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MSMEs Competitiveness In Eastern Java: The Role of Innovation and Information Systems Within Organizational Culture

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Abstract
This study aims to analyze the effect of organizational culture on performance through the mediating roles of innovation capability and management information systems among Micro, Small, and Medium Enterprises (MSMEs) in the eastern region of Java. The research employs a quantitative approach using a partial least squares structural equation modeling (PLS-SEM) technique. Data were collected through questionnaires distributed to 98 MSME owners and managers. The results indicate that organizational culture has a positive and significant influence on innovation capability and management information systems, both of which, in turn, significantly affect performance. Furthermore, innovation capability and management information systems partially mediate the relationship between organizational culture and performance. These findings suggest that fostering a strong organizational culture can enhance MSME performance when supported by innovative capabilities and effective information management systems. The study contributes to empirical evidence in strategic management and organizational behavior, particularly in the MSME context in eastern Java.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in supporting the national economy, particularly in creating employment opportunities, increasing community income, and strengthening regional economic structures. In the era of digital disruption, MSMEs are required to adapt to technological advancements and increasingly dynamic market conditions. However, in reality, many MSMEs in the eastern regions of Java continue to face challenges in enhancing their competitiveness and organizational performance. Limitations in human resources, low technological adoption, and weak innovation capabilities remain the primary obstacles in optimizing productivity and business sustainability (BPS, 2024; Suara Merdeka, 2021).

The performance of MSMEs across various regions in Indonesia still shows a gap between expectations for adaptive and innovative organizations and actual conditions in the field. Low production quality and quantity, limited business legality, and suboptimal collaboration among business actors continue to be prominent issues. In addition, many MSME actors have yet to maximize the use of information technology to support business processes, particularly in data management, digital marketing, and information-based decision-making (Times Indonesia, 2023; Pintasan.co, 2024). These conditions indicate that MSME performance is influenced not only by external factors such as government policies or market conditions, but also by internal organizational factors, including work culture, innovation capability, and the effectiveness of the information systems implemented.

Organizational culture plays an important role in shaping the behaviors, values, and work norms that serve as the foundation for improving performance. According to Robbins and Judge (2017), organizational culture is a system of shared meanings adopted by members of an organization that differentiates it from others. A strong culture fosters a collaborative, innovative, and results-oriented work environment (Daft, 2009). Conversely, a weak culture can hinder adaptation to change and reduce employee motivation. In the context of MSMEs, an organizational culture that is open to new ideas and willing to take risks serves as an essential asset for driving innovation and work efficiency.

In addition to organizational culture, innovation capability is also a key determinant in enhancing competitiveness and organizational performance. Innovation capability reflects an organization's ability to continuously create and implement new ideas in the form of products, processes, or relevant business strategies (Wang & Ahmed, 2007; Saunila, 2016). Organizations with high innovation capability tend to be more responsive to environmental changes and are better able to anticipate market needs. However, many MSMEs still lack well-structured innovation management systems, both in terms of human resources and technological support (Supriyono et al., 2024).

Another factor affecting MSME performance is the effectiveness of management information systems (MIS). According to Laudon and Laudon (2019), MIS play a role in collecting, processing, and distributing information to support accurate and efficient decision-making processes. A well-functioning information system not only enhances coordination and operational efficiency but also strengthens the foundation for strategic decision-making (Turban et al., 2018). However, many MSMEs in eastern Java still rely on manual recordkeeping and have yet to adopt integrated digital systems, due to limited technological literacy and insufficient managerial support.

Previous studies have demonstrated positive relationships among organizational culture, innovation capability, management information systems, and performance. Imran et al. (2021) found that organizational culture significantly influences performance through innovation as a mediating variable. Similar findings were reported by Iddris (2016) and Saunila (2016), who emphasized that organizations with an innovative culture and effective information systems tend to achieve better performance outcomes. Nonetheless, studies integrating both innovation capability and management information systems as mediating variables in the relationship between organizational culture and performance remain relatively limited, particularly within the context of MSMEs in eastern Indonesia.

Based on this background, the present study aims to analyze the influence of organizational culture on MSME performance in eastern Java, with innovation capability and management information systems serving as mediating variables. Theoretically, this study is expected to enrich the literature on MSME performance models grounded in organizational culture and information technology. Practically, the findings of this research may serve as a reference for MSME practitioners and policymakers in designing sustainable performance improvement strategies through strengthening organizational culture, enhancing innovation capability, and optimizing the use of effective management information systems..

METHODS

This study employs a quantitative approach using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method. This approach was selected because it enables the simultaneous analysis of complex causal relationships among latent variables and provides a more comprehensive examination of mediation models.

The population in this study consists of micro-category MSME actors registered with the Office of Cooperatives and MSMEs of Situbondo Regency. Based on data from the Cooperative and MSME Management Information System (Simku) of Situbondo Regency, the total population of micro-enterprises amounts to 6,136 business units. The sampling technique employed proportional random sampling to ensure proportional representation from each business category, including food, beverages, trade, services, and handicrafts. The sample size was determined using the Slovin formula with a 10% margin of error, resulting in 98 respondents as the research sample.

Data analysis was conducted using SmartPLS software version 4.0. The analytical procedures in PLS consist of three main components: the outer model (measurement model) assessment, the inner model (structural model) analysis, and hypothesis testing.

RESULTS AND DISCUSSION

Subheadings Level 2

Table 1
Outer Model Analysis (Validity Test)

Variable	Number of Indicators	Loading Factor (>0,70)	AVE (>0,50)	Cross Loading (>0,7)	Remarks
Organizational Culture	7	0,88–0,91	0,77	0,85-0,91	Valid and reliable
Innovation Capability	5	0,86–0,88	0,76	0,86-0,88	Valid and reliable
Mangement Information System	6	0,86–0,93	0,79	0,86-0,93	Valid and reliable
Performance	5	0,86–0,91	0,80	0,86-0,90	Valid and reliable

Source: SmartPLS Output (2025)

Based on Table 1, all variables demonstrate loading factor values above 0.70, AVE values greater than 0.50, and cross-loading values above 0.70. These results indicate that all constructs meet the criteria for convergent and discriminant validity.

Table 2
Outer Model Analysis (Validity Test)

Variable	*Cronbach Alpha*	Remarks	*Composite Reliability (rho_c)*	Remarks
Organizational Culture (X)	0.952	Reliable	0.961	Reliable
Innovation Capability (Z1)	0.923	Reliable	0.942	Reliable
Performance(Y)	0.938	Reliable	0.953	Reliable
Management Information System (Z2)	0.947	Reliable	0.957	Reliable

Source: Researcher, 2025

Based on Table 2, all variables exhibit Cronbach's Alpha values greater than 0.70 and composite reliability values above 0.70. Thus, the measurement instruments for organizational culture, innovation capability, performance, and management information systems are considered reliable.

Tabel 3
Structural Model Results (Inner Model)
R-Square (R^2)

Variabel	R-Square	R-Square Adjusted	Remarks
Innovation Capability (Z1)	0.909	0.908	Good
Performance (Y)	0.950	0.948	Good
Management Information System (Z2)	0.920	0.919	Good

Source: Researcher, 2025

The inner model results indicate that the research model exhibits very strong predictive accuracy. The R-Square value for Innovation Capability (Z_1) is 0.909, for Management Information System (Z_2) is 0.920, and for Performance (Y) is 0.950. According to Hair et al. (2021), an R^2 value exceeding 0.75 indicates a model with substantial predictive power. Thus, the research model demonstrates high predictive capability.

Tabel 4
Hypothesis Testing Results (Path Coefficient)
Path Coefficient (Direct and Indirect Effect)

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
OC (X) -> IC (Z1)	0.953	0.952	0.012	80.006	0.000
OC (X) -> P (Y)	0.285	0.284	0.104	2.751	0.006
OC (X) -> MIS (Z2)	0.959	0.959	0.009	101.491	0.000
IC (Z1) -> P (Y)	0.219	0.220	0.091	2.402	0.016
MIS (Z2) -> P (Y)	0.485	0.485	0.093	5.213	0.000
OC (X) -> IC (Z1) ->P (Y)	0.209	0.209	0.087	2.402	0.016
OC (X) -> MIS (Z2) ->P (Y)	0.465	0.465	0.089	5.215	0.000

Sumber: Peneliti, 2025.

DISCUSSION

Subheading Level 2

Based on the results presented in the tables above, it can be concluded that organizational culture has a positive and significant effect on innovation capability as well as on management information systems. Both mediating variables also have a significant effect on performance. In addition, the direct effect of organizational culture on performance remains significant, indicating the presence of partial mediation by innovation capability and the management information system.

These findings confirm that an organizational culture that supports openness, learning, and collaboration is capable of fostering innovation within MSMEs. Innovation subsequently enhances efficiency, product quality, and customer satisfaction.

Meanwhile, the implementation of a management information system facilitates faster decision-making processes, strengthens interdepartmental coordination, and improves overall productivity. These results are consistent with the theories of Denison (2000) and Schein (2010), which state that organizational culture serves as a foundation for collective behavior that drives learning and innovation. Support for information technology within the organizational culture creates an environment capable of adapting to change.

The high performance of MSMEs in Situbondo can be explained through the synergy between an adaptive culture, innovation capability, and the use of information systems. This reinforces the findings of Martins and Terblanche (2003), who emphasized that a culture that supports creativity is a key factor in the success of organizational innovation.

In conclusion, organizational culture, innovation capability, and management information systems serve as the primary pillars for strengthening the competitiveness of MSMEs in the digital era.

CONCLUSION

Organizational culture has a positive influence on innovation capability, management information systems, and MSME performance. Innovation capability and management information systems are proven to partially mediate the relationship between organizational culture and performance. This implies that the stronger the organizational culture embedded within the enterprise, the higher the level of performance that can be achieved through enhanced innovation and effective information management.

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