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COMPETITOR PRESSURE, CUSTOMER PRESSURE AND FIRM PERFORMANCE IN VIETNAMESE TOURISM BUSINESSES: THE MEDIATING ROLE OF CROSS-CHANNEL INTEGRATION

Duong Thi Thuy Luu[1], Van Thi Nguyen[2,*], Hong Hanh Duong [3], and Bui Thi Tu[4]

Abstract

This study examines the impact of competitor pressure and customer pressure on adopting cross-channel integration (CI) and its subsequent effect on the performance of tourism enterprises. The study further explored the mediating role of CI in the relationship between these two pressures and firm performance – a gap that has been largely overlooked in previous research. Data from 248 Vietnamese tourism firms were analyzed using SmartPLS 4.0 and structural equation modeling. The results demonstrate that customer and competitor pressures positively influence the adoption of CI, which in turn improves business performance. These findings have significant theoretical and practical implications for understanding and promoting the adoption of CI among tourism businesses.

Keywords: Competitor pressure, customer pressure, cross-channel integration, firm performance, tourism enterprises

1. INTRODUCTION

Tourism contributes significantly to economic development, especially in countries that prioritize tourism (Manosuthi, 2024). However, Industry 4.0 (IR4.0) has profoundly transformed customer behavior and brought significant breakthroughs and fundamental changes to the tourism and hospitality industries. Numerous destinations are increasingly leveraging the principles of IR4.0 to enhance tourism (Sommit & Boonpaisarnsatit, 2020), fostering the development of smart and appealing destinations (Sinlapasate et al., 2020). Many tourism and hospitality businesses and consumers leverage data, technology, and new devices to achieve their goals. Companies can develop new strategies and operate diverse technologies to compete, expand, and maintain their market share (Koo & Chang, 2021); tourists can now arrange their trips through an online travel agency (OTA) or directly from a travel company's website instead of visiting a physical office (Nguyen, 2021).

As one of the earliest sectors to embrace the Internet, tourism has become a highly successful e-commerce segment, garnering a significant and loyal customer base (Li et al.,

[1] Dr. Duong Thi Thuy Luu is currently working as a lecturer in the Strategic Management Department of Thuongmai University, Vietnam. She obtained a Ph.D. in Business and Trade from Thuongmai University Vietnam. Email: duongqtcl@tmu.edu.vn, ORCID: 000-0002-8048-4513

[2,*] Dr. Van Thi Nguyen (Corresponding Author) is currently working as a lecturer in the Institute of Business Administration,Thuongmai University, Hanoi, Vietnam. She obtained a Ph.D.in Business Administration from Thuongmai University, Vietnam. Email:vannguyen@tmu.edu.vn, ORCID:0009-0006-2116-3951

[3] Dr. Hong Hanh Duong is currently working as a lecturer in the Department of Hospitality and Tourism, Thuongmai University, Hanoi, Vietnam. She obtained a Ph.D. in Economic Management from Thuongmai University Vietnam. Email: hanh.dh1@tmu.edu.vn, ORCID: 0009-0001-3918-0227

[4] Bui Thi Tu is currently working as a lecturer in the Department of International Business, University of Economics - The University of Da Nang, Vietnam. She obtained a master's degree in International Economic and Business from Corvinus University of Budapest, Hungary. Email: tubt@due.edu.vn

2022). External factors, such as the pandemic and IR4.0, have been key catalysts for the shift in both consumer and business behavior, from offline to online travel (Li et al., 2022). Furthermore, the successful adoption of online channels by industry leaders has prompted widespread industry-wide adoption, leading to a fundamental transformation of the business model. Consequently, the strategic design of channel structures has emerged as a key determinant of sustainable growth in the tourism industry (He et al., 2019). A systematic review by Soltani-Nejad et al. (2022) also revealed that travel distribution is considered as one of the most important research topics in tourism, and that research on tourism distribution is asymmetrical due to rapid changes in the business environment and technology.

Current tourism research indicates a shift in tourism distribution channels from single-channel models (physical or online) to more integrated multi-channel approaches (Soltani-Nejad et al., 2022). CI involves expanding the distribution channel system, where a firm applies multi-channels (such as offline, online, and mobile commerce channels) to create synergies for the company, delivering specific advantages to customers by aligning channel goals, design, and implementation (Cao & Li, 2015).

However, a significant disparity remains between emerging and developed economies in adopting new business models based on Industry 4.0 technologies (Nguyen et al., 2024). While businesses in developed economies can often achieve high levels of cross-channel integration, emerging and transitioning economies may only achieve partial integration or focus on integrating a limited number of popular channels. This is due to various factors, including business environment uncertainties (Oh et al., 2012), as well as the lack of critical CI knowledge and skills among many tourism businesses in developing economies (Nguyen et al., 2024). This may lead to a need for more current knowledge to support decision-making regarding CI adoption among tourism businesses in emerging and transitioning economies. In numerous transitional economies, governments have been gradually promoting digital transformation across various business sectors to stimulate the economy's growth. Conversely, in many developing nations with tourism-dependent economies, tourism companies are increasingly investing in digital transformation to create new business models that drive growth, implementing CI.

According to this overview, existing studies on CI have primarily been concentrated on the retail and manufacturing industries (Deng et al., 2022; Yrjölä et al., 2018); thus, there is a lack of CI research in the tourism industry, a field that has been profoundly impacted by Industry 4.0 (Li et al., 2022). Soltani-Nejad et al. (2022) stated that no research has been conducted so far to provide a framework for adopting CI systems in the tourist sector. Meanwhile research on CI in other domains is varied, it commonly converges on a set of direct relationships, including the influence of internal and external factors on CI adoption (Zhang et al., 2020; Oh et al., 2012), and the subsequent effects of CI on firm performance (Cao & Li, 2015; Tagashira & Minami, 2019). The mediating role of CI in the relationship between stakeholder pressures and firm performance has been overlooked, potentially leading to an incomplete understanding among researchers and tourism managers of the impact of stakeholder pressures and the adoption of CI on firm performance. This study addresses these research gaps by investigating the role of external pressures (focusing on competitor pressure and customer pressure) in driving the adoption of CI, as well as the direct and indirect impacts of CI on the business performance of tourism enterprises. This research offers a fresh perspective on the well-studied relationship between CI and business performance by examining this topic within the unique context of the tourism industry. We also explore the mediating role of CI in the relationship between competitor pressure, customer pressure, and business performance. The results of this study will not only expand the theoretical understanding of CI, but also provide empirical evidence to assist tourism managers in

developing and transitioning economies, including Vietnam, in making well-informed decisions regarding the implementation of CI.

The remainder of this paper is structured as follows: section 2 establishes the theoretical framework and research hypotheses, while section 3 describes the research methodologies. The key findings of the model evaluation and hypothesis testing are presented in section 4. Section 5 offers a discussion of the results and contributions of the study. Finally, section 6 addresses the study's limitations and proposes avenues for future research.

2. Literature Background and Hypothesis Development

2.1 Cross-channel Integration

Cross-channel integration (CI) is a term that has received much attention over the past decade. Many authors identify CI differently (e.g., Stone et al., 2002; Zhang et al., 2010). A universally accepted definition for this term remains absent, especially in the context of the tourism industry. This study uses the CI concept of Cao and Li (2015) as the main approach. Accordingly, CI refers to the extent to which a firm aligns its goals, and designs, and deploys its channels to create synergy for the company and offer specific benefits to consumers (Cao & Li, 2015). This means that CI is concerned with how a business operates activities to implement a CI strategy to create, distribute, and capture value toward the organization's sustainable development in a constantly changing business environment. The level of CI can vary widely, from complete channel separation to complete channel integration (Cao & Li, 2015; Tagashira & Minami, 2019). Within the tourism industry, characterized by evolving tourist behavior and the significant impact of Industry 4.0 technologies, CI is understood as the extent to which a tourism business designs, manages, and coordinates its transaction channels—encompassing both online and offline platforms—to engage a broader range of diverse customer segments. This approach aims to deliver seamless experiences for tourists throughout the transaction process, thereby supporting the achievement of the business's operational objectives.

The components of CI remain a contentious issue in studies on CI due to the unique characteristics of different industries, such as the retail industry (Oh et al., 2012; Zhang et al., 2018), and manufacturing (Zhang et al., 2020; Deng et al., 2022). Given the distinctive characteristics of the tourism industry and the behavior of Vietnamese tourists, this study focuses on three main components of CI: (1) *Integrated promotion* involves the ability to use advertising programs and publicity across channels, thereby increasing customer awareness of the company's various channels (Oh et al., 2012); (2) *Integrated product and price information management* ensures consistent product information (including product catalogs and descriptions), pricing, and discounts across all channels to prevent customer confusion (Zhang et al., 2018); and (3) *Integrated order fulfillment* allows customers to complete their purchases through their preferred channel within the company's system, including picking up an online order at a physical store (Oh et al., 2012).

2.2 Stakeholder Theory, Stakeholder Pressure and Outcome

Stakeholder theory emphasizes that organizations rely on shareholders and other stakeholders – groups and individuals who can affect or be affected by the organization – for their survival and growth (Freeman, 1984). For instance, businesses require capital from shareholders, support from the community and government, purchases and commitment from customers, a stable supply from suppliers, and skills and loyalty from employees (Nguyen et al., 2024), as well as learning from competitors to mitigate business uncertainty (Lieberman & Asaba, 2006). Stakeholder engagement is crucial to the success of sustainable tourism

initiatives (Smerchuar & Madhyamapurush, 2020). As a result, stakeholder theory scholars believe that stakeholder pressure can serve as a driving force for businesses to adopt strategies and tactics that generate more value to meet stakeholders' needs and expectations (Wagner, 2011; Maas et al., 2018). Furthermore, by achieving positive business outcomes through the adoption of CI, firms are effectively meeting the needs and expectations of stakeholders. This suggests a connection between stakeholder pressures and organizational actions and outcomes (Wagner, 2015).

Among business stakeholders, customers and competitors are often considered by scholars to be key stakeholders that can influence business decisions (e.g., Nguyen et al., 2024; Zhang et al., 2020). Yan et al. (2010) argued that the rise of internet-based distribution channels has heightened the importance of studying multichannel competition and coordination. They further note that most firms adopt multichannel strategies primarily due to competitive pressures within the market. Contemporary research on multichannel integration often employs customer engagement and service provider activities as key indicators for assessing the level of multichannel integration within a business (Beck & Rygl, 2015; Yrjölä et al., 2018; Soltani-Nejad et al., 2022; Zhang et al., 2018). Maas et al. (2018) further combined these two pressures into the variable "market pressure", demonstrating its significant impact on the adoption of environmental practice. This study focuses on the influence of two stakeholder pressures from competitors and customers on adopting CI and the firm performance of Vietnamese tourism enterprises. The findings of this study will contribute to enhancing the existing theoretical framework on stakeholder pressure and its impact on the business performance of enterprises within the tourism sector.

2.3 Competitor Pressure and Cross-Channel Integration of Tourism Business

The success of key competitors in the market puts pressure on other businesses in the industry, which can lead to the decision to imitate competitors' business models or strategies to enhance business performance and competitiveness (Zhang et al., 2020). In the context of cross-channel integration, this can be explained by the following reasons:

First, although the adoption of CI has been proven to help improve overall business efficiency, it also infers many risks and uncertainties from the business environment (Oh et al., 2012); therefore it is reasonable for businesses to base on their operations on the CI performance of successful competitors to determine their level of CI. *Second*, when a business observes that its primary rivals have achieved a competitive advantage or increased business performance by implementing cross-channel integration (CI), it might feel that both its current position in the market and its long-term survival are in danger (Lieberman & Asaba, 2006); This could encourage the tendency to copy rivals to prevent lagging behind (Liang et al., 2007). *Third,* some scholars argue that businesses adopt CI because their competitors do so, not because they reap financial benefits (Cao & Li, 2018). Competitor pressure has been shown to drive increased CI among manufacturing firms (Zhang et al., 2020) and lead to the application of big data in the hotel industry (Yadegaridehkordi et al., 2020). To date, no study has specifically investigated the impact of competitor pressure on the decision of tourism enterprises to adopt CI. With evolving customer behavior and the advancements of Industry 4.0 technologies, the successful implementation of CI by some tourism businesses - enabling them to expand their customer base, increase market share, and enhance profitability - is likely to exert significant pressure on other enterprises. This competitive pressure may drive the remaining tourism businesses to adopt similar models to avoid lagging behind their competitors. The following hypothesis has therefore been developed:

H1: Competitor pressure has a positive impact on the cross-channel integration of tourism business.

2.4 Customer Pressure and Cross-Channel Integration of Tourism Business

Previous research based on stakeholder theory has shown that customer pressure is a key driver of business decisions, such as environmental practices (Maas et al., 2018) and the adoption of digital strategies by hotel businesses (Nguyen et al., 2024). The current business environment is witnessing the emergence of increasingly diverse groups of customers with varying characteristics and needs. Moreover, the pace of change in consumer needs or preferences for products/services is accelerating due to consumer heterogeneity. Thus, effective management of CI will better meet customer needs (Binder, 2014).

According to Zhang et al. (2020), in the context of CI, customer pressure arises from the seamless cross-channel shopping needs of a company's target customers. As CI is a customer-centric strategy that emphasizes understanding and meeting target customers' needs, it is fundamental to business success (Cao & Li, 2015). Therefore, customer pressure can be understood as the extent to which customers expect or pressure companies to improve the level of CI, thus retaining existing customers and maintaining market share. On the other hand, the research by Zhang et al. (2020) also demonstrated that the rising level of CI among manufacturing businesses is positively impacted by customer pressure. In the tourism sector, the shift in customer behavior from offline to online transactions has become increasingly evident (Li et al., 2022). However, while the number of multi-channel customers is steadily growing, this does not imply uniformity among them. Not all customers engage in shopping or searching across all channels, nor do they use the same channels consistently; rather, their transaction paths tend to be highly diverse (Binder, 2014). This indicates the need for tourism companies to develop well-integrated transaction channels to effectively reach and engage a broader range of customer segments. Hence, the hypothesis is:

H2: Customer pressure has a positive impact on the cross-channel integration of a tourism business.

2.5 Cross-channel Integration and Firm Performance

As a simultaneous integration of multiple customer touchpoints, emphasizing technology 4.0 platforms, CI is considered a new business model to deliver seamless and superior customer experiences while enhancing operational efficiency. Zhang et al. (2010) argued that CI benefits businesses in several ways: (1) enabling communication and promotion across all integrated channels, (2) leveraging cross-channel information and marketing research from one channel to improve decisions in other channels, (3) comparing prices across channels to refine pricing strategies for other channels, (4) reducing labor costs through digitalization, and (5) achieving economies of scale by spreading fixed costs throughout all channels. This explains why previous studies have proven that CI helps businesses achieve economies of scale (Neslin et al., 2006), reduce costs (Tagashira & Minami, 2019; Zhang et al., 2020), and increase sales (Cao & Li, 2015). In the context of Vietnamese tourism business, CI enables companies to cater to diverse customer segments, including international travelers and younger, tech-savvy customers who prefer online transactions, while also accommodating older customers who may be less accustomed to searching for tours online. This approach can facilitate the rapid achievement of economies of scale, expansion of market share, and enhancement of operational efficiency for travel companies. Thus, it is hypothesized that:

H3: Cross-channel integration has a positive impact on the performance of tourism businesses.

In this study, we not only assess the direct effect of CI on business performance but also investigate its mediating role in the relationship between stakeholder pressures and firm

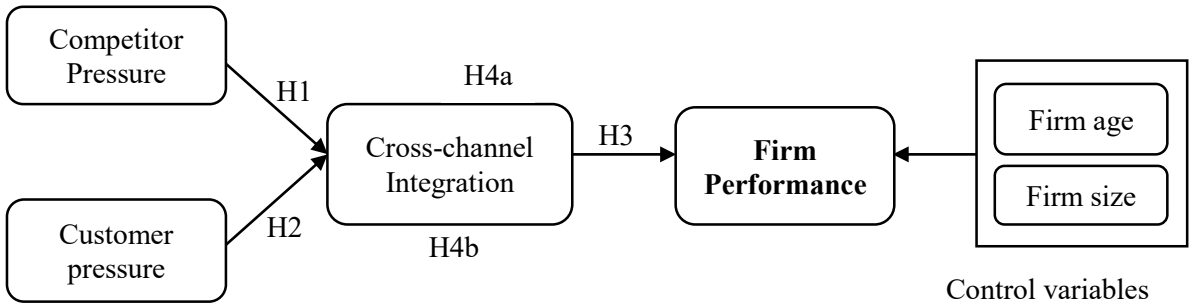
performance. Stakeholder theory posits that different stakeholders exert various pressures on the business (Gavetti et al., 2005). Thus, firms must strengthen their stakeholder relationship management to meet their expectations. Integrating stakeholder expectations into the strategic development process can significantly enhance business performance (Wolf, 2014). As Maas et al. (2018) demonstrated, stakeholder pressures have a strong impact on the adoption of environmental practices, which, in turn, positively affects the economic performance of logistics companies. In the context of CI, Zhang et al. (2020) found a significant relationship between competitor and customer pressures and the level of CI, while Tagashira and Minami (2019) demonstrated that CI positively impacts the cost efficiency of retail businesses. This implies that integration may serve as a mediator between stakeholder pressure and firm performance. More specifically, Wagner (2011) has demonstrated that integration is a necessary mediating variable in the relationship between stakeholders and firm performance. Hence, the following two hypothesizes are developed accordingly:

H4a: Cross-channel integration mediates the relationship between competitor pressure and business performance.

H4b: Cross-channel integration mediates the relationship between customer pressure and business performance.

Moreover, this study utilizes control variables (firm size, firm age) to identify the differential impacts of competitor pressure, customer pressure, cross-channel integration, and firm performance of tourism enterprises. Many previous studies have considered these variables as important control variables (Oh et al., 2012; Tagashira & Minami, 2019; Nguyen et al., 2024). In particular, according to the World Bank's size classification, the number of employees determines an organization's size. Company age is calculated from the time the business was established until the time of data collection for this study.

Figure 1 The Proposed Research Model



Source: The authors

3. METHODOLOGY

3.1 Context

Vietnam was selected as the context for this study due to the following reasons: First, Vietnam's tourism industry, characterized by rapid growth, has emerged as a cornerstone of the national economy, contributing a projected 6.4% to GDP in 2024 (Nguyen, 2024a). It is expected to grow substantially, reaching an estimated value of USD 135 billion by 2033 (Future Market Insights, 2023). Concurrently, domestic tourism remains the primary driver of the industry's development, complementing efforts to enhance international tourist arrivals.

In addition, Vietnam is among the countries with the highest internet penetration rates globally, positioning its population as one of the most digitally connected in the world (Nguyen, 2023). According to a Rakuten Insight survey conducted in June 2023, 54% of Vietnamese respondents reported using an online travel agency (OTA), while 16% indicated that they were unfamiliar with the concept of OTAs (Nguyen, 2024b). This highlights the fragmentation in consumer transaction behavior across distribution channels. Consequently, Vietnamese tourism businesses must adopt a multi-channel approach, integrating both online and offline transaction channels to effectively engage diverse tourist segments, including international and domestic visitors across various age groups.

The Vietnamese government has prioritized the promotion of Industry 4.0 technologies within the tourism sector (Vietnamese Prime Minister, 2020). However, as a developing and transitioning economy, Vietnam faces significant challenges in implementing digital transformation and adopting business models based on Industry 4.0 technologies. These challenges include high transformation costs, perceived risks, insufficient market information, and limited knowledge regarding methods to select and develop suitable digital strategies during the implementation process (Nguyen et al., 2024). As such, further research is critical to provide valuable insights and guidance for tourism research and business managers to make informed decisions on selecting and executing digital strategies, including the integration of multi-channel systems (Kraus et al., 2022).

3.2 Questionnaire Design

The proposed research model in this paper consists of two independent variables (competitor pressure, customer pressure), one mediating variable (cross-channel integration), one dependent variable (firm performance), and two control variables (firm age, firm size). The measurement scales for all variables in the research model are adapted from previous reputable studies on CI. A forward-backward translation technique was employed to ensure the reliability of these scales during the translation process.

After developing an initial questionnaire, we conducted a pre-test with 15 scientists and managers from tourism businesses to assess and develop the variables and scales in the research model. The pre-test result is a completed questionnaire consisting of three parts: Parts 1 and 2 collected information about the surveyed businesses and the representative respondents (managers from middle level or higher). Part 3 contained 15 scale items assessing the 4 main variables in the research model. The "Competitor pressure" variable included 3 items adapted from Zhang et al. (2020); the "customer pressure" variable consisted of 3 items adapted from Zhang et al. (2020) and Oh et al. (2012); the variable "Cross-channel integration" included 5 items adapted from Oh et al. (2012) and Zhang et al. (2018); while the "firm performance" variable consisted of 4 items taken from Yadegaridehkordi et al. (2020). The 5-point Likert scale ranged from 1 (strongly disagree) to 5 (strongly agree).

3.3 Data Collection Procedure

The study population comprised tourism businesses operating in Vietnam. A convenience sampling technique was employed to reach businesses engaged in various tourism services, including travel agencies, hotels, and supplementary services such as restaurants, transportation, and entertainment. Given the study's focus on CI, the surveyed businesses were required to have at least one online channel in addition to their traditional channels. Questionnaires were distributed to middle and/or higher-level managers of tourism businesses. Each manager represented one business to provide information about the influencing factors and the operation of CI aimed to enhance business performance.

There are various perspectives on the minimum sample size. Bentler and Chou (1987) suggested that a sample of 5 to 10 data sets is needed for each observed variable, while Hoyle (1995) recommended that a sample size of 100 to 200 is typically appropriate for developing a path model. Combining these suggestions, this study aimed for a sample size of 100 to 250 observations.

Data collection was conducted using both direct and indirect methods. The indirect approach involved sending emails and making phone calls to invite respondents to complete the questionnaire through a Google Forms link. The questionnaire was distributed to 300 tourism businesses from February 2024 to June 2024. A total of 272 completed questionnaires were gathered; after eliminating invalid questionnaires, a final sample of 248 valid responses was obtained for analysis. From the 248 valid responses, tourism businesses were distributed across Vietnam's northern, central, and southern regions at 60.5%, 19%, and 20.6%, respectively.

Most of the sampled businesses had an operational history exceeding five years, constituting 65.3% of the total sample (with 25.4% operating between 5-10 years, 21% between 10-15 years, and 19% over 15 years). Furthermore, businesses operating for 3-5 years represented 16.5% of the sample, while those operating for 1-3 years or less than one year accounted for 12.1% and 6%, respectively. In terms of business type, travel agencies were the most prevalent (68.1%), followed by hotels (25.8%) and other services (6%).

To analyze the collected data, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed (Hair et al., 2016). The data analysis was conducted in two steps: measurement model assessment and hypothesis testing. SPSS 22.0 was used to clean the data and assess the reliability and validity of the scales. Subsequently, the data was analyzed using PLS-SEM with the support of SmartPLS 4.0 to test the research hypotheses.

4. FINDINGS

4.1 Measurement Scale

The quality of observed variables was evaluated based on reliability, convergent validity, and discriminant validity. Reliability was assessed using Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). As presented in Table 1, the yielded Cronbach's alpha coefficients were greater than 0.9, the CR exceeded 0.9, and AVE values were above 0.7. Thus, the variables in the model ensure confidence and convergent validity as the acceptance threshold values of Cronbach's alpha, CR and AVE are 0.7, 0.7 and 0.5, respectively (Hair et al., 2016).

Table 1 Outer Loadings, Cronbach's alpha, CR, and AVE

Variables and items	Outer loadings	Cronbach's alpha	CR	AVE
Cross-channel integration (CI)		0.919	0.921	0.755
CI1. The company uses the same brand name, slogan and logo in both the company's online and offline channels.	0.828			
CI2. Promotion programs are built consistently across all offline and online channels of the company.	0.850			
CI3. Product/service descriptions are consistent across all of the company's online and offline channels.	0.877			
CI4. Product/service prices are consistent across all online and offline channels of the company.	0.827			

Table 1 (Continued)

Variables and items	Outer loadings	Cronbach's alpha	CR	AVE
CI5. The company allows customers to choose any of the company's offline channels to carry out the products/services they have ordered through the company's online channels.	0.818			
Customer pressure (CUP)		0.933	0.940	0.882
CUP1. My company's customers prefer transactions through integrated channels.	0.952			
CUP2. My company would not be able to retain key customers without cross-channel integration.	0.952			
CUP3. In our business, customer behavior changes a lot over time.	0.913			
Competitor Pressure (COP)		0.901	0.906	0.835
COP1. My company's key rivals have adopted cross-channel integration and achieved many benefits.	0.918			
COP2. My company's key rivals have applied cross-channel integration which are highly appreciated by customers.	0.946			
COP3. My company's key rivals have applied cross-channel integration and become more competitive.	0.875			
Firm performance (FP)		0.919	0.936	0.804
FP1. The company's operating costs have decreased.	0.861			
FP2. The company has reduced transaction costs with business partners.	0.872			
FP3. The company's profits have increased.	0.920			
FP4. The company's operating efficiency has increased.	0.931			

Note. CR: Composite reliability (rho_c); AVE: Average variance extracted

The study uses the HTMT value to test the discriminant validity, which ensures the reliability of the accuracy of the discriminant validity. Henseler et al. (2015) stated that discriminant validity is established when the value of HTMT is less than 0.9. All pairs of indicators have an HTMT index below 0.9, as Table 2 demonstrates. The variables therefore ensure the requirements of discriminant validity.

Table 2 HTMT Coefficient

	CUP	CI	Firm age	Firm size	FP	COP
CUP						
CI	0.677					
Firm age	0.213	0.168				
Firm size	0.081	0.067	0.023			
FP	0.538	0.515	0.103	0.034		
COP	0.543	0.669	0.084	0.127	0.384	

Note: FP: Firm performance; CI: Cross-channel Integration; CUP: Customer Pressure; COP: Competitor Pressure

4.2 Structural Model and Hypothesis Testing

4.2.1 Structural Model

The structural model was evaluated using bootstrapping with 5000 resamples. The variance inflation factor (VIF) was used to assess multicollinearity, with a threshold of 5.0 (Hair et al., 2016). As shown in Table 3, no multicollinearity was detected among the observed variables, satisfying the requirements for further analysis.

The degree to which the independent variables explain the variation in the dependent variable is shown by the R^2 coefficient (Hair et al., 2016). The results shown in Table 3 reveal that competitor pressure (COP) and customer pressure (CUP) can explain 50.4% of the variance in cross-channel integration (CI) (adjusted $R^2 = 0.504$). Simultaneously, with the adjusted $R^2 = 0.21$, cross-channel integration (CI) accounts for 21% of the variance in firm performance (FP).

Table 3 Inner VIF và R square

	VIF	R^2	R^2 adjusted
Customer Pressure → Cross-channel Integration	1.330		
Cross-channel Integration → Firm Performance	1.031		
Firm age → Firm Performance	1.028		
Firm size → Firm Performance	1.004		
Competitor Pressure → Cross-channel Integration	1.330		
Cross-channel Integration		0.513	0.504
Firm Performance		0.232	0.210

4.2.2 Testing the Direct Effect Relationship

To test the research hypotheses, path coefficients, p-values, and t-values were used. Following Hair et al. (2016), a t-value greater than 1.65 and a p-value less than 0.05 were considered significant at the 95% confidence level. The results in Table 4 indicate that both customer pressure (CUP) and competitor pressure (COP) have a positive impact on cross-channel integration (CI) with β coefficients of 0.434 and 0.393, respectively, and p-values less than 0.05, supporting hypotheses H_1 and H_2.

Moreover, cross-channel integration (CI) was shown to have a significant impact on firm performance (FP) with a path coefficient of 0.478 and p-value less than 0.05, supporting hypothesis H_3. Conversely, the two control variables, firm size and firm age, did not have a statistically significant effect on Firm performance (P value > 0.05).

Table 4 Results of the Direct Effects

	Constructs	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
H1:	COP → CI	0.393	0.082	4.765	0.000	Accepted
H2:	CUP → CI	0.434	0.073	5.951	0.000	Accepted
H3:	CI → FP	0.478	0.113	4.215	0.000	Accepted
	FIRM AGE → FP	0.021	0.095	0.222	0.824	ns
	FIRM SIZE → FP	0.005	0.087	0.055	0.956	ns

Note: FP: Firm performance; CI: Cross-channel Integration; CUP: Customer Pressure; COP: Competitor Pressure; ns: not significant

4.2.3 Testing the Indirect Effect Relationship

This study adopted the recent approach of Zhao et al. (2010) to test the mediation effect. Accordingly, the mediation analysis was conducted in two steps: (1) Assessing whether there is a mediation effect between customer pressure (CUP) and competitor pressure (COP) on firm performance (FP) and (2) Determining the nature of these two mediation effects. The results shown in Table 5 demonstrate that the mediating effects of cross-channel integration (CI) in the relationships between competitor pressure and firm performance (β=0.188, $p<0.05$) and between customer pressure and firm performance (β=0.208, $p<0.05$) are significant and positive, confirming hypotheses H_{4a} and H_{4b}.

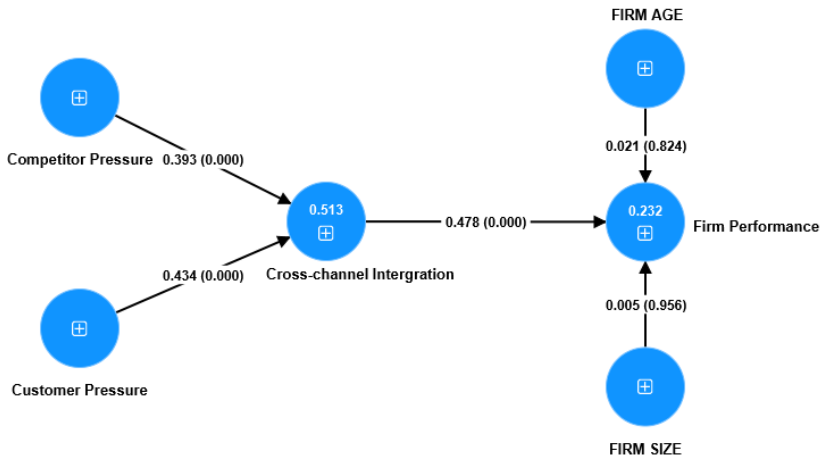
The second stage of the analysis involved examining the direct effects between the independent variables (competitor pressure, customer pressure) and the dependent variable (firm performance) to ascertain the nature of the mediation. As shown in Table 5, the direct relationships between the exogenous and endogenous variables are not statistically significant (Competitor pressure $t = 0.700$, $p > 0.05$; customer pressure $t = 0.354$, $p > 0.05$). Consequently, based on the criteria established by Zhao et al. (2010), cross-channel integration (CI) fully mediates the relationships of competitor pressure (COP) and customer pressure (CUP) with firm performance (FP) among Vietnamese tourism enterprises.

Table 5 Results of the Indirect Effects

	Constructs	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
Step 1	$H4_a$: COP → CI → FP	0.188	0.063	2.984	0.003	Accepted
	$H4_b$: CUP → CI → FP	0.208	0.064	3.219	0.001	Accepted
Step 2	COP → FP	0.119	0.169	0.700	0.484	Rejected
	CUP → FP	0.054	0.152	0.354	0.723	Rejected
	COP → CI → FP	0.158	0.074	2.131	0.033	Full mediation
	CUP → CI → FP	0.183	0.087	2.108	0.035	Full mediation

Note. FP: Firm performance; CI: Cross-channel Integration; CUP: Customer Pressure; COP: Competitor Pressure

Figure 2 Results of Structural Model Evaluation



5. DISCUSSION AND IMPLICATIONS

5.1 Discussion

This research offers a novel perspective on the mediating role of multi-channel integration in the relationship between stakeholder pressures, specifically customer pressure and competitor pressure, and firm performance. By addressing a significant gap in the tourism literature, this study contributes to both theoretical development and managerial practice.

The findings of this study indicate that both customer pressure and competitor pressure exert a direct influence on the adoption of CI among Vietnamese tourism businesses. This can be attributed to a significant shift in tourist behavior, coupled with the persistent trend of multi-option fragmentation resulting from the heterogeneity of consumer groups, and the application of CI to more effectively addresses diverse customer needs (Binder, 2014). Furthermore, the successful implementation of CI by competitors can pose a threat to the market position of other businesses, thereby motivating managers to adopt CI strategies similar to those of successful competitors in order to preserve their market share (Zhang et al., 2020). These results suggest that firms should prioritize understanding shifts in customer behavior and the CI practices of key competitors to make informed decisions regarding their CI strategies. This aligns with the findings of Zhang et al. (2020), who demonstrated the positive impact of mimetic and coercive pressures on multi-channel integration in the retail sector. Moreover, this study partially corroborates and extends the research of previous studies in the tourism and hospitality industry, such as Yadegaridehkordi et al. (2020) and Nguyen et al. (2024), which highlighted the significant influence of external stakeholder pressures on the adoption of big data and digital transformation strategies, respectively.

Furthermore, this research demonstrates that CI enhances the business performance of Vietnamese tourism enterprises by reducing operational costs and increasing profitability. This result is consistent with many previous studies in the field of CI including Neslin et al. (2006), Tagashira and Minami (2019), and Cao and Li (2015). The implications of this research are profound for tourism and hospitality managers, as they underscore the importance of continued investment in cross-channel integration strategies to drive business growth.

Finally, our research uniquely highlights the full mediating role of CI in explaining the link between external pressures and tourism firms' performance. This finding is consistent with Wagner's (2011) study, which demonstrated the essential mediating role of environmental integration in the relationship between stakeholder pressures and firm performance. This implies that evolving customer demands and successful CI among competitors have driven Vietnamese tourism managers to adopt CI, ultimately enhancing their performance. This study fills a significant gap in the literature by uncovering the mediating role of multi-channel integration in the relationship between stakeholder pressures and business performance in developing countries.

5.2 Theoretical Implications

This research offers important theoretical contributions. First, diverging from prior studies that have concentrated on digitalization in the tourism industry, this study, based on the combination of stakeholder pressure theory with business behavior and outcomes, proposed a research model that investigated the mechanisms leading to CI adoption and its influence on tourism firms' performance, emphasizing both competitor and customer pressures. In contrast, previous studies have largely limited their scope to the direct impacts of pressure-behavior-outcome linkages in CI adoption, while our model uniquely introduces two mediating hypotheses to explore the role of CI in the relationship between these pressures and firms'

performance. The empirical results support the proposed hypotheses, demonstrating a significant relationship among these factors and expanding the application of stakeholder theory on organizational actions and outcomes by affirming the dual role of CI as a central mediator in the proposed theoretical framework.

Moreover, the existing literature on CI highlights the influence of external pressures on CI adoption (Zhang et al., 2020) and the positive and multidimensional effects of CI on firm performance (Neslin et al., 2006; Tagashira & Minami, 2019; Zhang et al., 2020; Cao & Li, 2015). Nevertheless, the underlying mechanism linking external pressures to firm performance remains unclear. This research contributes to the body of knowledge by empirically demonstrating that competitor and customer pressures indirectly impact firm performance via the complete mediation of CI. By investigating the direct effects of two pressures on CI adoption and its indirect impact on business performance, this research enriches the understanding of academics regarding the relationship between perceptions of external pressures, organizational behavior, and outcomes.

5.3 Managerial Implication

CI is becoming an inevitable business model for Vietnamese tourism businesses in the context of the 4.0 industrial revolution, as customer behavior and business behavior in the industry have changed significantly. The research results show that customers and competitors are two stakeholders that generate significant pressure, influencing the decision to utilize CI, thereby considerably increasing the performance of tourism businesses. Thus, we offer some managerial implications for tourism businesses in Vietnam, focusing on various aspects:

Firstly, tourism businesses must conduct in-depth research into customer behavior to discover and exploit their needs and changing behaviors. Businesses should segment customers into groups (Baby Boomers, Gen X, Gen Y, Gen Z) and analyze their transaction behaviors across various channels. For instance, Baby Boomers tend to prefer traditional channels like physical offices or phones, while Gen X is more familiar with websites than traditional channels. Gen Y and Gen Z, especially Gen Z, are proficient in using social media platforms such as Facebook, YouTube, Instagram, and TikTok for transactions. Based on in-depth research into the transaction behavior of each customer segment, tourism businesses should plan and build a model, select channels, and integrate information about tourism products and services that best suit each customer segment across the entire channel system.

In addition, tourism enterprises must thoroughly examine the multi-channel integration models of their competitors to identify best practices. By selecting comparable competitors and successful CI adopters, businesses can analyze their business characteristics, the extent of CI adoption, and how competitors integrate activities across all channels. This analysis will inform the development of suitable CI adoption decisions for their specific needs and resources.

Last but not least, Vietnamese tourism enterprises should endeavor to achieve a high degree of multi-channel integration to deliver seamless customer experiences. Real-time synchronization of information across all channels, including tour organization processes, product details, pricing, promotions, loyalty programs, and order status, is essential. Investments in management software systems and sales technology equipment are required to ensure seamless integration between enterprise resource planning (ERP), customer relationship management (CRM), order management systems (OMS), distribution management systems (DMS), and warehouse management systems (WMS) with point-of-sale (POS) systems and supply chain partners. This integrated approach will streamline operations, minimize errors, and facilitate seamless customer experiences, ultimately driving customer transactions and enhancing business performance.

6. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study has some limitations that should be addressed in future research. The sample was only collected from businesses in the tourism industry, focusing mainly on travel agencies and hotels in Vietnam, and the sample size was relatively small, which could affect the generalizability of the results. Subsequent research should consider a larger sample size and encompass a broader range of industries. Moreover, this study has focused solely on the influence of two external stakeholders: competitors and customers. Future research could explore the impact of other external stakeholders, such as value chain members, regulatory bodies, and the community, as well as internal stakeholders, including leadership, employees, and organizational resources and capabilities, on the adoption of CI.

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