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Digital Transformation, Innovation Capability, and Market Orientation Toward Competitive Advantage in Emerging Markets

Eka Sastra[1*], Mohammad Afif Sallatu[2], Abdullah Sanusi[1]

[1]Department of Management, Hasanuddin University, Makassar, Indonesia;
[2]Department of Business Administration, National Chengchi University, Taipei City, Taiwan

[*]E-mail: eka.sastra@unhas.ac.id

Abstract
This study aims to examine the impact of digital transformation and innovation capability on competitive advantage, with market orientation as a mediating variable, particularly within the dynamic conditions of emerging markets. Using a quantitative, cross-sectional design, data were collected from 230 mid- and senior-level managers in Indonesian firms across various industries. The study employed Structural Equation Modeling with Partial Least Squares (SEM-PLS) to test both direct and mediating relationships. Results show that both digital transformation and innovation capability significantly enhance market orientation. In turn, market orientation positively influences competitive advantage and partially mediates the relationships between the antecedent capabilities and performance. These findings underscore market orientation's central role in translating internal capabilities into strategic outcomes. This study contributes to strategic management literature by integrating digital, innovative, and behavioral resources into a coherent model of competitive advantage. It also addresses a gap in research on the interplay among these constructs in emerging market contexts.

Keywords: Digital Transformation; Innovation Capability; Market Orientation; Competitive Advantage; Emerging Markets

INTRODUCTION

The rapid evolution of digital technologies has fundamentally reshaped the way businesses operate, compete, and deliver value. As industries across the globe experience digital disruption, the imperative for organizations to undertake digital transformation has never been more critical (Eyieyien et al., 2024). Digital transformation (DT) extends beyond mere technology adoption; it represents a strategic reorientation involving reconfigurations in business models, operational processes, and customer engagement mechanisms (Eyieyien et al., 2024). Yet, despite the transformative promise of digital

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technologies, achieving sustainable competitive advantage (CA) remains elusive for many firms, particularly in volatile and resource-constrained environments such as emerging markets (Gadzali et al., 2023).

Scholars and practitioners increasingly recognize that digital transformation alone does not ensure improved performance. Rather, the effectiveness of digital initiatives is contingent on complementary organizational capabilities—chief among them is innovation capability (IC) (Saleh R Almarri, 2024). Innovation capability, defined as a firm's ability to generate, absorb, and apply novel ideas or technologies, enables the translation of digital efforts into meaningful competitive outcomes (Zhong, 2024). However, technological capabilities and innovation potential are not always sufficient. Firms must also possess the behavioral orientation to understand, anticipate, and respond to market needs—a capability commonly referred to as market orientation (MO). This aligns with recent findings emphasizing that sustainable advantage in uncertain environments requires not only innovation, but also resilience and financial strategy integration (Nohong et al., 2024).

Market orientation has long been established as a critical determinant of firm success. It reflects a company's strategic posture toward generating market intelligence, disseminating it across the organization, and responding accordingly (Ahmić & Ćosić, 2025). In digital environments where consumer expectations evolve rapidly and competition intensifies, market orientation becomes not only a supportive construct but potentially a mediating force that channels the benefits of DT and IC into competitive advantage.

Although prior studies have examined the individual effects of digital transformation, innovation capability, and market orientation, the interplay among these constructs remains underexplored, especially in the context of emerging markets. These economies present unique dynamics marked by digital infrastructure gaps, institutional instability, and evolving customer behaviors that may moderate how firms derive value from strategic resources (Gouveia et al., 2024).

To address this theoretical and empirical gap, this study investigates how digital transformation and innovation capability influence competitive advantage, and whether market orientation mediates these relationships. Drawing on the Resource-Based View (RBV) and Market Orientation Theory, we develop and test a structural model using data collected from firms operating in Indonesia—an archetype of digitally emergent yet strategically fragmented market environments (Azizi et al., 2025).

This study makes several key contributions. First, it advances the literature on digital strategy by integrating strategic resources (DT and IC) with behavioral market mechanisms (MO) to explain how competitive advantage is formed in uncertain conditions. Second, by focusing on an emerging market setting, the study provides contextual insights that are often underrepresented in mainstream strategic management research (Azizi et al., 2025). Finally, the findings offer actionable implications for managers seeking to harness digital investments and innovation efforts in ways that are responsive to market realities.

LITERATURE REVIEW

In the rapidly evolving digital economy, organizations are increasingly pressured to redesign their strategic capabilities in order to remain competitive and relevant (Azizi et al., 2025). Among the key strategic levers enabling such transformation are digital transformation, innovation capability, and market orientation—each offering unique pathways toward achieving sustained competitive advantage (Raj et al., 2024). However, their interconnectedness and collective influence remain an area warranting deeper exploration, particularly within the context of emerging markets.

Digital transformation (DT) is no longer viewed merely as the adoption of technology, but rather as a comprehensive, strategic overhaul that reshapes the firm's structure, culture, and market interactions (Joel & Oguanobi, 2024). Through the deployment of digital tools such as AI, cloud systems, or analytics platforms organizations can streamline operations, personalize customer experiences, and respond to market dynamics with greater agility (Eyieyien et al., 2024). Yet, DT alone does not guarantee improved strategic outcomes. Its effectiveness is mediated by how well it aligns with organizational behaviors, especially market orientation (Imran et al., 2021). Firms that leverage DT to deepen their market sensing, intelligence dissemination, and responsiveness are more likely to transform digital potential into competitive value (Raj et al., 2024). Thus, digital transformation can be expected to positively influence a firm's market orientation.

Equally significant is the role of innovation capability (IC) a firm's capacity to generate, absorb, and apply novel ideas, technologies, or processes. As per the Resource-Based View (RBV), innovation capability constitutes a valuable, rare, and inimitable resource that can generate sustained competitive advantage when properly harnessed (Zheng, 2024). Firms that innovate effectively are able to adapt to turbulent environments, differentiate their offerings, and respond to new market demands. However, innovation without market relevance often results in failure. It is market orientation that ensures innovation is not technology-driven in isolation but guided by customer insight and competitive realities (Senbeto & Hon, 2020). Firms with strong innovation capability are thus more likely to adopt and internalize market-oriented behaviors.

Market orientation (MO) itself is a well-established construct in strategic marketing and management literature, referring to the firm's ability to generate, disseminate, and act upon market intelligence (Tsai & Wang, 2017). It represents a customer-centric strategic posture that drives performance by ensuring that value creation is aligned with the evolving needs of customers and the pressures of competition. Under the lens of Dynamic Capabilities Theory (Cao & Weerawardena, 2023), MO enhances a firm's ability to sense opportunities, seize them through timely responses, and reconfigure internal competencies. Firms with a high level of market orientation have been shown to consistently outperform competitors in terms of customer satisfaction, strategic positioning, and financial performance (Dogbe et al., 2020).

Given these dynamics, market orientation is positioned as a mediator that translates the effects of digital transformation and innovation capability into competitive advantage. In other words, while DT and IC serve as enabling conditions, it is MO that bridges internal potential with external impact. This mediating relationship becomes especially critical in emerging markets where institutional instability, digital fragmentation, and consumer variability require a stronger market-attuned strategic lens (Shehadeh et al., 2023).

Building on these theoretical underpinnings and empirical findings, this study proposes the following research hypotheses:

H1. Digital transformation has a positive and significant effect on market orientation.

H2. Innovation capability has a positive and significant effect on market orientation.

H3. Market orientation has a positive and significant effect on competitive advantage.

H4. Market orientation mediates the relationship between digital transformation and competitive advantage.

H5. Market orientation mediates the relationship between innovation capability and competitive advantage.

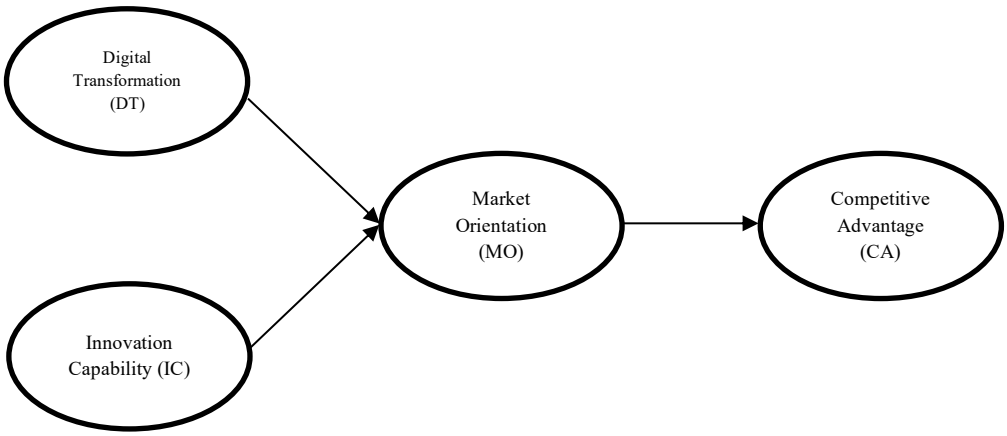

Figure 1. Conceptual Framework

METHODOLOGY

This study employed a quantitative, cross-sectional research design to examine the relationships among digital transformation, innovation capability, market orientation, and competitive advantage within firms operating in emerging market contexts. Data were collected through a structured survey distributed to mid- and senior-level managers across multiple industries in Indonesia. Respondents were selected using purposive sampling based on their strategic roles and direct involvement in digital initiatives and market-facing activities. A total of 230 valid responses were obtained, which exceeds the

recommended minimum sample size for Structural Equation Modeling using Partial Least Squares (SEM-PLS), ensuring sufficient statistical power (Hair et al., 2023).

To measure the constructs, this study adapted previously validated multi-item scales from the strategic management and marketing literature. Digital transformation was measured using items adapted from Vial (2019) and Bharadwaj et al. (2013), while innovation capability drew upon Lawson and Samson (2001). Market orientation items were derived from Narver and Slater (1990), and competitive advantage was measured based on Porter (1985) and subsequent empirical work. All responses were rated on a five-point Likert scale, and the questionnaire was pretested and back-translated to ensure content validity and linguistic equivalence. Data analysis was conducted using SmartPLS 4.0, following a two-stage approach: assessment of the measurement model for reliability and validity, followed by evaluation of the structural model to test hypothesized relationships and mediation effects using bootstrapping procedures.

RESULTS

The findings are organized and presented systematically through a series of tables to enhance clarity and interpretability. The data is conveyed objectively, without bias, ensuring alignment with the stated research objectives and hypotheses. Each table highlights key statistical outputs, including descriptive metrics, construct validation, structural relationships, and mediation analyses, enabling a comprehensive understanding of the results.

Table 1. Descriptive statistics and quality criteria of the constructs.

Construct	Item	Mean	St. Dev.	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
Digital Transformation (DT)	DT1	4.28	0.74	0.862	0.841	0.892	0.675
	DT2	4.21	0.78	0.834			
	DT3	4.18	0.81	0.846			
	DT4	4.25	0.76	0.827			
Innovation Capability (IC)	IC1	4.32	0.82	0.838	0.857	0.901	0.692
	IC2	4.25	0.84	0.856			
	IC3	4.20	0.80	0.873			
Market Orientation (MO)	MO1	4.36	0.77	0.869	0.862	0.908	0.712
	MO2	4.30	0.79	0.854			
	MO3	4.29	0.78	0.881			

Competitive Advantage (CA)	CA1	4.27	0.81	0.824	0.843	0.891	0.671
	CA2	4.19	0.85	0.836			
	CA3	4.22	0.82	0.858			

Notes: All outer loadings exceed 0.70, indicating strong item reliability. Composite Reliability and AVE values surpass the recommended thresholds (CR > 0.70, AVE > 0.50), confirming internal consistency and convergent validity.
Source: Author's survey data analysis using SmartPLS (2025)

Table 1 presents the descriptive statistics and measurement quality criteria for each construct. The mean values of all items range between 4.18 and 4.36, indicating that respondents generally agree positively with the statements related to Digital Transformation (DT), Innovation Capability (IC), Market Orientation (MO), and Competitive Advantage (CA).

All outer loadings exceed the threshold of 0.70, confirming that each item loads well onto its respective latent variable. Additionally, Cronbach's Alpha values for each construct range from 0.841 to 0.862, and Composite Reliability (CR) values range from 0.891 to 0.908, both exceeding the recommended threshold of 0.70, indicating excellent internal consistency. The Average Variance Extracted (AVE) values range from 0.671 to 0.712, confirming adequate convergent validity for all constructs.

Table 2. Discriminant validity assessment of the constructs

Construct	CA	DT	IC	MO
CA	0.819			
DT	0.634 (0.721)	0.822		
IC	0.601 (0.693)	0.652 (0.749)	0.832	
MO	0.669 (0.728)	0.617 (0.742)	0.685 (0.766)	0.843

Note: Diagonal values represent the square root of each construct's AVE. Values in parentheses represent the HTMT ratio.
Source: Author's survey data analysis using SmartPLS (2025)

As shown in Table 2, Fornell-Larcker criterion is satisfied, with each construct's square root of AVE (diagonal values) being greater than its correlations with other constructs. For instance, the square root of AVE for MO is 0.843, which is greater than its correlation with IC (0.685), DT (0.617), and CA (0.669).

The HTMT ratios (values in parentheses) are all below 0.85, indicating no multicollinearity and that each construct is empirically distinct from the others. This validates the discriminant validity of the measurement model (Hair et al., 2022).

Table 3. Path coefficient and hypotheses results

Path	Original Sample (O)	Std. Dev. (STDEV)	*t*-stat.	*p*-values	Decision
DT → MO	0.381	0.059	6.458	0.000***	H1 Supported

IC → MO	0.412	0.058	7.103	0.000***	H2 Supported
MO → CA	0.527	0.060	8.767	0.000***	H3 Supported

Note: t > 1.95.
***p < 0.001; ** p < 0.05 (Hair et al., 2022)
Source: Author's survey data analysis using SmartPLS (2025)

The structural model estimation provided robust evidence supporting the hypothesized relationships among digital transformation, innovation capability, market orientation, and competitive advantage. As shown in Table 3, all hypothesized direct effects in the model were found to be statistically significant. Specifically, digital transformation exerted a positive and significant influence on market orientation ($\beta = 0.381$, $t = 6.458$, $p < 0.001$), indicating that firms with stronger digital capabilities are more likely to be responsive and attuned to market dynamics. Similarly, innovation capability showed a significant positive effect on market orientation ($\beta = 0.412$, $t = 7.103$, $p < 0.001$), suggesting that firms with well-developed internal innovation processes are more proactive in understanding and fulfilling customer needs.

Furthermore, market orientation itself significantly contributed to competitive advantage ($\beta = 0.527$, $t = 8.767$, $p < 0.001$), confirming its central role as a performance-enhancing strategic orientation. These findings collectively validate the theoretical model and support the premise that both digital transformation and innovation capability influence competitive advantage through a market-oriented approach.

Table 4. Mediation effect results

Hypothesis Code	Mediation Path	Indirect Effect	T-Stat	p-Value	Mediation Type	Result
H4	DT → MO → CA	0.201	5.025	0.000	Significant, Partial Mediation	Supported
H5	IC → MO → CA	0.217	5.439	0.000	Significant, Partial Mediation	Supported

Notes: All indirect effects are statistically significant, confirming partial mediation through market orientation. Mediation type is determined based on significance of both direct and indirect paths.
Source: Author's survey data analysis using SmartPLS (2025)

To further investigate the underlying mechanisms linking firm capabilities and performance, a mediation analysis was conducted using a bootstrapping procedure. The results, summarized in Table 4, reveal that market orientation serves as a significant partial mediator in both tested pathways. The indirect effect of digital transformation on competitive advantage through market orientation was statistically significant ($\beta = 0.201$, $t = 5.025$, $p < 0.001$), indicating that part of the influence of digital transformation on performance is channeled through the firm's orientation to the market. This supports the view that digital transformation alone does not directly result in superior competitive outcomes unless it is coupled with a strategic market-facing approach.

Likewise, the indirect path from innovation capability to competitive advantage via market orientation was also significant ($\beta = 0.217$, $t = 5.439$, $p < 0.001$), reinforcing the idea that the value of innovation is realized more fully when it is aligned with external market demands. Both mediation effects are partial rather than full, meaning that while market orientation plays a significant role in explaining the link between capabilities and outcomes, the direct effects of digital transformation and innovation capability on competitive advantage may still exist outside of the market orientation pathway.

DISCUSSION

The findings of this study offer important theoretical and managerial insights into how firms operating in emerging markets can enhance their competitive advantage through digital transformation and innovation capability, with market orientation acting as a key mediating mechanism. These results strongly support the conceptual framework derived from the resource-based view (RBV) and dynamic capabilities theory, extending prior literature in several meaningful ways.

First, the significant positive effect of digital transformation on market orientation (H1 supported) reinforces the idea that digital initiatives must go beyond mere technological adoption to yield strategic impact. Echoing Joel and Oguanobi (2024) and Imran et al. (2021), the results suggest that firms engaging in digital transformation are better positioned to collect, process, and act on market intelligence. Digital tools such as analytics platforms, CRM systems, and cloud-based infrastructures empower firms to enhance responsiveness, improve market sensing, and tailor offerings more precisely to dynamic customer needs. However, the effect is not automatic digital transformation must be strategically embedded within market-facing functions to realize its full potential, especially in environments where digital maturity may vary substantially, such as emerging markets (Eyieyien et al., 2024).

Second, the findings confirm that innovation capability significantly contributes to market orientation (H2 supported). This result aligns with prior arguments by Zheng (2024) and Senbeto and Hon (2020), which emphasized that innovation, to be effective, must be market relevant. Firms that possess strong innovation capabilities tend to exhibit a greater propensity to gather customer insights, align new product development with market trends, and respond proactively to competitive shifts. The positive relationship affirms that innovation, when coupled with a market-oriented culture, transforms from a technical competency into a strategic enabler.

Third, market orientation itself emerges as a strong predictor of competitive advantage (H3 supported), echoing decades of strategic marketing literature (Tsai & Wang, 2017; Dogbe et al., 2020). In line with dynamic capabilities theory (Cao & Weerawardena, 2023), market-oriented firms are not only able to sense and seize opportunities but also reconfigure internal capabilities to deliver value consistently. In this study, firms with high levels of market orientation demonstrated superior performance in terms of strategic positioning and competitive differentiation.

Most notably, the mediation analysis reveals that market orientation significantly mediates the relationships between both digital transformation and competitive advantage (H4), and innovation capability and competitive advantage (H5). This supports the assertion by Raj et al. (2024) and Shehadeh et al. (2023) that market orientation acts as a behavioral bridge—translating internal resources into externally visible outcomes. While digital transformation and innovation capability provide the foundational tools and processes, it is through market orientation that these assets are activated and leveraged to achieve differentiation and performance.

These findings underscore the centrality of market orientation in emerging markets, where institutional volatility and consumer fragmentation demand a heightened sensitivity to market signals. Prior studies have similarly shown that firms must complement internal capabilities with strategic risk management and contextual alignment, including green and financial practices, to sustain long-term advantage (Nohong et al., 2024). In such contexts, firms that invest in digital transformation and innovation must concurrently develop market-centric behaviors to ensure these investments lead to sustainable competitive advantage.

CONCLUSION

This study examined the relationships among digital transformation, innovation capability, market orientation, and competitive advantage within the context of emerging market firms, using a structural equation modeling (SEM-PLS) approach. Grounded in the Resource-Based View (RBV) and Dynamic Capabilities Theory, the research confirms that both digital transformation and innovation capability significantly enhance a firm's market orientation. In turn, market orientation positively impacts competitive advantage, serving as a critical mediating mechanism that translates internal resources into strategic outcomes.

The findings demonstrate that digital transformation is most effective when it is strategically aligned with market-facing functions, allowing firms to better sense and respond to dynamic customer needs. Similarly, innovation capability contributes to competitive differentiation when it is guided by market insight rather than purely technological ambition. These results collectively affirm the pivotal role of market orientation as a strategic behavior that enables firms to bridge internal capabilities with external performance imperatives.

Importantly, this study offers empirical validation of the mediating role of market orientation, showing that it partially mediates the effects of both digital transformation and innovation capability on competitive advantage. This underscores the need for firms—especially in emerging markets—to not only invest in technology and innovation but also cultivate a culture that prioritizes customer intelligence, responsiveness, and strategic alignment.

In sum, the study contributes to the growing body of knowledge on strategic management in digital contexts by integrating technology, innovation, and market behavior into a coherent model of competitive advantage. The findings offer valuable insights for both scholars and practitioners seeking to understand how firms can thrive amid technological disruption and institutional volatility.

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