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DRIVERS OF DIGITALIZATION AND ITS IMPACT ON ORGANIZATIONAL RESILIENCE IN THAILAND'S TOP DEPARTMENT STORES

Rawin Vongurai[1]

Abstract

This study investigates the key drivers of digitalization and the impacts of digitalization on organizational resilience among Thailand's top department stores. Targeting mid- to senior-level managers, IT professionals, and operational executives, the study involved collection of data from a sample of 400 respondents using purposive and quota sampling techniques. A pilot test with 40 participants was utilized to ensure the reliability of the questionnaire through Item-Objective Congruence (IOC) and Cronbach's Alpha analysis. Data were analyzed using Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). The findings reveal that innovation ($\beta = 0.189$, $p < .001$), human capital ($\beta = 0.519$, $p < .001$), and infrastructure and technology ($\beta = 0.334$, $p < .001$), significantly drive digitalization, while business model adaptation did not show a significant effect ($\beta = 0.057$, $p = .313$). Furthermore, digitalization was shown to have a strong influence on organizational resilience ($\beta = 0.863$, $p < .001$). These results highlight the critical role of investment in human capital, fostering innovation and enhancing technological infrastructure, to accelerate digital transformation and build resilience in a rapidly changing retail environment. The study offers practical insights for department store leaders seeking to strengthen their digital capabilities and adapt effectively to market disruptions.

Keywords: Digitalization, organizational resilience, human capital, innovation, department stores

1. INTRODUCTION

The rapid advancement of digital technologies has fundamentally transformed the global retail sector, compelling traditional department stores to embrace digitalization to maintain competitiveness (Verhoef et al., 2021). In Thailand, the growth of e-commerce and the integration of online and offline retail platforms have intensified the pressure on department stores to adopt digital strategies that enhance operational efficiency, customer experience, and overall organizational resilience (Chen, 2020). Organizational resilience, defined as the ability of a firm to anticipate, prepare for, respond to, and adapt to incremental change and sudden disruptions (Lengnick-Hall et al., 2011), has become increasingly critical in the context of post-pandemic economic recovery and technological disruption.

Despite growing recognition of the importance of digitalization, many department stores in Thailand are struggling to implement comprehensive digital strategies effectively. Several initiatives remain fragmented, lacking alignment with organizational goals and resilience-building practices (Chetthamrongchai & Jermsittiparsert, 2019). There is limited

[1] Assoc. Prof. Dr. Rawin Vongurai is currently working as Associate Dean and Program Director of the Ph.D. in Technology, Education, and Management at the Graduate School of Business and Advanced Technology Management, Assumption University, Thailand. He obtained a Ph.D. in Electronic and Electrical Engineering from the University of Nottingham, United Kingdom. Email: rawinvng@au.edu

empirical evidence identifying which organizational factors—such as innovation, human capital, infrastructure, and business model adaptation—are most significant in driving digitalization efforts and contributing to strengthening organizational resilience in the Thai retail context.

While existing studies have explored digital transformation in global retail markets (Shankar et al., 2016; Singh & Hess, 2017), few have specifically examined how digitalization impacts organizational resilience in Thailand's department store sector. Moreover, there is a scarcity of research addressing the relative influence of key drivers such as human capital, innovation, and technological infrastructure within this regional context. This study addresses these gaps by empirically examining the causal relationships between specific drivers, digitalization, and organizational resilience.

This study contributes to the theoretical advancement of digitalization and resilience literature by extending it to the context of Thai department stores. Meanwhile, practical contributions of the findings include actionable insights for department store executives and policymakers aiming to strengthen resilience through targeted investments in innovation, talent development, and technological upgrades. Enhancing organizational resilience through effective digitalization strategies is crucial for ensuring long-term sustainability and competitiveness in an increasingly volatile and digitalized marketplace.

This study is guided by the following objectives:

1. To investigate the impact of business model adaptation, innovation, human capital, and infrastructure and technology, on digitalization in Thailand's department stores.
2. To examine the influence of digitalization on organizational resilience among Thai department stores.

Based on the research objectives, the study seeks to answer the following questions:

1. How do business model adaptation, innovation, human capital, and infrastructure and technology, affect digitalization in Thailand's department stores?
2. To what extent does digitalization enhance organizational resilience among department stores in Thailand?

2. LITERATURE REVIEW

2.1 Business Model Adaptation

Business model adaptation is a strategic process through which firms modify their value creation, delivery, and capture mechanisms in response to dynamic changes (Foss & Saebi, 2017; Teece, 2018). As technological disruptions have accelerated, digitalization—adopting digital technologies to transform business processes—has become a key driver of organizational change (Sharma et al., 2024). Studies have indicated that digitalization requires more than simple technological upgrades; it necessitates a fundamental rethinking of business models (Wirtz et al., 2019). Firms that have adapted their business models to embrace digital trends have outperformed those that only digitized existing operations, overcoming challenges such as legacy systems and organizational inertia (Li, 2020; Verhoef et al., 2021; Warner & Wäger, 2019). In the Thai context, Chen's (2020) research on Thailand's retail industry showed that proactive business model adaptation is essential for leveraging digital opportunities, enhancing competitiveness, and improving operational efficiency. In summary, the literature has suggested that business model adaptation is crucial for enabling digitalization, leading to the following hypothesis:

H1: Business model adaptation has a significant impact on digitalization.

2.2 Innovation

Innovation is generally defined as the introduction of new ideas, products, or processes that add value (González-Ramírez et al., 2024). In the context of business, digital innovation refers to utilizing digital technologies to enhance or create new business models, processes, or products (Westerman et al., 2011). Digitalization, the broader integration of digital technologies across operations, has become a key driver of transformation in businesses on a global scale (Bharadwaj et al., 2013). In Thailand, studies have shown that companies which embrace digitalization through innovations such as e-commerce platforms and mobile technologies gain significant competitive advantages. Chen (2020) demonstrated that digital platforms facilitate faster innovation, improve customer service, and increase market reach. Fitzgerald et al. (2014) noted that companies leveraging digital technologies see substantial improvements in performance, a trend also observed in the Thai retail industry. Thus, the literature suggests a strong connection between innovation and digitalization. Based on these findings, the following hypothesis is proposed:

H2: Innovation has a significant impact on digitalization.

2.3 Human Capital

Human capital refers to the collective skills, knowledge, and abilities of individuals that contribute to an organization's performance (Vidotto et al., 2017). In the context of digitalization, human capital has been shown to play a critical role in adopting and utilizing digital technologies effectively (Hossain et al., 2024). As businesses embrace digital transformation, they require a skilled workforce capable of leveraging new technologies to maintain competitiveness (Bhuiyan et al., 2024). Human capital development, especially in digital competencies, is crucial to facilitating digitalization and achieving organizational goals (Ghi et al., 2022). In Thailand, Ueasangkomsate (2025) demonstrated that organizations which prioritize the development of digital skills within their workforce are better positioned to succeed in digitalization. Janmethakulwat and Thanasopon (2024) focused on Thai logistic companies, highlighting the importance of investing in human capital to foster innovation and improve digital adoption in industries such as retail and manufacturing. Additionally, Wongwas et al. (2024) found that Thai businesses with skilled employees were more effective in implementing digital tools, leading to improved operational efficiency and market competitiveness. The following hypothesis is proposed accordingly:

H3: Human capital has a significant impact on digitalization.

2.4 Infrastructure and Technology

Infrastructure and technology refers to the physical and virtual resources that support the adoption of digital technologies. Infrastructure includes hardware, software, and networks, while technology focuses on tools that enhance business processes (Islam et al., 2015). Feng and Ali (2024) highlighted that advanced infrastructure is crucial for successful digital transformation, with firms leveraging technologies such as cloud computing and ERP systems to align operations with digital strategies. Avtalion et al. (2024) noted that robust infrastructure facilitates improved connectivity and customer experience. In Thailand, Ueasangkomsate (2025) highlighted that outdated infrastructure in SMEs hinders digital adoption, while Janmethakulwat and Thanasopon (2024) found that Thai logistics companies with modern technological infrastructure were more efficient and competitive. These findings reinforce the view that infrastructure and technology are vital enablers of digitalization. Based on this, the following hypothesis is proposed:

H4: Infrastructure and technology have a significant impact on digitalization.

2.5 Digitalization

Digitalization involves integrating digital technologies into business operations, significantly altering how organizations function and deliver value (Sharma et al., 2024). Organizational resilience, defined as the ability to adapt and thrive amid disruptions, is closely linked to digitalization. Digital technologies, such as cloud computing and AI, enable businesses to enhance agility, improve decision-making, and respond to market changes (Shao, 2025). These tools allow organizations to quickly adjust to disruptions, such as the COVID-19 pandemic, by supporting remote work and flexible operations (Aleem et al., 2023). Siriyotha and Lekcharoen (2024) found that Thai firms with digital operations were better equipped to handle market changes and recover from disruptions. Furthermore, Janmethakulwat and Thanasopon (2024) have highlighted that Thai businesses adopting digital technologies can achieve improved resilience through enhanced operational efficiency and adaptability. Overall, digitalization significantly contributes to organizational resilience, empowering firms to navigate challenges and maintain good performance, leading to the hypothesis:

H5: Digitalization has a significant impact on organizational resilience.

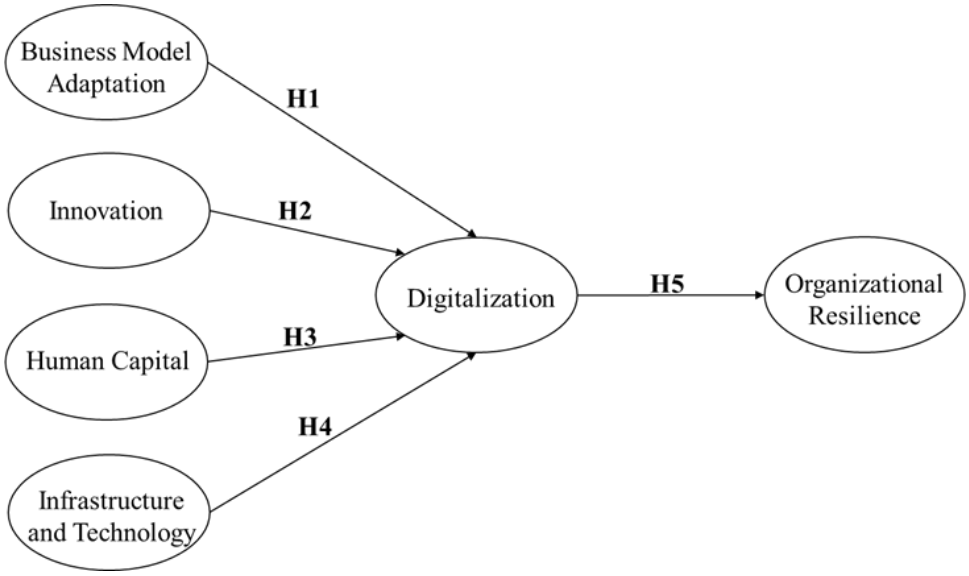
2.6 Organizational Resilience

Organizational resilience is defined as the ability of an organization to anticipate, prepare for, respond to, and recover from, disruptions while maintaining business operations (Sharma et al., 2024). It encompasses aspects such as adaptability, resourcefulness, and innovation in the face of uncertainty (Peñarroya-Farell & Miralles, 2021). Studies have highlighted that resilient organizations are better equipped to recover from, and even thrive during crises, by learning and adapting (Granig & Hilgarter, 2020; Prasongthan, 2022). In the digital age, organizational resilience has become increasingly tied to the effective use of digital technologies, which help organizations to improve decision-making, communication, and operational agility (He et al., 2023). Research has also found that firms leveraging digital tools are better able to adapt to market disruptions, thus strengthening their resilience (Shatila et al., 2025). In Thai hotel industry, digitalization has been shown to allow organizations to enhance operational efficiency and innovation, further promoting resilience in challenging environments (Prasongthan, 2022).

2.7 Conceptual Framework

The conceptual framework for this study was derived from three key theoretical perspectives. The first framework, presented by Sharma et al. (2024), emphasizes the importance of sustainable supply chains, digital transformation, and adapting business models, in enhancing organizational resilience. The second framework, proposed by González-Ramírez et al. (2024), focuses on the interconnectedness of digitalization and sustainability, particularly in fostering corporate social responsibility through innovation. The third framework, articulated by Hossain et al. (2024), examines how human capital influences strategic entrepreneurial innovation and the digitalization process in small and medium-sized enterprises (SMEs). These foundational theories have informed the development of the research hypotheses, and consequently the following investigation of the significant roles of business model adaptation, innovation, human capital, and infrastructure, in driving digital transformation, and the subsequent impact of digitalization on organizational resilience, as displayed in the conceptual framework in Figure 1:

Figure 1 Conceptual Framework of this Study and the Research Hypotheses



3. METHODOLOGY

3.1 Measurement Item Development

The measurement items for this study were developed using a 5-point Likert scale, where respondents were asked to rate their agreement with each statement, on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). The variables measured included Business Model Adaptation (4), Innovation (6), Human Capital (5), Infrastructure and Technology (7), Digitalization (4), and Organizational Resilience (4), with a total of 30 items. The questionnaire included screening questions to ensure relevant participant inclusion, such as confirming current employment at selected companies and department affiliation. Demographic information was also gathered, including age group, gender, highest level of education, and monthly income.

3.2. Target Population and Sample Selection

The target population for this study consisted of mid- to senior-level managers, IT professionals, and operational executives from Thailand's top department stores and their integrated online retail platforms. Purposive sampling was employed to ensure participants possessed relevant expertise in digitalization and organizational resilience (Etikan et al., 2016). To ensure robust statistical analysis using Structural Equation Modeling (SEM), a minimum sample size of 300–500 respondents was determined, based on the recommendations of Kline (2011) and Hair et al. (2014). This range supports model complexity and allows for adequate testing of measurement and structural models. A sample size of 400 respondents was targeted, which is adequate for the planned statistical analysis and generalizability of results.

3.3 Data Collection and Sampling

This study utilized purposive sampling to select mid- and senior-level managers, IT professionals, and operational executives, with relevant expertise in digitalization and organizational resilience. Quota sampling was applied to ensure that the sample achieved proportional representation regarding the size of different retail groups. The total employee

population was 72,500, with the quota sample size calculated as follows: 331 respondents from the largest retail conglomerate (60,000 employees), 55 from a major mall operator (10,000 employees), and 14 from a flagship mall owner (2,500 employees). Data collection occurred from November 2024 to February 2025, ensuring a balanced representation of different retail sectors for a robust analysis of digitalization and its impact on organizational resilience.

Table 1 Sample Size by Quota Sampling

Company	Number of Employees	Quota Sample Size	Sampling Justification
C Group	60,000	331	Largest retail conglomerate with diverse formats
M Group	10,000	55	Major mall operator
S Group	2,500	14	Owner of flagship malls
Total	72,500	400	

Source**:** HR Note (2024), The Mall Life Store (n.d.), and Siam Piwat (2024)

3.4 Pre-Test

A pre-test was conducted to validate the questionnaire using the Item-Objective Congruence (IOC) index. Three experts—two PhD researchers and one senior manager from the department store industry—rated each item on a scale of 0, -1, or 1. A score of 1 indicated alignment with the intended objective, -1 indicated irrelevance, and 0 indicated uncertainty. The average IOC index score exceeded 0.67, meeting the established threshold for content validity (Lawshe, 1975). Additionally, a pilot test with 40 participants assessed the reliability of the questionnaire. The Cronbach's Alpha coefficient for each construct was above 0.70, indicating strong internal consistency (Nunnally & Bernstein, 1994). These results confirmed that the questionnaire was both valid and reliable for the main study.

3.5 Data Analysis

To analyze the data using confirmatory factor analysis (CFA) and structural equation modeling (SEM), data were first prepared by cleaning and performing descriptive statistics to check for outliers and missing values. A CFA was then employed to test the measurement model, ensuring that the hypothesized relationships between latent variables and their indicators were supported by the data. Model fit was evaluated, while construct reliability and validity were assessed (Hair et al., 2014). Once the measurement model was validated, SEM was used to test the structural relationships between latent variables. The path coefficients were estimated, and hypothesis testing was performed to examine causal relationships (Kline, 2011). Throughout the process, model refinement was necessary, guided by modification indices, until a satisfactory fit was achieved. SEM and CFA were conducted using statistical software (Hair et al., 2014).

4. FINDINGS

4.1 Demographic Information

The demographic results shown in Table 2 indicate that the largest group of respondents fell in the age group of 25-34 years, accounting for 37.50% of the total sample. In terms of

gender, males represented the majority, with 60% of participants identifying as male. When considering the highest level of education, the largest group consisted of individuals holding a Bachelor's degree, making up 62.50% of the respondents. Regarding monthly income, the most prevalent category was those earning between 20,000 and 40,000 THB, comprising 40% of the sample. These results highlight the significant representation of younger, male, and more highly educated individuals within the sample, with a concentration of respondents earning mid-range salaries.

Table 2 Demographic Results

Demographic Category	Frequency (n=400)	Percentage (%)
Age Group		
24 and under	50	12.50
25-34	150	37.50
35-44	120	30
45-54	60	15
55 and above	20	5
Gender		
Male	240	60
Female	160	40
Highest Level of Education		
High school or equivalent	50	12.50
Bachelor's degree	250	62.50
Master's degree	70	17.50
Doctorate degree	30	7.50
Monthly Income (THB)		
Less than 20,000	40	10
20,000 - 40,000	160	40
40,000 - 60,000	100	25
60,000 - 100,000	80	20
More than 100,000	20	5

4.2 Confirmatory Factor Analysis

Table 3 presents the results of the confirmatory factor analysis (CFA) for the variables used in this study, including the composite reliability (CR) and average variance extracted (AVE) for each construct. The Cronbach's alpha values for all variables exceeded the accepted threshold of 0.7, indicating good internal consistency. Factor loadings for all items ranged from 0.572 to 0.838, which meets the criteria for acceptable loadings (> 0.5). The CR values for all constructs were also above the threshold of 0.6, further supporting their reliability, with scores ranging from 0.797 to 0.872. Regarding AVE, the values for all constructs were close to or above the acceptable threshold of 0.4, with the exception of infrastructure and technology (IT), which had an AVE of 0.469. However, since the CR for IT was above 0.6, this variable still met the criteria for satisfactory convergent validity. Overall, the results confirmed that the

constructs in this study demonstrated acceptable reliability and convergent validity, aligning with the recommended thresholds for CFA evaluation (Fornell & Larcker, 1981).

4.3 Discriminant Validity

The discriminant validity results demonstrated that the average variance extracted (AVE) square root values for each of the variables (listed diagonally in the table) were greater than their correlations with other variables, confirming adequate discriminant validity. Specifically, the AVE square roots for digitalization (DIG), business model adaptation (BMA), innovation (IN), human capital (HC), infrastructure and technology (IT), and organizational resilience (ORR) ranged from 0.685 to 0.732, indicating strong discriminant validity. The correlations between constructs, such as between digitalization and business model adaptation (0.300) or innovation and human capital (0.294), were lower than the corresponding AVE square roots, indicating that each construct was distinct from the others. This suggested that the constructs used in the model were sufficiently differentiated, enhancing the reliability and validity of the measurement model (Fornell & Larcker, 1981).

Table 3 Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire	No. of Items	Cronbach's (n=400)	Factors Loading	CR	AVE
Business Model Adaptation	Sharma et al. (2024)	4	0.800	0.668-0.725	0.801	0.503
Innovation	González-Ramírez et al. (2024)	6	0.871	0.572-0.838	0.872	0.536
Human Capital	Vidotto et al. (2017)	5	0.829	0.639-0.769	0.831	0.497
Infrastructure and Technology	Islam et al. (2015)	7	0.857	0.615-0.735	0.860	0.469
Digitalization	Sharma et al. (2024)	4	0.798	0.634-0.783	0.800	0.502
Organizational Resilience	Sharma et al. (2024)	4	0.789	0.594-0.774	0.797	0.497

Table 4 Discriminant Validity

	DIG	BMA	IN	HC	IT	ORR
DIG	**0.709**					
BMA	0.300	**0.709**				
IN	0.241	0.276	**0.732**			
HC	0.497	0.507	0.294	**0.705**		
IT	0.417	0.567	0.236	0.620	**0.685**	
ORR	0.540	0.445	0.356	0.604	0.560	**0.705**

4.4 Structural Equation Model (SEM)

The goodness-of-fit indices for the measurement and structural models, shown in Table 5, were assessed to evaluate model validity and the necessity for adjustment. The CMIN/DF ratio for the measurement model was found to be within the acceptable range of < 3.00 (Hair et al., 2006), with a value of 1.636, indicating a good fit. The goodness-of-fit indices, including GFI (0.907), AGFI (0.889), NFI (0.884), CFI (0.951), and TLI (0.946), all met or exceeded the recommended thresholds (Bentler, 1990; Kline, 2011; Sharma et al., 2005; Wu & Wang, 2006). The RMSEA value (0.040) was below the recommended threshold of 0.08 (Pedroso et al., 2016), indicating a good fit between the measurement model and empirical data. After adjustments, the structural model showed improved fit indices, with CMIN/DF reduced to 2.592 from 2.836, while the GFI (0.851), AGFI (0.823), NFI (0.816), CFI (0.877), and TLI (0.864) improved compared to the unadjusted model, although some values remained outside the ideal range. The RMSEA (0.063) remained within acceptable limits, suggesting that the structural model was reasonably well-aligned with the data after adjustments. Overall, these results indicate that both models were in harmony with the empirical data, with some minor adjustments of the structural model enhancing the fit.

Table 5 Goodness of Fit Indices for Measurement and Structural Models

Index	Acceptable Values	Measurement Model	Structural Model	
		Statistical Values	Statistical Values Before Adjustment	Statistical Values After Adjustment
CMIN/DF	< 3.00 (Hair et al., 2006)	637.882/390 = 1.636	1134.464/400 = 2.836	1015.950/392 = 2.592
GFI	≥ 0.85 (Kline, 2011)	0.907	0.832	0.851
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.889	0.805	0.823
NFI	≥ 0.80 (Wu & Wang, 2006)	0.884	0.794	0.816
CFI	≥ 0.80 (Bentler, 1990)	0.951	0.855	0.877
TLI	≥ 0.80 (Sharma et al., 2005)	0.946	0.843	0.864
RMSEA	< 0.08 (Pedroso et al., 2016)	0.040	0.068	0.063
Model summary		In harmony with empirical data	Not in harmony with empirical data	In harmony with empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degrees of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, and RMSEA = root mean square error of approximation

4.5 Research Hypothesis Testing Results

The results of the hypothesis testing presented through the Standardized Path Coefficients and t-values, are summarized in Table 6 and depicted in Figure 2. A significance level of p = 0.05, as suggested by Hair et al. (2006), was used to determine statistical significance and confirm the acceptance of each hypothesis.

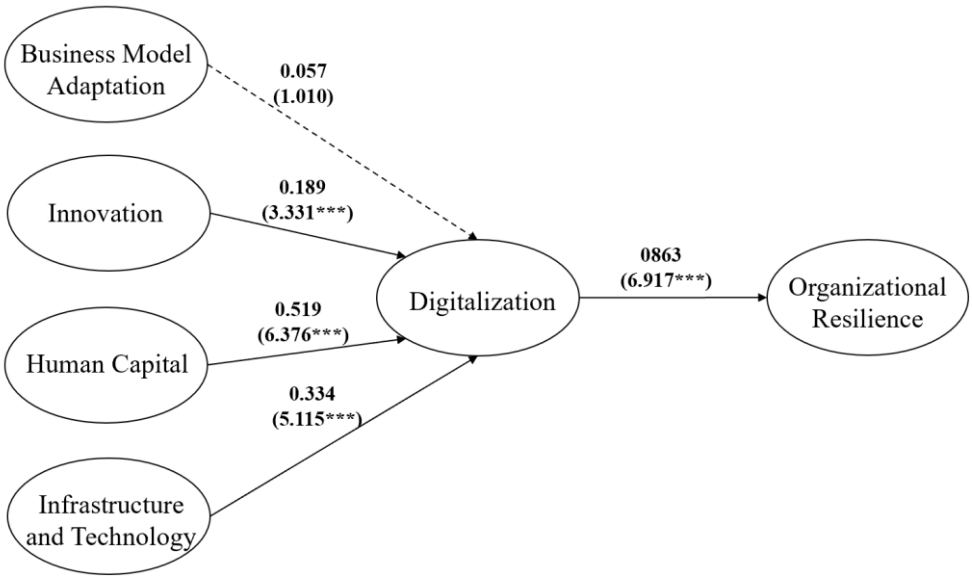
The hypothesis testing results showed varying degrees of support for the proposed relationships. Hypothesis 1, which stated that business model adaptation would have a significant impact on digitalization, was not supported, as the path coefficient was not statistically significant (β = 0.057, p = .313). In contrast, hypotheses 2, 3, 4, and 5 were all supported. Specifically, innovation (β = 0.189, p < .001), human capital (β = 0.519, p < .001), and infrastructure and technology (β = 0.334, p < .001) were found to have significant positive impacts on digitalization. Furthermore, digitalization itself was shown to have a strong positive effect on organizational resilience (β = 0.863, p < .001). These findings underscore the importance of factors such as innovation, human capital, and technological infrastructure in driving digitalization and enhancing organizational resilience.

Table 6 Hypothesis Testing Results from the Structural Model

Hypotheses	Paths	Standardized Path Coefficients (β)	S.E.	t-Value	Tests Result
H1	BMA→DIG	0.057	0.036	1.010	Not Supported
H2	IN→DIG	0.189	0.031	3.331***	Supported
H3	HC→DIG	0.519	0.064	6.376***	Supported
H4	IT→DIG	0.334	0.042	5.115***	Supported
H5	DIG→ORR	0.863	0.147	6.917***	Supported

Remark: *p < .05; **p < .01; ***p < .001

Figure 2 Results of the Structural Equation Model



Remark: Dashed lines indicate non-significant; solid lines indicate significance at the *p < .05; **p < .01; or ***p < .001 levels.

5. RESULTS AND DISCUSSION

The results of the hypothesis testing provide significant insights into the relationships between key factors affecting digitalization and organizational resilience in Thailand's department stores, aligning with the study's research questions and objectives. The first research objective, which sought to investigate the impact of business model adaptation, innovation, human capital, and infrastructure and technology, on digitalization, was partly supported. Specifically, hypothesis 1, which posited that business model adaptation would significantly influence digitalization, was not supported. This finding contradicts the literature, which emphasizes the importance of business model adaptation in enabling digital transformation (Verhoef et al., 2021; Wirtz et al., 2019). In contrast, hypotheses 2, 3, and 4, which examined the effects of innovation, human capital, and infrastructure and technology, on digitalization, were all supported. These findings are consistent with previous research, which underscores the importance of innovation (Bharadwaj et al., 2013; González-Ramírez et al., 2024; Westerman et al., 2011), human capital (Bhuiyan et al., 2024; Ghi et al., 2022; Ueasangkomsate, (2025), and technological infrastructure (Avtalion et al., 2024; Feng & Ali, 2024; Islam et al., 2015), in driving digital transformation. For instance, innovation, which includes digital technologies such as e-commerce platforms, is a key driver of digitalization in the Thai retail industry (Chen, 2020). Similarly, human capital, particularly the existance or development of digital skills, is crucial in adopting and leveraging digital technologies effectively (Ueasangkomsate, 2025).

The second research objective, which sought to examine the influence of digitalization on organizational resilience, was fully supported by the results for Hypothesis 5. Digitalization was found to have a significant positive impact on organizational resilience, confirming the literature's assertion that digital tools enhance an organization's ability to adapt to disruptions (Aleem et al., 2023; Siriyotha & Lekcharoen, 2024). This aligns with the idea that digitalization enables better decision-making, flexibility, and responsiveness to market changes, thereby strengthening organizational resilience (Sharma et al., 2024).

While business model adaptation did not show a direct impact on digitalization—contrary to prior research (Verhoef et al., 2021; Wirtz et al., 2019)—this unexpected result may stem from an implementation gap, where strategic changes are not yet operationalized through digital technologies. In the Thai retail context, adaptations may be more reactive than proactive, focusing on structural adjustments rather than digital innovation. According to Dynamic Capabilities Theory (Teece, 2018), business model changes must be paired with the ability to sense and seize digital opportunities to drive transformation. Without corresponding investments in digital infrastructure or skills, adaptation alone may not lead to meaningful digitalization. In contrast, innovation, human capital, and infrastructure and technology, all significantly were all shown to influence digital transformation, highlighting the critical role of tangible enablers in achieving digital progress.

6. CONCLUSION AND RECOMMENDATIONS

This study highlights key factors driving digitalization and organizational resilience in Thailand's department stores. Innovation, human capital, and infrastructure and technology, were found to significantly influence digitalization, supporting findings in the literature that emphasize the importance of technological adoption and a skilled workforce (Bharadwaj et al., 2013; Hossain et al., 2024). However, business model adaptation did not demonstrate a direct impact on digitalization, suggesting that internal capabilities and technological readiness are more crucial than strategic model changes (Wirtz et al., 2019). Additionally, digitalization was shown to enhance organizational resilience, aligning with research that underscores the role of

digital tools in fostering adaptability (Aleem et al., 2023; Sharma et al., 2024).

6.1 Theoretical Implications

This study expands the theoretical understanding of digitalization by highlighting the roles of innovation, human capital, and infrastructure, and confirming the link between digitalization and organizational resilience. These findings support existing theory which states that innovation and skilled labor are pivotal for effective digital transformation (Bhuiyan et al., 2024), while also reinforcing the concept that digitalization aids resilience by improving operational flexibility and decision-making (Shao, 2025; Shatila et al., 2025).

6.2 Practical Implications

Department stores in Thailand should prioritize investments in innovation, digital skills development, and technological infrastructure, to drive digitalization. For example, adopting AI-powered chatbots for customer service, using data analytics for personalized promotions, and implementing mobile apps to streamline the shopping experience, can significantly enhance customer engagement. Training programs focused on digital literacy for frontline and mid-level employees can help bridge skill gaps and support the effective use of new technologies. Although business model adaptation was not shown to be directly linked to digitalization in this study, it remains important that retailers continuously evaluate and adjust their strategies as technologies and consumer behaviors evolve, for example by integrating omnichannel models or launching direct-to-consumer (DTC) e-commerce platforms (Teece, 2018). Ultimately, digitalization should be treated as a core enabler of organizational resilience, equipping department stores to better navigate disruptions such as supply chain shocks, shifts in consumer demand, or future public health crises.

6.3 Recommendations for Future Research

Future studies could explore the role of business model adaptation in other industries or regions and examine how emerging technologies such as blockchain or AI, further contribute to digitalization and resilience. Additionally, understanding how digitalization impacts other types of resilience, such as financial or supply chain resilience, would offer deeper insights into organizational adaptability in the digital era.

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