

Impact of TQM practices on business performance of three-star hotels and above in Vietnam: The role of innovation performance

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DOI: <https://doi.org/10.56293/IJMSSSR.2022.4600>

IJMSSSR 2023

VOLUME 5

ISSUE 2 MARCH – APRIL

ISSN: 2582 - 0265

Abstract: The aim of this study is to examine the impact of TQM practices on the business performance of hotels in Vietnam, considering the role of innovation performance in the current business context. Data were collected from 190 hotels with a rating of three stars or higher in Vietnam in 2022. By using SEM analysis, we have demonstrated that TQM practices have a positive effect on hotels' business performance, and innovation performance plays an intermediary role in the relationship between TQM practices and business performance. Therefore, hotels should not only focus on implementing TQM principles to enhance service quality but also prioritize business, service, and process innovation to improve their results. This study highlights the importance of both TQM practices and innovation performance in achieving success in the hotel industry.

Keywords: TQM, innovation performance, hotel's performance, Vietnam.

1. Introduction

Today's business environment is marked by a high level of uncertainty, and the global outbreak of Covid-19 has only exacerbated the challenges that businesses face. In Vietnam, many businesses have had to operate with reduced staff or on rotating schedules to endure the pandemic, leading to a shortage of personnel when returning to normal operations. Moreover, the Covid-19 pandemic has spurred innovation activities in businesses, with many industries undergoing changes and the trend of digital transformation gaining momentum. However, businesses that fail to innovate and keep up with the pace of creativity risk falling behind. This is particularly true for hotels in Vietnam, which have faced significant difficulties since the beginning of the pandemic in 2020. According to statistics from the General Statistics Office of Vietnam, the contribution of the accommodation and catering services industry to Vietnam's GDP has decreased since 2019, and the number of international visitors to Vietnam has plummeted by more than 90% in 2021 compared to 2020 (General Statistics Office of Vietnam, 2022). In this context, new accommodation establishments with higher star ratings are emerging, intensifying competition and requiring existing accommodation businesses to optimize their systems and improve service quality to retain customers.

Total Quality Management (TQM) is an integrated management philosophy aimed at improving the quality of products and processes to achieve customer satisfaction (Vuppapapati et al., 1995). TQM has become a widely recognized operating philosophy and a key driver of competitive advantage in the market for organizations (Sureshchandar et al., 2001). Over the decades, the study of TQM practices has shifted from theoretical research to empirical research, and now it is being placed in the context of digital transformation in businesses. To successfully implement TQM in enterprises, specific actionable strategies, methods, tools, and techniques are needed (Dahlgaard et al., 2019). The focus of TQM researchers has shifted from applying TQM practices in manufacturing enterprises to service enterprises, but there is still limited research on TQM in service enterprises.

This study aimed to investigate the impact of TQM practices on the business performance of hotels with a scale of three stars or more in Vietnam, taking into account the need for hotels to continuously innovate their products, services, processes and activities to keep up with technological advancements in today's business operations. The study sought to answer two specific questions:

- (1) How does the implementation of TQM practices affect the business performance of hotels?
- (2) What is the role of Innovation performance as a mediator in the relationship between TQM practices and Hotel's performance?

To answer these questions, a conceptual framework was developed, which posits the relationship between TQM practices, innovation performance, and business performance of hotels. Data were collected from 190 hotels in major cities of Vietnam, including Hanoi, Ho Chi Minh City, Da Nang, Nha Trang, and Hai Phong, using SEM analysis in AMOS. The findings suggest that TQM and innovation performance have a positive impact on hotel performance, with innovation performance playing a mediating role in the relationship between TQM practices and Hotel's performance.

This study offers valuable empirical evidence for hotel managers to enhance their business performance by focusing on TQM practices and innovation in the hospitality industry. It also contributes to theoretical research by combining data on TQM practices and innovation in the hospitality industry, which is a topic that needs further exploration. The next section provides a literature review on the relationship between TQM practices, innovation performance, and business performance in enterprises to develop research hypotheses. Then, the research methodology is described, and the results of hypothesis testing are presented. Section five discusses the main findings and their implications, followed by the conclusions summarized in the final section.

2. Literature review

2.1. Studies on TQM practices impact on organizational performance in some fields

The impact of TQM practices on business performance has been widely recognized by researchers over the years. Since the 1980s, TQM has become a widely used management technique globally (Trappey, 1995). Many businesses in the manufacturing and service sectors have placed significant emphasis on implementing TQM. Multiple studies indicate that TQM leads to improved product and service quality, enhances production efficiency, reduces costs, and thus improves enterprise competitiveness (Rajagopal, 1995; Youssef et al., 1996). Additionally, companies that have received quality awards (such as the Malcolm Baldrige National Quality Award, European Quality Award, and Swedish Quality Award) have demonstrated better financial results compared to other equivalent average companies (Hendricks and Singhal, 1996; Eriksson and Hansson, 2003). As a result, several studies have explored the impact of TQM practices on corporate performance over the past three decades.

Salaheldin (2009) conducted a study on the impact of TQM implementation on the performance of SMEs in the industrial sector in Qatar, and found that it had a significant positive impact. The study suggested that in order to fully benefit from TQM, all elements of TQM should be implemented together, rather than piecemeal. Kumar et al. (2011) viewed TQM as a systematic management approach that can help organizations address technological and competitive challenges, and noted that the success factors of TQM may vary between the manufacturing and service industries.

Chen et al. (2018) argue that implementing TQM practices as both an internal and external input of an organization can promote the achievement of sustainable competitive advantage as an output. Khwaja (2020) conducted research on multinational beverage companies in the Pakistani market, where businesses are rapidly improving quality to gain a competitive advantage. The study focused on four elements of modern quality management (leadership, senior management commitment, process management, and training) and their influence on business performance, specifically in the direction of customer-focused balanced scorecard approaches. The results showed that leadership, senior management commitment, and process management had a positive influence on business performance with a customer focus.

In summary, research consistently shows that TQM practices have a positive impact on business outputs across various industries.

2.2. Relationship between TQM practices and Innovation performance

The relationship between TQM practice and innovation performance has been confirmed by many studies, which also show their impact on business performance of enterprises. According to Hung (2007), a company can lead TQM practices not only for quality performance but also for innovation performance by leveraging the characteristics of quality solutions. However, the study emphasizes that the business environment is critical before innovation performance can be achieved. Krivokapic et al. (2013) also conducted a qualitative study and confirmed a positive correlation between TQM system and innovation, where continuous improvement under certain conditions leads to innovation in the organization.

It is worth noting that many studies have confirmed the positive relationship between TQM practice and innovation performance. For instance, Hung et al. (2010) conducted an empirical study and found that TQM practices have a positive impact on innovation performance. Similarly, Moreno (2011) demonstrated that TQM helps in creating an environment that fosters innovation. Zehir et al. (2012) also found a positive association between TQM aspects such as management leadership, continuous improvement, and customer focus with innovation performance. Aoun & Hasnan (2013) argued that TQM standards are essential for organizations to innovate and serve as a fundamental foundation for initiating change.

Iqbal et al. (2012) found that innovation performance partially mediates the relationship between TQM and organizational performance in the telecommunications service industry in Pakistan. Similarly, Ooi et al. (2012) concluded that TQM has a positive impact on innovation performance in the Malaysian manufacturing and services sector. Yusr (2016) showed that TQM practices improve innovation performance and that innovation capacity mediates the relationship between TQM practice and innovation performance in manufacturing companies in Malaysia. Recent research by Mushtaq & Peng (2020) suggests that managers need to pay attention to the role of each TQM factor in enhancing a specific type of innovation.

Overall, TQM practice can be viewed as a foundation for businesses to innovate, leading to improved performance and sustainable competitiveness.

2.3. Studies on TQM in the hospitality industry

Studies on TQM practices in the hotel industry have shown that TQM practices have a strong impact on hotel performance.

Claver-Cortés et al. (2006) conducted a study on the reasons for adopting and certifying quality systems and their subsequent impacts on hotel operations based on the perceptions of two managers of hotels in Spain. The study found that the most important reason for adopting and certifying a quality system is that it helps to improve service quality, develop a quality culture, and improve efficiency and productivity. In addition, improving the hotel's image becomes easier. Similarly, Wang et al. (2012) argue that in the competitive hotel industry, it is important for hotels to have abundant resources and more flexible forms to meet the changing market needs. The research shows that TQM has a positive effect on hotel performance.

Bouranta et al. (2017) identified the underlying structure of TQM practices and their impact on firm performance in the Greek hospitality industry. The study found that top management quality practices, strategic quality planning, employee quality management, customer focus, and knowledge and education of employees have a strong impact on hotel performance. Hotel performance was measured by variables such as financial performance, customer-focused operational performance, and service quality performance. The results showed that most TQM factors are precursors to the success of hotel businesses. Similarly, Khan et al. (2019) investigated the role of TQM practices in hotel performance in developing countries and found a positive relationship between TQM practices and hotel performance.

The study by Jabbarzare & Shafighi (2019) examined the impact of three aspects of soft TQM (continuous improvement, customer focus, and employee engagement) on the business performance of 22 hotels in Malaysia. Regression analysis showed that all three aspects had a significant correlation with the hotels' business results. Hussain & Khan (2020) noted that while TQM implementation is widely accepted in manufacturing industries, it

is still limited in the service industry, particularly in the hospitality sector. They identified important elements of TQM practices for implementing TQM in this area and highlighted the positive outcomes for hotels' bottom line. ElShaer & Shaker (2020) also emphasized the importance of both hard and soft TQM practices in the hotel industry, stating that resources must be allocated to exploit the efficiency of the entire TQM system. Their research using structural equation modeling (SEM) showed that soft TQM practices improve financial performance, while hard TQM practices have a direct effect on financial performance.

Based on the summary of TQM practices in the hotel industry provided, it is evident that there has been considerable attention given to this area by researchers. The majority of studies confirm the positive impact of TQM practices on hotel performance, but few have explored the relationship between TQM and digital transformation or the role of innovation implementation in this context. This highlights a research gap that needs to be addressed to gain a better understanding of the relationship between TQM practices, digital transformation, innovation implementation, and hotel performance.

3. Analytical framework and Hypothesis development

3.1 Analytical framework

3.1.1 Input – process – output theory IPO

The IPO (Input-Process-Output) model was first introduced in TQM practice by Youssef (1996) to illustrate the relationships between the TQM quality management system and employees in the organization. Wang et al. (2012) later developed this model to study the relationship between TQM practices and organizational performance in the hotel industry. Similarly, Pascual González et al. (2016) agreed on the application of the IPO model to identify the inputs, outputs, and processing tasks required to obtain efficiency and systematic integration in enterprises. Chen et al. (2018) also argue that quality systems such as TQM are viewed as inputs that improve business outputs through processes.

Overall, most studies following the IPO theory consider TQM as an input and business performance as an output, and TQM is placed in a process to consider related factors. Services are viewed as actions, processes, and business outcomes (Zeithaml, 1996), or as a process that creates value for the customer (Edvardsson et al., 2005). Both of these perspectives highlight the importance of service as a process that impacts business outcomes and customer satisfaction. Therefore, the IPO theory approach is a reasonable method to study TQM practices in the hotel service industry.

3.1.2 Analytical framework

From the analysis shown above, we apply the following model to study TQM practices in hotels:

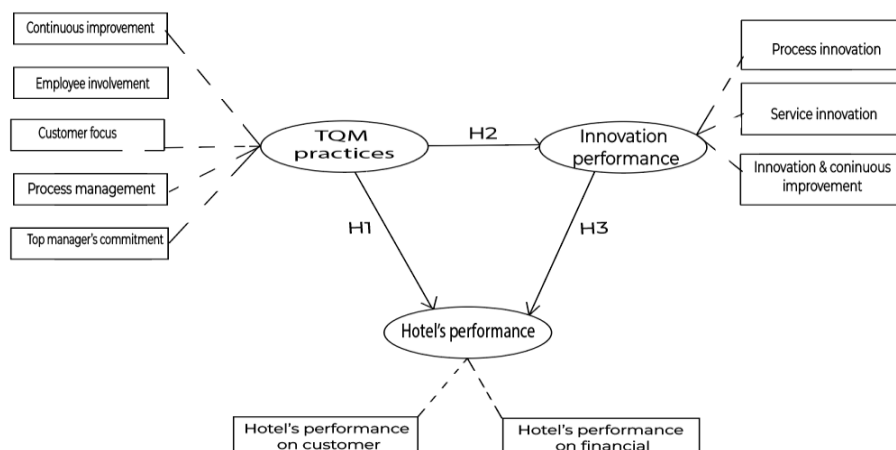


Figure 1 - The proposed analytical framework

Figure 1 is the proposed research model based on literature review. The details are as follows:

TQM practices: The concept of TQM involves a range of techniques and procedures designed to minimize or eliminate variations in manufacturing processes or service delivery systems, with the goal of improving efficiency, reliability, and quality in order to achieve customer satisfaction and organizational performance (Liu & Liu, 2014). TQM is considered a philosophy aimed at improving the entire enterprise, and its practices help businesses achieve process productivity and efficiency by identifying and eliminating problems in work processes and systems (Chao et al., 2015; Chaichi & Chaichi, 2015; Usrof & Elmorsey, 2016).

Table 1: Literature review of the elements of TQM practices used in this study

Elements of TQM practices	S1	S2	S3	S4	S5	S6	S7	S8	S9
Customer focus	v		v	v	v	v	v	v	v
Top manager's commitment	v		v	v				v	v
Employee involvement		v			v	v	v	v	v
Continuous improvement	v		v	v	v		v	v	v
Process management	v	v	v	v	v			v	

Source:

- S1: Ali and Johl (2021)
- S2: Zeng et al. (2016)
- S3: Abdallah (2013)
- S4: Ershadi et al. (2019)
- S5: Khan et al. (2019)
- S6: Fotopoulos and Psomas (2009)
- S7: Rahman and Bullock (2005)
- S8: Yunis et al. (2013)
- S9: Psomas et al. (2014)

Source: Authors sum up

Based on the literature review, TQM practices comprise five key elements: customer focus, top manager's commitment, employee involvement, continuous improvement, and process management.

- 1) Customer focus (CF): This element involves recognizing customer needs and expectations, disseminating this information throughout the organization, managing customer relationships, measuring and improving customer satisfaction, and is essential for long-term organizational success (Brah et al., 2002). Amin et al. (2017) also found that customer focus plays a significant role in improving hotel performance.
- 2) Top manager's commitment (TM): This element involves a commitment to TQM principles by developing and implementing a strategy based on quality improvement (Madanat & Khasawneh, 2017). Senior executives' personal involvement and leadership in setting strategic directions, building and maintaining leadership systems, and facilitating high organizational performance, personal development, and organizational learning are crucial (Brah et al., 2002). Amin et al. (2017) also found that leadership commitment plays an important role in improving hotel performance.
- 3) Employee involvement (EI): This element involves involving employees in creating appropriate organizational structures where individuals or groups can work to achieve individual/group goals and the ultimate goals of the organization (Goetsch & Davis, 2014). Yusuf et al. (2007) emphasize that all employees should be involved in decision-making, problem-solving, and contributing to the financial success of the company throughout all phases of TQM implementation. Jabbarzare & Shafighi (2019) found that workforce participation has a significant impact on business performance in the hotel industry.

4) Continuous improvement (CI): This element involves supporting and encouraging improvement in all aspects and operations of the business by having dedicated teams meet continuously to discuss work issues and make recommendations on how to deal with them (Madanat & Khasawneh, 2017).

5) Process management (PM): This element is a system of interrelated processes that focuses on three initiatives: process mapping, process improvement, and adherence to documented organizational procedures (Benner & Tushman, 2003). Abdallah (2013) believes that a process is the entity that needs to be managed to eliminate or minimize errors and that improvements related to the manufacturing process will necessarily improve overall quality performance.

Innovation performance: According to Prajogo & Sohal (2003), there are different ways to measure innovation performance in organizations. Based on the internal factors of an organization, innovation can be related to technical, product, and process innovation (Hung et al., 2011). This study uses an innovation scale measurement tool that focuses on several criteria (product innovation, process innovation, service innovation, and continuous improvement) that have been used in previous empirical studies on innovation, such as Singh & Smith (2004), Trivellas & Santouridis (2009), and Iqbal et al. (2012).

The performance of hotels is generally divided into two aspects: financial and non-financial activities. Financial aspects are often measured using metrics such as revenue, profit, ROI, market share, and costs. Non-financial aspects are usually viewed from the customer perspective. In service industries, including hotels, it is essential to establish and maintain mutually beneficial relationships with customers for sustainable development. This study agrees with Moorman and Rust (1999) and Wang et al. (2012) in using both financial and customer perspectives to evaluate hotel performance.

3.1.4 Hypothesis development

In the service sector, there is a growing interest in the relationship between TQM and organizational performance, as several studies have shown that implementing TQM practices can bring significant benefits to company operations. Yang (2006) found that all TQM practices significantly influenced customer satisfaction, while Lam et al. (2012) provided evidence on the positive impact of TQM practices on service quality in the service industry in Malaysia.

Similarly, in the hospitality sector, previous studies have confirmed that firms that adopt TQM practices achieve higher performance than those that do not (Kumar et al., 2011). Wang et al. (2012) showed that hotels that adopted TQM practices experienced improvements in customer focus, internal/external collaboration, leadership, continuous improvement, process management, employee training, empowerment, and reward. TQM practices also impact performance in terms of financial results, operating results, customer satisfaction, employee satisfaction, and product/service quality (Kumar et al., 2011). Therefore, this study proposes that adopting TQM practices can improve hotel performance, leading to the following research hypothesis:

H1: TQM practices affect positively hotel performance

The study by Sadıkoğlu and Zehir (2010a) found a positive and significant relationship between all elements of TQM and innovation performance. Similar results were also reported by Hung et al. (2011) and Zehir et al. (2012) in their experimental studies. Previous research has confirmed the relevance of TQM practices to corporate innovation. Leadership is the first element of TQM and encourages employees to propose creative ideas to solve problems or develop new products. Customer focus, another element of TQM, is also significantly related to innovation activities as it encourages organizations to consistently seek new customer needs and expectations in this globally competitive environment. Continuous improvement is also important for encouraging change and creative thinking in the work organization, as reported in previous studies (Costa & Lorente, 2008; Zehir et al., 2012). Process management is another key element of TQM, and as organizations achieve higher levels of process management, they emphasize efficiency measures in terms of speed, cost, or waste reduction, which extends into innovation development (Benner & Tushman, 2003). Hoang et al. (2010) confirmed that employee and process management factors in TQM practices had a positive impact on company innovation performance. Therefore, this study proposes that TQM practices have a positive effect on hotel innovation performance.

H2: TQM Practice affect positively innovation performance of hotels

The relationship between innovation performance and organizational performance has been demonstrated in various studies, including those conducted by Huang & Liu (2005), Lin & Chen (2007), Pinho (2008), and Iqbal et al. (2012). Lin & Chen (2007) specifically investigated the link between innovation and organizational performance and found that innovation was associated with corporate sales. Similarly, Iqbal et al. (2012) found that innovation could lead to improved organizational performance. Based on these findings, it can be suggested that improving innovation performance can have a positive impact on a hotel's overall performance. Therefore, we suggest the research hypothesis:

H3: Innovation performance affect positively Hotel's performance.

4. Data collection

4.1. Measures

We have developed specific scales to measure TQM practice, innovation performance, and hotel business performance. The TQM practice scale includes customer focus, employee involvement, top manager's commitment, and process management. The innovation performance scale includes service innovation, process innovation, and innovation and continuous improvement. The hotel business performance scale includes customer results and financial results. To measure these constructs, we designed a questionnaire based on the scales and sent it to ten hotel managers in Vietnam for feedback. All the managers confirmed that the questionnaire was appropriately worded and suitable for conducting large-scale research.

4.2 Sample

Data were collected from 190 hotels with a minimum of three stars located in major tourist destinations in Vietnam, such as Hanoi, Da Nang, Hue, and Nha Trang. These cities were chosen due to their high concentration of tourists. The selection of hotels with at least three stars ensured that the sample included hotels with a good level of organizational complexity and established quality management practices. Hotel managers were selected as participants because of their in-depth understanding of hotel operations and expertise in implementing quality management practices. Their responses were expected to provide accurate information regarding the current state of soft TQM application in their respective hotels.

4.3 Measurement test

We plan to assess the reliability of the scale using a series of tests, including Cronbach's Alpha, exploratory factor analysis (EFA), convergence and discriminant validity tests, and confirmatory factor analysis (CFA).

To determine if the Cronbach's Alpha scale is reliable, each scale's Cronbach's Alpha value should be greater than 0.7, and the total correlation coefficient of each variable should be greater than 0.3.

To evaluate the scale's convergence and discriminant validity, we will rely on the combined reliability coefficient (CR) of greater than 0.7 and the extracted mean coefficient of variance (AVE) of greater than 0.5. The table 2 presents the Cronbach's Alpha values, as well as the convergence and discriminant values of the scales.

Table 2 - Cronbach's Alpha and Composite Reliability (CR) coefficients

Factor	Corrected Item-Total Correlation of each sub-scales.	Cronbach's Alpha	CR	AVE	MSV
Top manager's commitment	> 0.3	0.985	0.985	0.917	0.092

Customer focus	> 0.3	0.822	0.826	0.456	0.314
Employee involvement	> 0.3	0.967	0.969	0.862	0.577
Continuine improvement	> 0.3	0.799	0.804	0.582	0.314
Process management	> 0.3	0.962	0.945	0.743	0.577
Service innovation	> 0.3	0.936	0.937	0.751	0.166
Process innovation	> 0.3	0.856	0.858	0.603	0.165
Innovation and continuous improvement	> 0.3	0.758	0.780	0.646	0.214
Hotel's performance on financial	> 0.3	0.857	0.862	0.612	0.384
Hotel's performance on customer	> 0.3	0.758	0.742	0.420	0.328

Table 2 shows that the scale appears to be reliable based on acceptable values for Cronbach's Alpha, convergence, and discriminability. The AVE values for Customer focus and Hotel's performance on customer scales are both close to 0.5. However, the CR values for both scales are greater than 0.7, and the MSV values are smaller than AVE values.

In addition, the Kaiser-Meyer-Olkin (KMO) test measures the suitability of data for factor analysis by assessing the adequacy of sample size and the strength of correlation among variables. The KMO coefficient ranges from 0 to 1, and values above 0.7 are considered acceptable. In this case, the KMO coefficient for the independent variable scales is 0.868, indicating that the sample size and correlation strength are adequate for factor analysis. The KMO coefficient for the dependent variable scales, Hotel's performance on customer and Hotel's performance on financial, is 0.809, which is also acceptable.

The results of the factor analysis indicate that the sub-items of each scale converge to the original sub-scale, which suggests that the scale items are measuring the same construct. This supports the validity of the scale and provides evidence for the use of factor analysis in further analysis.

The Barlett's test of sphericity is used to determine whether the correlation matrix among variables is significantly different from an identity matrix. A significant result ($p < 0.05$) indicates that the correlation matrix is appropriate for factor analysis. In this case, the Barlett's test has a significance level less than 0.05, suggesting that the correlation matrix is suitable for factor analysis.

Confirmatory factor analysis (CFA) was used to assess how well the observed variables represent factors, using Chi-squared indices, CFI, and RMSEA. The model is considered appropriate when CFA tests such as Chi-squared test have $p > 0.05$, $CMIN/df \leq 5$ is acceptable, CFI coefficient ≥ 0.8 is acceptable, $RMSEA \leq 0.08$ is acceptable (Hair et al., 2010). The results of the CFA are provided in detail table 3.

Table 3: CFA model fit

STT	Condition	CFA result	
		Result	Conclusion
1	$RMSEA \leq 0.08$	$RMSEA = 0.067$	Satisfy
2	$CFI > 0.8$	$CFI = 0.807$	Acceptance
4	$CMIN/df > 3$	$Cmin/df = 3.047$	Acceptance

Based on the test results presented above, it can be concluded that the TQM Practice scale, Innovation performance scale, and Hotel's performance scale are reliable and suitable for use in subsequent analyses. The scales have been tested for Cronbach's Alpha reliability, EFA factor analysis, and CFA, and they meet the necessary criteria for each test. Therefore, the scales can be used with confidence to analyze the quality management practices, innovation performance, and hotel business performance in Vietnam's hotel industry.

5. Hypothesis testing

After determining that the scales are reliable, the research hypothesis will be tested by analyzing the SEM structural equation on AMOS. The results of the SEM analysis are shown in Table 4.

Table 4 - The result of hypothesis testing

Hypothesis	The relationship			Standardized Regression weight	P	Conclusion
H ₁	Hotel's performance	<---	TQM	0.651	0.0001	Supported
H ₂	Innovation performance	<---	TQM	0.479	0.023	Supported
H ₃	Hotel's performance	<---	Innovation performance	0.489	0.035	Supported
	Services innovation	<---	Innovation performance	0.234		
	Process innovation	<---	Innovation performance	0.409	0.023	
	Innovation and continuous improvement	<---	Innovation performance	0.648	0.016	
	Process management	<---	TQM	0.962		
	Continue improvement	<---	TQM	0.020	0.785	
	Employee involvement	<---	TQM	0.755	0.0001	
	Top manager's commitment	<---	TQM	-0.165	0.027	
	Customer focus	<---	TQM	0.237	0.001	
	Hotel's performance on customers	<---	Hotel's performance	0.609		
	Hotel's performance on financial	<---	Hotel's performance	0.766	0.0001	

The results indicate that, at a significance level of 95%, the initial assumptions are confirmed, and the TQM practice scale has a significant impact on Hotel's performance, as well as on Innovation performance. Additionally, the Innovation performance scale has a significant impact on innovation performance and Hotel's performance. Despite the different effects of TQM and Innovation performance scales on business outcomes, hotel managers who aspire to enhance their business results should consider these factors. The managerial implications are further discussed in the following section.

6. Discussion and implications

Firstly, TQM practice has a strong impact on the business performance of hotels, with a standardized regression coefficient up to 0.651. This means that if hotels want to improve their business performance, the first factor they should pay attention to is quality assurance, specifically from the perspective of total quality management (TQM). Currently, the Covid epidemic has greatly affected the business results of hotels in Vietnam. According to data from the General Statistics Office of Vietnam, hotel revenues all decreased during the period of 2019-2021,

resulting in decreased profits. In this difficult context, hotels must optimize their systems and improve service quality to satisfy and retain existing customers. Therefore, implementing management methods such as TQM to improve service quality is a trend that hotels need to pay attention to and implement. TQM practices need to be implemented in the hospitality industry to improve Hotel's performance. This finding is also supported by previous studies in the hospitality sector, such as Wang et al. (2012), Bouranta et al. (2017), Khan et al. (2019), Jabbarzare & Shafighi (2019), and ElShaer & Shaker (2020).

Secondly, innovation performance can positively affect the business performance of hotels, with a standardized regression coefficient of 0.489. This shows that hotel managers need to be innovative and creative in hotel operations to improve Hotel's performance. Innovation practices that need attention include service innovation, process innovation, and innovation and continuous improvement. Regarding innovation and continuous improvement, hotels need to focus on continuous quality improvement in all aspects of work, as well as continuous improvement of job performance. In terms of process innovation, hotels need to focus on the technology side and combine it with technologies to change the working process. In terms of service innovation, hotels need to consider the use of new technologies in providing services to customers, as well as pay attention to the speed of developing and introducing new services to the market. This finding is also supported by previous studies, such as Iqbal et al. (2012), who suggested that implementing innovation can boost the business performance of enterprises.

Thirdly, TQM practices positively impact innovation performance. This result confirms the theory that Anderson et al. (1995) previously proposed regarding the relationship between quality management and innovation, as well as the research model proposed by Aoun and Hasnan (2013), which was experimentally verified. Research by Iqbal et al. has also shown a strong positive impact of TQM practices on innovation performance. Some other studies, such as Prajogo & Sohal (2006), Trivellas & Santouridis (2009), and Ooi et al. (2012), have also confirmed the positive impact of TQM practices on innovation performance. This result can help hotel managers see how TQM practices promote and support innovation. Practices such as customer focus, employee engagement, and process management create a positive work environment that supports innovation.

The study confirms the role of innovation performance in the relationship between TQM practice and hotel performance. Table 5 presents the results of the SEM analysis with two models. The first model includes only the two variables of TQM and hotel performance, while the second model includes TQM practice, innovation performance, and hotel performance.

Table 5: The role of Innovation performance in the relationship between TQM practice and Hotel's performance.

Model Description	X ²	Df	CMIN/DF	CFI	RMSEA
Model 1: TQM practices, Hotel's performance	1935.003	506	3.883	0.811	0.08
Model 2: TQM practices, Innovation performance, Hotel's performance	2720.497	900	3.047	0.807	0.067

The change in the chi-square value between multi-group SEM with the added constraint of innovation performance can indicate a significant change in path loading between different groups (Su et al., 2008). As shown in Table 5, the fit of Model 2 is significantly better than that of Model 1, with better model fit indexes such as CMIN/df and RMSEA. Additionally, the X² value and number of degrees of freedom increased when the constraint on innovation performance was added. Therefore, it can be concluded that the presence of innovation activities, such as product innovation, process innovation, and operational innovation, can better explain the change in Hotel's performance.

7. Conclusions

The present study offers empirical evidence on the impact of TQM practices on Hotel's performance in relation to Innovation performance in Vietnam's hospitality industry. The findings indicate that TQM practices have a positive effect on hotels' business results, and that TQM practices promote Innovation performance.

Furthermore, Innovation performance has been found to enhance the operational performance of hotels. As a result, hotel managers should prioritize quality activities to enhance operational efficiency, while also focusing on innovation in operations, products, and processes to enhance operational efficiency. This approach can help hotels to improve their business results, particularly in the aftermath of the Covid-19 epidemic.

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