CORPORATE GOVERNANCE AND BUSINESS OUTCOMES IN DIGITAL MERCHANDISING BUSINESSES

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How to cite this paper: Siriyotha, S., & Lekcharoen, S. (2025). Corporate governance and business outcomes in digital merchandising businesses [Special issue]. *Journal of Governance and Regulation, 14*(4), 269–278.
https://doi.org/10.22495/jgrv14i4siart4

ISSN Online: 2306-6784
ISSN Print: 2220-9352

Received: 25.12.2024
Revised: 20.03.2025; 19.05.2025; 20.10.2025
Accepted: 17.11.2025

JEL Classification: G30, H26, Q56
DOI: 10.22495/jgrv14i4siart4

Abstract

While Thailand promotes digital entrepreneurship for economic competitiveness, many businesses still struggle to succeed in the e-commerce landscape. This study addresses this gap by developing a performance model for Thailand's digital merchandising sector, highlighting how good governance practices like decision-making and accountability strengthen these relationships. Using a mixed-methods approach, qualitative insights from 20 experts through the Fuzzy e-Delphi technique, and quantitative data from 611 digital merchants. The research identified nine success factors: market alignment, information technology (IT) foundation, IT scope, IT proactivity, market strength, IT competence, digital advancement, innovation development, and business outcomes, with market strength, IT competence, digital advancement and innovation development emerging as influential drivers when supported by governance frameworks. These findings provide a framework for entrepreneurs and policymakers, demonstrating how strategic investments in digital advancement and market strength, sound governance principles can improve business outcomes. The study makes three key contributions: 1) digital merchandising success factors in emerging markets; 2) digital economy policies with recommendations; and 3) strategies for business owners navigating digital advancement while maintaining good governance standards. This research provides insights to strengthen Thailand's position in the global digital marketplace while creating positive economic and social impacts nationwide by bridging the gap between policy objectives and practical implementation.

Keywords: Business Outcomes, Digital Merchandising Businesses, Mixed Method

Authors' individual contribution: Conceptualization — S.S. and S.L.; Methodology — S.S. and S.L.; Formal Analysis — S.S. and S.L.; Data Curation — S.S. and S.L.; Writing — S.S.; Supervision — S.L.; Project Administration — S.S.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

In Thailand, digital technologies are rapidly changing consumer behavior. E-commerce increases convenience, and virtual reality boosts confidence in online shopping. Digital operations are growing in sectors like transportation and information technology (IT) services. With an aging population, sales channels are shifting online. Businesses must differentiate through uniqueness and convenience (Panthamit & Ozawa, 2022). Thailand's national strategy focuses on boosting competitiveness by nurturing modern entrepreneurs, including startups, community enterprises, and farmers. The goal is to enhance their production, sales, and service skills for success domestically and internationally.

Key areas of innovation include business models, products and services, and production processes to strengthen trading capabilities (Government of Thailand, 2018). In the digital era, companies focus on improving operational processes, enhancing customer experiences, and fostering innovation. This is achieved by setting clear objectives to drive impactful digital transformation while cultivating an organizational culture that encourages creativity and risk-taking (Khanom, 2023). For developing countries, integrating Industry 4.0 technologies, strengthening small and medium-sized enterprises (SMEs), and reforming monopolistic companies are key challenges. To tackle these, they need to boost economic capabilities, develop strong digital infrastructure, and keep up with global digital trends (Doroshenko et al., 2023). This wave of change reflects a major revolution in the business world, aiming to boost productivity and profit potential by shifting from traditional systems to digital ones (Verhoef et al., 2021).

This study addresses this critical gap by developing a comprehensive performance model for Thailand's digital merchandising sector. While Thailand's National Strategy promotes digital entrepreneurship to enhance economic competitiveness, many businesses still struggle to succeed in the evolving e-commerce landscape. Using a robust mixed-methods approach, combined with qualitative insights from 20 experts (government officials, academics, and business leaders) through the Fuzzy e-Delphi technique, with quantitative data from 611 digital merchants via online surveys.

This research provides valuable insights to strengthen Thailand's position in the global digital marketplace while creating positive economic and social impacts nationwide by bridging the gap between policy objectives and practical implementation. The research identified nine statistically significant success factors: market alignment, IT foundation, IT scope, IT proactivity, market strength, IT competence, digital advancement, innovation development, and business outcomes, with market strength, IT competence, digital advancement, and innovation development emerging as particularly influential drivers. These findings provide a practical framework for entrepreneurs and policymakers, demonstrating how strategic investments in digital advancement and market strength can substantially improve business outcomes. The findings emphasize the critical roles of market strength, IT competence, digital advancement, and innovation development in driving business outcomes. The study makes three key contributions:

1. Advancing academic understanding of digital merchandising success factors in emerging markets.

2. Supporting Thailand's national digital economy policies with evidence-based recommendations.

3. Offering actionable strategies for business owners navigating digital advancement.

Accordingly, the current study aims to create a new model to show how key factors like market strength, innovation development, IT competence, and digital advancement contribute to business outcomes. The research will gather insights from experts and business owners to develop a comprehensive model. This model will help entrepreneurs improve their business strategies, grow their businesses, and stay competitive. By understanding these critical factors, businesses can better adapt to the digital market, attain sustained success, and create a positive influence on the economy and society.

The structure of this paper is as follows. Section 2 presents the theoretical background of the research. Section 3 details a mixed-methods approach combining: a) qualitative insights from 20 experts via the Fuzzy e-Delphi technique; and b) quantitative data from 611 Thai digital merchants. Section 4 presents empirical findings through four tables and a figure. Section 5 discusses the study's model aligned with empirical data. Section 6 identifies the key factors influencing the performance of companies within the digital commerce sector in Thailand by employing a comprehensive mixed-methods approach that includes both qualitative and quantitative analyses.

2. LITERATURE REVIEW

The researchers reviewed literature and data from experts and digital commerce operators in Thailand, refining the model based on Barney's (1991) resource-based view (RBV) theory to include nine components:

1) market alignment (*MA*);
2) IT foundation (*IF*);
3) IT scope (*IS*);
4) IT proactivity (*IP*);
5) market strength (*MS*);
6) IT competence (*IC*);
7) digital advancement (*DA*);
8) innovation development (*ID*);
9) business outcomes (*BO*).

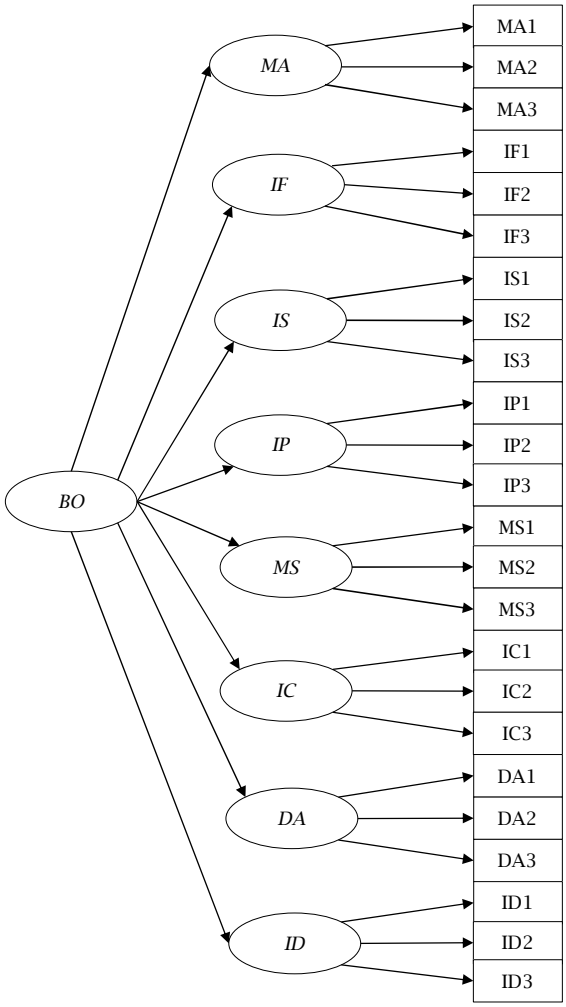
Yasin et al. (2022) examined digital transformation's impact on organizational performance with smart technologies as a mediator, utilizing a validated questionnaire survey of 150 respondents from seven Pakistani SMEs analyzed through partial least squares structural equation modeling (PLS-SEM). Their findings demonstrate that digital transformation directly enhances organizational performance, with smart technologies serving as a significant mediator, while also identifying these technologies' practical benefits for Pakistani SMEs including market expansion, innovative product development, customer satisfaction, and production efficiency, ultimately proposing policy recommendations for transitioning traditional supply chains to digital business models; however, the study's narrow focus on a small sample of Pakistani SMEs limits the generalizability of its findings to other developing contexts with differing infrastructure and institutional conditions.

Homburg and Wielgos (2022) investigated the value relevance of digital marketing capabilities (DMCs) versus traditional marketing capabilities (CMCs) through a mixed-methods study combining in-depth interviews with multi-industry data analysis. Their research, grounded in contingent RBV theory, revealed that DMCs significantly outperform CMCs in driving organizational profitability, particularly identifying three key findings: 1) a direct performance advantage of DMCs in dynamic markets, 2) critical contingency thresholds, including data analytics maturity, that moderate the DMC-CMC relationship, and 3) a practical framework for achieving optimal capability complementarity while avoiding substitution effects. The study suggests further validation in emerging markets where different institutional and resource conditions may apply — a research gap. These limitations

notwithstanding, the work offers both theoretical advancement in understanding marketing capabilities and practical guidance for balancing digital and traditional marketing investments under varying environmental conditions.

Liu (2022) examined the combined impact of DMCs and blockchain technology on customer-linking capabilities (CLCs), market-sensing capabilities (MSCs), consumer-brand engagement (CBE), and organizational performance in China's omni-channel environment. Using simple random sampling and 311 valid questionnaires with five-point Likert scales, the SEM analysis revealed: 1) significant direct effects of DMCs on CLCs, MSCs, and CBE; 2) full mediation effects where MSCs and CLCs collectively explained DMCs' performance impact; and 3) blockchain integration amplified these relationships in secure data-sharing scenarios. While the study advances understanding of digital marketing in omnichannel contexts, its exclusive focus on Chinese firms and cross-sectional design limits generalizability to other regulatory environments and prevents causal inferences. The findings nevertheless provide valuable insights for implementing DMC-blockchain synergies, particularly highlighting MSCs' pivotal mediating role in transforming technological capabilities into performance outcomes. Future research should address cultural and institutional variations in blockchain adoption across markets.

Figure 1. Theoretical model framework



3. RESEARCH METHODOLOGY

This study utilized an integrated approach combining both qualitative and quantitative techniques and received ethical approval from the Rangsit University Research Ethics Committee (COA No. RSUERB2023-144)[1]. The researcher employs the following methods for conducting the research.

3.1. Step 1: Qualitative study

Qualitative study steps are as follows: 1) define the research problem; 2) define the credentials of a group of 20 experts; 3) develop a draft of an open-ended online questionnaire to collect opinions from the 20 experts; 4) gather insights from the expert group through an online questionnaire; 5) summarize the qualitative research results. The detailed scheme is presented in Figure 2 below.

Figure 2. Theoretical model framework

1. Define the research problem by synthesizing literature and studies related to the area of focus.

2. Define the credentials of a group of 20 experts by selecting those with knowledge and expertise in digital commerce. The group consists of:
- Group 1: Seven government officials related to commerce.
- Group 2: Six university professors teaching business administration.
- Group 3: Seven digital commerce entrepreneurs.

3. Develop a draft of an open-ended online questionnaire to collect opinions from the 20 experts, ensuring it covers all research questions.

4. Gather insights from the expert group through an online questionnaire, employing the electronic Delphi (e-Delphi) method in two rounds to capture expert opinions.
- 1st round: Develop open-ended questionnaires to broadly address the research issues.
- 2nd round: Develop closed-end questionnaires by deriving variables from the examined responses of the 1st round, utilizing a seven-point rating scale.

5. Summarize the qualitative research results to obtain indicators from the agreement assessment of the 20 specialists via the Fuzzy Delphi approach.

3.1.1. Population and sample

This research involves a population related to qualitative research via the dissemination of online surveys. The researcher has segmented the population into three groups: 1) government officials related to commerce, 2) university professors teaching business administration, and 3) digital commerce entrepreneurs. The researchers have divided the sample into three groups: seven government officials related to commerce, six university professors teaching business administration, and seven digital commerce entrepreneurs, totaling 20 experts. This aligns with Macmillan's (1971) suggestion that in qualitative research, using a sample size of 17 or more experts minimizes the rate of error reduction. By selecting 20 experts, the researcher aims to attain a margin of error of just 0.02.

[1] https://ethics.rsu.ac.th/

3.1.2. Research tools

In this study, an online survey was utilized in the form of the main tool for data gathering. This questionnaire focused on conducting a confirmatory factor analysis (CFA) of the business outcomes of the digital merchandising business in Thailand. To guarantee the applicability and efficiency of the questionnaire, the researchers undertook a comprehensive review of various pertinent textbooks. Additionally, they sought insights from 20 experts in the field to assist in the development of the questionnaire. This collaboration aims to enhance the integrity and consistency of the data collected for the study.

3.1.3. Data collection

Data was collected in two rounds: the 1st round through an open-ended online questionnaire, followed by expert opinions used to create a structured online questionnaire using a seven-point rating scale for 2nd round. The surveys were distributed through email from November 2023 to February 2024.

3.1.4. Data analysis and evaluation

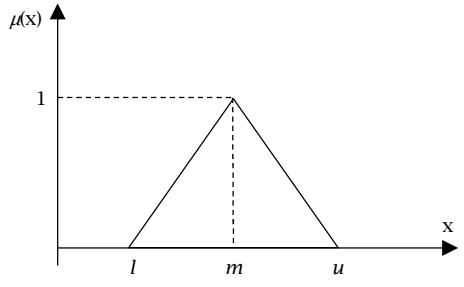
In this section, the researcher utilized the Fuzzy Delphi theory to analyze the data. This innovative mathematical framework addresses the complexities of sets and the uncertainties associated with their members. The opinions gathered from 21 experts were scrutinized, focusing on identifying only pertinent variables and metrics according to an acceptance threshold of 0.80. This method significantly improved the effectiveness of choosing variables and metrics that aligned closely with the researcher's objectives. The methodology is particularly effective for multi-criteria decision-making, as it minimizes conflicts in scoring among experts by allowing each individual to share their insights comprehensively. This process ultimately led to a more precise and complete consensus on the measurement results from the expert group. The steps involved in this analysis included:

- calculating Fuzzy values;
- converting points;
- selecting optimal factors and indicators.

This was achieved by adjusting the membership function to adjust to a triangular form.

A Fuzzy membership function has been displayed in Figure 3.

Figure 3. Fuzzy number membership function



Source: Saelee and Pankham (2024).

To establish the equation for the membership function shift, we define it as follows (Saelee & Pankham, 2024):

$$\mu_f = \begin{cases} \dfrac{x-l}{m-l} \; if \; l < x < m \\ \dfrac{u-x}{u-m} \; if \; m < x < u \\ 0 \qquad otherwise \end{cases} \tag{1}$$

where,

- l = minimum quantitative values of Fuzzy members;
- m = maximum quantitative values of Fuzzy members;
- u = the peak participation degree of fuzziness.

Linguistic factors and their associated Fuzzy values for the seven-point Likert scale as presented in Table 1.

Table 1. Linguistic factors and their associated Fuzzy values for the seven-point Likert scale

Priority level	*Seven-point Fuzzy scale*	*Likert-type scale*
Strongly disagree	(0.0, 0.0, 0.1)	1
Somewhat disagree	(0.0, 0.1, 0.3)	2
Disagree	(0.1, 0.3, 0.5)	3
Neutral	(0.3, 0.5, 0.7)	4
Agree	(0.5, 0.7, 0.9)	5
Somewhat agree	(0.7, 0.9, 1.0)	6
Strongly agree	(0.9, 1.0, 1.0)	7

Source: Mohammad et al. (2019).

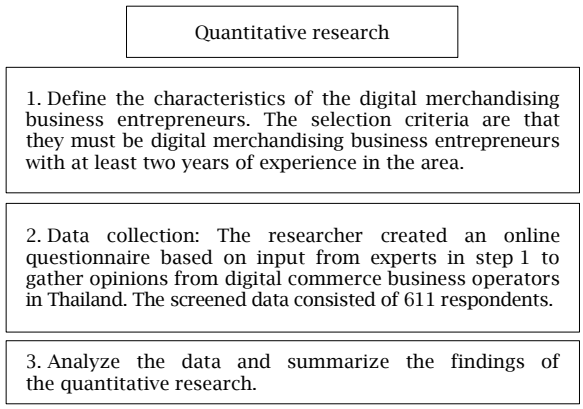
Methodology for transforming Likert scale responses into Fuzzy values.

In this research, the concept of the Fuzzy mean approach was employed to transform specialist insights from the Likert scale into Fuzzy values. The researchers established a threshold of 0.80. If a question received a score equal to or exceeding this threshold, it was deemed accepted; otherwise, it was rejected. This approach allowed for a systematic aggregation of expert insights, enhancing the reliability of the results.

3.2. Step 2: Quantitative research

Quantitative research steps include: 1) defining the characteristics of the digital merchandising business entrepreneurs; 2) data collection; 3) analyzing the data. A more detailed description of the steps is provided below in Figure 4.

Figure 4. Quantitative research steps



3.2.1. Study group and sampling

The study group comprises digital commerce entrepreneurs residing in Thailand with at least two years of experience. The exact number of the population is unknown. The sample consists of digital commerce business 611 entrepreneurs residing in Thailand with at least two years of experience. This sample size followed Kline's (2011) guideline, which recommends a sample size of 10–20 times the number of observed variables. With 27 observed variables in this study, a minimum sample size of 270 was required.

3.2.2. Research instrument

The main instrument employed for data acquisition in this study was digital questionnaires crafted to perform a CFA of key determinants of business outcomes in digital merchandising businesses in Thailand. To ensure the questionnaire's effectiveness and relevance, the researchers thoroughly examined various pertinent textbooks. Additionally, they gathered insights from 20 experts in the field to assist in the development of the questionnaire. Collaborative is intended to improve the quality and consistency of the collected information, thereby contributing to the study's overall validity.

3.2.3. Data gathering

Data was gathered through online questionnaires containing closed-ended questions utilizing a seven-point Likert scale. The data collection period spanned from March 2024 to May 2024.

3.2.4. Data evaluation

Using CFA, parameter estimates were obtained using maximum likelihood (ML). To assess the statistical measures of fit, we evaluated the Chi-square statistic, relative chi-square (Chi-square minimum/df [CMIN/df]), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), standardized root means square residual (SRMR), and root mean square error of approximation (RMSEA). These analyses helped determine the confirmation elements for developing the performance of the digital merchandising business in Thailand. Additionally, we assessed to determine if the collected empirical data were appropriate for the model.

Model fit assessment

Use various indicators to assess the model fit with empirical data, such as:

- Chi-square test: Assesses fit between model and data.
- RMSEA: Evaluates the average discrepancy per degree of freedom, with values below 0.08 suggesting a good fit.
- CFI: Values nearing 1 suggest a good fit.
- Tucker-Lewis index (TLI): Values nearing 1 signify a good fit.
- SRMR: Values under 0.08 indicate a good fit.
- GFI: Values approaching 1 suggest a good fit.
- AGFI: Values nearing 1 suggest a good fit.
- Incremental fit index (IFI): Values nearing 1 suggest a good fit.
- CMIN/df: Values below 3 indicate a good fit.

Analysis of standardized factor loadings, t-test, reliability coefficients, composite reliability, and average variance extracted

The analyses involve the following steps:

1. Standardized factor loadings (λ): Examine the factor loadings to evaluate the relationship between latent and observed variables. High factor loadings indicate strong associations.
2. T-test: Perform t-tests to assess model fit and analyze t-values to determine the significance of the factor loadings.
3. Reliability coefficients (R^2): Evaluate the reliability of the instruments used in the analysis, such as Cronbach's alpha, to measure the internal consistency of the questionnaire items.
4. Composite reliability (CR): Assess the CR of the latent variables in the measurement model by calculating CR from the factor loadings and error variances.

Formula to assess CR calculation:

$$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \theta_i} \quad (2)$$

where,

- λ_i represents the factor loading linked to each measured variable;
- θ_i represents the mistake variance of each observed variable.

5. Average variance extracted (AVE): Measures the amount of variance that is captured by the latent variable from its observed variables.

Formula for AVE calculation:

$$AVE = \frac{\sum_{i=1}^{n} \lambda_i^2}{n} \quad (3)$$

where,

- λ_i represents the factor loading for each observed variable.
- n represents the number of observed variables.

An alternative method that would be suitable for conducting the research is rough set e-Delphi.

4. RESULTS

Research employs two steps. Initially, a Fuzzy set Delphi study was conducted to reach specialist agreement upon essential elements influencing the performance of digital merchandising businesses in Thailand. This qualitative phase gathered insights from industry experts to identify and prioritize these factors. In the second phase, we employed CFA to verify the model framework using observational data obtained from the sector. Results reveal the complex interplay of factors affecting business outcomes, providing valuable insights for practitioners and policymakers in digital merchandising.

The study's model aligned with empirical data.

There were eight factors of development considered, listed in order of importance: 1) IT

foundation, 2) IT proactivity, 3) market strength, 4) IT competence, 5) digital advancement, 6) innovation development, 7) market alignment, and 8) IT scope.

This study confirms that having an IT foundation, IT proactivity, market strength, and IT competence positively impact business outcomes. These findings can be used to develop strategies and management practices that improve business outcomes and success in the digital era.

The results show that digital advancement has the strongest impact on business outcomes and is closely connected to social media. This highlights the need for digital merchandising businesses to focus on digital advancement in their strategies.

4.1. Consensus among experts in Fuzzy set Delphi

This section outlines the research outcomes based on the collective agreement reached by subject matter experts regarding the steps involved in the Fuzzy set Delphi methodology. The insights were gathered from a select group of 20 trusted experts, whose feedback was instrumental in shaping the study.

Table 2. Linguistic factors and their associated Fuzzy values for the seven-point Likert scale

Statement	*Score*	*Result*
Market alignment (MA)		
1. You ensure a thorough understanding of customers' needs to remain competitive.	0.95	Accepted
2. You often organize activities to boost sales through regular customer interaction.	0.90	Accepted
3. You always emphasize the importance of customer service.	0.95	Accepted
IT foundation (IF)		
1. You have a good computer and network system.	0.95	Accepted
2. You provide good information database services satisfactorily.	0.95	Accepted
3. You have fast internet.	0.95	Accepted
IT scope (IS)		
1. You regularly collaborate on strategic initiatives planning between the IT and other departments.	0.90	Accepted
2. Your management is knowledgeable importance of investing in information systems.	0.95	Accepted
3. Your IT management regularly engages in activities in business planning meetings.	0.90	Accepted
IT proactivity (IP)		
1. Your IT team can test new technologies when opportunities arise.	0.85	Accepted
2. Your IT team actively suggests new ideas and approaches for using information systems to improve the organization's future operations.	0.90	Accepted
3. Your IT team gathers feedback, improves, and reports to management.	0.90	Accepted
Market strength (MS)		
1. You can quickly develop and bring new products or services to market.	0.95	Accepted
2. You can set prices that quickly adapt to customer needs.	0.95	Accepted
3. You can expand distribution channels effectively.	0.90	Accepted
IT competence (IC)		
1. Your IT staff effectively adopts new technologies.	0.85	Accepted
2. Your IT staff is capable of effectively implementing business projects.	0.90	Accepted
3. Your IT staff should also have knowledge and understanding of the work of other departments.	0.90	Accepted
Digital advancement (DA)		
1. You use digital marketing to gain an advantage.	0.95	Accepted
2. You leverage social media to boost profitability.	0.90	Accepted
3. You grow your customer base with digital marketing.	1.00	Accepted
Innovation development (ID)		
1. You continually enhance business processes.	0.85	Accepted
2. You regularly adopt new social media platforms as tools for market expansion.	0.85	Accepted
3. You regularly apply new methods to solve your business problems.	0.90	Accepted

4.2. CFA of outcomes in digital merchandising businesses

Indices for model fit are presented in Table 3 below. After model fitting, CR and AVE are calculated (Table 4). The criteria are clear: CR must be above 0.7 and AVE above 0.5. These values show reliability and variance, which are key for evaluating the quality of the measurement model. Second-order CFA is presented in Figure 5.

Table 3. Indices for model fit

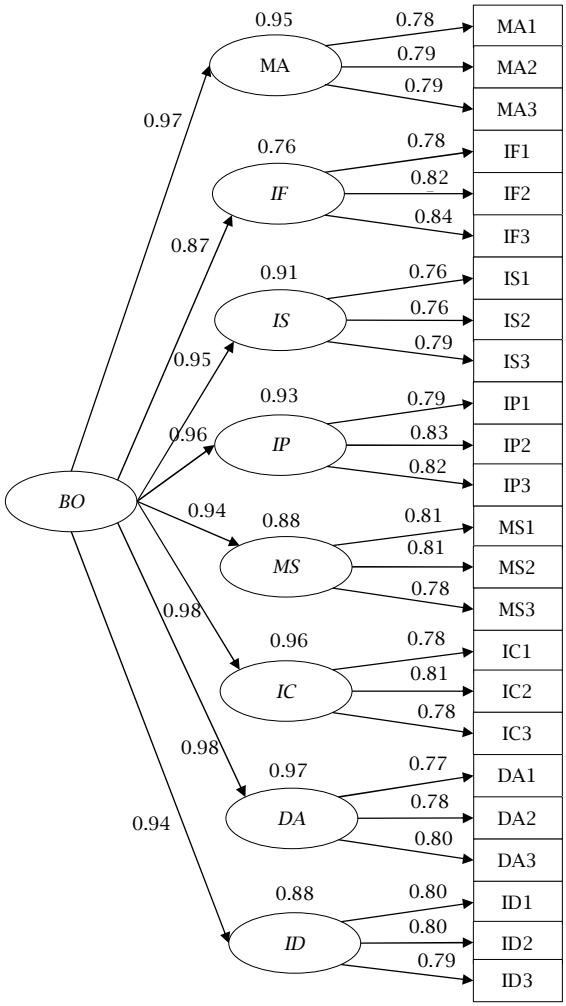
Metric	χ^2	χ^2/df	*CFI*	*TLI*	*RMSEA*	*RMR*
Criteria	-	≤ 3	≥ 0.90	≥ 0.90	≤ 0.08	≤ 0.08
Model	548	2.25	0.97	0.97	0.04	0.02
Result	Pass	Pass	Pass	Pass	Pass	Pass

Note: RMR — root mean square residual.

Table 4. Composite reliability and average variance extracted values of latent variables

Latent variable	*Observable variables*	*Estimate (λ)*	*λ²*	*var(e)*	*CR*	*AVE*
MA	*MA1*	0.782	0.612	0.388		
	MA2	0.788	0.621	0.379		
	MA3	0.791	0.626	0.374		
Total		**2.361**	**1.859**	**1.141**	**0.863**	**0.620**
IF	*IF1*	0.783	0.613	0.387		
	IF2	0.823	0.678	0.322		
	IF3	0.841	0.707	0.293		
Total		**2.447**	**1.998**	**1.002**	**0.899**	**0.666**
IS	*IS1*	0.763	0.582	0.418		
	IS2	0.764	0.584	0.416		
	IS3	0.789	0.622	0.378		
Total		**2.316**	**1.788**	**1.212**	**0.857**	**0.596**
IP	*IP1*	0.794	0.631	0.369		
	IP2	0.826	0.682	0.318		
	IP3	0.823	0.677	0.323		
Total		**2.443**	**1.990**	**1.010**	**0.884**	**0.663**
MS	*MS1*	0.814	0.663	0.337		
	MS2	0.815	0.664	0.336		
	MS3	0.780	0.608	0.392		
Total		**2.409**	**1.935**	**1.065**	**0.867**	**0.645**
IC	*IC1*	0.785	0.616	0.384		
	IC2	0.812	0.659	0.341		
	IC3	0.779	0.607	0.393		
Total		**2.376**	**1.882**	**1.118**	**0.862**	**0.627**
DA	*DA1*	0.774	0.599	0.401		
	DA2	0.782	0.612	0.388		
	DA3	0.802	0.643	0.357		
Total		**2.358**	**1.854**	**1.146**	**0.869**	**0.618**
ID	*ID1*	0.796	0.634	0.366		
	ID2	0.802	0.643	0.357		
	ID3	0.792	0.627	0.373		
Total		**2.390**	**1.904**	**1.096**	**0.876**	**0.635**

Figure 5. Second-order confirmatory factor analysis



4.3. Standardized factor loadings, t-test values, reliability coefficients

Latent variable analysis is presented in Table 5, which includes all latent variables, observed variables, along with their t-test statistics and R-squared value.

Table 5. T-test values and reliability coefficients (R^2)

Latent variable	*Observable variables*	*t-test*	*R²*
MA	*MA1*	21.285***	0.612
	MA2	21.217***	0.622
	MA3	21.331***	0.625
IF	*IF1*	21.894***	0.612
	IF2	21.736***	0.677
	IF3	21.753***	0.707
IS	*IS1*	19.467***	0.581
	IS2	19.394***	0.584
	IS3	20.201***	0.622
IP	*IP1*	22.936***	0.631
	IP2	22.820***	0.683
	IP3	22.698***	0.677
MS	*MS1*	20.343***	0.662
	MS2	23.092***	0.664
	MS3	21.397***	0.608
IC	*IC1*	20.136***	0.616
	IC2	22.339***	0.659
	IC3	21.042***	0.607
DA	*DA1*	21.217***	0.599
	DA2	21.032***	0.612
	DA3	21.505***	0.644
ID	*ID1*	21.872***	0.634
	ID2	21.823***	0.643
	ID3	21.203***	0.627

*Note: ***p-value < 0.001.*

5. DISCUSSION

The study's model aligned with empirical data. There were eight factors of development considered, listed in order of importance: 1) IT foundation,

2) IT proactivity, 3) market strength, 4) IT competence, 5) digital advancement, 6) innovation development, 7) market alignment, and 8) IT scope.

First, the IT foundation component has the most significant weight in affecting business outcomes in digital merchandising businesses in Thailand.

IT foundation possesses a beneficial effect on business outcomes, consistent with studies indicating that a strong IT foundation supports the development of business outcomes (Byrd & Turner, 2000). Finally, Lu and Ramamurthy (2011) provide an empirical examination of the link between IT foundation and organizational flexibility, underscoring the function of IT foundation as a foundational element in enhancing business outcomes.

Second, IT proactivity considerations directly influence business outcomes in digital merchandising businesses in Thailand. This suggests that integrating IT thoroughly into business operations and having a proactive IT management approach are crucial for enhancing business outcomes (Bharadwaj, 2000).

Third, market strength factors influence business outcomes in digital merchandising businesses in Thailand. This demonstrates the importance of developing market strength to boost business outcomes. Kamboj and Rahman (2017) examined the function of market strength, highlighting its importance in driving business outcomes.

Fourth, IT competence directly impacts business outcomes. This demonstrates the importance of IT competence to boost business outcomes. Some literature analyzed the multidimensional perspective regarding IT capability, particularly within the framework of Chinese SMEs, with their studies indicating that IT competence plays a critical function in improving business efficiency and business outcomes by supporting digital business strategies.

Fifth, digital advancement directly impacts business outcomes. This value supports research indicating that digital advancement enhances innovation and improves organizational performance (Chen et al., 2015; Thuy, 2021).

Sixth, innovation development directly impacts business outcomes. AlMulhim (2021) investigated the role of digital innovations in smart supply chains and their effect on business outcomes, revealing the crucial contribution of digital advancements to operational efficiency and competitive advantage.

Seventh, the findings reveal that market alignment positively influences business outcomes. This supports previous research showing that clear market orientation helps develop and enhance (Narver & Slater, 1990).

Eighth, the findings indicate that the IT scope positively affects business outcomes. This suggests that integrating IT thoroughly into business operations and having a proactive IT management approach are crucial for enhancing business outcomes (Bharadwaj, 2000).

This study confirms that having an IT foundation, IT proactivity, market strength, and IT competence positively impacts business outcomes. These findings can be used to develop strategies and management practices that improve business outcomes and success in the digital era.

6. CONCLUSION

This research successfully identified the key factors influencing the performance of companies within the digital commerce sector in Thailand by employing a comprehensive mixed-methods approach that includes both qualitative and quantitative analyses. The findings emphasize the critical roles of marketing capabilities, IT capabilities, digital transformation, and innovation in driving company performance.

The CFA validated the consistency and precision regarding the constructs, along with standardized factor loadings (λ) and t-test values highlighting the significance of latent variables such as marketing capabilities and innovation. Moreover, the CR and AVE of latent variables, such as *IF, IP*, and *ID*, with CR values of 0.899, 0.884, and 0.876, respectively, indicated high reliability and validity.

The analysis shows digital advancement has the biggest impact on business outcomes. The review also found that digital advancement is strongly connected to social media factors.

This study has two key limitations. First, the research collected data only from business owners rather than employees, focusing on decision-makers' perspectives but potentially overlooking valuable insights from staff. Second, the study did not account for artificial intelligence (AI) related factors, as AI adoption and awareness were still limited during the initial research period compared to current levels. These limitations should be considered when interpreting the findings.

Next studies could improve on this work in two ways. First, including department managers in surveys, not just business owners, would give a more complete picture of how companies operate. Second, now that more businesses are using AI, future research should explore how it affects entrepreneurship. This study couldn't properly analyze AI since too few businesses used it at the time, but that's changing fast.

Addressing these considerations will not only enhance existing knowledge but also lay the foundation for future research that can adapt to the rapidly changing digital commerce landscape. The insights gained from this study have significant implications for both academia and the professional field.

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