.20.05.202205.1>.
- Samson, A. T. (2015). The Impact of Entrepreneurial Orientation, Reconfiguring Capability and Moderation of Environmental Turbulence on Export Performance of SMEs in Nigeria. *Journal of Economics and Behavioral Studies*, 7(3(J)), 76–87. [https://doi.org/10.22610/jebs.v7i3\(j\).584](https://doi.org/10.22610/jebs.v7i3(j).584).
- Sawaeen, F. A. A., & Ali, K. A. M. (2020). The impact of entrepreneurial leadership and learning orientation on organizational performance of SMEs: The mediating role of

- innovation capacity. *Management Science Letters*, 10(2), 369–380. <https://doi.org/10.5267/j.msl.2019.8.033>.
- Syahdan, R., Djaelani, Y., & Mahdi, S. A. R. (2020). Strategic orientation and the performance of SMEs in Indonesia: The mediating role of access to finance. *Management Science Letters*, 10(5), 1151–1160. <https://doi.org/10.5267/j.msl.2019.10.026>.
- Tjahjadi, B., Soewarno, N., Nadyaningrum, V., & Aminy, A. (2022). Human capital readiness and global market orientation in Indonesian Micro-, Small- and-Medium-sized Enterprises business performance. *International Journal of Productivity and Performance Management*, 71(1), 79–99. <https://doi.org/10.1108/IJPPM-04-2020-0181>.
- Tsetse, E. K. K., Mahmoud, M. A., Blankson, C., & Odoom, R. (2021). The impact of stakeholder market orientation on sustainability performance at tourism destinations. *Management Research Review*. <https://doi.org/10.1108/MRR-04-2021-0290>.
- Vega Martinez, J. E., Martinez Serna, M. D. C., & Parga Montoya, N. (2020). Dimensions of learning orientation and its impact on organizational performance and competitiveness in smes. *Journal of Business Economics and Management*, 21(2), 395–420. <https://doi.org/10.3846/jbem.2020.11801>.
- Wahyono, & Hutahayan, B. (2021). The relationships between market orientation, learning orientation, financial literacy, on the knowledge competence, innovation, and performance of small and medium textile industries in Java and Bali. *Asia Pacific Management Review*, 26(1), 39–46. <https://doi.org/10.1016/j.apmr.2020.07.001>.
- Zhao, X. (2022). Customer Orientation: A Literature Review Based on Bibliometric Analysis. *SAGE Open*, 12(1). <https://doi.org/10.1177/21582440221079804>