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BUSINESS ADAPTATION AND DIGITAL TRANSFORMATION: DRIVING COMPETITIVE ADVANTAGE IN THAI SMALL AND MEDIUM ENTERPRISES

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Abstract

As digital disruption profoundly reshapes the global market, Small and Medium-sized Enterprises (SMEs) must urgently reconfigure their operational paradigms to sustain long-term viability. This study investigates the complex structural mechanisms linking business adaptation, business strategy, and organizational cultural transmission to competitive advantage, specifically emphasizing the mediating role of digital transformation. Employing a quantitative cross-sectional design, empirical data were gathered from 311 active members of the Young Entrepreneur Chamber of Commerce (YEC) across Thailand. The measurement model's construct validity was rigorously confirmed through Confirmatory Factor Analysis (CFA), followed by Structural Equation Modeling (SEM) to evaluate the hypothesized causal pathways. The robust empirical findings reveal that business adaptation acts as the foundational catalyst, significantly driving both business strategy and cultural transmission. Crucially, digital transformation serves as a powerful mediator that translates these strategic and cultural readiness factors into a sustained competitive advantage. This research provides vital empirical evidence that digital transformation is not merely a technological upgrade but a holistic strategic imperative. To achieve sustainable economic growth, policymakers and SME leaders must synergistically align adaptive organizational cultures with robust digital strategies to navigate hyper-competitive business environments effectively.

Keywords: Digital Transformation, Competitive Advantage, Business Adaptation, Organizational Culture, Small and Medium Enterprises

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Introduction

The rapid advancement of technology has undeniably disrupted how organizations work, significantly changing consumer behavior and global market trends. To sustain long-term viability and remain competitive, it is imperative for companies—especially Small and Medium-sized Enterprises (SMEs)—to engage in business adaptation by thoroughly re-examining their business models, strategic plans, and organizational cultures. Those enterprises that fail to adapt or actively adopt technological changes strategically will inevitably face a lesser position and potential obsolescence in this highly dynamic and hyper-competitive market (Ates & Acur, 2022; Ringberg et al., 2019).

A central aspect of the current business environment is digital transformation, which entails not only the integration of technology but also a profound transformation of business models, customer experiences, and operational processes, leveraging digital capabilities to create new value propositions (Fitzgerald et al., 2014; Vial, 2019). While there is general agreement on the relevance of digital transformation, the specific mechanisms that facilitate competitive advantage remain elusive. In particular, it is critical to understand how specific organizational factors—namely business adaptation, business strategy, and cultural transmission—synergistically shape the trajectory of digital transformation and its ultimate impact on competitive positioning (Mihu et al., 2023). This research gap is especially pronounced when examining Small and Medium-sized Enterprises (SMEs) (Freeman & Engel, 2007). Given their unique resource constraints and distinct market challenges, SMEs represent an under-researched domain regarding the complexities of digital transformation and its impact on operational efficiency (Rachinger et al., 2019; Soluk & Kammerlander, 2021). While most studies examine individual facets of these relationships, a holistic, integrated model remains less common in the current literature. To address this crucial gap, this study investigates the complex structural mechanisms linking business adaptation, business strategy, and organizational cultural transmission to competitive advantage. Specifically, this integrated research model emphasizes the powerful mediating role of digital transformation in translating these strategic and cultural readiness factors into a sustained competitive advantage for Thai SMEs.

Drawing upon recognized theoretical frameworks in strategic management, organizational theory, and information systems, our proposed model posits that successful business adaptation and rigorous business strategy are indispensable facilitators of digital transformation (Verhoef et al., 2021). Furthermore, it indicates that the effective transfer of culture within an organization is a highly relevant yet often under-recognized catalyst for both business adaptation and broader, holistic digital transformation efforts (Grover et al., 2022). Indeed, this study focuses on determining the mediating role of digital transformation in translating organizational capabilities and cultural dynamics into competitive advantages. Ultimately, in the context of the digital age, this contributes to a more holistic understanding of how an SME might compete in the digital sector, thereby filling a significant gap concerning the synergistic implications of these elements in the extant literature.

As mentioned earlier, this research focuses on Small and Medium-sized Enterprises (SMEs) in particular because of their essential role in national economies and their specific vulnerabilities and opportunities amid the digital disruption wave (Wijayanti et al., 2021). In this regard, attention will be given to members of the Thai Young Entrepreneur Chamber of Commerce. The Young Entrepreneur Chamber of Commerce (YEC) is a leading organization of young business leaders under the aegis of the Chamber of Commerce of Thailand. Its goal is to create local and social entrepreneurs who own and participate in the field themselves while fostering strong collaborative relationships. This group comprises rising business executives who may be proactively adopting new technologies and innovative business practices (Tirasawasdichai et al., 2021); thus, their experience is invaluable for understanding effective digital

transformation in the SME context (Bouwman et al., 2018). These findings from the YEC can help organizations allocate their resources among investment strategies, nurture relevant environments and strategies to leverage digital technologies to gain and maintain a competitive advantage in volatile market environments, especially in the SME industry. Thus, this study is in line with the increasing focus on sustainability in the business sector, not only in Thailand but in an Asian context, too. SMEs can create economic resilience and sustainability by strengthening competitive advantage through digital transformation (Lalaeng & Hongsakul, 2024) across the dimensions of dynamic capabilities.

The rest of this paper is organized as follows: in the second section, we review the literature. Section 3 also presents the research methodology and data collection. Subsequently, Section 4 describes the empirical findings. Section 5 presents our findings, discusses the study's theoretical and practical implications, acknowledges its limitations, and proposes future work.

Literature Reviews

Business Adaptation → Business Strategy

Business adaptation is the critical process of adjusting an SME's internal organizational configuration, processes, strategic direction, and cultural orientation in response to rapid environmental changes (Cichosz et al., 2020). While initial theoretical approaches based on contingency theory focused primarily on organizational reactivity to environmental demands as they existed at the time of formation (Lawrence & Lorsch, 1967), modern perspectives emphasize a preemptive capacity. This active shaping allows companies not only to react to conditions but also to proactively drive climate change or achieve new targets, thereby driving superior business performance across various industries (Volberda, 1996; Teece, 2007).

Organizational adaptive capacity has been shown in prior work to influence strategic decisions. Business adaptation has a direct impact on business strategy, and the ability of organizations to adapt and flourish at all costs is not just an unfortunate side effect of strategy; it is a core element where the type and form of strategy is also formed as a product of the organization's ability to adapt to an ever-evolving environment. A highly adaptive organization will be able to design flexible and adaptive strategies oriented towards continuous innovation rather than fixed, inflexible plans (Volberda, 1996). Adaptive organizations are capable of sensing changing opportunities and threats more intelligently and can therefore realign their strategic paths more efficiently (so that organizations engage in active re-invention/refactoring to take advantage of or minimize these changes) (Sarta et al., 2021). A firm with an adaptable nature would choose an emergent strategy, which enables it to continually learn and adapt to new situations, rather than a structured, top-down approach. This means that companies whose internal processes and structures are responsive to change have a stronger ability to develop strong, long-term-oriented business strategies. In strategic terms, the business's adaptation would enable the firm to use its resources more effectively. As the active and conscious process of developing capabilities renews resources as the core driver of their strategic decisions, it shifts them away from a fixed pattern of traditional resource assignment toward a more responsive approach to dynamic and agile competitive environments (Shams et al., 2021). Successful adaptation is associated with a multitude of positive outcomes. For example, performance improvements in organizations, greater market share, improved efficiency, increased innovation capability, and long-term sustainability (O'Reilly & Tushman, 2008). Adaptable organizations are often noted for the ability to detect an opportunity and a threat, take full advantage of them, and reorganize effectively promptly, and are continually changing (Teece, 2007); a transition of the organizational structure has as much to do with the processes and routines required to continually adapt to such opportunities and threats as with being adaptable.

Based on the comprehensive review of previous studies regarding strategic alignment, we hypothesized that “The level of business adaptation positively impacts business strategy (H1).”

Business Adaptation → Cultural Transmission

Schein (1992) described organizational culture as the values, beliefs, assumptions, norms, and practices that people share to regulate actions throughout an organization. Cultural transmission refers to the process by which these elements are communicated, learned, and internalized by organizational members, particularly newcomers (Kowtha, 2018). As organizational cultural transmission allows the firm to evolve continually (Ghaleb, 2024), several essential processes—including onboarding, formal training, storytelling, and leadership role modeling—integrate new staff members into the organization's fabric (Louis, 1980; Schein, 1992).

The intrinsic connection between business adaptation and cultural transmission within SMEs is strongly supported by contemporary organizational theory (Ando, 2002). When an enterprise strategically adapts to new market challenges, the internal processes, core values, and norms that enable such adaptation are powerfully reinforced and subsequently transmitted throughout the organization (Costanza et al., 2016). If an organization rapidly navigates a market disruption through innovation, these values become deeply ingrained in the culture and are actively transmitted to new and existing employees (Garrido-Moreno et al., 2024). This implies that positive adaptation experiences help strengthen resilient cultural practices, eventually generating a highly cohesive organizational culture.

The transmission of culture is a critical factor affecting many organizational processes; deep culture promotes commitment, boosts motivation, and enables cooperation (Kotter & Heskett, 1992). The quality of the transmitted culture—whether based on innovation, risk-taking, or adaptability—profoundly shapes an organization's ability to evolve and integrate change (Cameron & Quinn, 1999). Conversely, the transmission of static cultural norms can stifle organizational flexibility (Fietz et al., 2021). Consequently, we hypothesized that “The level of business adaptation positively impacts the effectiveness of cultural transmission within an organization (H2).”

The role of Digital Transformation

Digital transformation (DT) refers to a fundamental, strategic change that firms and organizations undergo to integrate digital technologies across all departments and to fundamentally change how they operate and serve their clients (Westerman et al., 2014). It is not only about digitization (converting analog to digital) or digitalization (enabling or improving processes via digital technology) but also about a complete renewal of business model, operational processes, customers' experiences, and organizational culture (Fitzgerald et al., 2014).

Motivations for digital transformation are many (Raimo et al., 2023). Some of these include accelerating technological evolution, changing customer demands for seamless digital engagement, strong competitive pressures from digitally native disruptors, and the need to drive operational efficiency and data-informed decision-making (Matt et al., 2015). However, there might just as easily be barriers to DT of its own. These barriers may range from a lack of clear strategic vision, resistance to change among employees, underdeveloped digital skills of the workforce, legacy IT infrastructure, cultural inertia, and cybersecurity issues (Chanias et al., 2019). Strong leadership, change management, and a long-term orientation will be needed to address these barriers effectively (Ferede et al., 2024).

Digital transformation is not only a technology upgrade but also requires a fundamental transformation of thinking, workplace behavior, and organizational processes (Westerman et al., 2014). Such an organizational culture for agility that supports the adoption of technology, cross-functional collaboration, and data-driven decision-making should be transmitted to accelerate digital transformation initiatives, and thereby improve the success of digital

transformation opportunities (Bux et al., 2025). On the other hand, a culture resistant to change or prioritizing tradition over innovation may be a key deterrent to DT (Deep, 2023), as described earlier. This brings to light the critical role of "people in an organization" in technological transformation. To reach the effective point for adopting the technology in an organization's operations, organizational culture is a necessary factor in enabling the firm to achieve the expected result (Lam et al., 2021). That is, the involvement and collaboration of an entity's staff are essential to ensure that a DT is effective.

Moreover, a well-designed Digital Transformation strategy has a strategic basis and is driven by clear business objectives while providing more than a standalone IT project (Hess et al., 2016). A business strategy that reflects an established business plan will explain why digital transformation is required (to be a cost leader, to improve user experience, or to enter new markets) and how it adds value by providing a competitive advantage (Ren & Lin, 2024). A differentiation approach centered on a better customer experience strategy has the potential to create far more than the money to build new apps that go out and create a platform; rather, it involves investments in customer-facing digital platforms and data analytics to conduct deep dives into customer behavior. This holistic approach ensures that technology is an enabler in achieving separation of the market proposition (Kraus et al., 2022). However, in the absence of this specific strategic direction, digital initiatives can quickly become a series of isolated projects that cannot be integrated into an integrated whole that adds value to the organization (Wu et al., 2023).

Based on the aforementioned literature review regarding the role of digital transformation, we thus hypothesized that:

"The effectiveness of organizational cultural transmission positively impacts Digital Transformation (DT) (H3)."

"The level of business strategy positively impacts digital transformation (DT) (H4)."

Digital Transformation → Competitive Advantage

If successful, digital transformation contributes to a competitive edge, or business competency (Shehadeh et al., 2023). Digital technologies can boost operational efficiency to promote new products and services, create better customer relationships, and develop new business models, etc, which in turn may contribute to a sustained competitive edge (Bharadwaj et al., 2013). Digital platforms can provide new forms of value creation, while data analytics can better inform decision-making (Gouveia et al., 2024). Digitally transforming firms enable faster, more agile operations and first-mover advantages on digital platforms, and are a force in business digitalization (Martínez-Peláez et al., 2023).

On the one hand, business strategy and cultural transmission impact competitive advantage and business outcomes directly, but also indirectly through effects mediated by digital transformation (DT) (Nadkarni & Prügl, 2021), with DT serving as the key instrument for implementing strategic directives. Organizations can leverage their cultural readiness to achieve a stronger market position, a more effective approach, and innovative business models. That is, business strategy does not merely enable an institution to develop a benefit; it steers DT initiatives that contribute to a competitive edge later on. Similarly, cultural transmission is not only a means of achieving competitive advantage; it also creates the conditions for DT to thrive and, in turn, creates that competitive advantage (Mutambik, 2024). The catalyst translating cultural readiness into market superiority is DT (Wang & Zhang, 2025). Now, the importance of digital adoption in Thailand has gone beyond just commercial activities, as evidenced by recent public-domain studies. For instance, Pimpaporn et al. (2025) highlighted the digital transformation of Thai public health, which is providing important infrastructure for technology adoption, implying a nationwide transition towards a more digitally intertwined society.

As evidenced by recent public domain studies, the importance of digital adoption in Thailand extends far beyond basic commercial activities, signifying a nationwide transition toward a digitally intertwined society (Pimpaporn et al., 2025). Within this landscape, digital transformation serves as the vital catalyst translating cultural and strategic readiness into market superiority for SMEs (Wang & Zhang, 2025). Consequently, we hypothesized that as a crucial mediating mechanism, the level of digital transformation positively contributes to an SME's sustained competitive advantage (H5).

Research Methodology

Sampling and Data Collection

The target population for this study comprises active members of the Young Entrepreneur Chamber of Commerce (YEC), specifically selected for serving as founders, owners, or key strategic decision-makers in Thai Small and Medium-sized Enterprises (SMEs). Given their executive roles, these individuals are uniquely positioned to provide highly accurate, comprehensive insights into their organizations' business adaptation, cultural dynamics, and digital transformation initiatives. To ensure a robust geographic and sectoral representation across Thailand, a stratified volunteer sampling approach was employed. Data were collected via a self-administered online questionnaire, distributed systematically through official YEC provincial chairs and established communication networks, following formal authorization from the Chamber of Commerce of Thailand.

This study was conducted in strict accordance with ethical principles for research involving human subjects. The research protocol was officially reviewed and approved by the Institutional Review Board (IRB) of the Kasetsart University Chalermphrakiat Sakon Nakhon Province Campus (KU CSC) Human Research Ethics Committee, under the approval number KuCsc.HE-64-018. Participants were explicitly informed that their participation was entirely voluntary and that they maintained the right to withdraw from the study at any time without any negative consequences. Informed consent was obtained electronically from all participants before they proceeded to the questionnaire.

A total of 311 valid respondents were obtained, which is sufficient to estimate the entire YEC population nationwide. Data were collected via Google Forms as a self-administered online questionnaire. To ensure broad geographic and sectoral representation, the authors implemented a stratification strategy by distributing the survey through official YEC provincial chairs across all regions of Thailand and through official communication channels, such as YEC members' social media groups.

After completing data collection, the reliability test is conducted by using Cronbach's Alpha to analyze the internal consistency of the multi-item scales. The Cronbach's alpha values are shown in Table 1 to ensure that the indicators within each construct are reliable and reflect their underlying concepts.

Table 1 Cronbach's Alpha

Variables	Cronbach's Alpha	Number of Items	Reference(s)
Business Adaptation	0.834	5	Volberda, 1996; Teece, 2007
Business Strategy	0.851	5	Porter, 1985; Cichosz et al., 2020
Cultural Transmission	0.866	5	Schein, 1992; Cameron & Quinn, 1999
Digital Transformation	0.898	5	Westerman et al., 2014; Fitzgerald et al., 2014
Competitive Advantage	0.889	6	Porter, 1985; Barney, 1991

Research Results

General Information of Respondents

The Young Entrepreneur Chamber of Commerce (YEC), established in 2014 for Thai SME owners typically aged 20-45, provided the sample for this study. Among the 311 respondents, the majority were female (58.5%) and held a Bachelor's degree (63.7%). The most prevalent age group was 20-30 years (19.6%), and 3-6 years of work experience was the most common (27%).

Regarding business characteristics, most firms were micro-enterprises with 1-10 employees (40.5%) and operated primarily in the Service (36.4%) and Retail (28.3%) sectors. Geographically, the largest group was located in the Northeast (47.3%). Most businesses were relatively new, having been established for less than 5 years (39.2%), as shown in Table 2.

Table 2 Descriptive Statistics

Respondents' Information	Ranges	Number of respondents	Percentage
Sex	Male	129	41.5%
	Female	182	58.5%
Age	<20 years old	35	11.3%
	20-25 years old	80	25.7%
	26-30 years old	72	23.2%
	31-35 years old	59	18.9%
	36-40 years old	43	13.8%
	41-45 years old	16	5.1%
	> 45 years old	6	1.9%
Education	High school or equal	26	8.4%
	Associated degree	12	3.9%
	Bachelor degree	198	63.7%
	Master degree	69	22.2%
	Ph.D./Doctoral degree	6	1.9%
Working Experience	From 0-3 years	80	25.7%
	From 3-6 years	84	27%
	From 6-9 years	48	15.4%
	From 9-12 years	46	14.8%
	From 12-15 years	21	6.8%
	More than 15 years	32	10.3%
Number of Employees	1-10 person(s)	126	40.5%
	11-20 persons	70	22.5%
	21-30 persons	39	12.5%
	31-40 persons	26	8.4%
	41-50 persons	18	5.8%
	51-60 persons	7	2.3%
	61-70 persons	4	1.3%
	More than 70 persons	21	6.8%
Types of Business	Service	114	36.7%
	Retail	88	28.3%
	Whole sale	44	14.1%
	Manufacture	47	15.1%
	Others	18	5.8%

Region	Bangkok and Metropolitan	43	13.8%
	Central	31	10%
	North	48	15.4%
	South	20	6.4%
	West	7	2.3%
	East	15	4.8%
	Northeast	147	47.3%
Age of Business	<5 years	126	40.5%
	From 6-10 years	74	23.8%
	From 11-15 years	31	10%
	From 16-20 years	27	8.7%
	From 21-25 years	16	5.1%
	From 26-30 years	15	4.8%
	From 31-35 years	6	1.9%
	From 36-40 years	9	2.9%
	> 40 years	7	2.2%

Correlation Analysis

Correlation analysis was used to illustrate relationships among variables, indicating no severe collinearity issues. All correlation coefficients range from 0.4 to 0.8, indicating a moderate level of association. According to Table 3, the highest coefficient value is 0.800 among all pairs of variables, specifically between business adaptation and business strategy. The lowest value is 0.619, occurring between Digital Transformation and Competitive Advantage. This correlation analysis confirms the validity for subsequent statistical interpretation. Furthermore, the variance inflation factor (VIF) was calculated to test for multicollinearity. All relationships exhibit no severe multicollinearity; the highest VIF is 3.346, and the lowest is 2.421, both remaining well below the conservative threshold of 10 (Schober et al., 2018).

Table 3 Correlation Analysis

Variables	BusAdpt	BusStgy	CulTran	DT	ComAdt	VIF
BusAdpt	1					3.346
BusStgy	0.800 p = 0.000	1				3.013
CulTran	0.679 p = 0.000	0.650 p = 0.000	1			2.421
DT	0.687 p = 0.000	0.652 p = 0.000	0.714 p = 0.000	1		2.462
ComAdt	0.654 p = 0.000	0.656 p = 0.000	0.690 p = 0.000	0.619 p = 0.000	1	

Confirmatory Factor Analysis

CFA is performed to confirm the measurement model and the underlying factor structure of the constructs, as well as the goodness-of-fit indices. The criteria for model-fit indices consist of normed Chi-square (χ^2/df) should be less than 3 (Hair et al., 2014); root mean square of error approximation (RMSEA) and standardized root mean squared residual (SRMR) should be less than 0.080; comparative fit index (CFI) should have a value closer to 1, indicating a good fit of the model; the value should be higher than 0.90 (Byrne, 2010).

According to Table 4, goodness-of-fit indices are illustrated. The normed chi-square equals 1.764, which is less than 3, indicating a well-fitting model; RMSEA and SRMR equal 0.050

and 0.049, respectively, both of which are less than 0.080, as mentioned above, indicating a good fit as well. Then, CFI is 0.958, higher than 0.90, indicating an excellent fit of the model.

Table 4 Degree of model fit for CFA

Model analyzed	Chi-square (χ^2)	χ^2/df	Value of p	RMSEA	SRMR	CFI
Confirmatory factor analysis (CFA)	497.532	1.764	0.000	0.050	0.049	.0958
Criteria ()	-	< 3	-	< 0.080	< 0.080	> 0.900/0.950

In the Confirmatory Factor Analysis (CFA), all factor loadings for the measurement items were calculated to determine the strength of the relationship between each item and its respective latent construct. In other words, it indicates how well each item represents the concept it was designed to measure.

According to Table 5, the lowest factor loading in CFA is 0.909. In contrast, all other factor loadings are statistically significant at the 0.01 level and exceed the recommended threshold of 0.55 suggested by Fornell & Larcker (1981), indicating a strong relationship between the items and their respective latent constructs.

The results of the confirmatory factor analysis (CFA) for each variable are integrated into the structural model shown in Figure 1.

Table 5 Factor Loadings

Factors of variables	Estimate	S.E.	C.R.	P
BusAdpt5 $\leftarrow$ Business Adaptation	1.000			
BusAdpt4 $\leftarrow$ Business Adaptation	0.996	0.097	10.276	**
BusAdpt3 $\leftarrow$ Business Adaptation	1.031	0.081	12.676	**
BusAdpt2 $\leftarrow$ Business Adaptation	1.024	0.077	13.359	**
BusAdpt1 $\leftarrow$ Business Adaptation	1.061	0.076	13.876	**
BusStgy5 $\leftarrow$ Business Strategy	1.000			
BusStgy4 $\leftarrow$ Business Strategy	1.051	0.100	10.574	**
BusStgy3 $\leftarrow$ Business Strategy	1.172	0.107	10.914	**
BusStgy2 $\leftarrow$ Business Strategy	1.253	0.107	11.753	**
BusStgy1 $\leftarrow$ Business Strategy	1.183	0.099	11.981	**
CulTran5 $\leftarrow$ Cultural Transmission	1.000			
CulTran4 $\leftarrow$ Cultural Transmission	1.007	0.067	14.995	**
CulTran3 $\leftarrow$ Cultural Transmission	1.102	0.092	11.949	**
CulTran2 $\leftarrow$ Cultural Transmission	1.193	0.095	12.533	**
CulTran1 $\leftarrow$ Cultural Transmission	1.078	0.089	12.160	**
DT5 $\leftarrow$ Digital Transformation	1.000			
DT4 $\leftarrow$ Digital Transformation	1.023	0.071	14.338	**
DT3 $\leftarrow$ Digital Transformation	0.948	0.075	12.604	**
DT2 $\leftarrow$ Digital Transformation	1.082	0.085	12.791	**
DT1 $\leftarrow$ Digital Transformation	1.053	0.083	12.675	**
ComAdt6 $\leftarrow$ Comparative Advantage	1.023	0.076	13.446	**
ComAdt5 $\leftarrow$ Comparative Advantage	1.000			
ComAdt4 $\leftarrow$ Comparative Advantage	0.909	0.064	14.296	**
ComAdt3 $\leftarrow$ Comparative Advantage	1.098	0.091	12.008	**
ComAdt2 $\leftarrow$ Comparative Advantage	1.159	0.084	13.777	**
ComAdt1 $\leftarrow$ Comparative Advantage	1.055	0.083	12.703	**

**Correlation is significant at the 0.01 level

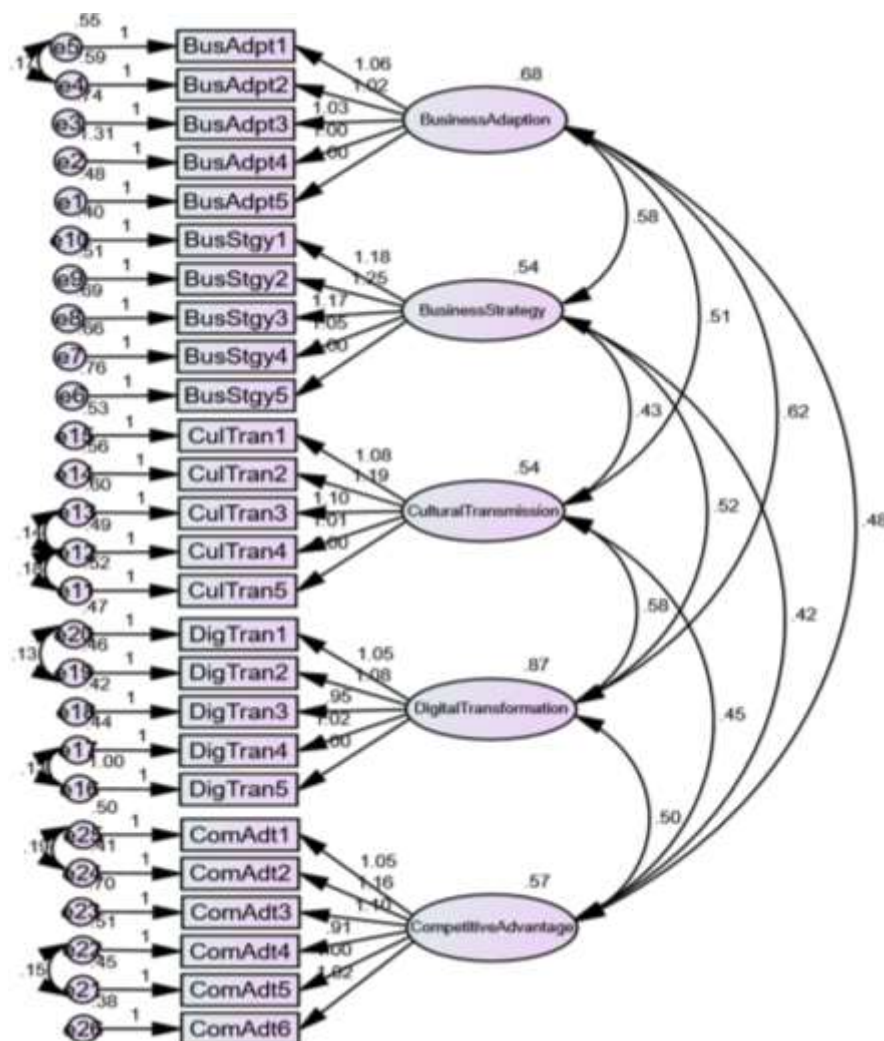


Figure 1 Confirmatory Factor Analysis

Structural Equation Model Testing

A structural equation model (SEM) is tested to examine the relationships among variables and to perform path analysis. The degree of model fit of the structural equation model is calculated to confirm that our research model is consistent with the theoretical model. According to Table 6, each index has shown goodness-of-fit within the acceptable threshold, collectively providing strong evidence that the measurement model is an adequate fit for the collected data.

The first criterion for model fit value is chi-square (squared), which equals 1.423 (squared equals 1.423), indicating the model's likelihood ratio test. The calculated value is considered a good fit when the p-value is higher than 0.05 (Schumacker & Lomax, 2010). The value of p in this model analysis is 0.491, indicating an appropriate fit. The RMSEA and SRMR, as in previous CFA considerations, should both be less than 0.08 (Diamantopoulos & Siguaw, 2000). The values of RMSEA and SRMR are 0.000 and 0.004, respectively, indicating an excellent fit for the model. Finally, the GFI (Schumacker & Lomax, 2010) suggested that GFI should exceed 0.90 for a good fit or 0.95 for an excellent fit. The calculated GFI is 0.998, indicating an excellent fit for the model. All indices in Table 6 illustrate that the research model is consistent with the hypothesized model.

Table 6 Degree of model fit for SEM

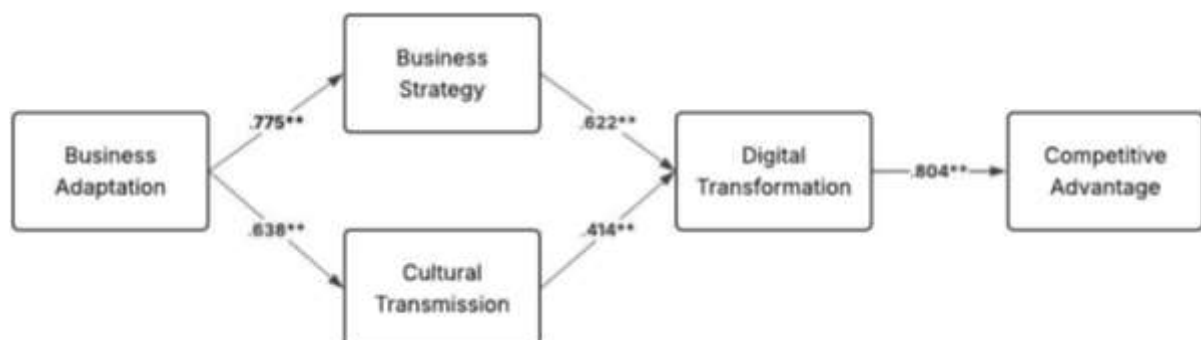
Model analyzed	Chi-square (χ^2)	Value of p	RMSEA	SRMR	GFI
Structural equation model (SEM)	1.423	0.491	0.000	0.004	.998
Criteria ()	-	> 0.05	< 0.080	< 0.080	> 0.900/0.950

Table 7 Regression weights, errors, and significance level

Relationships assessment	Estimate	S.E.	C.R.	P
Business Strategy $\leftarrow$ Business Adaptation	0.775	0.033	23.483	**
Cultural Transmission $\leftarrow$ Business Adaptation	0.638	0.039	16.300	**
Digital Transformation $\leftarrow$ Cultural Transmission	0.414	0.060	6.932	**
Digital Transformation $\leftarrow$ Business Strategy	0.622	0.072	8.626	**
Competitive Advantage $\leftarrow$ Digital Transformation	0.804	0.052	15.313	**

According to Table 7, the path analysis for each hypothesized relationship was systematically evaluated to understand the structural dynamics within the research model. For the first hypothesis (H1), the path analysis indicates that business adaptation has a significant positive effect on business strategy at the 0.01 significance level ($b = 0.775$, $p\text{-value} < 0.01$), thereby supporting H1. This result strongly confirms that higher levels of business adaptation directly empower an SME's strategic posture. The second hypothesis (H2), positing that business adaptation positively impacts the effectiveness of organizational cultural transmission, was also supported, with a statistically significant path coefficient of 0.638 ($b = 0.638$, $p\text{-value} < 0.01$). Regarding the predictors of technological alignment, the third hypothesis (H3) confirms that the effectiveness of organizational cultural transmission exerts a significant positive impact on digital transformation ($b = 0.414$, $p\text{-value} < 0.01$). Similarly, the fourth hypothesis (H4) demonstrates that the use of a strategic business strategy has a strong positive impact on digital transformation ($b = 0.622$, $p\text{-value} < 0.01$). Finally, the fifth hypothesis (H5) establishes that the level of digital transformation positively and powerfully drives an SME's competitive advantage ($b = 0.804$, $p\text{-value} < 0.01$). Collectively, these statistical parameters confirm that digital transformation acts as a vital mediating mechanism transforming internal adaptive capabilities into marketplace superiority.

Research hypotheses and the model are summarized in Figure 2; the path analysis among variables is shown in green, indicating acceptance of the research hypotheses. At the same time, the model is drawn as relationships shown in Figure 2.



** Coefficients are significant at the 0.01 level

Figure 2 Research model

Conclusion and Discussion

Structural Drivers of Competitive Advantage

The validated structural model is statistically significant, conclusively demonstrating the profound impacts among the observed determinants. According to the robust empirical findings in Figure 2, business adaptation acts as the foundational catalyst in a cascaded operational process that culminates in a superior competitive advantage. These findings fundamentally challenge traditional strategic management paradigms, which often position deliberate strategy as the starting point, by arguing instead that an SME's inherent adaptive capacity is the essential precursor for all subsequent strategic and cultural development (Moqaddamerad & Ali, 2024). The exceptionally strong path from business adaptation to business strategy ($b = 0.775$) indicates that an organization's agility and responsiveness directly shape its strategic direction. In a dynamic and volatile business environment, the ability to adapt to new market conditions, technological disruptions, or competitor actions becomes the very basis for business strategy. Rather than relying on rigid, pre-defined plans, an adaptive organization is more likely to pursue an emergent strategy that is flexible, experimental, and oriented toward continuous learning. This highlights a shift from a traditional, static view of strategy to a dynamic one, in which an organization's adaptive capabilities dictate its strategic choices and its ability to reconfigure resources to maintain relevance and competitive positioning.

Similarly, the substantial path from business adaptation to organizational cultural transmission ($b = 0.638$) demonstrates that when an SME successfully adapts to environmental pressures, the internal processes, values, and behavioral norms that facilitated that success become deeply ingrained in the firm's fabric. The empirical experience of business adaptation substantially reinforces shared organizational traits such as resilience, agile innovation, and calculated risk-taking, which, in turn, embed a collective mindset highly conducive to navigating future industry disruptions (Zhang et al., 2023). This underscores that business adaptation functions not merely as an operational outcome but as a vital cultural force driving how modern Thai SMEs continuously operate, transform, and evolve sustainably (Georgescu et al., 2024).

While business strategy and cultural transmission inherently exert direct positive influences on an SME's competitive advantage, this study distinctly illuminates their interconnected roles in driving subsequent transformational outcomes. The empirical data reveal a robust relationship between cultural transmission and digital transformation ($b = 0.414$), confirming that the successful embedment of an adaptive organizational culture is a paramount enabler of technological change (Bozkus, 2024). Digital transformation in the SME context is far from a purely technical endeavor; it demands a profound paradigm shift in mindsets, behaviors, and organizational norms. A culture that effectively transmits values of collaboration and openness to change provides the fertile ground necessary for digital initiatives to flourish (Asif et al., 2024). In contrast, a culture resistant to change acts as a major impediment (Firican, 2023). Concurrently, the business strategy process exerts a powerful direct influence on digital transformation ($b = 0.622$). This compelling path substantiates the premise that digital initiatives must be strategically anchored rather than executed as isolated technological projects. A clear business strategy provides the essential roadmap, ensuring that technological investments are rigorously aligned with core business objectives and sustainable growth (Eyieyien et al., 2024).

The Mediating Role of Digital Transformation

Digital Transformation (DT) has played a key role in an organization's operations, acting as both a mediator that strengthens the influence of other factors and a variable that directly contributes to positive business outcomes. It not only supports other variables in achieving desired results but also serves as a direct driver of competitive advantage on its own (Merín-Rodríguez et al., 2024). The analysis reveals an exceptionally strong path coefficient from Digital Transformation to Competitive Advantage ($b = 0.804$), indicating that successful digital

transformation is the single most powerful and direct driver of competitive advantage in the model. This finding suggests that while business strategy and Cultural Transmission lay the groundwork for success, it is the actual implementation and execution of a digital transformation that translates these internal capabilities into superior organizational performance.

Digital Transformation serves as the crucial bridge that turns strategic intent and cultural readiness into tangible results by operationalizing an organization's strategic directions (Chirumalla et al., 2025). A cost leadership strategy is achieved through process automation and data-driven efficiency, while a differentiation strategy is achieved through personalized customer experiences enabled by digital platforms. Besides, cultural readiness is also leveraged via this mechanism. For instance, an agile, innovative culture enables rapid development and deployment of new digital products, adaptation to technological changes, and data-driven decision-making, which in turn leads to a sustained competitive edge. This confirms that the positive effects of an adaptive culture on competitive advantage are not direct, but are delivered through the successful implementation of digital initiatives.

The evaluated indirect effects within the structural equation model are equally compelling. The positive impacts of business strategy and cultural transmission on marketplace superiority are largely channeled through digital transformation. This explicitly confirms that a robust business strategy and an adaptive culture are critical not because they directly generate market success, but because they are foundational prerequisites for an effective digital transformation, which serves as the immediate source of that competitive advantage. This mediating architecture highlights the paramount importance of a holistic, integrated approach where strategy, culture, and digital capabilities work in concert to achieve superior organizational outcomes. Furthermore, these findings carry significant implications for the long-term sustainability of Thai SMEs. Integrating digital transformation into core business models enables resource optimization and reduced waste, bridging immediate performance with long-term growth. By leveraging these digital tools, SMEs can successfully transition toward greener technologies and transparent community engagement, ensuring they remain highly viable, competitive, and socially responsible actors within the volatile regional and ASEAN economy (Jongsriwattanaporn & Lalaeng, 2023; Pimpaporn et al., 2025).

Limitations and Future Research

Several methodological limitations must be acknowledged when interpreting these empirical findings. First, the cross-sectional research design, while highly effective for testing the proposed structural relationships at a specific point in time, inherently precludes the definitive establishment of causality and limits the observation of these dynamic processes over time. Given the rapid pace of technological advancement, SME leaders must continually adapt strategically to sustain their competitive edge. Second, the sample is composed exclusively of YEC members operating in Thailand; this specific demographic may limit the generalizability of the findings to larger multinational corporations or enterprises operating in markedly different cultural contexts. Finally, relying on a self-administered questionnaire introduces the potential for self-reporting bias. To rigorously address these validity concerns, future research should incorporate longitudinal designs, probability sampling techniques, or a mixed-methods approach—combining quantitative surveys with in-depth qualitative interviews—to triangulate data and yield deeper insights into complex constructs like digital tool adoption and strategic intensity.

Practical Implications

The findings of this study offer several actionable insights for SME leaders, YEC members, and policymakers. Firstly, for young entrepreneurs and SME owners, digital transformation must not be viewed merely as a technological purchase, but as a holistic strategic imperative that begins with business adaptation and cultural alignment. Firms should prioritize fostering

an organizational culture that values digital literacy and continuous learning before investing heavily in complex digital tools. Secondly, the results confirm that digital transformation acts as a critical structural bridge; therefore, Thai SMEs should explicitly integrate digital goals into their core business strategies rather than treating technology as an isolated operational function. Finally, for organizations like the YEC and government agencies, these empirical insights can guide the design of targeted training programs focused on "soft skills" such as change management and strategic agility, which have proven to be essential enablers of successful digital adoption and long-term competitive advantage in the Thai SME sector.

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