

BUILDING COMPETITIVE ADVANTAGE THROUGH INTELLECTUAL CAPITAL AND ORGANIZATIONAL AGILITY: A STRATEGIC MANAGEMENT PERSPECTIVE ON INDONESIAN MSMEs

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ABSTRACT

This study aims to examine the influence of Intellectual Capital on Organizational Agility and Business Performance among Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, as well as to investigate the mediating role of Organizational Agility. A quantitative approach was employed using a survey method involving 120 MSME participants selected through purposive sampling. Data were collected using a five-point Likert scale questionnaire and analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that Intellectual Capital has a positive and significant effect on both Organizational Agility and Business Performance. Furthermore, Organizational Agility exerts a positive influence on Business Performance and mediates the relationship between Intellectual Capital and business outcomes. These results provide empirical support for the Resource-Based View (RBV) and Dynamic Capability Theory, emphasizing that effective management of intellectual resources enhances an organization's adaptive capacity and overall performance. Future research is recommended to incorporate digital transformation variables and Islamic values as moderating factors to strengthen the sustainable competitiveness of MSMEs.

Key words: Intellectual Capital; Organizational Agility; Business Performance

INTRODUCTION

Micro, Small, and Medium Enterprises are widely regarded as a central pillar of national economies because they generate employment, increase Gross Domestic Product, and stimulate innovation (Homayoun et al., 2024). In Indonesia, MSMEs contribute approximately 61 percent of national GDP, equivalent to IDR 9,580 trillion, and absorb nearly 97 percent of the total workforce. Data from the Ministry of Cooperatives and Small and Medium Enterprises indicate the presence of 65.5 million MSME units, accounting for 99 percent of all business entities nationwide (Herissuparman et al., 2024). These figures highlight the critical role of MSMEs in sustaining economic resilience and promoting inclusive growth.

Within a knowledge based economy, intellectual capital serves as a strategic resource that shapes firm performance. It encompasses human capital, structural capital, and relational capital, all of which contribute to value creation. The Resource Based View argues that resources that are valuable, rare, inimitable, and non substitutable form the basis of sustained competitive advantage (Kero and Bogale, 2023). From this standpoint, intellectual capital functions as a core asset that differentiates firms and strengthens long term performance. Dynamic Capability Theory complements this perspective by emphasizing a firm's capacity to reconfigure resources and realign strategies in response to environmental change (Bleady et al., 2018). In this framework, organizational agility represents a crucial dynamic capability that enables MSMEs to respond rapidly and flexibly to market shifts (Xiao et al., 2020).

Intellectual capital comprises three primary dimensions. Human capital reflects employees' knowledge, skills, and competencies. Structural capital encompasses organizational systems, routines, and infrastructure. Relational capital captures relationships with customers, partners, and other stakeholders (Liu and Jiang, 2020; Muda et al., 2020). Empirical evidence indicates that human and structural capital enhance organizational agility, which refers to a firm's ability to adapt effectively to environmental change (Baima et al., 2021; Mahmood and Mubarik, 2020). Relational capital further supports external collaboration and innovation, thereby reinforcing agility (Rezaei et al., 2020). In turn, organizational agility strengthens business performance by enabling firms to respond quickly to market shifts, adjust strategies, and allocate resources flexibly to sustain competitiveness (Tayyaba et al., 2024). Firms with higher agility consistently demonstrate stronger innovation outcomes, greater operational efficiency, and improved growth (Li et al., 2024; Mubarik et al., 2019).

However, empirical findings on the relationships among intellectual capital, organizational agility, and business performance remain mixed. Some studies report a direct effect of intellectual capital on performance, while others find that its influence operates indirectly through organizational agility (Rafi et al., 2022; Sağır & Gönülölmez, 2019). Moreover, prior research has largely focused on large firms or industrial sectors in developed economies, leaving limited evidence from MSMEs in developing countries such as Indonesia (Çallı

& Çallı, 2021). Addressing this gap, the present study proposes that Intellectual Capital positively affects Business Performance, both directly and indirectly through Organizational Agility as a mediating variable.

This study examines the role of digital technology in managing intellectual capital and improving business performance. Prior research has rarely explored how digital technology strengthens the relationship between intellectual capital and firm outcomes, despite its potential to improve efficiency, transparency, and sustainability.

Accordingly, this study analyzes the effects of intellectual capital and digital technology on the performance and sustainability of micro, small, and medium enterprises, with organizational agility as a mediating variable. By integrating these constructs, the research contributes to Business Management literature in the context of digital transformation.

METHOD

This study employs a quantitative design and collects empirical data through a questionnaire based survey that measures intellectual capital, organizational agility, and business performance among MSMEs in Indonesia. The respondents consist of MSME practitioners from various regions who satisfy predefined research criteria. Following the guideline that recommends a minimum sample size of ten times the number of indicators in the model, the study secured 120 valid responses.

The instrument builds on established theoretical constructs and applies a five point Likert scale for measurement. The analysis uses Partial Least Squares Structural Equation Modeling, which is appropriate for complex models with moderate sample sizes (Jannah and Al Banna, 2021). The study evaluates construct validity and reliability by examining factor loadings and average variance extracted values that exceed 0.5 (Darmansyah et al., 2020). Furthermore, assessments of common method bias using the Variance Inflation Factor and non response bias procedures based on Tajudeen et al. (2018) indicate that the data are free from systematic bias.

RESULTS AND DISCUSSION

Table 1 summarizes the demographic profile of the 120 respondents. Most participants were female (67%) and aged 20–29 years (52%). The food and beverage sector dominated (47%), followed by fashion (25%), while other sectors such as health, beauty, handicrafts, and digital technology accounted for less than 10%. In terms of financial institution usage, Bank Syariah Indonesia (BSI) was the most preferred (70%), and the majority of businesses reported monthly revenues between IDR 1–10 million (67%).

Table 1. Respondent Profile

Demographic Aspects	Category	No.	Percentage
Gender	Men	40	33.3%
	Famale	80	67%
Age	<20	40	33%
	20-29	62	52%
	30-49	17	14%
	>50	1	1%
	More	14	12%
Line of Business	Food and Beverage	56	47%
	Fashion	30	25%
	Health and Beauty	7	6%
	Handicrafts	7	6%
	Technology and Digital	6	5%
	More	14	12%
Monthly Business Revenue	1jt-10jt	80	67%
	11jt-20jt	22	18%
	21jt-30jt	8	7%
	31jt-40jt	4	3%
	41jt-50jt	2	2%
	>51jt	4	3%

Table 2 presents the results of the validity and reliability tests for the constructs of Intellectual Capital, Organizational Agility, and Business Performance. All indicators demonstrated factor loadings above 0.70 and AVE values exceeding 0.50, indicating strong construct validity. Furthermore, the Composite Reliability values above 0.70 confirm that all constructs exhibit high reliability and internal consistency.

Table 2: Validity and Convergent Reliability

Indicator	Code	Factor Loading	VIF	AVE	Composite Reliability
Intellectual Capital	IC			0.573	0.915
Human Capital	HC				
I consistently empower employees to perform at their optimal capacity.	HC1	0.767	2.009		
I implement well structured training programs aimed at enhancing the operational effectiveness of the business.	HC2	0.740	1.901		
My employees show strong creativity and innovation in generating ideas.	HC3	0.747	1.831		
Structural Capital	SC				
I emphasize corporate investment in information technology development.	SC1	0.784	2.056		
In managing my business, I place a strong emphasis on market development.	SC2	0.749	1.887		
I prioritize product development to enhance competitiveness and meet market changes.	SC3	0.790	2.097		
Relational Capital	RC				
My business maintains strong partnerships with a wide network of highly reliable suppliers.	RC1	0.760	1.819		
My business possesses a well formulated and robust strategic framework.	RC2	0.718	1.755		
Organizational Agility	OA			0.607	0.823
My business swiftly adapts its production or services to changing customer demands.	OA1	0.747	1.260		
My business continually strives to improve and innovate its operations and products.	OA2	0.799	1.434		
My business views market changes as opportunities to boost profits and strengthen competitiveness.	OA3	0.791	1.321		
Business Performance	BP			0.661	0.854
My business demonstrates strong profitability within its respective market segment.	BP1	0.779	1.413		
My business offers products and services that are designed to be sustainable.	BP2	0.826	1.505		
My business offers high quality products and services that meet excellence standards.	BP3	0.834	1.550		

Table 3 presents the results of the discriminant validity test based on the Fornell-Larcker criterion. The square root values of the AVE for each construct Business Performance (0.813), Intellectual Capital (0.757), and Organizational Agility (0.779) were higher than their corresponding inter-construct correlations. This indicates that each construct demonstrates satisfactory discriminant validity and is empirically distinct from the others.

Table 3. Forenell Larcker Criteria

Construct	Business Performance	Intellectual Capital	Organizational Agility
Business Performance	0.813		
Intellectual Capital	0.750	0.757	
Organizational Agility	0.719	0.681	0.779

Table 4 presents the results of the hypothesis testing. The analysis reveals that Intellectual Capital has a positive and significant effect on Business Performance ($\beta = 0.750$; $T = 8.703$; $p < 0.001^*$). Moreover, Intellectual

Capital also exerts a positive and significant influence on Organizational Agility ($\beta = 0.681$; $T = 7.260$; $p < 0.001^*$). In addition, Organizational Agility positively and significantly affects Business Performance ($\beta = 0.388$; $T = 3.351$; $p = 0.001^*$). Therefore, all proposed hypotheses (H1, H2, and H3) are supported.

Table 4. Hypothesis Results

H	Path	β	T Statistics	P Values	Result
H 1	Intellectual Capital -> Business Performance	0.750	8.703	0.000	Supported
H 2	Intellectual Capital -> Organizational Agility	0.681	7.260	0.000	Supported
H 3	Organizational Agility -> Business Performance	0.388	3.351	0.001	Supported

Table 5 presents the analysis results showing that Intellectual Capital has a positive and significant effect on Business Performance through Organizational Agility as a mediating variable ($\beta = 0.265$; $T = 3.088$; $p = 0.002$). This finding confirms that Organizational Agility acts as a significant mediator in the relationship between Intellectual Capital and Business Performance among Indonesian MSMEs. In other words, the higher an organization's ability to adapt and respond to market changes, the stronger the influence of intellectual capital on business performance.

Table 5. Specific Indirect Effect Results

Path	β	STDEV	T Statistics	P Values
Intellectual Capital -> Organizational Agility -> Business Performance	0.265	0.086	3.088	0.002

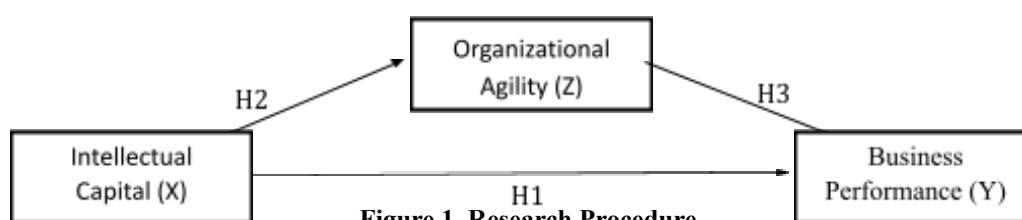


Figure 1. Research Procedure

CONCLUSION

The findings demonstrate that Intellectual Capital positively and significantly influences both Organizational Agility and Business Performance among MSMEs in Indonesia. In addition, Organizational Agility mediates the relationship between Intellectual Capital and Business Performance, thereby strengthening the overall effect. These results support the Resource Based View, which positions intellectual capital as a valuable and inimitable strategic resource, and align with Dynamic Capability Theory, which emphasizes the importance of adaptive capabilities in responding to environmental change.

The results underscore the need for MSMEs to strengthen intellectual capacity and enhance organizational agility to maintain competitiveness and ensure long term business continuity. Future research should incorporate digital transformation and Sharia based values as additional variables to provide a more comprehensive understanding of sustainable competitiveness within the MSME sector.

REFERENCES

- Baima, G., Forliano, C., Santoro, G., & Vrontis, D. (2021). Intellectual capital and business model: A systematic literature review to explore their linkages. *Journal of Intellectual Capital*, 22(3), 653–679. <https://doi.org/10.1108/JIC-02-2020-0055>
- Bleady, A., Ali, A., & Ibrahim, S. (2018). Dynamic Capabilities Theory: Pinning Down A Shifting Concept. 22(2).
- Çallı, B. A., & Çallı, L. (2021). Relationships between digital maturity, organizational agility, and firm performance: An empirical investigation on SMEs. *Business & Management Studies: An International Journal*, 9(2), 486–502. <https://doi.org/10.15295/bmij.v9i2.1786>
- Jannah, S. M., & Al-Banna, H. (2021). Halal Awareness and Halal Traceability: Muslim Consumers' and Entrepreneurs' Perspectives. *Journal of Islamic Monetary Economics and Finance*, 7(2), 285–316.

- <https://doi.org/10.21098/jimf.v7i2.1328>
- Jr, H. (2017). *PLS-SEM or CB-SEM: updated guidelines on which method to use*.
- Kero, C. A., & Bogale, A. T. (2023). A Systematic Review of Resource-Based View and Dynamic Capabilities of Firms and Future Research Avenues. *International Journal of Sustainable Development and Planning*, 18(10), 3137–3154. <https://doi.org/10.18280/ijstdp.18101>
- Li, Y., Li, J., & Zhai, Y. (2024). Intellectual capital and sustainability performance: The mediating role of digitalization. *Journal of Intellectual Capital*, 25(5/6), 867–890. <https://doi.org/10.1108/JIC-06-2023-0129>
- Liu, C.-H., & Jiang, J.-F. (2020). Assessing the moderating roles of brand equity, intellectual capital and social capital in Chinese luxury hotels. *Journal of Hospitality and Tourism Management*, 43, 139–148. <https://doi.org/10.1016/j.jhtm.2020.03.003>
- Mahmood, T., & Mubarik, M. S. (2020). Balancing innovation and exploitation in the fourth industrial revolution: Role of intellectual capital and technology absorptive capacity. *Technological Forecasting and Social Change*, 160, 120248. <https://doi.org/10.1016/j.techfore.2020.120248>
- Mubarik, M. S., Naghavi, N., & Mubarak, M. F. (2019). Impact of Supplier Relational Capital on Supply Chain Performance in Pakistani Textile Industry. *Asian Economic and Financial Review*, 9(3), 318–328. <https://doi.org/10.18488/journal.aefr.2019.93.318.328>
- Muda, S., Rahman, M. R. C. A., Hamzah, N., & Saleh, N. M. (2020). Intellectual Capital and SMEs' Business Performance from an Organisational Lifecycle Perspective. *The South East Asian Journal of Management*, 14(1). <https://doi.org/10.21002/seam.v14i1.11939>
- Rafi, N., Ahmed, A., Shafique, I., & Kalyar, M. N. (2022). Knowledge management capabilities and organizational agility as liaisons of business performance. *South Asian Journal of Business Studies*, 11(4), 397–417. <https://doi.org/10.1108/SAJBS-05-2020-0145>
- Rezaei, M., Jafari-Sadeghi, V., & Bresciani, S. (2020). What drives the process of knowledge management in a cross-cultural setting: The impact of social capital. *European Business Review*, 32(3), 485–511. <https://doi.org/10.1108/EBR-06-2019-0127>
- Sağır, M., & Gönülölmez, A. (2019). Yapısal Sermaye Ve İnsan Sermayesinin İşletme Performansına Etkileri: Örgütsel Çevikliğin Aracılık Rolü - The Effect of Structural Capital And Human Capital on Business Performance: The Role of Organizational Agility. *Mehmet Akif Ersoy Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 11(27), 58–77. <https://doi.org/10.20875/makusobed.476375>
- Tajudeen, F. P., Jaafar, N. I., & Ainin, S. (2018). Understanding the impact of social media usage among organizations. *Information & Management*, 55(3), 308–321. <https://doi.org/10.1016/j.im.2017.08.004>
- Tayyaba, S., Hazlina Ahmad, P. Dr. N., & Hussain, S. (2024). Innovation Performance of SMEs: The vital roles of Intellectual Capital, Organizational Agility and Organizational Inertia. *Salud, Ciencia y Tecnología - Serie de Conferencias*, 3. <https://doi.org/10.56294/sctconf2024.1228>
- Xiao, X., Tian, Q., & Mao, H. (2020). How the Interaction of Big Data Analytics Capabilities and Digital Platform Capabilities Affects Service Innovation: A Dynamic Capabilities View. *IEEE Access*, 8, 18778–18796. <https://doi.org/10.1109/ACCESS.2020.2968734>