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Effect of Information Sharing on Supply Chain Performance in the Tourism and Hospitality Industry: Mediating Role of Supply Chain Agility and Innovation, and Moderating Role of Information Quality

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Abstract

Purpose: Information sharing has played an important role in affecting supply chain performance. However, few studies have focused on the mechanism of this effect, especially in the tourism and hospitality industry. This study aims to investigate the effect of information sharing on supply chain performance within the tourism and hospitality industry, emphasizing the mediating roles of supply chain agility and innovation and the moderating role of information quality. Using the resource-based theory, this study investigates how supply chain agility and innovation are the primary mechanisms by which information sharing influences supply chain performance in the tourism and hospitality industry. The research also investigates how shared information quality enhances these relationships. **Research design, data and methodology:** Data were collected from 269 managers/supervisors in the tourism and hospitality sector and analyzed using SmartPLS 4.0. **Results:** The results show that information sharing significantly affects supply chain performance. This effect was mediated by supply chain agility and innovation. Information quality also moderated the associations between information sharing, supply chain innovation, and agility. **Conclusions:** These findings provide valuable theoretical insights by extending supply chain management to the tourism and hospitality industry. These findings provide practical solutions for managers to improve the supply chain performance through effective information sharing.

Keywords: Information Sharing, Supply Chain, Performance, Agility, Innovation, Information Quality, Tourism and Hospitality.

JEL Classification Code: M00, M10, M11

1. Introduction

In recent years, information sharing has played a crucial role in the supply chain as it helps to enhance collaboration, improve overall performance, reduce costs, and increase resilience (Colicchia et al., 2018; Guan et al., 2020; Khan et al., 2016; Lee et al., 2000; Liu et al., 2021; Tai et al., 2022; Yu et al., 2001). For example, Cachon and Fisher (2000) discovered that sharing information can reduce supply chain costs by up to 12.1% compared to not sharing. Similarly, Khan et al. (2016) proved that sharing information helps the whole supply chain gain profits and reduce costs. Yu et al. (2001) found that information sharing can improve the

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performance of the entire supply chain. As a result, partners in the supply chain are motivated to share information.

In the tourism and hotel industry, information sharing is crucial to the success of the supply chain, as it impacts various aspects, including supply chain efficiency, service quality, and innovation, which collectively contribute to enhanced firm performance (Adnani et al., 2023; Jangkrajarng et al., 2022; Tiedemann et al., 2009). Specifically, Tiedemann et al. (2009) found that information sharing increases customer responsiveness, enhancing satisfaction and loyalty. Jangkrajarng et al. (2022) found that information sharing increases service quality and firm performance in the tourism and hospitality supply chain. Hence, sharing information is necessary in this chain.

Resource-based theory (RBT) is an influential approach in strategic management. As a managerial framework, it has been frequently used to identify the essential resources for organizations to maintain competitive advantages (Barney, 1991). A firm's competitive advantage is built upon its unique set of resources and capabilities that are valuable, rare, difficult to imitate, and non-substitutable (Barney, 1991). In supply chain management, information sharing refers to the exchange of data (e.g., demand forecasts, inventory levels, and production schedules) among supply chain partners, including suppliers, manufacturers, distributors, and retailers. Previous studies have used RBT to understand how information sharing improves supply chain efficiency, responsiveness, and competitive advantage (Baah et al., 2021; Barney, 1991). However, few studies have focused on utilizing RBT in information sharing within the supply chain. This affects agility and innovation, ultimately impacting supply chain performance. Hence, we explain the relationship between information sharing and supply chain performance utilizing RBT.

Seamless coordination and responsiveness across the tourism and hospitality industry's supply chain are essential, and fast information sharing is vital to enhancing operational efficiency and customer satisfaction (Kozicka et al., 2019; Tang et al., 2023). As global competition intensifies and consumer expectations change, effective information exchange is essential to supply chain performance, which enables organizations to react quickly to market developments (Inderfurth et al., 2013; Zhao et al., 2002). However, the mechanism by which information sharing affects supply chain outcomes, primarily through mediating characteristics such as supply chain agility and innovation, is poorly understood. Furthermore, the moderating effect of information quality in this connection between information sharing, supply chain agility, and innovation requires further examination. To fill these gaps, this study examines the effect of information sharing on supply chain performance, the mediating role of supply chain agility and innovation, and the moderating role of information quality in tourism and hospitality.

This study adds to the body of knowledge on supply chains by creating and empirically evaluating a thorough model that incorporates information quality as a moderator and supply chain agility and innovation as mediators in the relationship between information sharing and supply chain performance. Doing this provides new insights into the underlying mechanisms and boundary conditions that govern this dynamic. Practically, the findings provide managers in the tourism and hospitality industries with specific recommendations for boosting supply chain efficiency through strategic information management, supporting resilience and competitiveness in an increasingly competitive market.

2. Literature Review

2.1. Resource-based theory

Resource-based theory (RBT) is a strategic management paradigm that describes how businesses gain and maintain a competitive edge by effectively utilizing their internal resources and capabilities. RBT, developed by Wernerfelt (1984) and popularized by Barney (1991), contends that valuable, rare, inimitable, and organized resources drive a firm's performance. These resources might be tangible (physical assets, technology) or intangible (brand reputation, organizational knowledge). Previous studies highlighted that firm performance differences are caused by strategic resources, capabilities, and assets (D'Oria et al., 2021; Michalisin et al., 1997). In addition, research posits that firms achieve advantages based on their ability to access and use resources or enjoy resource-associated benefits. These benefits are based on information sharing, which leads to flexibility and effectiveness of the supply chain (Huo et al., 2021; Yang et al., 2021; Zhou & Benton Jr., 2007).

Despite the importance of information sharing in the supply chain, few studies have focused on its effect on supply chain performance. In addition, prior research has mainly focused on supply chain agility, collaboration, and recovery when examining information sharing via RBT (Dubey et al., 2021; Mustapha et al., 2022; Raweewan & Ferrell, 2018). For instance, Dubey et al. (2021) found that information alignment and collaboration enhance supply chain agility via RBT. Similarly, Raweewan et al. (2018) proved that the RBT supports the evaluation of information sharing in supply chain collaborations by assessing the value of shared information. This helps in determining the potential benefits and risks of collaboration, ensuring that efforts are focused on high-reward opportunities. However, few studies have focused on the effect of information

sharing on supply chain performance via the RBT. Hence, we test the impact of information sharing on supply chain performance utilizing the RBT.

2.2. Hypothesis development

2.2.1. Relationship between information sharing, supply chain agility, and supply chain performance

Information sharing in supply chains involves exchanging data and information among supply chain partners to improve coordination and performance (Lee & Whang, 2000). Information sharing can reduce inventory costs, improve responsiveness to market changes, and enhance customer satisfaction (Cheng & Wu, 2005; Huang et al., 2017; Yang et al., 2018). According to Yang et al. (2018), firms must know new and valuable information generated in the environment and adopt strategies to make fast decisions based on this new information. More critically, information sharing allows firms and supply chains to adapt to the current competitive markets' evolving nature and dynamics (Feizabadi et al., 2019). Thus, information sharing affects supply chain performance.

Table 1: Summary of Key Papers

Author(s)	Year	Focus	Findings	Gaps
Zhao et al.	2002	The paper examines how sharing information and coordinating orders affect the overall performance of a supply chain.	Factors such as demand patterns, capacity constraints, and the type of information shared moderate the impact of information sharing. Demand uncertainty and capacity tightness significantly affect the value of information sharing and coordination, suggesting that benefits are not uniform across all supply chain contexts.	The study is based on a simulation model with specific assumptions, controlled conditions, and simplified structures, which limits its findings' direct applicability in more complex, real-world scenarios.
Fawcett et al.	2007	The paper explores how information technology (IT) is used to enhance supply chain performance.	Both dimensions of information sharing (connectivity and willingness) are critical for effective information sharing, many firms focus on connectivity and neglect willingness, leading to underwhelming performance improvements.	The findings offer a one-time snapshot, potentially missing evolving trends in technology or culture. Based mainly on surveys and interviews, the study's narrow focus on connectivity and willingness may limit its relevance in industries where other factors are also critical.
Inderfurth et al.	2013	The study explores the impact of various factors such as trust, commitment, reciprocity, and power on an organization's supply chain performance, and the mediating effects of information sharing and collaboration.	The study found that trust, commitment, reciprocity, and power, are significant determinants of information sharing and collaboration within supply chains. These factors are crucial for enhancing supply chain performance.	The response rate was low, and while top managers were the target, about 23.7% of respondents were staff members instead, affecting the study's generalization.
Panahifar et al.	2018	The purpose of this study is to identify and assess the interrelationships between various characteristics of information sharing and trust and their criticality for effective information centred supply chain collaboration initiatives and in turn its criticality to overall firm performance.	The empirical results indicate that three collaboration enablers, including trust, information readiness, and secure information sharing, improve supply chain collaboration.	Due to the small sample size, construct revalidation was not conducted. Differences in perceptions across supply chain roles may affect results, and the model includes only four collaboration enablers. As a cross-sectional survey, findings are only generalizable within the sample.
Kankam et al.	2023	The purpose of this study is to explore the relationship between information quality and supply chain performance and information sharing mediates this relationship.	There is a partial mediating effect between information quality and supply chain performance satisfaction through information sharing.	With only 225 responses, the sample size limits external validity, meaning the findings can only be generalized to populations similar to the study sample.

Note: Authors' summary

However, prior studies have found that while both connectivity (technological capability) and willingness (behavioral intent) are critical for effective information sharing, many firms focus on connectivity and neglect willingness, which leads to a minor effect on supply chain performance improvements (Fawcett et al., 2007). This suggests that information sharing alone does not guarantee better outcomes unless both technological and relational factors are addressed. Moreover, information sharing only improves supply chain performance when sufficient trust

and mechanisms for rewarding or punishing behavior are in place. Even then, no mechanism consistently outperformed the theoretically predicted second-best performance, indicating limits to the effectiveness of information sharing in specific environments (Inderfurth et al., 2013). These conflicting findings raise the necessity to consider mediators and moderator variables when studying the effect of information sharing on supply chain performance.

Recent empirical investigations confront enduring discrepancies in the academic literature concerning the direct influence of information sharing on supply chain performance by incorporating mediating variables such as supply chain agility and innovation. Instead of presuming a simplistic, direct correlation, these investigations illustrate that information sharing frequently affects performance through its impact on supply chain agility and innovative capabilities (Baah et al., 2021; Marjerison et al., 2022; Wang & Hu, 2020).

Previous studies found contradictory results between information sharing and supply chain performance. For instance, Yang et al. (2021) found that information sharing positively impacts supply chain operational performance. In contrast, Kankam et al. (2023) noted only a partial mediating effect of information sharing between information quality and supply chain performance, indicating that information sharing alone may not fully explain performance improvements. The conflicting findings underscore the imperative to incorporate mediating and moderating variables when examining the influence of information dissemination on the efficacy of supply chain performance. Thus, this study argued that supply chain agility and innovation mediated the relationship between information sharing and supply chain performance, and this is one of the new contributions of this study by providing new insights into the information-sharing-performance relationship.

Previous studies found that information sharing significantly impacts supply chain performance by enhancing operational efficiency, adaptability, and collaboration (Fawcett et al., 2007; Huo et al., 2021; Inderfurth et al., 2013; Yang et al., 2021; Zhou & Benton Jr., 2007). For example, Fawcett et al. (2007) found that information sharing positively impacts supply chain performance. Similarly, Yang et al. (2021) found that internal, supplier, and customer information sharing positively impacts supply chain adaptability and flexibility, which in turn enhances operational performance. Hence, we proposed the following hypothesis:

H1: Information sharing positively affects supply chain performance.

Supply chain agility refers to the ability of a supply chain to rapidly respond to changes in demand, supply disruptions, or market conditions with minimal cost or service disruption (Christopher, 2000; Swafford et al., 2006; Yusuf et al., 2004). It involves being flexible, adaptive, and responsive across all functions of the supply chain—from procurement and manufacturing to distribution and customer service (Christopher, 2000; Swafford et al., 2006; Yusuf et al., 2004). Existing literature found that supply chain agility affects supply chain performance (Eckstein et al., 2015; Tarafdar & Qrunfleh, 2017; Um, 2017). For instance, Tarafdar and Qrunfleh (2017) discovered that supply chain agility positively impacts supply chain performance. Similarly, Um (2017) proved that the supply chain is increased via supply chain agility. Thus, a hypothesis is proposed:

H2: Supply chain agility positively affects supply chain performance.

Previous studies found that information sharing plays a crucial role in enhancing supply chain agility, which is the ability of a supply chain to adapt to changes and disruptions (Baah et al., 2021; Firmansyah & Siagian, 2022; Kim & Chai, 2017). According to Baah et al. (2021), information sharing positively affects supply chain agility. Similarly, Kim and Chai (2017) found that information sharing improves supply chain agility. Hence, we proposed the following hypothesis:

H3: Information sharing positively affects supply chain agility.

2.2.2. Relationship between information sharing, supply chain innovation, and supply chain performance

Supply chain innovation refers to implementing new ideas, technologies, processes, or business models within the supply chain to improve performance, create competitive advantage, or adapt to changing market demands (Flint et al., 2005; Grawe, 2009). It focuses on doing things differently or doing new things to enhance efficiency, sustainability, responsiveness, or customer value (Flint et al., 2005; Grawe, 2009). Prior research found that information sharing improves supply chain innovation (Kim & Chai, 2017; Wang & Hu, 2020). According to Wang and Hu (2020), information sharing positively influences innovation performance by acting as a partial mediator between collaborative innovation activities and firm performance, which supports the development of collaborative innovation capabilities and further enhances innovation outcomes in supply chain networks. Furthermore, Kim and Chai (2017) demonstrated that information sharing enhances supply chain agility and supports strategic sourcing, amplifying the positive effects of supplier innovativeness. Hence, we proposed the following hypothesis:

H4: Information sharing positively affects supply chain innovation.

Existing literature has proved that supply chain innovation positively influences supply chain performance (Asare et al., 2023; Lii & Kuo, 2016; Seo et al., 2014). Asare et al. (2023) found that supply chain innovation orientation positively influences supply chain integration, enhancing firm performance. Similarly, Lii and Kuo (2016) showed that supply chain innovation increases supply chain performance. Thus, a hypothesis is proposed as follows:

H5: Supply chain innovation positively affects supply chain performance.

Since information sharing affects supply chain agility and innovation, which in turn affect supply chain performance, we proposed the mediating role of supply chain agility and innovation as follows:

H6: The effect of information sharing on supply chain performance is mediated by supply chain agility.

H7: The effect of information sharing on supply chain performance is mediated by supply chain innovation.

2.2.3. Moderating effect of information quality

Information quality in supply chain management refers to the quality of information exchanged between supply chain partners, covering aspects such as accuracy, timeliness, completeness, relevance, and consistency, directly influencing coordination, decision-making, responsiveness, and overall supply chain performance (Li & Lin, 2006; Zhou & Benton Jr., 2007). High-quality information sharing is crucial for enhancing organizational agility and innovation. It facilitates better decision-making and responsiveness to changes, which are essential for maintaining a competitive advantage (Ashrafi et al., 2019; Khan et al., 2016; Li & Lin, 2006). In contrast, low-quality information sharing reduces supply chain agility and innovation. Hence, we proposed the hypothesis as follows:

H8: Information quality enhances the effect of information sharing on supply chain agility.

H9: Information quality enhances the effect of information sharing on supply chain innovation.

From the hypotheses above, we proposed a research model:

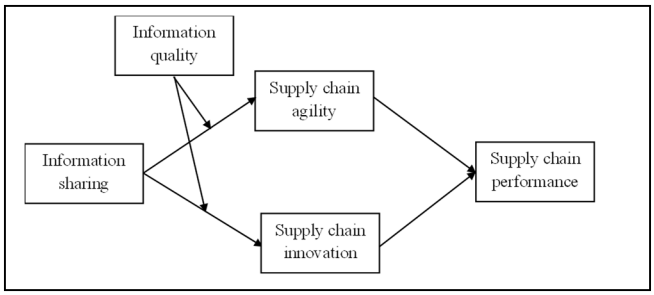

Figure 1: The Proposed Research Model

3. Research Methods and Materials

3.1. Sample and Data Collection

The research population comprised a diverse range of businesses operating within the tourism and hospitality industry in Hanoi, Vietnam. Specifically, the study targeted hotels, restaurants, tour operators, transportation service providers, and local suppliers. A total of 295 managers/ supervisors of tourism and hospitality firms were invited to participate in the research, with questionnaires distributed primarily to managers and decision-makers within each organization, ensuring informed and relevant responses. The data collection process spanned three months (from 1st June to 31st August, 2024), during which continuous follow-ups and reminders were conducted to encourage participation. At the end of the collection period, 269 completed questionnaires were successfully returned, representing a high response rate and providing a robust data set for analysis.

3.2. Instrument Development

We adopted three items from Li and Lin (2006) to measure information sharing and five items to measure information quality. For supply chain agility, we adapted four items from the study of Brusset (2016). For supply chain innovation, we adapted seven items from the study of Panayides and Lun (2009). We adopted five items from the study of Kankam et al. (2023) for supply chain performance. All items were measured on a 7-point Likert scale.

3.3. Data Analysis

First, we assessed the measurement model to evaluate the reliability and validity of the constructs. This involved examining internal consistency reliability using Cronbach's alpha and composite reliability (CR) and evaluating convergent validity through average variance extracted (AVE) and factor loadings. Discriminant validity was also tested using the Heterotrait-Monotrait ratio (HTMT). Once the measurement model was validated, we proceeded to the second stage—structural model analysis. This included hypothesis testing and path coefficient analysis to determine the strength and significance of the relationships among the constructs. Bootstrapping with 5,000 resamples was employed to assess the statistical significance of the hypothesized paths.

4. Results and Discussion

4.1. Results

Table 2 presents the demographic data of the participants. Accordingly, 68.8% of the respondents

identified as female, 40.5% worked in organizations with a workforce ranging from 200 to less than 300 employees, and 6.8% reported having experience of 15 years or above.

Table 2: Participants' Information

Variables	Frequency	Percent (%)
Gender		
Male	84	31.2
Female	185	68.8
Number of employees		
Less than 100	33	12.3
100 - less 200	38	14.1
200 - less 300	109	40.5
300 and above	89	33.1
Experiences		
Less than 5 years	33	12.3
5 - less than 10 years	71	26.4
10 - less than 15 years	39	14.5
15 and above	126	46.8

Measurement model

Table 3: Reliability, Convergence, and Discriminant

Items	Outer loading	Cronbach Alpha	CR	AVE	HTMT
AG1	0.876	0.880	0.918	0.737	0.793-0.884
AG2	0.884				
AG3	0.876				
AG4	0.793				
IF1	0.767	0.793	0.879	0.709	0.767-0.902
IF2	0.902				
IF3	0.851				
IN1	0.881	0.917	0.934	0.672	0.674-0.881
IN2	0.876				
IN3	0.807				
IN4	0.828				
IN5	0.674				
IN6	0.849				
IN7	0.807				
IQ1	0.930	0.949	0.961	0.833	0.830-0.893
IQ2	0.925				
IQ3	0.927				
IQ4	0.938				
IQ5	0.839				
P1	0.930	0.955	0.966	0.849	0.848-0.898
P2	0.941				
P3	0.912				
P4	0.919				
P5	0.904				

For measuring the convergence and discriminant validity of the scales, we used AVE and HTMT. As can be seen from Table 3, all AVE coefficients are greater than 0.5, and the HTMTs are below 0.9 (Hair et al., 2023). Thus, convergence and discriminant validity are satisfactory.

To evaluate the strength of the relationships, the authors followed Cohen's (2013) guidelines, utilizing f^2 coefficients for analysis. According to Cohen (2013), f^2 values below 0.02 indicate extremely small or negligible effects; values between 0.02 and 0.15 reflect minor effects; those ranging from 0.15 to 0.35 suggest moderate effects; and values above 0.35 represent large effects. As shown in Table 4, the moderating effect of information quality on the relationship between information sharing and supply chain agility is classified as small. In contrast, its moderating effect on the relationship between information sharing and supply chain innovation is considered an extremely small effect.

Table 4 presents hypothesis testing. The adjusted β is the path coefficient, which refers to the level and impact direction, while the p-value represents the significance value, and f^2 coefficient represents the strength of the relationship (effect size). From Table 4 and figure 2, we can see that information sharing, supply chain agility, and innovation positively affected supply chain performance ($\beta = 0.206$, $p < 0.001$, $\beta = 0.214$, $p < 0.001$, $\beta = 0.562$, $p < 0.001$); thus, H1, H2, and H5 are accepted. Similarly, information sharing positively impacted supply chain agility and innovation ($\beta = 0.394$, $p < 0.001$, $\beta = 0.230$, $p < 0.001$), hence, H3 and H4 are accepted.

For mediating effects, information sharing significantly affected supply chain agility and innovation, affecting supply chain performance ($\beta = 0.084$, $p < 0.001$, $\beta = 0.129$, $p < 0.001$). Therefore, H6 and H7 are accepted.

The moderating effects were supported. Specifically, information quality positively moderated the relationships between information sharing and supply chain agility and information sharing and supply chain innovation ($\beta = 0.131$, $p = 0.002$, $\beta = 0.044$, $p = 0.031$). Hence, H8 and H9 are accepted.

Table 4: Hypothesis Testing

Relationships	Adjusted β	p value	f^2	Decisions
IF → P	0.206	0.000	0.072	Accepted H1
AG → P	0.214	0.000	0.104	Accepted H2
IF → AG	0.394	0.000	0.167	Accepted H3
IF → IN	0.230	0.000	0.091	Accepted H4
IN → P	0.562	0.000	0.646	Accepted H5
IF → AG → P	0.084	0.000	-	Accepted H6
IF → IN → P	0.129	0.000	-	Accepted H7
IQ x IF → AG	0.131	0.002	0.073	Accepted H8
IQ x IF → IN	0.044	0.031	0.013	Accepted H9

Note: IF: Information sharing, P: Supply chain performance, AG: Supply chain agility; IN: Supply chain innovation; IQ: Information quality.

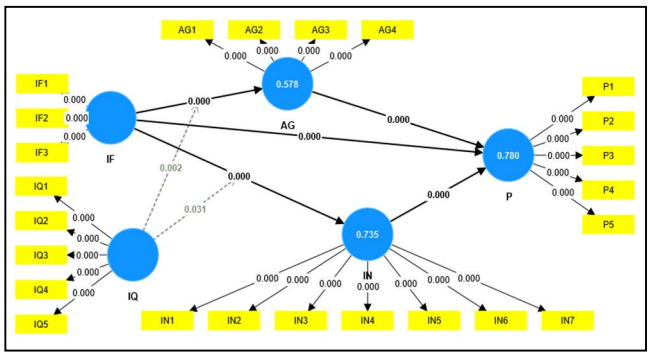

Figure 2: Path Analysis

4.2. Discussion

4.2.1. General Discussion

This study examines the impact of information sharing on supply chain performance, the mediating effect of supply chain agility and innovation, and the moderating effect of information quality. The findings show that information sharing positively affects supply chain performance, which is consistent with the results of studies by Fawcett et al. (2007), Huo et al. (2021), and Yang et al. (2021). Moreover, supply chain agility and innovation significantly affect supply chain performance, as evidenced by studies by Asare et al. (2023), Lii and Kuo (2016), Tarafdar and Qrunfleh (2017), and Um (2017). This is consistent with previous literature, which suggests that the smooth flow of accurate and timely information among supply chain partners leads to enhanced coordination, fewer uncertainties, and better decision-making. When firms communicate data on demand projections, inventory levels, and production plans, it allows for more coordinated operations, reduces the bullwhip effect, and improves overall responsiveness and efficiency. These findings highlight the importance of supply chain managers investing in strong information systems and cultivating a culture of adaptability and innovation, which can result in more resilient, efficient, and competitive supply networks.

Notably, our findings show that supply chain agility and innovation mediate the connections between information sharing and supply chain performance. Previous studies have focused on the direct impact of information sharing on supply chain performance (Inderfurth et al., 2013; Khan et al., 2016; Ye et al., 2011; Zhou & Benton Jr., 2007). We are one of the pioneers in testing the mediating effect. This implies that information sharing is an important factor, but does not necessarily result in improved performance. Instead, the benefits of information sharing become apparent when it leads to enhanced supply chain agility and increased supply chain innovation. These mediating effects suggest that firms should not only exchange information but also guarantee that it is used to drive supply chain agility and innovation. As a result, they may turn information transparency into tangible performance gains.

Furthermore, our findings prove that information quality moderates the connection between information quality and supply chain agility and innovation. Previous studies have focused on the impact of information quality on supply chain performance, supply chain agility, innovation, and the moderating role of information sharing (Kankam et al., 2023). We are among the first to test the moderating effect of information quality on the relationship between information sharing and supply chain agility, and between information sharing and innovation. This implies that the impact of information sharing on a firm's agility and innovation capabilities is influenced by the quality of the information being shared. When the shared information is accurate, timely, relevant, and reliable, it strengthens the positive effects of information sharing, enabling organizations to respond more effectively to changes (agility) and to develop or adopt innovative solutions. Conversely, when information quality is low, the potential benefits of information sharing on supply chain agility and innovation may be diminished. Therefore, the quality of that information can significantly enhance or hinder how well firms adapt and innovate within their supply chains, which impacts supply chain performance.

4.2.2. Theoretical Implications

This study enriches supply chain management literature, notably in the tourism and hospitality industries. Specifically, the study contributes to the theoretical understanding of information sharing by applying it to the tourism and hospitality industry, which is distinguished by high demand volatility, perishable services, and complex stakeholder networks. Existing supply chain management theories, such as the resource-based theory, focus on information exchange as a strategic resource for improving supply chain performance (Khan et al., 2016; Ye et al., 2011; Zhou & Benton Jr., 2007). This study builds on these theories by illustrating how knowledge sharing works in a service-oriented, experience-driven business where intangible assets are important. Furthermore, integrating supply chain agility and innovation as mediators increases the theoretical discussion of how information sharing leads to performance results. Supply chain agility and innovation are essential approaches. This mediation model adds to the supply chain management literature by emphasizing the indirect consequences of information exchange, filling gaps in past research that mainly focused on direct relationships. Furthermore, the moderating impact of information quality establishes a boundary requirement for the information-sharing-performance relationship. By proving that high-quality information improves the impact of information sharing on supply chain agility, innovation, and

performance, the study adds a contingency dimension to the theoretical framework.

4.2.3. Practical Implications

The study's practical implications provide actionable insights for managers, policymakers, and stakeholders in the tourism and hospitality industries on improving supply chain performance through effective information sharing, supply chain agility, and innovation while considering information quality. Managers in the tourist and hospitality industries should emphasize the development of comprehensive information-sharing systems to allow collaboration across supply chain partners (such as hotels, airlines, tour operators, and local service providers). For example, implementing interconnected platforms like cloud-based Property Management Systems (PMS) or Global Distribution Systems (GDS) might enable real-time data sharing on bookings, occupancy rates, and client preferences.

Notably, firms should invest in capabilities allowing quick responses to market shifts. For example, hotels and travel agencies can use shared demand projections to dynamically modify pricing strategies or reallocate resources (such as staff or inventory) to meet variable tourist demand. For example, a hotel chain may use pooled data to quickly shift marketing efforts to developing travel trends like eco-tourism or staycations. Furthermore, tourism and hospitality businesses must implement creative strategies to improve performance. Implementing IoT-enabled smart rooms, AI-powered chatbots for customer support, or blockchain-based platforms for transparent booking systems can all help to enhance productivity and customer happiness. However, information quality is crucial. Organizations should invest in systems that ensure data is accurate, timely, and valuable. To preserve information quality, managers should create data governance structures, such as conducting frequent audits of shared data or teaching employees on data entry standards.

5. Conclusion

This study investigated the effects of information sharing on supply chain performance in the tourist and hospitality industries, emphasizing the mediating roles of supply chain agility and innovation and the moderating influence of information quality. The findings show that information sharing considerably enhances supply chain performance, particularly by increasing supply chain agility and innovation. Furthermore, the quality of provided information reinforces these linkages, underlining the importance of providing high-quality information to reap the full benefits of information sharing. These insights extend the theoretical understanding of how supply chains function in service-based sectors and assist practitioners looking to increase operational efficiency, responsiveness, and competitiveness in a highly dynamic and customer-focused environment.

While this work makes essential contributions, certain limitations should be noted. *First*, the data was collected in Hanoi for the tourism and hospitality industries, which may limit the applicability of the conclusions to other places, settings, or businesses. Thus, future research should broaden the scope of the study to include additional sites and settings. *Second*, the study focused on information sharing on supply chain performance through supply chain agility, innovation, and a moderator (information quality), perhaps ignoring other important mediators and moderators. Future research could look into additional potential mediators or moderators, such as digital transition or environmental uncertainty.

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Appendixes

Constructs/Items	Sources
Information sharing	**Li and Lin (2006)**
Our firm informs trading partners in advance of changing needs.	
Our trading partners share proprietary information with us.	
Our trading partners share business knowledge of core business processes with us.	
Information quality	**Li and Lin (2006)**
Information exchange between our trading partners and us is timely.	
Information exchange between our trading partners and us is accurate.	
Information exchange between our trading partners and us is complete.	
Information exchange between our trading partners and us is adequate.	
Information exchange between our trading partners and us is reliable.	
Supply Agility	**Brusset (2016)**
Our firm quickly detects and adapts to changes, threats, and opportunities.	
Our firm frequently modifies tactics and operations when needed.	
Our firm is able to make decisions quickly.	
Our firm is able to implement decisions quickly in response to market changes.	
Supply Innovation	**Panayides and Lun (2009)**
Our firm frequently tries out new ideas in the supply chain context.	
Our firm seeks out new ways to do things in our supply chain.	
Our firm is creative in the methods of operation in the supply chain.	
Our firm often introduces new ways of servicing the supply chain.	
Our firm motivates supply chain members to suggest new ideas.	
Our firm pursues continuous innovation in core processes.	
Our firm pursues new technological innovation.	
Supply chain performance	**Kankam et al. (2023)**
Profitability increase	
Market share increase	
Sales growth	
Profit increase	
Continuous improvement	