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DYNAMIC CAPABILITIES AND BUSINESS PERFORMANCE: THE MEDIATING ROLE OF BUSINESS MODEL INNOVATION IN VIETNAMESE ENTERPRISES

CAPACIDADES DINÂMICAS E DESEMPENHO EMPRESARIAL: O PAPEL MEDIADOR DA INOVAÇÃO DO MODELO DE NEGÓCIOS EM EMPRESAS VIETNAMITAS

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Abstract
This study examines how dynamic capabilities enhance firm performance, highlighting the mediating role of business model innovation (BMI) in Vietnamese enterprises. A mixed-methods approach was employed, combining qualitative interviews and a survey with 32 indicators. Data from 396 valid responses were analyzed using SPSS and AMOS to assess five dynamic capabilities: absorptive, technological, adaptive, innovative, and knowledge management. Results indicate that innovative capability is the strongest driver of BMI and firm performance. Technological and knowledge management capabilities also play significant roles in fostering adaptability and opportunity recognition. All five dynamic capabilities positively influence BMI, which in turn improves performance. The study extends

Resumo
Este estudo examina como as capacidades dinâmicas aprimoram o desempenho das empresas, destacando o papel mediador da inovação em modelos de negócios (IMN) em empresas vietnamitas. Uma abordagem de métodos mistos foi empregada, combinando entrevistas qualitativas e um questionário com 32 indicadores. Os dados de 396 respostas válidas foram analisados utilizando SPSS e AMOS para avaliar cinco capacidades dinâmicas: absortiva, tecnológica, adaptativa, inovadora e de gestão do conhecimento. Os resultados indicam que a capacidade inovadora é o principal fator impulsionador da IMN e do desempenho da empresa. As capacidades tecnológica e de gestão do conhecimento também desempenham papéis significativos no fomento da adaptabilidade e do reconhecimento

dynamic capability theory by confirming the mediating effect of BMI and providing empirical evidence from the context of Vietnamese firms. The findings suggest that firms should integrate dynamic capabilities into their strategies to sustain innovation, flexibility, and competitiveness in rapidly changing technological environments. The scope is limited to Vietnamese firms and five specific capabilities; future research should broaden contexts and variables to enhance generalizability.

Keywords: Dynamic Capabilities. Business Model Innovation. Firm Performance. Innovation. Vietnam.

de oportunidades. Todas as cinco capacidades dinâmicas influenciam positivamente a IMN, o que, por sua vez, melhora o desempenho. O estudo amplia a teoria das capacidades dinâmicas ao confirmar o efeito mediador da IMN e fornecer evidências empíricas no contexto de empresas vietnamitas. As descobertas sugerem que as empresas devem integrar capacidades dinâmicas em suas estratégias para sustentar a inovação, a flexibilidade e a competitividade em ambientes tecnológicos em rápida transformação. O escopo se limita a empresas vietnamitas e a cinco capacidades específicas; pesquisas futuras devem ampliar os contextos e as variáveis para aumentar a generalização dos resultados.

Palavras-chave: *Capacidades Dinâmicas. Inovação em Modelos de Negócios. Desempenho da Empresa. Inovação. Vietnã.*

1 INTRODUCTION

In today's fast-paced, technology-driven business environment, firms must adapt and innovate to remain competitive. Dynamic capabilities the ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece et al., 1997) enable organizations to navigate uncertainties and seize opportunities. These capabilities are central to strategic management, fostering innovation and enhancing performance in turbulent markets (Eisenhardt & Martin, 2000; Teece, 2007). A key mechanism through which dynamic capabilities operate is business model innovation (BMI), which involves reimagining a firm's value proposition, creation, and delivery to generate new value (Amit & Zott, 2001; Osterwalder & Pigneur, 2010). Amid globalization, technological disruption, and shifting consumer preferences, BMI is essential for sustained growth and competitive advantage.

While prior research highlights the direct impact of dynamic capabilities on performance, fewer studies explore how these capabilities foster BMI, which subsequently enhances performance, particularly in emerging markets. Binh Duong Province, Vietnam, offers a compelling context for this study. As a dynamic industrial hub, Binh Duong reported a 3.76% GDP growth in the first half of 2023, with a 5.9% increase in the services sector and significant foreign direct investment (over 28 trillion VND). However, competitive pressures are evident, with 294 enterprises dissolving in

the same period. This study addresses three research questions: (1) How do absorptive, technological, adaptive, innovative, and knowledge management capabilities influence BMI? (2) How do these capabilities affect performance, directly and indirectly, via BMI? (3) Which capability has the greatest impact on innovation and performance?

This research contributes by empirically validating BMI's mediating role, identifying the most influential capabilities, and extending dynamic capabilities theory to an emerging economy. It offers practical insights for managers and policymakers in fast-evolving markets. The paper is structured as follows: a literature review and hypotheses, methodology, results, discussion, and conclusion with limitations and future research directions.

2 LITERATURE REVIEW

2.1 Dynamic capabilities and competitive advantage

Dynamic capabilities, defined as a firm's ability to adapt and reconfigure resources in dynamic environments (Teece et al., 1997), extend the resource-based view by emphasizing resource renewal for competitive advantage. Eisenhardt and Martin (2000) describe these capabilities as reliable processes (e.g., product development, strategic decision-making) that enable adaptation. Zollo and Winter (2002) highlight learning as a foundation for capability evolution, while Teece (2007) identifies sensing, seizing, and transforming as key processes. These capabilities allow firms to modify their resource base (Helfat et al., 2007), driving innovation and performance.

This study focuses on five dynamic capabilities: absorptive, technological, adaptive, innovative, and knowledge management. These are hypothesized to influence BMI and performance, with BMI as a mediator (see Figure 1).

2.1.1 Absorptive capability

Absorptive capability encompasses a firm's ability to acquire, assimilate, transform, and exploit external knowledge to enhance organizational performance. Building on early definitions by Cohen and Levinthal (1990), Wang and Ahmed (2007), and Zahra and George (2002), this capability enables firms to recognize and apply new

knowledge in ways that support strategic and structural adjustments. Prior studies (e.g., Teece, 2007; Jansen et al., 2005; Lane, Koka, & Pathak, 2006) highlight that strong absorptive capability facilitates business model innovation by allowing firms to respond effectively to market changes, restructure operations, and convert new information into growth opportunities. Research further suggests that leveraging external knowledge promotes innovation and sustainable development (Fosfuri et al., 2001) and is increasingly critical in competitive and globalized environments (Camisón & Forés, 2010; Volberda et al., 2010). Overall, absorptive capability is widely recognized as a foundational driver of business model renewal and long-term competitive advantage.

Hypothesis H1: Absorptive capability has a positive influence on the business model innovation of enterprise.

Research widely affirms that absorptive capability is a critical determinant of business performance. Originating from Cohen and Levinthal's (1990) definition of recognizing, assimilating, and applying new knowledge, the concept was expanded by Zahra and George (2002) into four dimensions that strengthen innovation and overall outcomes. Subsequent studies, including those by Todorova and Durisin (2007) and Lane, Koka, and Pathak (2006), highlight its role in enhancing efficiency and enabling firms to adapt to dynamic environments. Evidence from Wang and Ahmed (2007), Jansen et al. (2005), Flatten et al. (2011), and Fosfuri et al. (2008) shows that absorptive capability supports strategic adjustment, product development, and improved performance. Research by Camisón and Forés (2010) and Volberda et al. (2010) further indicates its positive influence on innovation, revenue growth, and sustainable value creation. Overall, absorptive capability is essential for strengthening long-term performance and maintaining competitive advantage.

Hypothesis H2: Absorptive capability has a positive influence on the business performance of enterprises

2.1.2 Technological capability

Research consistently shows that technological capabilities play a central role in driving business model innovation. Scholars such as Teece (2007) and Chesbrough and Rosenbloom (2002) highlight that strong technological foundations enable firms to develop new products and continuously adjust their business models to respond to market

and technological change. Studies by Mitchell et al. (1997), Baden-Fuller and Haefliger (2013), and Bower and Christensen (1995) demonstrate that advanced and disruptive technologies stimulate new business model designs and open opportunities in the digital environment. Further contributions by Pisano and Teece (2007), Zott and Amit (2008), Lyytinen and Rose (2003), Foss and Saebi (2017), and Cavalcante et al. (2011) confirm that technological capabilities enhance competitive advantage and support the transformation of traditional models. Overall, technological capabilities are essential for enabling firms to innovate, adapt, and maintain competitiveness in dynamic contexts.

Hypothesis H3: Technological capability has a positive influence on the business model innovation of enterprise

A substantial body of research demonstrates that technological capabilities are fundamental to improving business performance. Teece et al. (1997) showed that these capabilities enable firms to restructure and use resources more effectively, strengthening operational performance and competitive advantage. Zahra et al. (2006) argued that firms with strong technological foundations are better able to capitalize on new opportunities, leading to superior growth. Calantone et al. (2002) and Cohen and Levinthal (1990) linked technological and absorptive capabilities to enhanced learning, product development, and process improvement. Nonaka and Takeuchi (1995) and Benner and Tushman (2003) emphasized that technological strength supports continuous innovation and productivity gains. Grant (1996) and Bharadwaj (2000) further noted that these capabilities improve knowledge management, operational efficiency, and profitability. Overall, technological capabilities play a critical role in boosting efficiency, productivity, and competitiveness in dynamic environments.

Hypothesis H4: Technological capability has a positive influence on the business performance of enterprises

2.1.3 Adaptive capability

Adaptive capability is widely recognized as a key driver of business model innovation. Teece et al. (1997) emphasized that it enables firms to adjust their business models flexibly in response to market volatility, sustaining competitive advantage and creating new value. Wang and Ahmed (2007) highlighted its role in facilitating rapid and efficient restructuring under changing business conditions. Zahra and George (2002)

noted that adaptive capability supports the absorption and application of new knowledge, fostering strategic innovation. Gibson and Birkinshaw (2004) observed that firms with strong adaptive capability can balance current performance with innovation, maintaining efficiency while adapting to change. Lengnick-Hall et al. (2011) and Doz and Kosonen (2010), together with O'Reilly and Tushman (2008), further confirmed that flexible organizational and strategic capabilities enhance competitiveness and long-term performance, particularly in dynamic environments

Hypothesis H5: Adaptive capability has a positive influence on the business model innovation of enterprise

Adaptive capability is widely acknowledged as a critical factor influencing business performance. Teece et al. (1997) highlighted its role in enabling firms to quickly adjust resources, improve operational efficiency, and maintain competitiveness. Wang and Ahmed (2007) emphasized that it supports strategic adjustments in response to environmental changes, enhancing performance. Gibson and Birkinshaw (2004) noted that firms with strong adaptive capability achieve better outcomes by balancing resource exploitation with the exploration of new opportunities. Lengnick-Hall et al. (2011), O'Reilly and Tushman (2008), and Doz and Kosonen (2010) further confirmed that adaptive capability fosters innovation, aligns business models with market trends, and sustains long-term growth and effectiveness in dynamic environments.

Hypothesis H6: Adaptive capability has a positive influence on the business performance of enterprises

2.1.4 Innovative capability

Innovative capability is widely recognized as a key driver of business model innovation. Schumpeter (1934) emphasized that innovation, through creative destruction, enables firms to replace outdated processes and introduce new products and services. Teece et al. (1997) highlighted that it allows firms to restructure business models to seize opportunities and sustain long-term competitive advantage. Christensen (1997) stressed its role in fostering disruptive models and supporting sustainable growth. Empirical studies by García-Morales et al. (2007), O'Connor et al. (2008), Lawson and Samson (2001), and Crossan and Apaydin (2010) further demonstrate that high innovative

capability helps firms adapt to environmental changes, refine business models, develop new products, and enhance performance and competitiveness

Hypothesis H7: Innovative capability has a positive influence on the business model innovation of enterprise

Innovative capability is widely recognized as a critical determinant of business performance. Schumpeter (1934) emphasized its role in driving economic growth by improving processes and developing new products. Drucker (1985) highlighted that it enables firms to identify and exploit new opportunities, enhancing overall performance. Teece et al. (1997) and Hitt et al. (1996) noted that innovative capability allows firms to restructure resources, create value, and maintain competitive advantage. Christensen (1997) underscored its role in generating disruptive solutions and expanding markets. Empirical studies by Calantone et al. (2002) and Fletcher and Melancon (2012) further confirm that strong innovative capability improves business outcomes and supports sustainable competitiveness in dynamic environments.

Hypothesis H8: Innovative capability has a positive influence on the business performance of enterprises

2.1.5 Knowledge management capability

Knowledge management capability is widely recognized as a key driver of business model innovation. Nonaka and Takeuchi (1995) emphasized that creating and applying knowledge enables firms to develop new business models and strengthen competitive advantage. Grant (1996) and Zack (1999) highlighted that knowledge, as a strategic resource, supports innovation by facilitating the collection, storage, and effective use of information. Choi and Lee (2003) noted that it enhances learning and adaptability, while Teece (2000) positioned knowledge management as a central component of dynamic capabilities for identifying new opportunities. Alavi and Leidner (2001) and Bontis (1996) further confirmed that strong knowledge management capability fosters sustainable value creation, efficiency, and innovative business models.

Hypothesis H9: Knowledge management capability has a positive influence on the business model innovation of enterprise

Knowledge management capability is widely recognized as a critical driver of business performance and innovation. Nonaka and Takeuchi (1995) emphasized that

knowledge creation and sharing enhance competitive advantage. Grant (1996) highlighted knowledge as a strategic resource that supports innovation and operational optimization. Zack (1999) and Choi and Lee (2003) demonstrated that knowledge management facilitates the collection, application, and integration of information, boosting learning, strategic adjustment, and performance. Teece (2000) positioned it as a core component of dynamic capabilities for identifying and exploiting new opportunities. Alavi and Leidner (2001) and Fletcher and Melancon (2012) further confirmed that strong knowledge management capability fosters sustainable value creation, improved outcomes, and enhanced innovation potential.

Hypothesis H10: Knowledge management capability has a positive influence on the business performance of enterprises

2.1.6 Business model innovation

Business model innovation (BMI) is widely recognized as a key driver of firm performance. Studies indicate that effectively implementing BMI can enhance sales, growth, and profitability. Amit and Zott (2001) emphasized that BMI creates value by improving product and service delivery, increasing efficiency and market reach. Chesbrough (2007) highlighted its role in generating new revenue streams and strengthening competitiveness beyond product innovation. Teece (2010) argued that BMI enables firms to optimize value for customers and sustain competitive advantage. Osterwalder and Pigneur (2010) stressed that adjusting business models in line with market trends enhances efficiency and performance. Zott and Amit (2010) further confirmed that innovative business models improve operational efficiency and revenue growth, demonstrating that BMI is essential for positive business outcomes.

Hypothesis H11: Business model innovation has a positive influence on the business performance of enterprises

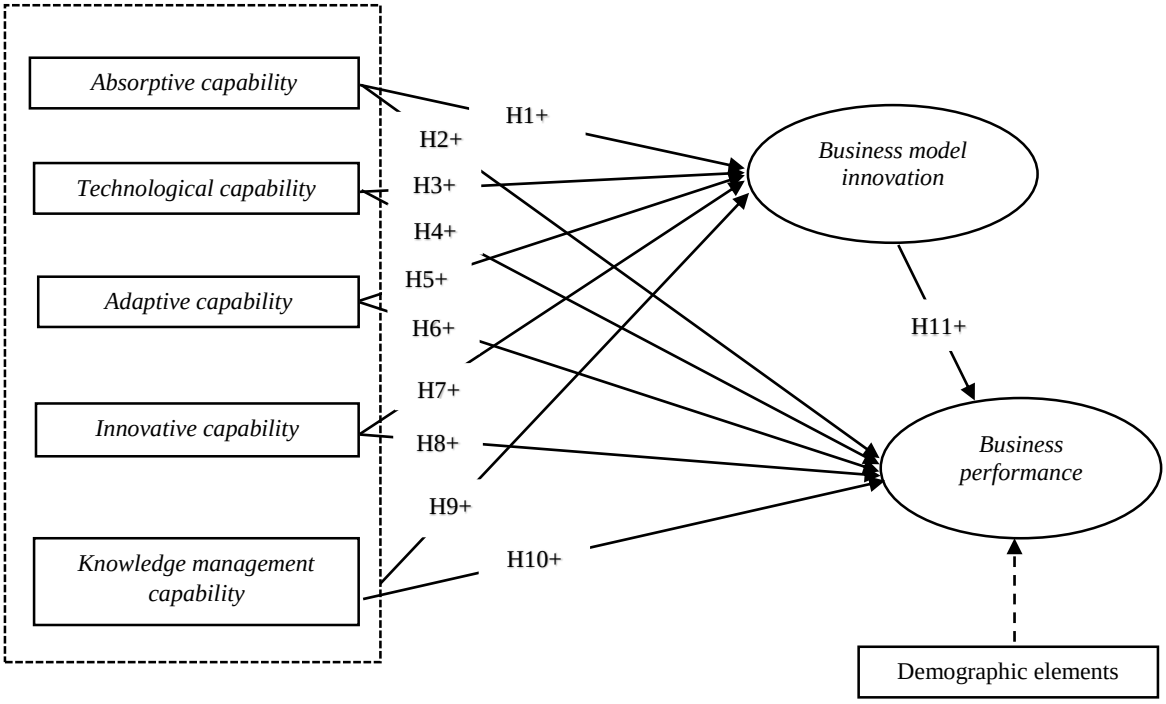
2.2 Research model

Through the literature review on dynamic capabilities, business model innovation, and business performance mentioned above, the author proposes a research model on the impact of dynamic capabilities on business performance through the mediating variable

of business model innovation in the research context of Binh Duong. The proposed research model is illustrated in Figure 1.

Figure 1

Proposed research model



Source: Author's compilation

3 METHODOLOGY

3.1 Research Design

To investigate the impact of dynamic capabilities on business performance mediated by business model innovation, we employed a mixed-methods research design consisting of an initial qualitative phase followed by a quantitative survey. The qualitative phase involved a thorough literature review and expert consultations to develop and refine the measurement scales for each construct. This ensured content validity and context relevance of the survey instrument. We conducted discussions with several industry experts and senior managers in Binh Duong to identify practical indicators of dynamic capabilities and business model innovation in the local context. Based on their feedback and existing literature, we drafted an initial pool of items (questions) representing the five

dynamic capabilities, business model innovation, and business performance. A pilot study was then carried out to purify the measurement scales. We administered the draft questionnaire to a small sample of managers (50 were invited, with 38 valid responses returned). Using this pilot data, we performed exploratory analysis (e.g., Cronbach's alpha reliability and exploratory factor analysis) to identify any problematic items. As a result, we refined the instrument and retained 32 observed variables (survey items) that cleanly represented the seven constructs of interest (five capabilities, one mediator, one outcome) with acceptable reliability. These 32 items formed the basis of the final questionnaire, with each construct measured by multiple Likert-scale items (detailed below).

3.2 Sample and data collection

The target population for the study was enterprises operating in Binh Duong Province, Vietnam. We focused on established businesses across various industries in this region, as Binh Duong is a leading industrial hub with a mix of manufacturing, service, and trade companies. The key informants for the survey were members of senior management – specifically, board of directors' members, department heads, or deputy heads – because these individuals are knowledgeable about their firm's strategic capabilities, innovation initiatives, and overall performance. Targeting senior managers also helps ensure the respondent has a holistic view of the organization, which is important for assessing firm-level constructs. We utilized a quota sampling method to ensure that the sample included a diverse range of firms by size and ownership type (e.g., private domestic firms, state-owned enterprises, foreign-invested firms, joint-stock companies). Quotas were set to approximate the known composition of businesses in Binh Duong's economy, thereby improving the representativeness of the sample. After the pilot test, the official survey was launched. We distributed 500 questionnaires through a combination of email and in-person delivery during 2023. A total of 418 responses were collected. After excluding incomplete or invalid responses (e.g., significant missing data or obviously insincere answers), we obtained 396 valid responses for analysis, yielding an effective response rate of approximately 79%. This sample size is adequate for our statistical analyses, including structural equation modeling. The respondent firms varied in profile. In terms of ownership, the sample included private local enterprises, foreign

direct investment (FDI) companies, and some state or joint-stock companies. They ranged from small and medium-sized enterprises to large corporations. We collected basic demographic information: for example, about 60% of the sample were domestic private companies and 40% had some state or foreign ownership. Firms' ages ranged widely (many firms had over 10 years of operation, while some were newer), and industries covered manufacturing (about 45%), services (30%), and trading/other sectors (25%). We also captured firm size (number of employees and revenue): roughly half were medium-sized (50–250 employees), with the remainder split between small (<50 employees) and large (>250 employees) firms. These demographic factors (ownership type, size, and firm age) were later used as control variables in the analysis to account for their potential influence on performance.

4 RESULTS

4.1 Measurement modeling results

Before conducting data, analysis using AMOS, it is essential to evaluate the measurement model, which includes assessing factor loadings, reliability, convergent validity, and discriminant validity (Hair et al., 2010). In this study, the factor loadings for all observed variables were greater than 0.6, with a KMO value exceeding 0.5 and eigenvalues greater than 1, as presented in Table 1 below. These results confirm that the exploratory factor analysis (EFA) is appropriate for the model

Table 1

EFA analysis results

	Factors						
	1	**2**	**3**	**4**	**5**	**6**	**7**
Thichnghi3	.847						
Thichnghi4	.822						
Thichnghi2	.811						
Thichnghi1	.811						
Thichnghi5	.786						
Congnghe1		.871					
Congnghe4		.853					
Congnghe2		.797					
Congnghe3		.784					
Congnghe5		.689					
Quantri4			.801				
Quantri1			.784				

	Factors						
	1	2	3	4	5	6	7
Quantri2			.776				
Quantri3			.759				
Quantri5			.740				
Sangtao4				.793			
Sangtao1				.778			
Sangtao2				.760			
Sangtao3				.756			
Sangtao5				.713			
KQHD4					.838		
KQHD1					.819		
KQHD2					.799		
KQHD3					.776		
Doimoi1						.831	
Doimoi3						.799	
Doimoi4						.793	
Doimoi2						.787	
Hapthu3							.826
Hapthu4							.809
Hapthu2							.795
Hapthu1							.725
KMO = 0,837							
Eigenvalue = 1,740							
Total variance explained = 67,062%,							

Source: Author's analysis

Furthermore, the CFA analysis revealed that the composite reliability (Pc) for all scales exceeded 0.5, and the composite extracted variance (Pvc) was also greater than 0.5 across the board. Additionally, all scales had a Cronbach's alpha coefficient higher than 0.7, indicating strong reliability, unidimensionality, and ensuring both convergent and discriminant validity

Table 2

Composite reliability analysis results

Factor	Reliability of the scale			Conclusion
	Cronbach's Alpha	Composite Reliability	Composite Extracted Variance	
Absorptive capability	0,808	0.810	0.519	Accepted
Technological capability	0,872	0.876	0.591	Accepted
Adaptive capability	0,892	0.892	0.625	Accepted
Innovative capability	0,833	0.834	0.503	Accepted
Knowledge management capability	0,844	0.844	0.520	Accepted
Business model innovation	0,865	0.871	0.629	Accepted
Business performance	0,870	0.867	0.620	Accepted

Source: Author's analysis

4.2 Testing research models with SEM

Table 3 presents the standardized estimated results for the main parameters of the research model, showing that the relationships between the concepts are statistically significant at the 5% level ($p < 0.05$)

Table 3

Hypothesis test results

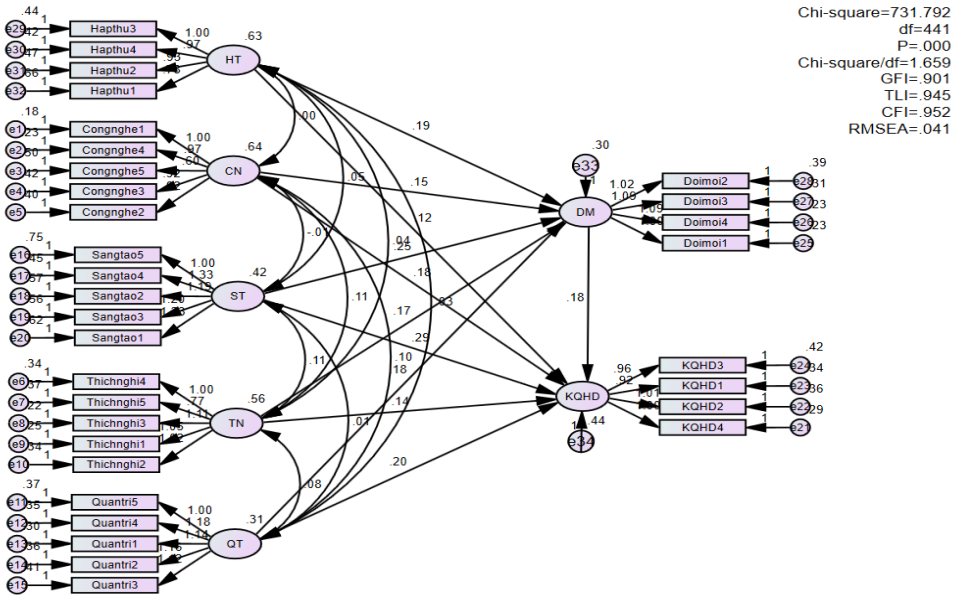
Relationship			Hypothesis	Estimate	S.E	C.R	p	Result
DM	<---	HT	H1	.196	.045	4.349	***	Accepted
DM	<---	CN	H3	.152	.044	3.489	***	Accepted
DM	<---	ST	H5	.245	.058	4.234	***	Accepted
DM	<---	TN	H7	.165	.047	3.506	***	Accepted
DM	<---	QT	H9	.175	.065	2.689	.007	Accepted
KQHD	<---	HT	H2	.113	.055	2.035	.042	Accepted
KQHD	<---	CN	H4	.173	.054	3.220	.001	Accepted
KQHD	<---	ST	H6	.287	.072	3.977	***	Accepted
KQHD	<---	TN	H8	.138	.057	2.422	.015	Accepted
KQHD	<---	QT	H10	.211	.079	2.656	.008	Accepted
KQHD	<---	DM	H11	.194	.077	2.536	.011	Accepted

Source: Author's analysis

The analysis results indicate that the model's indexes meet the necessary criteria, including those for the SEM critical model (Fig. 3). Specifically, Chi-Square = 731,792; Chi – Square/df = 1,659 < 5; GFI = 0,901 > 0.9; TLI = 0,945 > 0.9; CFI = 0,952 > 0.9 and RMSEA = 0,041 < 0.05. These values suggest that the model aligns well with market data (Hair et al., 2010).

Figure 3

The analysis result of the study with SEM



Source: Author's analysis

5 DISCUSSION AND CONTEXTUAL AND PRACTICAL IMPLICATIONS

5.1 Discussion

The findings of this research provide empirical evidence for the theoretical proposition that dynamic capabilities are crucial drivers of both business model innovation and business performance. In this section, we discuss the results in detail, interpret their implications in light of existing literature, and highlight the contributions and nuances of our study.

5.1.1 Dynamic capabilities and business model innovation

Our analysis indicates that all five examined dynamic capabilities positively influence business model innovation (BMI), with innovative capability showing the strongest effect. This suggests that firms which foster a culture of creativity and possess strong innovation processes are especially adept at reinventing or adjusting their business models. This result aligns with the work of Wang and Ahmed (2007), who emphasized innovation capability as a core component of dynamic capabilities that propels long-term

competitive advantage. It also resonates with Christensen's (1997) notion that innovation (particularly disruptive innovation) can necessitate new business models. The strong impact of innovative capability on BMI underscores the critical importance of fostering organizational creativity and openness to new ideas; companies with higher innovative capacity tend to not only develop new products but also find novel ways to deliver and capture value, thereby reshaping their business models for greater success.

Absorptive capability is a key predictor of business model innovation, nearly matching the impact of innovative capability. This aligns with the view that a firm's ability to acquire and apply external knowledge enhances internal innovation processes (Cohen & Levinthal, 1990; Zahra & George, 2002). Our findings, consistent with Chien and Tsai (2012) and Tran (2015), indicate that firms in Binh Duong that effectively learn from customers, competitors, and technological trends are more likely to restructure business models, such as adopting new distribution channels or revenue models. The local context, characterized by rapid industrial growth and technological adoption, necessitates that firms leverage absorptive capability to transform market insights and technological know-how into innovative business model changes. Investing in knowledge acquisition and organizational learning mechanisms is therefore critical for enabling experimentation and opportunity recognition in this dynamic environment.

Technological, adaptive, and knowledge management capabilities all positively influence business model innovation, though their effects are smaller than innovative and absorptive capabilities. Technological capability, in particular, enables firms to implement new digital business models and operational configurations, supporting structural changes (Teece, 2007; Zott & Amit, 2008). In Binh Duong, the rapid adoption of Industry 4.0 technologies, such as automation and IoT, has driven manufacturing firms to adjust production and supply chain models, highlighting that local technological advancement necessitates process redesign to fully leverage new technologies (Lyytinen & Rose, 2003).

Adaptive capability positively influences business model innovation, highlighting the importance of organizational agility for strategic renewal (Doz & Kosonen, 2010). Firms with high adaptive capability can adjust their business models in response to environmental shifts, balancing short-term responsiveness with long-term innovation (Gibson & Birkinshaw, 2004). In Binh Duong, where firms face volatile input costs, policy changes, and fluctuating demand, companies with strong adaptive capability often

modify product lines or distribution strategies to maintain competitiveness, demonstrating that continuous adaptation is essential for aligning business models with dynamic market conditions

Knowledge management capability, though having a smaller statistical effect, remains crucial for business model innovation. Firms that effectively capture, share, and apply knowledge are better positioned to implement new business ideas (Tseng & Lee, 2014). In Binh Duong, companies with structured systems for market intelligence, internal knowledge sharing, and learning were more likely to experiment with innovative approaches, such as introducing subscription services based on customer feedback. This demonstrates that well-managed knowledge translates into actionable innovation, bridging the gap between insights and practical business model changes.

5.1.2 Dynamic capabilities and business performance

Our results also demonstrate that dynamic capabilities have significant direct effects on business performance, beyond their indirect effects through BMI. This finding is notable because it suggests that while transforming the business model is a key pathway for capabilities to enhance performance, it is not the sole pathway—dynamic capabilities also improve performance via other mechanisms (e.g., incremental improvements, operational efficiencies, etc.).

Among dynamic capabilities, innovative capability exerted the strongest direct effect on business performance, highlighting innovation as a key driver of competitive advantage and firm success (Schumpeter, 1934; Hitt et al., 1996). Firms in Binh Duong with high innovative capability achieved superior growth and profitability, likely due to their ability to continuously develop valuable products and optimize processes. This aligns with evidence from emerging economies (Nguyen & Nguyen, 2009; Bui, 2017), where innovation is essential for firms to remain competitive under globalization pressures, emphasizing the importance of investing in R&D, creative talent, and an innovation-supportive organizational culture.

The positive impact of technological and knowledge management capabilities on performance in our study aligns with prior research (Zahra et al., 2006; Bharadwaj, 2000; Choi & Lee, 2003). Firms in Binh Duong's industrial parks that have upgraded technologies (e.g., automation, ERP systems) and implemented effective knowledge

management practices achieve higher productivity, operational efficiency, and financial outcomes. These findings underscore the importance of technological proficiency and organizational learning as key enablers of competitive performance, highlighting that even if less emphasized than innovation, knowledge management remains a foundational pillar for firm success.

Adaptive capability positively influences performance, though its standardized effect is slightly smaller than that of innovative and technological capabilities. This suggests that the ability to quickly adjust strategies provides a performance advantage, particularly in context-dependent scenarios such as economic fluctuations. In Binh Duong, firms that effectively restructured supply chains, reduced costs, or shifted product focus during recent market turbulence demonstrated better survival and growth, confirming that adaptive capability is a vital competency for sustaining performance in volatile emerging markets (Gibson & Birkinshaw, 2004; Nguyen, 2013). Absorptive capability showed the smallest but still significant direct effect on performance among the five capabilities. This indicates that its benefits are primarily indirect, supporting innovation and business model adaptation rather than immediately improving financial outcomes. In Binh Duong, firms with strong absorptive capacity were more effective at learning from technological developments and market trends, which enabled them to implement complementary actions such as process improvements and innovative business models, ultimately enhancing performance. This finding aligns with previous studies by Flatten and colleagues in 2011 and Wang and Ahmed in 2007, highlighting absorptive capability as an enabling capacity that works together with other dynamic capabilities to sustain firm competitiveness.

5.1.3 Mediating role of business model innovation

This study demonstrates that business model innovation acts as a mediating mechanism between dynamic capabilities and firm performance. Partial mediation indicates that dynamic capabilities enhance performance partly by enabling business model adjustments, providing empirical evidence of a pathway through which dynamic capabilities generate competitive advantage.

The findings support and extend Teece and Foss and Saebi's arguments that business model innovation is often required to capture the value of dynamic capabilities.

For instance, technological capability alone may not improve performance unless accompanied by a new business model, such as adopting a platform-based or licensing approach. Firms that integrate their capabilities with business model innovation achieve higher performance.

Innovative and absorptive capabilities showed substantial indirect effects via business model innovation, highlighting that much of their impact on performance operates through shaping the business model. This aligns with prior research calling for more empirical evidence on how innovation capabilities drive business model changes and confirms similar mediation effects observed for knowledge management capability. Business model innovation therefore serves as a bridge linking dynamic capabilities to performance outcomes.

Since all direct effects remained significant, the mediation is partial, indicating that dynamic capabilities also improve performance through other channels, such as operational efficiencies, strategic alignment, and incremental improvements. Adaptive capability, for example, can enhance short-term performance via pricing or marketing adjustments without a full business model change. The co-existence of direct and indirect effects suggests that managers should leverage capabilities for both innovation and effective execution, as business model innovation is most effective when combined with direct capability deployment.

5.2 Contextual and practical implications

Our study in Binh Duong, Vietnam, highlights that the dynamic and competitive environment of this emerging market amplifies the importance of internal capabilities. The strong effects of dynamic capabilities on business model innovation and performance indicate that firms in developing regions can achieve competitive advantages by focusing on capability development rather than relying solely on cheap labor or natural resources. Innovative capability emerged as the most influential driver, suggesting that cultivating creativity and R&D is particularly critical for success in such contexts.

Firm size and type also influenced performance. Larger firms and joint-stock companies generally performed better, likely due to greater resources, governance structures, or economies of scale. Nonetheless, dynamic capabilities and business model innovation remained significant even after controlling for these factors, indicating that

smaller or younger firms can overcome scale disadvantages by being agile and innovative. Medium-sized enterprises in our sample exemplified this, outperforming larger rivals through superior dynamism and innovation

Managers should strengthen all five dynamic capabilities—learning, technology, adaptation, innovation, and knowledge management—to create a robust foundation for innovation and performance. If resources are limited, prioritizing innovative capability can yield the greatest returns. Business model innovation should be a deliberate strategic focus, with dynamic capabilities guiding where model changes are feasible, such as leveraging technological capability for digital platforms or knowledge capability for service models. Regular review of value creation and capture processes is essential to maintain competitiveness.

The study underscores the interconnected nature of capabilities and business model innovation. Isolated investments, such as technology upgrades without adaptability or knowledge sharing, may fail to translate into performance gains. Effective business model innovation requires alignment across capabilities: technological enablement, knowledge-informed decisions, and adaptive execution. A systemic approach, including cross-functional initiatives and coordinated training, is recommended to maximize outcomes.

For policymakers and development agencies in emerging economies, fostering ecosystems that support firm-level capability development is crucial. Policies promoting R&D, technology adoption, management training, and knowledge networks can enhance dynamic capabilities, thereby indirectly boosting business model innovation and firm competitiveness. The performance gains observed in our study provide an economic justification for such capacity-building initiatives.

6 CONCLUSION

This study underscores the pivotal role of dynamic capabilities in shaping business model innovation and driving firm performance, with evidence drawn from a rapidly growing emerging market context. By examining five distinct dynamic capabilities in enterprises in Binh Duong Province, Vietnam, we found that these internal capabilities – absorptive, technological, adaptive, innovative, and knowledge management – each contribute significantly to both the innovation of business models and the enhancement

of business performance. Among the capabilities, innovative capability emerged as a particularly influential factor, highlighting the critical importance of fostering an organizational culture and resource base that supports continuous innovation. Technological and knowledge management capabilities also showed strong effects, emphasizing that investing in technology and effectively managing knowledge are vital for companies to remain competitive and responsive.

Crucially, our research demonstrated that business model innovation serves as a key mechanism through which dynamic capabilities translate into performance gains. Firms that leveraged their capabilities to rethink or reinvent their business models achieved better performance outcomes, confirming the mediating role of business model innovation. This finding contributes to a more nuanced understanding of dynamic capabilities theory by illuminating how capability-building efforts can yield tangible benefits: not only through direct improvements in operations but also by enabling transformative changes in how the business creates and captures value. In practice, it suggests that managers should not only develop capabilities in isolation but also apply them in a strategic manner to innovate their business models for sustainable success.

The implications of our findings are especially pertinent for businesses operating in volatile and fast-changing environments. As the business landscape continues to evolve – with technological disruptions, shifting customer preferences, and global competitive pressures – the ability to dynamically adapt and innovate will remain a key determinant of success. Companies that prioritize building their innovative, technological, adaptive, absorptive, and knowledge management capabilities are likely to be better equipped to face challenges and seize new opportunities for growth. They will be the ones able to pivot their business models when needed, introduce novel ways of delivering value, and thereby achieve superior performance even in highly competitive and uncertain markets.

In conclusion, this research offers empirical support for the idea that developing dynamic capabilities is an investment in long-term competitiveness and resilience. It also highlights the importance of business model innovation as both an outcome and enabler of such capabilities. For scholars, it opens avenues to further explore the interplay between internal capabilities and strategic innovation. For practitioners, it reinforces a clear message: to thrive in today's environment, firms must cultivate agility at their core – continuously learning, innovating, and evolving their business models – to deliver outstanding performance and sustainable growth.

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Authors' Contribution

Both authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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