International Journal of Business and Quality Research

https://e-journal.citakonsultindo.or.id/index.php/IJBQR
E-ISSN: 2985-9468

The Effects of Knowledge Acquisition and Knowledge Application on MSME Competitiveness: A Structural Equation Modeling Approach

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Abstract

Knowledge has become a strategic resource for enhancing the competitiveness of Micro, Small, and Medium Enterprises (MSMEs) in an increasingly dynamic business environment. This study examines the effects of Knowledge Acquisition and Knowledge Application on MSME Competitiveness through the mediating role of Knowledge Management. A quantitative explanatory approach was employed using a survey of 160 MSME owners and managers from various business sectors in Kerinci Regency, Indonesia. Data were collected using structured questionnaires and analyzed through Structural Equation Modeling (SEM) with AMOS. The results indicate that the proposed model demonstrates a satisfactory goodness-of-fit, confirming its suitability for hypothesis testing. Knowledge Acquisition and Knowledge Application significantly strengthen Knowledge Management, while Knowledge Management exerts the strongest influence on MSME Competitiveness. In addition, both Knowledge Acquisition and Knowledge Application directly contribute to competitiveness, indicating that knowledge resources enhance business performance both directly and indirectly through effective knowledge management. This study contributes to the knowledge management literature by validating an integrated structural model within the context of mixed-sector MSMEs in a developing regional economy. Practically, the findings provide insights for policymakers and business support institutions to design capacity-building programs that strengthen knowledge management practices and improve the long-term competitiveness of MSMEs.

Keywords: Knowledge Acquisition, Knowledge Application, Knowledge Management, MSME Competitiveness, Structural Equation Modeling (SEM).

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are widely recognized as the backbone of Indonesia's economy because of their substantial contribution to employment generation, regional economic growth, poverty reduction, and income distribution. According to national economic statistics, MSMEs account for more than 99 percent of all business entities in Indonesia and contribute significantly to the country's Gross Domestic Product (GDP) (Sari and Maryanto, 2025). Beyond their economic contribution, MSMEs play an important role in fostering local entrepreneurship, encouraging innovation, and supporting sustainable regional development. In many regencies, including Kerinci Regency, MSMEs represent the dominant business sector, operating across various industries such as agriculture, food processing, handicrafts, retail trade, tourism, and services. Their diversity provides opportunities for local economic resilience but also presents managerial challenges, particularly in maintaining competitiveness in an increasingly dynamic business environment (Rahadian and Thamrin, 2023). The rapid development of digital technology, market globalization, changing consumer preferences, and intense competition require MSMEs to continuously improve their capabilities to survive and grow sustainably.

One of the most important organizational capabilities that determines the long-term competitiveness of MSMEs is Knowledge Management (KM). Knowledge Management enables organizations to identify, acquire, develop, share, and apply valuable knowledge in order to improve organizational performance and create sustainable competitive advantages. Unlike large corporations that generally possess sophisticated organizational systems and abundant financial resources, MSMEs often rely heavily on the knowledge, experience, and learning capabilities of their owners and employees (Irawati, Santoso and Prananingtyas, 2024). Therefore, the ability to obtain relevant knowledge from external and internal sources and subsequently transform that knowledge into practical business decisions becomes a strategic asset. Effective knowledge management supports innovation, improves operational efficiency, enhances product quality, and enables organizations to respond more quickly to environmental changes.

Among the various dimensions of Knowledge Management, Knowledge Acquisition and Knowledge Application have received considerable attention in organizational and business research (Kanaan *et al.*, 2024). Knowledge Acquisition refers to an organization's capability to obtain useful information and knowledge from customers, suppliers, competitors, government institutions, training programs, universities, digital platforms, and business networks (Djangone and El-Gayar, 2021). This capability enables MSMEs to understand market trends, technological developments, customer expectations, and business opportunities more effectively. Meanwhile, Knowledge Application refers to the

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capability of utilizing acquired knowledge to solve business problems, improve operational processes, develop innovative products, formulate strategic decisions, and enhance organizational performance (Chen and Tsai, 2019; Figueiredo, Magalhães and Huber, 2023). Possessing knowledge alone is insufficient if organizations are unable to transform that knowledge into practical actions that generate business value. Consequently, these two dimensions represent complementary organizational capabilities that directly influence the competitiveness of MSMEs.

The importance of Knowledge Acquisition and Knowledge Application becomes even more significant in regions such as Kerinci Regency. Kerinci possesses abundant natural resources, tourism potential, agricultural products, and local cultural heritage that provide numerous opportunities for MSME development. However, despite these advantages, many MSMEs continue to encounter various constraints, including limited access to business information, inadequate technological capability, low innovation capacity, restricted market expansion, and insufficient managerial competencies. These challenges often reduce the ability of MSMEs to compete with larger enterprises and products from other regions. Furthermore, digital transformation has fundamentally changed consumer behavior, marketing strategies, and business operations. MSMEs that fail to continuously acquire new knowledge and effectively apply it to their business activities may experience declining competitiveness and slower business growth.

Previous empirical studies have consistently demonstrated that Knowledge Management contributes positively to organizational performance, innovation capability, and competitive advantage (Sayyadi, 2019; Buntoro *et al.*, 2023; Yusriani, Patiro and Rekarti, 2024). Nevertheless, existing studies present several limitations that warrant further investigation. First, many previous studies have examined Knowledge Management as a single construct without distinguishing the specific contribution of its underlying dimensions. As a result, it remains unclear whether Knowledge Acquisition or Knowledge Application exerts a stronger influence on MSME competitiveness. Second, prior research has primarily focused on large organizations or manufacturing industries, whereas empirical evidence regarding mixed-sector MSMEs remains relatively limited. Third, most previous studies have concentrated on developed countries or major metropolitan areas, leaving regional contexts in developing economies, particularly rural and semi-rural areas such as Kerinci Regency, insufficiently explored. The socioeconomic characteristics, business environments, and resource limitations of MSMEs in Kerinci may produce different empirical relationships compared with findings obtained in urban settings.

Another important research gap concerns methodological approaches. Numerous previous studies investigating Knowledge Management and business performance have

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employed multiple regression analysis or Partial Least Squares Structural Equation Modeling (PLS-SEM). Although these approaches provide valuable insights, fewer studies have applied Covariance-Based Structural Equation Modeling (CB-SEM) using AMOS to validate the structural relationships among Knowledge Acquisition, Knowledge Application, and MSME competitiveness. SEM-AMOS offers stronger statistical capabilities in simultaneously evaluating measurement validity, construct reliability, model fit, and structural relationships among latent variables. Therefore, applying SEM-AMOS provides more comprehensive empirical evidence regarding the theoretical relationships between Knowledge Management dimensions and MSME competitiveness.

This study introduces several important novelties. First, instead of treating Knowledge Management as a unidimensional construct, this research decomposes it into two strategic dimensions, namely Knowledge Acquisition and Knowledge Application. This approach enables a more comprehensive understanding of how each dimension contributes individually to the competitiveness of MSMEs. Second, this study focuses specifically on mixed-sector MSMEs in Kerinci Regency, an area that has received limited attention in previous Knowledge Management research. The regional context provides valuable empirical evidence regarding how local business characteristics influence organizational learning and competitive performance. Third, the study employs Structural Equation Modeling using AMOS to validate both the measurement model and the structural model simultaneously, thereby producing more robust empirical findings than conventional analytical methods.

Based on the background, research gaps, and identified novelty, this study aims to examine the influence of Knowledge Acquisition and Knowledge Application on MSME competitiveness in Kerinci Regency by employing Structural Equation Modeling (SEM-AMOS). Specifically, the research seeks to analyze the direct effect of Knowledge Acquisition on MSME competitiveness, evaluate the direct effect of Knowledge Application on MSME competitiveness, and assess the overall structural relationship between these two dimensions of Knowledge Management and competitive performance. The findings are expected to contribute both theoretically and practically by providing a comprehensive understanding of how organizational knowledge capabilities strengthen MSME competitiveness and support sustainable regional economic development.

THEORETICAL REVIEW

This study is grounded in the Knowledge-Based View (KBV), which considers knowledge as one of the most strategically important organizational resources (Han *et al.*, 2024). The KBV is an extension of the Resource-Based View, which argues that firms can

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achieve sustainable competitive advantage when they possess resources that are valuable, rare, difficult to imitate, and difficult to substitute. Abusweilem and Abualoush (2019) emphasizes that knowledge is a critical resource because organizational activities depend on the ability of firms to integrate, coordinate, and apply specialized knowledge. In the context of micro, small, and medium enterprises (MSMEs), knowledge is particularly important because these enterprises often have limited financial, technological, and physical resources. Therefore, their competitiveness is strongly influenced by the knowledge, experience, skills, and learning capabilities of owners and employees.

Knowledge management enables MSMEs to develop their internal capabilities by systematically obtaining and using information that supports business activities. Effective knowledge management can improve decision-making, operational efficiency, innovation, product quality, customer service, and market responsiveness. Among the various knowledge management processes, knowledge acquisition and knowledge application are considered fundamental because they represent the ability of an enterprise to obtain relevant knowledge and transform it into practical business value (Núñez-Tabales, Puccia and González-Mohíno, 2024).

Knowledge Acquisition

Knowledge acquisition refers to the process through which an organization obtains information, ideas, experience, and expertise from internal and external sources. These sources may include customers, employees, suppliers, competitors, government institutions, universities, business associations, training programs, digital platforms, and market networks. Knowledge acquisition allows MSMEs to identify changes in consumer preferences, technological developments, market opportunities, regulatory requirements, and competitive conditions. The concept of knowledge acquisition is closely related to absorptive capacity, which refers to an organization's ability to recognize the value of external knowledge, assimilate it, and use it for commercial purposes (Gnawali, 2020; Sima *et al.*, 2022).

Knowledge Application

Knowledge application refers to an organization's ability to use acquired and existing knowledge in operational activities, strategic decisions, problem-solving, product development, marketing, and customer service. Knowledge does not automatically generate business value unless it is applied effectively. An enterprise may possess a large amount of information, but its performance will not improve if the information is not translated into concrete actions. Knowledge application enables MSMEs to improve production processes,

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E-ISSN: 2985-9468

reduce operational errors, develop innovative products, enhance service quality, and respond more quickly to customer needs (Mohammadi, 2024; Zhong and Liu, 2024).

MSME Competitiveness

MSME competitiveness refers to the ability of an enterprise to maintain and improve its market position compared with competitors. It may be reflected in product quality, innovation, productivity, customer satisfaction, market expansion, cost efficiency, and the ability to respond to environmental changes. Competitiveness is not determined solely by physical resources, but also by the capability of enterprises to manage knowledge strategically. Based on the KBV, knowledge acquisition provides MSMEs with relevant information, while knowledge application transforms that information into business improvements. Accordingly, this study proposes that both knowledge acquisition and knowledge application positively influence MSME competitiveness (Sari and Maryanto, 2025).

METHOD

Research Design

This study employed a quantitative explanatory research design to examine the effects of knowledge acquisition and knowledge application on the competitiveness of micro, small, and medium enterprises (MSMEs). The quantitative approach was selected because the study aimed to test causal relationships among latent variables using numerical data collected from MSME owners and managers.

The study used a cross-sectional survey design, in which data were collected at one point in time through a structured questionnaire. The research model consisted of two exogenous variables, namely knowledge acquisition and knowledge application, and one endogenous variable, namely MSME competitiveness. Structural Equation Modeling was used to evaluate both the measurement model and the structural relationships among the constructs.

Population and Sample

The population of this study comprised owners and managers of MSMEs operating in Kerinci Regency. The MSMEs represented various business sectors, including trade, food and beverage, agriculture-related businesses, handicrafts, services, tourism-supporting businesses, and other local economic activities.

The unit of analysis was the individual MSME owner or manager because these respondents were considered to have sufficient knowledge of business operations, decision-

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making processes, market conditions, and knowledge-management practices within their enterprises.

The study targeted approximately 160 respondents. The final sample size depended on the number of complete and usable questionnaires obtained during data collection in 16 item indicators times 10.

Sampling Technique

This study applied purposive sampling, which is a non-probability sampling technique used to select respondents based on predetermined criteria. Purposive sampling was considered appropriate because not all MSME actors possessed sufficient information regarding knowledge acquisition, knowledge application, and business competitiveness.

The selection focused on MSME owners and managers who were directly involved in acquiring business information and applying knowledge in operational and strategic decisions. Respondents were recruited from different business sectors to obtain broader evidence regarding knowledge-management practices among mixed-sector MSMEs.

Data were collected through direct questionnaire distribution and, where necessary, online survey forms. Before completing the questionnaire, respondents were informed about the purpose of the study, the confidentiality of their responses, and the voluntary nature of their participation.

Data Analysis Using SEM-AMOS

The data were analyzed using Structural Equation Modeling with Analysis of Moment Structures software. SEM-AMOS was selected because it enables the simultaneous assessment of relationships between latent constructs and their observed indicators. The analysis was conducted in several stages (Sari, Haryono and Yuliviona, 2024).

First, the data were screened to identify incomplete responses, missing values, outliers, and data-entry errors. Descriptive statistics were then used to present the characteristics of respondents and their MSMEs. Data normality was evaluated using skewness and kurtosis values. Second, Confirmatory Factor Analysis was performed to assess the measurement model. Indicator validity was evaluated using standardized factor loadings. Indicators with factor loadings of at least 0.50 were considered acceptable, while loadings of 0.70 or above were preferred. Construct reliability was evaluated using Composite Reliability, with a recommended minimum value of 0.70. Convergent validity was examined through Average Variance Extracted, with a value of at least 0.50 indicating that the construct explained an adequate proportion of the variance in its indicators. Discriminant validity was examined by comparing the square root of AVE with correlations

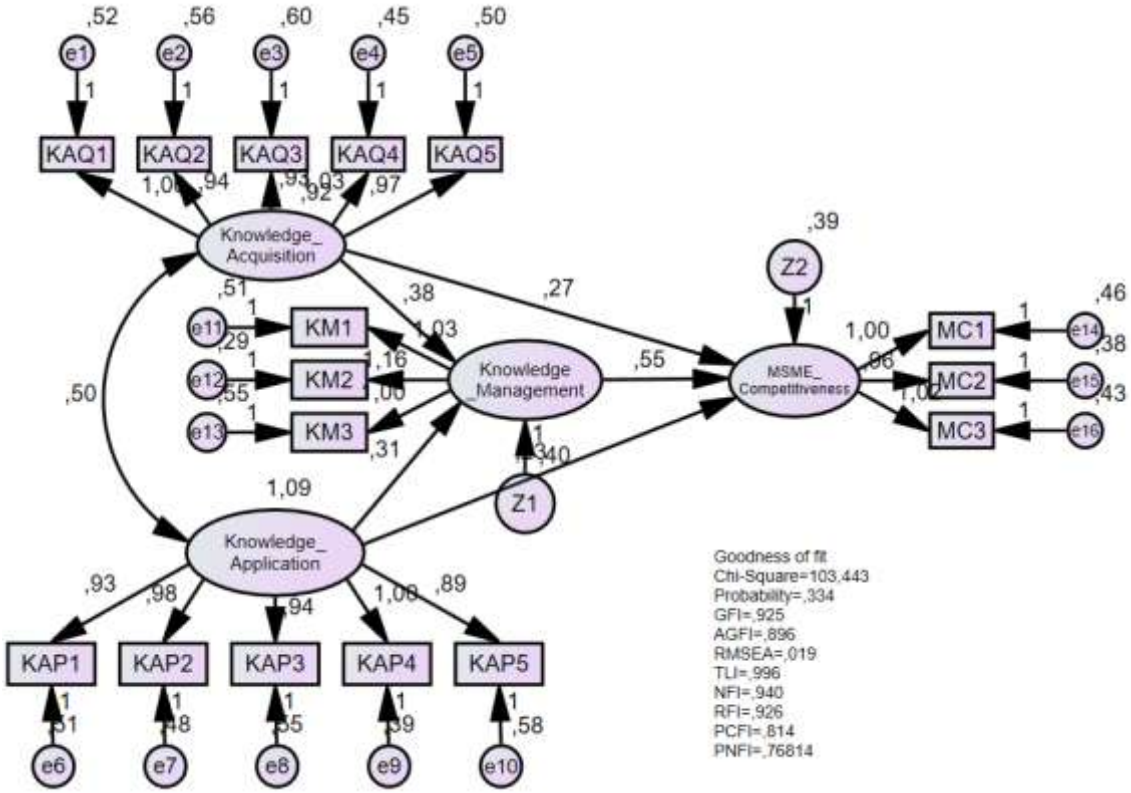
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among constructs. Third, the overall model fit was evaluated using several goodness-of-fit indices. The criteria included a chi-square probability value greater than 0.05, a chi-square to degrees-of-freedom ratio below 2.00 or 3.00, a Root Mean Square Error of Approximation below 0.08, a Goodness-of-Fit Index and Adjusted Goodness-of-Fit Index close to or above 0.90, and Comparative Fit Index and Tucker–Lewis Index values of at least 0.90.

RESULTS

Figure 1 presents the results of the Structural Equation Modeling (SEM) analysis using AMOS. The model illustrates the relationships among Knowledge Acquisition, Knowledge Application, Knowledge Management, and MSME Competitiveness, including the measurement model, standardized path coefficients, and overall goodness-of-fit indices.



Picture 1. Structural Equation Modeling

Analysis of Goodness of Fit

Table 1 presents the goodness-of-fit results used to assess the agreement between the proposed model and the empirical data. All evaluated indices meet the recommended

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cut-off values, indicating that the model demonstrates satisfactory fit and is suitable for further analysis.

Table 1: Goodness of Fit

Goodness-of-Fit Index	Simulated Result	Recommended Cut-off	Evaluation
Chi-square	103,443	Smaller; p > 0.05	Good
Degrees of Freedom	98,000	Positive	Good
Probability	0,334	> 0.05	Good
CMIN/DF	1,056	< 2.00	Good
GFI	0,925	≥ 0.90	Good
AGFI	0,896	≥ 0.90 or close	Marginal/Good
CFI	0,997	≥ 0.90	Good
TLI	0,996	≥ 0.90	Good
NFI	0,940	≥ 0.90	Good
RMSEA	0,019	≤ 0.08	Good
RMR	0,058	≤ 0.08	Good
SRMR	0,043	≤ 0.08	Good
PNFI	0,768	≥ 0.60	Good

Table 1 presents the results of the Goodness-of-Fit (GOF) evaluation for the Structural Equation Modeling (SEM) analysis using AMOS. Overall, the model demonstrates an acceptable to excellent fit with the observed data, indicating that the proposed structural model adequately represents the relationships among Knowledge Acquisition, Knowledge Application, Knowledge Management, and MSME Competitiveness.

The Chi-square value is 103.443 with a probability value of 0.334, which exceeds the recommended threshold of 0.05. The CMIN/DF (Normed Chi-square) value is 1.056, which is well below the recommended maximum value of 2.00. Regarding the absolute fit indices, the Goodness-of-Fit Index (GFI) reaches 0.925, exceeding the recommended cut-off value of 0.90, indicating a good overall model fit. The Adjusted Goodness-of-Fit Index (AGFI) is 0.896, slightly below the conventional threshold of 0.90. The incremental fit indices also demonstrate excellent model performance. The Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) are 0.997 and 0.996, respectively, while the Normed Fit Index (NFI) is 0.940. All three indices exceed the recommended minimum value of 0.90, suggesting that the proposed structural model provides a substantially better fit than the null model. The

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Root Mean Square Error of Approximation (RMSEA) is 0.019, which is considerably lower than the recommended threshold of 0.08, indicating a very close approximation between the proposed model and the population covariance matrix. The Root Mean Square Residual (RMR) and Standardized Root Mean Square Residual (SRMR) are 0.058 and 0.043, respectively, both satisfying the recommended criterion of less than 0.08. These values indicate that the residual differences between the observed and estimated covariance matrices are minimal. The Parsimonious Normed Fit Index (PNFI) records a value of 0.768, exceeding the recommended cut-off value of 0.60. This finding indicates that the proposed model achieves a satisfactory balance between model complexity and explanatory power.

Overall, the GOF results demonstrate that nearly all fit indices satisfy the recommended thresholds, while AGFI remains within an acceptable marginal range. Consequently, the structural model can be considered well fitted, indicating that it is appropriate for hypothesis testing and for examining the relationships among Knowledge Acquisition, Knowledge Application, Knowledge Management, and MSME Competitiveness using Structural Equation Modeling (SEM).

Analysis of Regression Weights

Table 2 summarizes the structural model estimation results, including standardized path coefficients, standard errors, critical ratios, and significance levels, to evaluate the proposed hypotheses among the latent constructs.

Table 2: Regression Weights

Hypothesis	Structural Relationship	Standardized Estimate (β)	S.E.	C.R.	p-value	Decision
H1	Knowledge Acquisition → Knowledge Management	0.384	0.084	4.564	< 0.001	Supported
H2	Knowledge Application → Knowledge Management	0.315	0.075	4.207	< 0.001	Supported
H3	Knowledge Management → MSME Competitiveness	0.555	0.123	4.491	< 0.001	Supported
H4	Knowledge Application → MSME Competitiveness	0.232	0.083	2.805	0.005	Supported
H5	Knowledge Acquisition → MSME Competitiveness	0.272	0.094	2.900	0.004	Supported

The first hypothesis examines the effect of Knowledge Acquisition on Knowledge Management. The standardized estimate is 0.384, with a Critical Ratio (C.R.) of 4.564 and a

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p-value < 0.001. Since the C.R. is greater than 1.96 and the relationship is highly significant, the hypothesis is supported. This finding indicates that greater knowledge acquisition significantly enhances knowledge management practices among MSMEs. In other words, businesses that actively obtain knowledge from customers, competitors, training programs, and external information sources are better able to organize, manage, and utilize knowledge within their organizations.

The second hypothesis investigates the effect of Knowledge Application on Knowledge Management. The standardized estimate is 0.315, with a C.R. of 4.207 and a p-value < 0.001. These results demonstrate a significant positive relationship, indicating that the effective application of knowledge contributes to stronger knowledge management. Although the effect is slightly lower than that of knowledge acquisition, it remains substantial, suggesting that applying acquired knowledge in daily business operations improves organizational learning and knowledge utilization.

The third hypothesis evaluates the influence of Knowledge Management on MSME Competitiveness. The analysis reveals a standardized estimate of 0.555, a C.R. of 4.491, and a p-value < 0.001. This represents the strongest structural relationship in the model. The finding suggests that knowledge management plays a crucial role in improving MSME competitiveness. Enterprises that effectively manage, organize, and utilize knowledge are more capable of improving product quality, responding to market changes, enhancing innovation, and maintaining competitive advantages.

The fourth hypothesis examines the direct effect of Knowledge Application on MSME Competitiveness. The standardized estimate is 0.232, with a C.R. of 2.805 and a p-value of 0.005. Since the p-value is below the 0.05 significance level, the relationship is statistically significant. This result indicates that applying knowledge directly in business activities contributes to improving MSME competitiveness, although its influence is weaker than the indirect effect through knowledge management.

Finally, the fifth hypothesis assesses the direct effect of Knowledge Acquisition on MSME Competitiveness. The standardized estimate is 0.272, with a C.R. of 2.900 and a p-value of 0.004. These findings indicate a significant positive effect, suggesting that MSMEs capable of continuously acquiring relevant knowledge are better positioned to improve their competitive performance. However, compared with the indirect pathway through knowledge management, the direct effect is relatively smaller.

Overall, all five structural paths are positive and statistically significant, indicating that the proposed hypotheses are supported. Among the relationships examined, Knowledge Management exerts the strongest influence on MSME Competitiveness ($\beta = 0.555$), highlighting its role as the primary mechanism through which knowledge resources are

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transformed into superior business performance. Meanwhile, Knowledge Acquisition has a stronger impact on Knowledge Management (β = 0.384) than Knowledge Application (β = 0.315), suggesting that acquiring high-quality knowledge is a prerequisite for effective knowledge management. These findings support the Knowledge-Based View (KBV), which posits that organizational knowledge and its effective management constitute strategic resources that enable firms to achieve sustainable competitive advantage. The results also imply that MSMEs should strengthen both knowledge acquisition and knowledge application practices to enhance organizational knowledge management, which ultimately leads to greater competitiveness.

Analysis of Standardized Regression Weights

Table 3 presents the Squared Multiple Correlations (R^2) for the endogenous constructs, indicating the proportion of variance explained by the predictor variables in the proposed SEM model.

Table 3: Standardized Regression Weights

Endogenous Variable	R^2	Interpretation
Knowledge Management	0.480	Moderate explanatory power; 48.0% of the variance is explained by Knowledge Acquisition and Knowledge Application.
MSME Competitiveness	0.649	Substantial explanatory power; 64.9% of the variance is explained by Knowledge Acquisition, Knowledge Application, and Knowledge Management.

The results show that Knowledge Management has an R^2 value of 0.480, indicating that 48.0% of the variance in Knowledge Management is explained jointly by Knowledge Acquisition and Knowledge Application. This level of explanatory power can be considered moderate, suggesting that the two knowledge-related capabilities play an important role in strengthening knowledge management practices among MSMEs. However, the remaining 52.0% of the variance is influenced by other factors not included in the model, such as organizational culture, leadership, technological capability, employee competence, organizational learning, or knowledge-sharing behavior.

Furthermore, MSME Competitiveness records an R^2 value of 0.649, meaning that 64.9% of its variance is explained by Knowledge Acquisition, Knowledge Application, and Knowledge Management. This result indicates a substantial level of explanatory power, demonstrating that the proposed model effectively explains the competitiveness of MSMEs.

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The remaining 35.1% of the variance is attributable to other determinants outside the research model, such as innovation capability, entrepreneurial orientation, market orientation, digital transformation, financial resources, government support, and external environmental factors.

Overall, the Squared Multiple Correlations indicate that the structural model possesses good predictive capability. The explanatory power is particularly strong for MSME Competitiveness (R^2 = 0.649), confirming that knowledge-related capabilities, especially Knowledge Management, are important determinants of MSME competitiveness. These findings support the Knowledge-Based View (KBV), which argues that organizational knowledge and its effective management constitute strategic resources that contribute significantly to achieving sustainable competitive advantage.

DISCUSSION

The findings of this study demonstrate that knowledge-related capabilities constitute important strategic resources for enhancing MSME competitiveness. Specifically, the results indicate that Knowledge Acquisition and Knowledge Application strengthen Knowledge Management, which subsequently contributes to improving business competitiveness. These findings support the central argument of the Knowledge-Based View (KBV), which posits that knowledge is one of the most valuable organizational resources because it enables firms to create capabilities that are difficult for competitors to imitate (Grant, 1996). Rather than viewing knowledge as a static organizational asset, the present study confirms that competitive advantage emerges from an organization's ability to continuously acquire, organize, and utilize knowledge in response to environmental changes.

The positive relationship between Knowledge Acquisition and Knowledge Management suggests that the competitiveness of MSMEs begins with their capacity to obtain relevant knowledge from both internal and external sources. Business environments have become increasingly dynamic due to technological advancement, digitalization, changing consumer preferences, and intensified market competition. Under these circumstances, MSMEs can no longer rely solely on accumulated experience but must continuously seek new information through customers, suppliers, competitors, government programs, training activities, and digital platforms. Such continuous learning enables enterprises to enrich their organizational knowledge and improve managerial decision-making. This finding is consistent with absorptive capacity theory, which emphasizes that organizations must first recognize and acquire valuable external knowledge before they can effectively utilize it (Zahra & George, 2002). Previous studies by Darroch (2005) and Ngatno

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et al. (2021) similarly concluded that knowledge acquisition strengthens organizational learning and supports innovation, ultimately improving organizational performance.

The findings also emphasize that acquiring knowledge alone is insufficient to create sustainable competitiveness. Knowledge must be translated into practical business activities through Knowledge Application. Organizations that effectively apply acquired knowledge are more capable of improving operational processes, developing innovative products, enhancing customer service, and responding to market opportunities. This reflects the practical dimension of knowledge management, where information is transformed into organizational routines and strategic decisions. Gold et al. (2001) argue that the real value of knowledge lies in its utilization rather than its mere possession. Likewise, Al Koliby et al. (2022) reported that knowledge application represents an important mechanism through which organizational knowledge contributes to sustainable business performance. Therefore, MSMEs should not only invest in obtaining information but also develop organizational practices that encourage employees and managers to apply knowledge consistently in daily operations.

An important contribution of this study is the identification of Knowledge Management as the central mechanism linking knowledge capabilities to MSME competitiveness. This finding suggests that the benefits of acquiring and applying knowledge become more meaningful when supported by effective organizational processes for storing, sharing, integrating, and utilizing knowledge. Knowledge management enables enterprises to convert dispersed information into coordinated organizational capabilities that support innovation, improve efficiency, enhance product quality, and strengthen customer relationships. These organizational capabilities are increasingly important because MSMEs generally operate with limited financial and technological resources. Consequently, knowledge management becomes a strategic asset that compensates for resource constraints by improving organizational adaptability and learning capacity. This interpretation is consistent with Andreeva and Kianto (2012), who argued that knowledge management practices enhance both organizational competitiveness and long-term performance.

The findings also have important practical implications for MSME development policies. Government institutions, universities, business associations, and development agencies should move beyond conventional training programs that focus only on knowledge transfer. Greater emphasis should be placed on establishing organizational learning systems, mentoring programs, collaborative business networks, digital knowledge platforms, and mechanisms that facilitate continuous knowledge sharing among MSMEs. Such initiatives would help enterprises institutionalize knowledge management practices

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rather than relying solely on the personal experience of business owners. This is particularly important because many MSMEs remain highly dependent on individual expertise, making organizational learning vulnerable when key individuals leave the business.

Overall, this study enriches the literature on knowledge management by demonstrating that the competitiveness of MSMEs is shaped by an integrated knowledge process rather than by isolated knowledge activities. The findings confirm that sustainable competitiveness is achieved when enterprises continuously acquire new knowledge, effectively apply that knowledge, and embed it within organizational management practices. Accordingly, strengthening knowledge management should become a strategic priority for both MSME managers and policymakers seeking to improve business resilience, innovation capability, and long-term competitive performance in an increasingly knowledge-driven economy.

CONCLUSION

This study examined the effects of Knowledge Acquisition and Knowledge Application on MSME Competitiveness, with Knowledge Management incorporated as an intervening construct. Using Structural Equation Modeling (SEM) with AMOS and data collected from 160 MSMEs operating across various business sectors in Kerinci Regency, the study provides robust empirical evidence supporting the proposed theoretical framework. The results indicate that both Knowledge Acquisition and Knowledge Application have positive and significant effects on Knowledge Management. Furthermore, Knowledge Management exerts the strongest positive influence on MSME Competitiveness, while Knowledge Acquisition and Knowledge Application also directly contribute to competitiveness, although with relatively smaller effects.

These findings reinforce the Knowledge-Based View (KBV) by demonstrating that organizational knowledge represents a strategic resource capable of enhancing business competitiveness when it is effectively acquired, managed, and applied. The relatively high explanatory power of the structural model (R^2 = 0.480 for Knowledge Management and R^2 = 0.649 for MSME Competitiveness) indicates that knowledge-related capabilities explain a substantial proportion of competitiveness among MSMEs. Therefore, improving knowledge management systems is essential for transforming acquired knowledge into sustainable competitive advantage.

From a practical perspective, the findings suggest that policymakers, local governments, universities, and business support institutions should strengthen programs that facilitate knowledge acquisition through training, mentoring, digital literacy, networking, and collaboration with external stakeholders. Simultaneously, MSMEs should

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encourage the systematic application of knowledge in product innovation, service improvement, operational efficiency, and strategic decision-making. Such initiatives will enable MSMEs to respond more effectively to changing market conditions and improve their long-term competitiveness.

Despite these contributions, this study has several limitations. The research was conducted in a single regency and employed a cross-sectional research design, limiting the generalizability of the findings and the ability to infer causal relationships over time. Future studies are encouraged to include larger and more geographically diverse samples, employ longitudinal research designs, and incorporate additional variables such as innovation capability, digital transformation, entrepreneurial orientation, market orientation, organizational learning, and absorptive capacity to provide a more comprehensive understanding of the factors influencing MSME competitiveness.

Recommendations

Based on the findings, local governments should strengthen MSME knowledge acquisition through training, digital literacy, mentoring, and collaboration with universities and business institutions. MSMEs should establish systematic knowledge management practices by documenting experiences, encouraging knowledge sharing, and integrating knowledge into business decisions and innovation processes. Business support organizations should also develop collaborative platforms that facilitate networking, technology transfer, and the exchange of best practices to improve organizational learning and competitiveness. Future research is encouraged to include larger and more diverse MSME samples across regions and sectors to enhance the generalizability of the findings. Longitudinal studies are also recommended to examine the long-term effects of knowledge management on competitiveness. Additionally, future studies should incorporate variables such as innovation capability, digital transformation, entrepreneurial orientation, market orientation, and organizational learning to provide a more comprehensive understanding of the factors influencing MSME competitiveness and sustainable business performance in an increasingly knowledge-driven economy.

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