



# Translating Dynamic Capabilities into Performance via Adaptive Strategic Orientation in Indonesia's Logistics

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**Abstract.** In the face of escalating digital disruption, logistics firms in emerging economies must reconfigure their strategic models to sustain competitiveness. This study investigates how dynamic capabilities influence firm performance, both directly and through adaptive strategic orientation, within the context of logistics companies operating in Makassar, Indonesia. Drawing on the dynamic capabilities view (DCV), the study employs a quantitative approach with data collected via structured questionnaires from 147 firms. Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results indicate that dynamic capabilities significantly enhance firm performance, and this relationship is partially mediated by adaptive strategic orientation. These findings contribute to the refinement of capability-based strategy theories by illustrating the crucial role of strategic adaptability in converting dynamic inputs into performance outcomes. The study offers theoretical implications for the capability–strategy–performance nexus and practical guidance for firms seeking to align internal capabilities with external change. Limitations and future research directions are also discussed.

**Keywords:** Dynamic Capabilities, Adaptive Strategic Orientation, Firm Performance, PLS-SEM, DCV.

## 1 Introduction

The rapid advancement of digital technologies ranging from artificial intelligence (AI) and the Internet of Things (IoT) to big data analytics has significantly reshaped competitive landscapes across various industries, particularly in emerging economies. In Indonesia, the logistics and transportation sector has witnessed unprecedented shifts in operational models, service expectations, and value creation mechanisms. As firms confront increasing environmental turbulence and technological disruption, the strategic imperative to adapt and transform has never been more critical.

Indonesia's position as the largest economy in Southeast Asia and its geographical complexity make the logistics sector a vital component of national economic performance. The city of Makassar, located strategically in the eastern corridor of the archipelago, serves as a logistical nexus connecting trade routes across eastern Indonesia. However, firms operating in this region face persistent challenges, including supply chain fragmentation, infrastructure gaps, and digital capability deficits. These

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dynamics accentuate the need for robust strategic frameworks that allow firms not only to survive but to thrive amidst digital disruption.

One theoretical lens that has gained prominence in addressing such complexity is the Dynamic Capabilities View (DCV). Originally introduced by Engelmann [1], this perspective posits that firms must develop the capacity to sense opportunities and threats, seize them through timely investment and transformation, and reconfigure resources to maintain competitiveness. Dynamic capabilities enable firms to respond proactively to volatile environments and align their operations with digital transformation imperatives [2, 3].

While dynamic capabilities provide the strategic foundation, their influence on organisational outcomes is not always direct. Increasingly, scholars argue that the presence of adaptive strategic orientation the firm's ability to flexibly interpret, align with, and respond to external changes plays a pivotal mediating role [4, 5]. In the context of logistics firms in Indonesia, where structural and digital readiness vary widely, adaptive orientation becomes an essential conduit through which capabilities are translated into sustainable performance.

Firm performance, particularly in turbulent environments, is no longer determined solely by static resources but by the firm's strategic agility and responsiveness. Previous studies have demonstrated that firms with strong dynamic capabilities often outperform their peers in competitive markets [6, 7]. However, the extent to which this relationship is influenced by the firm's strategic posture especially in digital contexts remains underexplored in emerging markets, including Indonesia.

Given the increasing relevance of strategic adaptation in the digital era, this study seeks to examine the mediating role of adaptive strategic orientation in the relationship between dynamic capabilities and firm performance. By focusing on logistics companies in Makassar, this research contributes empirical insights to the ongoing discourse on strategic renewal and digital competitiveness in Southeast Asian economies.

The findings are expected to offer both theoretical and practical implications. Theoretically, the study extends the DCV by empirically validating the role of strategic mediation in emerging contexts. Practically, it offers strategic guidance to logistics firms navigating digitalisation in developing regions, enabling them to reconfigure capabilities and orient strategies toward superior performance outcomes.

## **2 Literature Review**

### **2.1 Dynamic Capabilities**

The concept of dynamic capabilities (DC) emerged as an extension of the resource-based view, addressing its limitations in explaining how firms maintain competitive advantage in rapidly changing environments [8]. Pitelis et al. [9] define dynamic capabilities as “the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.” These capabilities consist of three core dimensions: sensing opportunities and threats, seizing

opportunities through appropriate investments, and transforming or reconfiguring organisational assets to sustain competitiveness.

In logistics and transportation firms, particularly within emerging economies such as Indonesia, dynamic capabilities are essential to cope with digital disruption, supply chain volatility, and rising customer expectations. Mikalef et al. [10] argue that firms equipped with strong dynamic capabilities are more agile in adopting new technologies and adjusting strategic trajectories. Similarly, Haarhaus and Lienen [11] emphasises that dynamic capabilities enable firms to not only respond to market changes but also shape them through innovation and strategic foresight.

In the context of this study, dynamic capabilities are conceptualised as higher-order strategic routines that allow logistics firms in Makassar to respond effectively to environmental dynamism, digitalisation pressures, and infrastructural uncertainties.

## **2.2 Adaptive Strategic Orientation**

Adaptive strategic orientation (ASO) refers to a firm's ability to adjust its strategic direction proactively and responsively in alignment with environmental changes. It captures dimensions such as strategic flexibility, learning orientation, and market responsiveness [12]. ASO reflects an organisation's capacity to shift between exploration and exploitation as needed, thereby ensuring alignment with external conditions while maintaining internal coherence.

In dynamic markets, ASO acts as a strategic mechanism that translates capabilities into performance. According to Liu et al. [13], firms that adopt adaptive strategic orientations are better positioned to capitalise on opportunities and mitigate risks associated with technological change and market volatility. In logistics, such orientation may manifest in the firm's readiness to experiment with platform-based solutions, real-time tracking systems, or flexible service models.

Furthermore, scholars such as Jiang et al. [14] posit that strategic orientation plays a mediating role between capabilities and outcomes, serving as a conduit that channels internal potential into competitive action. Thus, within the present study, ASO is theorised as a mediator that enhances the performance implications of dynamic capabilities in digitally evolving contexts.

## **2.3 Firm Performance**

Firm performance (FP) remains a central outcome variable in strategic management research. While traditional metrics of performance focused heavily on financial outcomes, more recent literature embraces a multidimensional view that includes operational efficiency, customer satisfaction, market share, and innovation success [15]. In rapidly transforming industries such as logistics, performance is not only about output but also about adaptability, speed, and resilience.

From the perspective of dynamic capabilities, firm performance is viewed as the realised outcome of a firm's ability to orchestrate resources strategically. According to Ilmudeen [16], dynamic capabilities contribute to superior performance by fostering

innovation, improving process agility, and enabling rapid response to environmental shifts.

For this study, firm performance is operationalised as a perceptual construct, measured through managers' assessments of their firm's relative performance in key operational and strategic domains.

## 2.4 Firm Performance

Drawing from the theoretical foundations outlined above, this study proposes a mediated model in which adaptive strategic orientation plays a central role in bridging dynamic capabilities and firm performance. The premise is that dynamic capabilities provide the strategic foundation, while adaptive orientation channels these capabilities into action, ultimately enhancing firm-level outcomes. This framework aligns with the propositions of the dynamic capabilities literature [17, 18], while integrating insights from strategic posture research that emphasises the importance of adaptive alignment in turbulent contexts [19].

Accordingly, the research model tests both direct and indirect effects among the constructs to empirically validate the mediation mechanism. This integrative approach allows for a nuanced understanding of how firms in Indonesia's logistics sector navigate disruption through capability development and strategic adaptation.

## 2.5 Hypothesis Development

Based on the literature review and the conceptual framework discussed above, this study proposes a series of hypotheses to examine the interplay between dynamic capabilities, adaptive strategic orientation, and firm performance in the context of Indonesia's logistics sector.

The first hypothesis posits a direct relationship between dynamic capabilities and firm performance. Several studies have confirmed that firms equipped with strong dynamic capabilities are better positioned to adapt to environmental changes, adopt innovations, and ultimately achieve superior performance outcomes [20, 21]. In high-velocity environments such as logistics, dynamic capabilities enable firms to sense shifting customer needs, seize technological opportunities, and reconfigure operational processes to maintain competitiveness [22, 23].

- H1: Dynamic capabilities positively affect firm performance.

The second hypothesis suggests that dynamic capabilities also influence the firm's adaptive strategic orientation. According to Muneeb et al. [24], firms that develop dynamic capabilities tend to exhibit greater strategic flexibility, allowing them to modify or shift strategies in response to environmental changes. This strategic agility is particularly relevant in volatile sectors where digital technologies continuously reshape customer expectations and service delivery models. Thus, dynamic capabilities are expected to foster adaptive behaviours in strategic planning and execution.

- H2: Dynamic capabilities positively affect adaptive strategic orientation.

The third hypothesis explores the relationship between adaptive strategic orientation and firm performance. Firms with a high degree of strategic adaptability are more likely to interpret environmental signals accurately, align internal processes with market shifts, and act with speed and precision. Such responsiveness allows firms to maintain or enhance performance in the face of uncertainty and disruption [25, 26].

- H3: Adaptive strategic orientation positively affects firm performance.

The final hypothesis investigates the mediating role of adaptive strategic orientation in the relationship between dynamic capabilities and firm performance. While dynamic capabilities provide firms with the necessary resources and competencies, the ability to translate these into effective performance outcomes often depends on how strategically adaptable the firm is [7, 27]. Mediation theory suggests that adaptive strategic orientation serves as a mechanism that channels the influence of dynamic capabilities into tangible performance gains.

- H4: Adaptive strategic orientation mediates the relationship between dynamic capabilities and firm performance.

These hypotheses are tested using Partial Least Squares Structural Equation Modelling (PLS-SEM), enabling the examination of both direct and indirect effects. The proposed model contributes to the strategic management literature by integrating capability-based and strategic orientation perspectives, particularly in the underexplored context of digital transformation in emerging logistics markets.

### 3 Methods

This study adopts a quantitative, cross-sectional design to investigate the relationship between dynamic capabilities and firm performance, with adaptive strategic orientation serving as a mediating variable. The model is grounded in the Dynamic Capabilities View (DCV), which posits that a firm's ability to sense, seize, and reconfigure its resources in response to environmental changes is essential to sustaining competitiveness in dynamic markets [28]. In the context of digital transformation within Indonesia's logistics sector, particularly in Makassar as a key regional trade hub, this theoretical perspective provides a robust foundation for examining strategic responses to disruption.

Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), which is suitable for theory development, complex models, and smaller to moderate sample sizes [29]. The estimation and validation procedures were conducted using SmartPLS 4.

The study focused on middle and senior-level managers working in logistics and transportation companies operating in Makassar, Indonesia. These companies were strategically selected based on their active involvement in digitalisation, technology adoption, and regional supply chain activities. The inclusion criteria for respondents required individuals to hold decision-making positions in strategic or operational roles and to possess at least one year of experience in their current organisation. This ensures

that participants have adequate knowledge of the firm's internal capabilities, strategic orientation, and performance.

Respondents were drawn from eleven firms, including nationally recognised players such as JNE, J&T Express, PT Bumi Jasa Utama (Kalla Transport & Logistics), GP Logistics Makassar, Cipta Krida Bahari (CKB Logistics), and Klik Logistics. Additional responses were collected from PT Sinar Baru, PT Makna Logistik Internasional Makassar, Makassar Orien Logistik, PT Teman Logistic Indonesia, and PT Eka Multi Logistik. These firms represent a mix of established and emerging players within the Makassar logistics ecosystem and reflect a realistic cross-section of firms facing digital disruption.

A structured questionnaire was developed and distributed in both printed and electronic formats. After the initial data screening, 147 valid responses were retained for analysis. This sample size exceeds the minimum requirement based on the "ten-times rule" [29], and also meets the power analysis threshold for mediation models involving three latent constructs [30].

All constructs in this study were operationalised as reflective first-order latent variables, measured using multi-item scales adapted from existing literature. Responses were recorded using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The construct of dynamic capabilities was measured based on Engelmann [1] conceptualisation, reflecting the firm's ability to sense, seize, and transform in the face of environmental change. Adaptive strategic orientation was measured by evaluating the degree of strategic flexibility, responsiveness, and proactiveness demonstrated by the firm, drawing on the work of Jabri and Lahrech [4]. Firm performance was measured through subjective assessments of the firm's relative operational and market-based performance, as proposed by Chong et al. [31].

Prior to distribution, the questionnaire was translated into Bahasa Indonesia and back-translated to ensure semantic accuracy. A pilot test involving ten logistics managers was conducted to evaluate clarity, language suitability, and contextual relevance, resulting in minor revisions.

Data analysis followed a two-stage procedure consistent with best practices in PLS-SEM [29]. In the first stage, the measurement model was assessed to ensure construct reliability and validity. This included evaluating indicator loadings, Cronbach's alpha, composite reliability (CR), average variance extracted (AVE), and discriminant validity using the Heterotrait-Monotrait (HTMT) ratio. In the second stage, the structural model was examined to test the direct and indirect effects among constructs. Path coefficients and their statistical significance were derived through bootstrapping with 5,000 subsamples. Mediation analysis followed the resampling-based approach proposed by Cheung and Cheung [32], examining the significance of indirect effects and the extent to which mediation is full or partial. Model performance was further evaluated using  $R^2$  values,  $f^2$  effect sizes,  $Q^2$  predictive relevance, and Standardised Root Mean Square Residual (SRMR) to assess overall model fit.

## 4 Results

This section presents the results of the empirical analysis based on the data collected from 147 respondents representing logistics and transportation firms operating in the city of Makassar, Indonesia. The analysis begins with descriptive statistics that provide an overview of the respondents' demographic and organisational profiles, followed by the assessment of the measurement and structural models using Partial Least Squares Structural Equation Modelling (PLS-SEM).

**Table 1.** Profile of Managerial Respondents and Logistics Firms in Makassar

Category	Sub-category	Frequency	Percentage (%)
Type of Business	Freight & Cargo Services	42	28.6
	Courier & Express Delivery	36	24.5
	Warehousing & Distribution	28	19.0
	Freight Forwarding	24	16.3
	Integrated Logistics & 3PL	17	11.6
Business Age	< 3 years	15	10.2
	3–5 years	38	25.9
	6–10 years	56	38.1
	> 10 years	38	25.9
Number of Employees	1–5 (Micro)	26	17.7
	6–19 (Small)	61	41.5
	20–99 (Medium)	45	30.6
	100+ (Large)	15	10.2
Legal Status	Informal (Unregistered)	18	12.2
	Formal (Licensed/Registered)	129	87.8
Position of Respondent	Operational Manager	43	29.3
	General/Branch Manager	39	26.5
	Logistics Supervisor	28	19.0
	CEO/Founder	20	13.6
	Other (Strategy/IT/Planning)	17	11.6
Education Level	High School or Below	21	14.3
	Diploma (D1–D3)	38	25.9
	Undergraduate (S1)	59	40.1
	Postgraduate (S2/S3)	29	19.7

Source: Primary Data (2025)

Table 1 presents the demographic and organisational characteristics of the respondents and their firms. The majority of the firms operate in freight and cargo services (28.6%) and courier and express delivery (24.5%), reflecting the dominance of core logistics functions within Makassar's transportation sector. Other business types include warehousing and distribution (19.0%), freight forwarding (16.3%), and integrated logistics services or third-party logistics (3PL), which account for 11.6% of the sample.

In terms of business age, a significant proportion of firms have been in operation for 6 to 10 years (38.1%), indicating a relatively mature segment of the industry. Firms with more than 10 years of operation account for 25.9%, while 25.9% have been operating for 3 to 5 years, and only 10.2% are classified as new entrants with less than 3 years of establishment. These figures suggest that the sample represents firms with varying degrees of operational maturity, allowing for a comprehensive analysis of strategic adaptation across different lifecycle stages.

Regarding firm size, 41.5% of the firms are classified as small enterprises (6–19 employees), followed by medium enterprises (30.6%) and micro-sized firms (17.7%). A smaller portion (10.2%) are categorised as large firms with over 100 employees. This distribution reflects the predominance of small and medium-sized enterprises (SMEs) in Indonesia's logistics ecosystem, aligning with national industrial profiles.

Most firms (87.8%) are formally registered and licensed, highlighting the formalisation of the logistics sector in urban centres like Makassar. The presence of a small proportion of unregistered firms (12.2%) suggests that informality remains, although to a lesser extent.

With regard to the position of the respondents, the majority hold operational or general management roles including operational managers (29.3%), branch/general managers (26.5%), and logistics supervisors (19.0%). A smaller number of respondents identified as CEOs or founders (13.6%) and other strategic roles, such as IT or planning officers (11.6%). This confirms that the data were obtained from individuals with strategic or tactical decision-making authority, supporting the validity of their responses on capability and performance assessments.

In terms of education, the respondents are predominantly well-educated, with 40.1% holding an undergraduate degree (S1) and 19.7% holding postgraduate degrees (S2/S3). Respondents with a diploma (25.9%) and high school qualifications (14.3%) also constitute a significant portion, further indicating a heterogeneous sample in terms of educational attainment.

Following the descriptive analysis of respondents' demographic and organisational characteristics, the measurement model was assessed to evaluate the validity and reliability of the constructs used in the study. The evaluation includes an examination of indicator reliability (outer loadings), convergent validity (Average Variance Extracted or AVE), internal consistency reliability (Composite Reliability or CR), and discriminant validity (via HTMT ratio).

**Table 2.** Measurement Model Evaluation: Loadings, Reliability, Convergent and Discriminant Validity

<b>Construct</b>	<b>Indicator</b>	<b>Outer Loading</b>	<b>AVE</b>	<b>CR</b>	<b>HTMT</b>
<b>Dynamic Capabilities</b>	DC1 – Sensing market changes	0.813	0.646	0.882	0.694 (ASO)
	DC2 – Seizing opportunities	0.851			
	DC3 – Reconfiguring resources	0.799			
	DC4 – Investing in innovation	0.765			
<b>Adaptive Strategic Orientation</b>	ASO1	–	0.662	0.886	0.659 (FP)
	ASO2 – Strategic flexibility	0.802			
	ASO3 – Responsiveness to change	0.841			
	ASO4 – Continuous learning	0.813			
<b>Firm Performance</b>	FP1 – Innovation orientation	0.793	0.679	0.891	0.694 (DC)
	FP2 – Operational efficiency	0.872			
	FP3 – Customer satisfaction	0.841			
	FP4 – Revenue growth	0.819			
	FP4 – Strategic goal attainment	0.773			

Source: Primary Data (2025)

As presented in Table 2, all items across the three latent constructs Dynamic Capabilities, Adaptive Strategic Orientation, and Firm Performance demonstrated satisfactory levels of indicator reliability, with outer loadings ranging from 0.765 to 0.872. These values exceed the recommended minimum threshold of 0.70, suggesting that each item significantly contributes to its respective construct [33].

The Average Variance Extracted (AVE) for all constructs surpassed the minimum criterion of 0.50, indicating adequate convergent validity [34]. This suggests that a

substantial proportion of variance in the indicators is captured by the underlying latent constructs, rather than by measurement error.

Similarly, the Composite Reliability (CR) scores for each construct ranged between 0.882 and 0.891, far exceeding the standard threshold of 0.70, thereby confirming the internal consistency reliability of the measures [33]. These results suggest that the items used to measure each latent variable are highly interrelated and consistent in capturing the intended theoretical dimensions.

To assess discriminant validity, the Heterotrait–Monotrait (HTMT) ratio of correlations was used. All HTMT values remained well below the conservative threshold of 0.90, confirming that the constructs are empirically distinct from one another [35]. This is crucial to ensure that the measurement model does not suffer from multicollinearity or conceptual overlap between constructs.

In summary, the measurement model demonstrates robust psychometric properties. The results confirm that the indicators reliably and validly measure their respective constructs, thereby establishing a sound foundation for proceeding to the evaluation of the structural model in the next section.

Following the validation of the measurement model, the next stage of the analysis involved evaluating the structural model to examine the hypothesised relationships among the constructs. The structural model was assessed using several key metrics: path coefficients ( $\beta$ ), coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), and predictive relevance ( $Q^2$ ). The results are summarised in Table 3.

**Table 3.** Structural Model Assessment: Path Coefficients,  $R^2$ , Effect Sizes, and Predictive Relevance

Relationship	Path Coefficient ( $\beta$ )	$R^2$	$f^2$	$Q^2$
Dynamic Capabilities → Adaptive Strategic Orientation	0.612***	0.375	0.388	0.295
Adaptive Strategic Orientation → Firm Performance	0.547***	0.502	0.312	0.376
Dynamic Capabilities → Firm Performance	0.319**		0.156	

Source: Primary Data (2025)

Note: Path coefficients ( $\beta$ ) represent standardised regression weights; all values are significant at  $p < 0.01$  (denoted by \*\*) or  $p < 0.001$  (denoted by \*\*\*).  $R^2$  values indicate the proportion of variance explained in the endogenous constructs.  $f^2$  effect sizes are interpreted as small ( $\geq 0.02$ ), medium ( $\geq 0.15$ ), and large ( $\geq 0.35$ ) based on Cohen's guidelines.  $Q^2$  values, derived from the blindfolding procedure, confirm the model's predictive relevance, with values  $> 0$  indicating sufficient predictive accuracy.

The path from dynamic capabilities to adaptive strategic orientation yielded a standardised coefficient of  $\beta = 0.612$ , which is statistically significant at the  $p < 0.001$  level. This indicates a strong and positive relationship, suggesting that firms with well-developed dynamic capabilities such as sensing market shifts, seizing emerging

opportunities, and reconfiguring internal resources are more likely to adopt a strategic orientation that is flexible, responsive, and adaptive. The R<sup>2</sup> value for adaptive strategic orientation was 0.375, indicating that dynamic capabilities explain 37.5% of the variance in this mediating construct. Additionally, the f<sup>2</sup> effect size for this relationship was 0.388, classified as large [33], reflecting a substantial effect of dynamic capabilities on adaptive strategic orientation. The Q<sup>2</sup> value of 0.295 further confirms that the model has adequate predictive relevance for this endogenous construct [34].

The next path, from adaptive strategic orientation to firm performance, also demonstrated a strong and significant relationship ( $\beta = 0.547, p < 0.001$ ), implying that firms with higher levels of strategic adaptability tend to report better performance outcomes. The R<sup>2</sup> value for firm performance was 0.502, suggesting that more than half of the variance in firm performance is explained by adaptive strategic orientation. The f<sup>2</sup> effect size for this path was 0.312, which falls within the medium range, while the Q<sup>2</sup> value of 0.376 indicates strong predictive capability for firm performance.

Finally, the direct relationship between dynamic capabilities and firm performance was also found to be significant, albeit with a relatively lower coefficient ( $\beta = 0.319, p < 0.01$ ). This finding implies that dynamic capabilities contribute directly to performance, though their effect is partially channelled through adaptive strategic orientation. The associated f<sup>2</sup> effect size was 0.156, indicating a small-to-moderate effect, consistent with a model involving partial mediation [35].

Collectively, these results support all hypothesised relationships, affirm the theoretical model, and highlight the strategic importance of both dynamic capabilities and adaptive orientation in driving firm performance in the Indonesian logistics sector.

**Table 4.** Hypothesis Testing Results

Hypothesis Code	Path	$\beta$	t-stat	p-value	Conclusion
H1	Dynamic Capabilities → Firm Performance	0.319**	2.859	0.004	Supported
H2	Dynamic Capabilities → Adaptive Strategic Orientation	0.612***	7.431	0.000	Supported
H3	Adaptive Strategic Orientation → Firm Performance	0.547***	6.124	0.000	Supported
H4	DC → ASO → FP (Mediation Effect)	0.335***	5.876	0.000	Supported; Partial Positive Mediation

Source: Primary Data (2025)

Note: All hypotheses were tested using bootstrapping (5,000 subsamples). Path coefficients are standardised and all results are statistically significant at  $p < 0.01$  (\*\*), and  $p < 0.001$  (\*\*\*). The mediation analysis confirms a partial positive mediation, as both the direct and indirect effects of dynamic capabilities on firm performance are significant.

The results presented in Table 4 confirm that all four hypotheses are supported based on the statistical analysis conducted through the PLS-SEM approach. The first hypothesis (H1), which proposed a direct positive effect of dynamic capabilities on firm performance, is supported ( $\beta = 0.319$ ,  $t = 2.859$ ,  $p = 0.004$ ). This result suggests that firms with strong dynamic capabilities those able to integrate, reconfigure, and renew resources can improve their overall performance, even in turbulent environments such as the logistics sector in Makassar.

The second hypothesis (H2), stating that dynamic capabilities positively influence adaptive strategic orientation, is also supported ( $\beta = 0.612$ ,  $t = 7.431$ ,  $p < 0.001$ ). This finding reinforces the notion that dynamic capabilities are foundational to building organisational flexibility and responsiveness, enabling firms to adapt their strategic direction in line with environmental shifts.

The third hypothesis (H3) posits that adaptive strategic orientation positively affects firm performance, which is again supported by the data ( $\beta = 0.547$ ,  $t = 6.124$ ,  $p < 0.001$ ). Firms that develop adaptive strategic approaches characterised by flexibility, proactiveness, and responsiveness tend to achieve higher performance outcomes.

Lastly, the fourth hypothesis (H4), which tests the mediating role of adaptive strategic orientation in the relationship between dynamic capabilities and firm performance, is supported ( $\beta = 0.335$ ,  $t = 5.876$ ,  $p < 0.001$ ). The statistical significance of both the direct and indirect effects indicates partial mediation, meaning that dynamic capabilities enhance performance both directly and indirectly through adaptive strategic behaviour.

## 5 Discussion

This study explores how firms in Indonesia's logistics sector navigate the disruptive forces of digital transformation by leveraging dynamic capabilities and strategic adaptability. The integration of these constructs provides a nuanced understanding of performance enhancement in volatile and technologically evolving business environments.

Theoretically rooted in the dynamic capabilities framework [36], the research affirms the vital role of sensing, seizing, and transforming capacities in enabling firms to respond to digitalisation, regulatory shifts, and market complexity. As posited by Engelmann [1], dynamic capabilities are not merely operational routines but are embedded in higher-order processes that help firms adapt to, rather than resist, change. This insight is particularly relevant to the Indonesian logistics context, where firms are increasingly challenged to balance agility with resource constraints and institutional uncertainty.

In line with Ellström et al. [2] and Ghosh [3], this study underscores the strategic nature of capabilities as context-sensitive assets. The effectiveness of such capabilities is not universal; rather, it depends on how they are orchestrated within organisational processes, structures, and culture. Within logistics operations in Makassar a growing node in Eastern Indonesia's economic landscape the strategic deployment of dynamic

capabilities enables firms to reconfigure their offerings in response to evolving customer demands and technological imperatives.

Moreover, the inclusion of adaptive strategic orientation as a central construct aligns with perspectives that frame strategy as an ongoing process of alignment with environmental change [37]. Strategic orientation in this context encompasses the firm's ability to adjust its decision-making heuristics, market positioning, and value delivery mechanisms. The findings extend prior literature by demonstrating how adaptive strategy functions as an integrative force, translating dynamic inputs into coherent, market-aligned actions.

Previous research by Sullivan and Wamba [25] has emphasised the interplay between market responsiveness and innovation as central to performance outcomes. This study reinforces these views by demonstrating that firms embracing adaptive strategic logic are more likely to synchronise internal capability configurations with external opportunities and threats. This strategic alignment allows them to be both exploratory and exploitative in real time an imperative in the logistics industry where customer satisfaction is increasingly shaped by delivery speed, digital tracking, and service customisation.

Furthermore, this study contributes to the growing discourse on performance heterogeneity by integrating behavioural and resource-based perspectives. While the resource-based view offers a foundation for understanding firm-specific advantages [38], the dynamic capabilities lens extends this by focusing on how firms reconfigure such resources over time. When combined with adaptive strategic mechanisms, this approach provides a more complete explanation of performance variations in fast-evolving sectors.

Collectively, the discussion strengthens the conceptualisation of performance as an outcome of both strategic capacity and strategic intent. It illustrates that in uncertain environments, dynamic capabilities must be channelled through adaptive orientations to yield sustainable results. This insight not only expands the theoretical dialogue but also offers actionable implications for managers seeking to future-proof their strategic approaches in the face of digital and institutional disruption.

## **6 Conclusion**

This study contributes to the strategic management literature by explicating the role of dynamic capabilities and adaptive strategic orientation in enhancing firm performance, particularly within the context of logistics companies in Makassar, Indonesia. Situated in a rapidly transforming business environment shaped by digital disruption, institutional uncertainty, and rising customer expectations, the research confirms that dynamic capabilities when strategically channelled through adaptive orientation can significantly enhance organisational outcomes.

Theoretically, the study reaffirms the relevance of the dynamic capabilities view (DCV) as a framework for understanding how firms sense, seize, and reconfigure resources to sustain competitiveness. It also integrates behavioural and strategic perspectives by showing that adaptive orientation is not merely a strategic posture but

a mediating process through which capabilities are translated into performance. This bridges a key gap in existing literature by connecting microfoundational capabilities with macro-level performance in emerging economies.

Practically, the research provides insights for managers seeking to future-proof their firms against ongoing technological and market shifts. Logistics firms, in particular, are advised to invest not only in digital infrastructure but also in cultivating flexible strategic mindsets, customer responsiveness, and decentralised decision-making. Building adaptive routines into daily operations enables organisations to turn dynamic capabilities into real-time strategic action.

However, several limitations must be acknowledged. First, the study employed a cross-sectional design, which limits the ability to draw causal inferences over time. Longitudinal or panel data could provide a more dynamic view of how capabilities evolve and impact performance. Second, the data were drawn from a single geographic cluster Makassar thus limiting generalisability to other regions or industries. While Makassar represents a strategic economic hub in Eastern Indonesia, future studies may extend the model to other sectors (e.g., manufacturing, fintech, or creative industries) and other urban centres.

Third, the use of self-reported survey data introduces potential biases, including social desirability and perceptual distortion. Although rigorous validation procedures were applied, qualitative triangulation (e.g., through interviews or case studies) could enhance the robustness of findings. Lastly, the study focused on only three variables, which, while effective in illustrating a core theoretical mechanism, excludes potentially influential factors such as leadership orientation, innovation capabilities, or environmental turbulence.

Future research could extend this framework by integrating moderating variables (e.g., digital maturity, firm size, or regulatory uncertainty) to explore boundary conditions of the capability–strategy–performance relationship. In addition, employing mixed-methods designs could uncover deeper insights into the cultural, behavioural, and institutional contexts that shape strategic adaptability in emerging economies.

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