Non-financial factors including quality of services, the flexibility of a company, utilization of resources, and market orientation are regarded as significant determinants that enhance the profitability-based performance of a service company or a hotel. The study investigated the interaction between these factors and hotel operating performance measured by the hospitality performance and results indicators. Data on 346 executives of Vietnam’s hospitality companies were collected. A structural equation modeling (SEM) method was utilized to examine the positive-direct and moderating effects of non-financial factors on hotel performance in terms of occupancy rate (OCR), average daily rate (ADR), and the revenue per available room (RevPAR). The findings showed that service quality ($\beta = 0.118, p < 0.05$), flexibility ($\beta = 0.173, p < 0.05$) and resource utilization ($\beta = 0.172, p < 0.05$) positively affected the performance of Vietnam’s hospitality companies. Meanwhile, innovation showed no direct influence ($p = 0.068$) but an indirect impact on the performance through service quality ($\beta = 0.311, p < 0.05$). Market orientation did not impact the performance ($p = 0.076$) but it positively affected both innovation ($\beta = 0.322, p < 0.05$) and service quality ($\beta = 0.146, p < 0.05$).

The study contributed to a theoretical enhancement of the current level of knowledge on the factors that affect the performance and developed a reliable scale for measuring the performance of hotels in Vietnam.

**Keywords**

service quality, resource utilization, market orientation, flexibility, innovation, hospitality

**JEL Classification**

M10, M41

**INTRODUCTION**

Non-financial factors have been well-recognized as factors that affect key determinants of company performance. Fitzgerald et al. (1991) suggested a standardized model for measuring the competitiveness and performance of a profit-based service business under the influence of service quality, flexibility, resource utilization, and innovation.

Continuously, later studies also corroborated the positive impact of each factor on the financial performance of service companies including hotels. The quality of service (e.g. regarding facilities and comfortability) positively affected hotel productivity (Chu & Choi, 2000) and was regarded as a holistic service experience (including physical product and service experience) rather than separate components (Wilkins et al., 2007). According to Phillips et al. (1999), there was a strong positive correlation with effectiveness, efficiency, adaptability, and overall productivity of a hotel. Regarding the diversity of operations, several studies showed that they were a core strategy to promote hotels’ growth (Kang, 2011). Related to the influence of resource utilization...
and hotel performance, good management, and quality of human resources were positively related to the high efficiency (Hoque, 1999) and associated with the growth rates of revenue and productivity (Budhwar & Varma, 2011) of companies. Other detailed factors of the utilization like staff capabilities and appropriate organizational structure proved to increase company profit (Sharma & Upneja, 2005) and annual revenue (Cho et al., 2006). Regarded as a vital predictor for the performance of hospitality firms, Au and Tse (1995) suggested that the market orientation could well predict customer satisfaction as well as other financial factors such as returns on assets and returns on investment. Srinivasan (1997) realized that financial indicators (e.g. revenue, expenses, and operating income) were improved when the hotel conducted a promotion after customers’ feedbacks. Ensuring customer satisfaction was more likely to be associated with the long-term profit rather than other financial indicators such as revenue and operating income (Banker et al., 2005) and could positively influence the performance, as well as play a role to connect the market orientation and business outcomes (Chi & Gursoy, 2009). Hotels with good customer relationship management capabilities could significantly improve hotel performance (Josiassen et al., 2014), room productivity, and market share (Wang et al., 2014). Based on prior studies, there was a significantly positive relationship between organizations’ assets and efficiency (Sharma & Upneja, 2005). The application of information technology had a positive effect on the productivity of hospitality business (Sirirak et al., 2011).

Although the positive trend was found in investigating the impact of non-financial factors on company performance, other studies evidenced as opposed to this trend. Berger and Ofekb (1995) showed contradictory results against the positive relationship. Additionally, Chi and Gursoy (2009) found that there was no relationship between staff satisfaction and efficiency. The structure of a hospitality business did not influence the relationship between strategies and performance (Tavitiyaman et al., 2012). Besides, some studies proved the mediating correlation between the factors and performance instead of the direct one (de Jong et al., 2003; Lin, 2013). Lastly, almost all studies used either profit-based indicators or an individual key indicator of a specified service industry in measuring the operational performance (Khuong et al., 2015). To fulfill the gaps between these factors, this study aimed to investigate the effects of non-financial factors including service quality, flexibility, resource utility, innovation, and market orientation on the hospitality indicators-based operating performance of hotels in Vietnam.

1. LITERATURE REVIEW AND HYPOTHESES

Numerous studies are conducted to investigate the relationship between non-financial factors on hotel operating performance such as service quality, flexibility, resource utility, innovation, and market orientation. However, the findings of the studies are different.

Service quality is an important factor to differentiate a firm from others since it contributes to the firm competitiveness and improves the business outcomes (Gounaris et al., 2003). Service quality refers to the quality that customers perceive from the service regarding the way the service is supplied and performed (Ramayah et al., 2011). Many studies showed the positive effects of different types of service quality on the revenue and productivity of hospitality firms (Wang et al., 2012), therefore, the study proposes to investigate the positive impact of service quality on hotel operating performance.

The flexibility of a business is a basic indicator in strategic management worldwide (Roberts & Stockport, 2014). It refers to the way a firm can adapt to the change of both internal and external environments (Guo & Cao, 2014), or reflect the interaction between the responsiveness of the firm and its managerial abilities (Volberda, 1996). In another view, firm flexibility is identified as the capability to build the connection and alter the disparities between the firm and the current environment (Verdú-Jover et al., 2008). Teece (2007) suggested that a company should be operated flexibly to maintain its ability to self-innovate and adapt the core capability to the change of environment. By then, the firm can find the manner to optimize its resources. Flexibility in applying different strat-
strategies has been proven to have a significant positive effect on financial and profitability indicators (Kang, 2011; Phillips et al., 1999) and it forms the question that is there a positive association between flexibility and operating performance.

Resources include all things controlled by a company (e.g. assets, capability, business features, and others) which can be used to assist this company in performing business strategies (Barney, 1991). Resources can be classified into three groups: tangible resources, human resources, and organizational resources. Another view measured the efficiency of resources used through the efficiency of human resources used and technology applied (Fitzgerald et al., 1991). Prior studies proved that this factor directly affected the hospitality firm performance and positively affected financial indicators, profitability indicators, and integrated indicators (Tavitiyaman et al., 2012; Sharma & Upneja, 2005). On this basis, a positive correlation between resource utility and the operating performance of Vietnamese hotels is examined.

Innovation leads to the enhancement of performance (Schumpeter, 1961). Innovation refers to the creation of new ideas, products, processes, and new services; and the speed of innovation measures the period a firm needs to complete a product or new process as quickly as compared to its competitors. Under the view of flexibility, the innovation of a business process could help to improve short-term performance (Piening & Salge, 2015; Ernest et al., 2020), and ensure long-term business survival (Teece, 2007). An organization can achieve higher performance by innovation; however, sometimes this does not achieve the desired effect because the implementation is not responsive (Whittington et al., 1999). Based on these analyses, it is expected to examine the positive influence of innovation on the operating performance in the study.

Previous studies suggested three components that construct the market orientation including customer orientation, competitor orientation, and interdisciplinary collaboration (Ramayah et al., 2011). These studies investigated the relationship between customer satisfaction and performance in various hotels and corroborated the positive influence of satisfaction on long-term performance. Sin et al. (2005) concluded that the long-term existence of hospitality business in a competitive market increasingly relied on the capabilities to satisfy customers. Market orientation plays a significant role in keeping a business’s existence and profit (Tse et al., 2005). Various studies on performance based on accounting or profitability indicators also substantiated that market orientation affected the performance of hospitality firms (Wang et al., 2012; Chi & Gursoy, 2009). Josiassen et al. (2014) also corroborated that the market orientation influenced hotel operating efficiency. This study investigates the positive correlation between market orientation and hotel performance in Vietnam.

Although many studies confirmed all factors that directly impacted hotel performance, some others conducted in the service industry substantiated they also interact together. Firstly, there is a positive correlation between innovation and service quality. De Jong et al. (2003) revealed that innovation not only increasingly promoted firms’ revenue but also benefited firms in different ways such as creating customers’ value and achievements. Findings by Arshad and Su (2015) reconfirmed this conclusion. Innovation in the hospitality industry significantly affected customers of both low-standard hotels and luxury hotels. Victorino et al. (2005) found that innovative services had more positive effects on the entertainment business than on others. A study by Lin (2013) on China’s tourism found that the factor had influenced a company’s efficient operation under both direct and indirect (through service quality) impacts. Secondly, market orientation positively associates with service quality. Tsai and Wu (2007) corroborated that achieving customers’ desires, supplying services or products that customers wanted, and reviewing the supplying process of service with a customer orientation were important factors for service quality. Voon (2006) found a robust link between market orientation and service quality. Besides, a previous study showed that suppliers serving customers under market orientation tended to adjust their products or services to satisfy customer expectations (Gummesson, 1998). Chang et al. (1999) concluded that customers would perceive that the quality of service was high if the service was oriented by a given high-quality market. Voon (2006) additionally explained that a business with market orientation would take ad-
vantage of its services as it could get capability and competency satisfied with its customers’ current desires or future expectations. The interaction between two different non-financial factors largely discovered in prior studies is a positive impact of market orientation on innovation. According to Kirca et al. (2005), market orientation is positively associated with innovation, which is related to the changes in productivity of new products or new improvements. Market orientation could enhance innovation due to the capabilities of companies to quickly generate a new product to meet customer or market desires (Im & Workman, 2004). Under a particular market orientation, a company would try to keep up with the expectations of its potential customers as well as monitor its competitors’ actions, which foster the innovation to make the difference (Narver et al., 2004). Atuahene-Gima (1996) reconfirmed this conclusion and found that a market-oriented company would use more information, education, and changes in its activities to improve its innovation rather than other factors. These interrelations gave more concerns arising in Vietnamese hospitality companies. It is essential to consider whether these relations are being tested or not in the search model. To confirm this, in-depth interviews were conducted with eleven experts of the two biggest Vietnamese universities in hospitality management and nine senior managers of three hotels from three to five stars in Hanoi. As the results, it was properly confirmed that innovation and market orientation also affected the operating performance through service quality as mediating variance, market orientation had a direct influence on service quality and indirectly affected performance, and there is a positive influence of market orientation on innovation.

Based on the review of prior findings, the following hypotheses were proposed:

H1: Service quality positively impacts the performance of hotels in Vietnam.

H2: Flexibility positively impacts the performance of hotels in Vietnam.

H3: Resource utilization positively impacts the performance of hotels in Vietnam.

H4: Innovation positively impacts the performance of hotels in Vietnam.

H5: Market orientation positively impacts the performance of hotels in Vietnam.

H6: Innovation affects the performance of hotels in Vietnam through service quality.

H7: Market orientation affects the performance of hotels in Vietnam through service quality.

H8: Market orientation influences the performance of hotels in Vietnam through innovation.

2. METHOD

From literature review (Fitzgerald et al., 1991) and the theory of market orientation (Narver & Slater, 1990), the study proposed and empirically tested a theoretical model with five independent variables including service quality, flexibility, resources utilization, innovation, and market orientation and operating performance as a dependent variable (see Figure 1).

It was considered adding information to define measurement scales in the context of Vietnam’s hospitality companies. Interviews with experts were conducted to obtain their comments on contents, presentation, and language. All feedbacks would be considered when designing questionnaires with correct, clear, and understandable terms. Additionally, these questions were examined to edit the language as well as adjust relevant contents if needed. Next, a sample of 20 hotels (3 to 5 stars ranked) in Hanoi was selected for piloting to ensure that the questionnaire was suitable for the data collection. Finally, the official questionnaire was approved and used in surveys.

The study adopted appropriate variables and measurement scales through a literature review (see Table 1). Based on the perception of hotels’ management on service quality, Gronroos (1984) suggested that service quality should consider both functional and technical quality. This study used twelve items numbering from SQ1 to SQ12 measuring service quality, which were originated from Ramayah et al. (2011), and three new items were added (SQ13-SQ15). Six items numbering from FL1 to FL6 were used to measure the flexibility,
which was recommended by Guo and Cao (2014). Five items namely RU1 to RU5, which were adapted from previous studies (Tavitiyaman et al., 2012; Fitzgerald et al., 1991), were used for measuring resource utilization. Two aspects of innovation including the innovation magnitude (IM) and the innovation speed (IS) were measured by ten items (five items per aspect). These items were previously used in the study of Salem (2014) and Fitzgerald et al. (1991). Ten items concerning the market orientation (from MO1 to MO10) were used, which were adapted from studies of Narver and Slater (1990), and Ramayah et al. (2011).

To measure the performance of hotels, both performance and results indicators as key performance indicators of hotels can be used in the previous studies. Hospitality indicators are commonly used to measure the performance of hotels rather than profitability indicators. For example, Chiu and Huang (2011) evaluated the optimal occupancy rate in Taiwan’s international tourist hotels and found that this indicator was related to the efficacy of the hotels. Other authors used average daily rate (ADR) and revenue per available room (RevPAR) as key performance indicators in reflecting the manners of how resources were used (Chen, 2009). O’Neill and Mattila (2006) suggested that these indicators were valuable measures for leaders and managers. O’Neill (2003) showed that ADR was a better predictor of hotel value than net operating income (NOI), and Mandelbaum (2011) supplemented that the growth of ARD could project the profit of a hotel. RevPAR is another standardized indicator that is used to measure and compare the performance of different hospitality firms (Mauri, 2013). Although it has been criticized due to insufficiently reflecting the revenue from other divisions or the operational cost (Brown & Dev, 1999), it is still considered a critical factor to evaluate the efficacy of a hotel (Schwartz et al., 2017). As such, key hospitality indicators were popularly applied to appraise the performance. In the research model, the dependent variable with three items, namely HOTSPE1 to HOTSPE3, assessed OCR representing the total demand divided by the total supply; ADR representing the total revenue was divided by the total bookings, and RevPAR was the proportion of total revenue to total supply.

Structural questionnaire was used to collect data on demographic characteristics, hotel characteristics, and non-financial factors. Five-point Likert scales were used from 1 (strongly disagree) to 5 (strongly agree) for all items. The minimum sample size was 265 according to the formula developed by Hair et al. (1998). This study focused on Vietnam’s hotels with 3 to 5 stars ranked and at least three years of operation. The questionnaires were sent to all 820 hotels satisfying these inclusion criteria by using postal mails, direct emails, and an online survey, or sending hard copies of questionnaires to participants directly. Respondents could be hotel managers, chief executive officers, sales managers, financial managers, or head or vice heads of departments including selling, services, accounting, or finance departments.

During the period from October 2017 to December 2018, there were 346 respondents from all sources responding to the survey. There were 63% of participants being male; 50.9% of the participants aged from 46 to 60, and 30.9% aged from 31 to 45. About 86% of the participants had bachelor’s degrees or higher, and approximately 70% of them had experience in hospitality for over seven years.

---

1 Online survey is available at https://goo.gl/forms/FHSc3I0sSLjF7cUmw1

**Figure 1. Theoretical framework**

![Theoretical framework diagram](image-url)
Table 1. Explanation of variables and respective measures in the model

| Variables | Items | Measures |
|-----------|-------|----------|
| Service quality – SQ | SQ1 | Staff are courteous and friendly |
| | SQ2 | Staff are competent and able to explain |
| | SQ3 | Staff are competent, knowledgeable, and able to explain and advise customers for services and policies |
| | SQ4 | Staff are trustworthy and willing to help customers |
| | SQ5 | Staff are available to reply to customer questions |
| | SQ6 | Staff are responsive to customer requests |
| | SQ7 | Staff handle customer complaints effectively |
| | SQ8 | Staff quickly support account and bill information |
| | SQ9 | Staff are confidentiality of information transfer |
| | SQ10 | Staff handle and solve customer complaints easily |
| | SQ11 | Staff keep a contact easily and frequently |
| | SQ12 | Staff are always attentive to customer complaints |
| | SQ13 | The hotel as a whole and the rooms decorated are beautiful and tidy |
| | SQ14 | Staff present a professional and beautiful appearance |
| | SQ15 | The location has a beautiful view and comfortable movement |
| Flexibility – FL | FL1 | The hotel is very flexible to get opportunistic shifts in economic conditions changed |
| | FL2 | The hotel is very flexible to respond to new opportunities or threats in the market |
| | FL3 | The hotel is very flexible to respond to a new technology introduced in the market that may negatively affect its current business |
| | FL4 | The hotel is very flexible to react to changes in the customer needs or habits |
| | FL5 | The hotel is very flexible to compete with others in a new market |
| | FL6 | The hotel is very flexible to face unfavorable changes in relevant regulations |
| Resource utilization – RU | RU1 | The hotel is rarely to challenges the frequency of equipment breakdown |
| | RU2 | The hotel always uses modern technologies in the business |
| | RU3 | The hotel always finances employee training and development programs |
| | RU4 | The hotel always evaluates employees basing on their competence and employee turnover surveys |
| | RU5 | The hotel employee performance appraisal ratings are always high |
| Innovation magnitude – IM | IM1 | The hotel has made many new ideas |
| | IM2 | The hotel has produced and served new services |
| | IM3 | The hotel has implemented many new processes in producing or serving customers |
| | IM4 | The hotel has conducted many new operations |
| | IM5 | The hotel has many new processes in making decisions |
| Innovation speed – IS | IS1 | The hotel quickly made new ideas compared to major competitors |
| | IS2 | The hotel quickly launches new services compared to major competitors |
| | IS3 | The hotel quickly develops new services compared to major competitors |
| | IS4 | The hotel quickly applies creative business processes compared to major competitors |
| | IS5 | The hotel quickly solves problems compared to key competitors |
| Market orientation – MO | MO1 | The hotel business targets are driven by customer satisfaction |
| | MO2 | The hotel staff take control of and supervise the commitment and direction of its management to meet customer expectations |
| | MO3 | The hotel strategy is based on the understanding of its customers’ desire to achieve competitive advantages |
| | MO4 | The hotel business management usually measures customer satisfaction under a systematic approach |
| | MO5 | The hotel businesses target customers beyond an individual or teams where competitive advantage is taken or can be enhanced |
| | MO6 | The hotel top management periodically considers the strengths and strategies of powerful competitors |
| | MO7 | The hotel staff obtain and communicate information about customer experiences regarding all operating functions |
| | MO8 | The hotel management understands how the company members can contribute to customer value |
| | MO9 | The hotel responds to threats from competitors |
| | MO10 | The hotel business functions are all cooperated to serve the demand of the company’s target markets |
| Hospitality special performance evaluation – HOTSPE | HOTSPE1 | Occupancy Rate – OCR |
| | HOTSPE2 | Average Daily Rate – ADR |
| | HOTSPE3 | Revenue Per Available Room – RevPAR |
Only 14.5% of hotels surveyed were five-star hotels compared to 53.7% for three-star ones and 31.8% for four-star ones. Approximately 35% of hotels had below 50 rooms, while 39% had from 51 to 100 rooms, and 26% had more than 100 rooms. Nearly 90% of hotels had operated for over six years.

Based on the results of Cronbach’s alpha, inappropriate items of service quality including SQ6, SQ8, and SQ12; the item FL5 of flexibility; and such items of market orientation as MO2, MO4, MO9, and MO10 were removed. Next, the exploratory factor analysis was employed with principal components analysis, varimax rotation, and eigenvalues of 1.566 > 1. After these items were removed, the factor loading of the remaining items is bigger than 0.5. Finally, six independent factors with 38 items (accounting for 66.8% of variance) were extracted including “Service Quality (SQ),” “Flexibility (FL),” “Resource Utilization (RU),” “Innovation Magnitude (IM)” and “Innovation Speed (IS),” and “Market Orientation (MO).” The “Service quality” had the highest proportion of variance (29.97% – 12 items), following by “Market orientation” (14.28%- 6 items), “Innovation speed” (7.85% – 5 items), “Flexibility” (6.81% – 5 items), “Resource utilization” (5.61% – 5 items), and “Innovation magnitude” (3.88% – 5 items) (see Table 2).

### 3. RESULTS

#### 3.1. Confirmatory factor analysis for non-financial factors

The SEM model showed that the model had a value of Chi-square/degree of freedom (df) of 1.562 which was on the acceptable range (from 1 to 3) (Hair et al., 1998). Tucker-Lewis index (TLI) and comparative fit index (CFI) were 0.957 and 0.960, respectively, which were in the acceptable range (from 0.9 to 1.0) (Chin & Todd, 1995; Segars & Grover, 1993). The root means the square error of approximation (RMSEA) was 0.040 which was less than the tolerance of 0.08 (Taylor et al., 1993) (see Figure 2). There was none of the un-dimensionality, indicating that the model was suitable for data analysis.

#### 3.2. Reliability and validity of the overall measurement model

All composite reliability values were higher than 0.7, indicating high reliability (Bagozzi & Yi, 1988). Convergent validity was tolerable because all average variance extracted (AVE) estimates of all factors were greater than 0.5 (Hair et al., 1998) (see Table 3).

### Table 2. Total variance explained

| Factor | Initial Eigenvalues | Extraction sums of squared loadings | Rotation sums of squared loadings*
|--------|----------------------|------------------------------------|----------------------------------|
|        | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total |
| 1      | 12.286 | 29.965 | 29.965 | 11.964 | 29.180 | 29.180 | 8.406 |
| 2      | 5.857 | 14.284 | 44.249 | 5.498 | 13.409 | 42.589 | 7.196 |
| 3      | 3.220 | 7.854 | 52.103 | 2.949 | 7.194 | 49.783 | 7.189 |
| 4      | 2.791 | 6.807 | 58.910 | 2.510 | 6.121 | 55.904 | 5.848 |
| 5      | 2.298 | 5.606 | 64.516 | 2.013 | 4.909 | 60.813 | 7.361 |
| 6      | 1.589 | 3.875 | 68.392 | 1.317 | 3.213 | 64.026 | 6.301 |
| 7      | 1.566 | 3.819 | 72.210 | 1.156 | 2.819 | 66.845 | 4.783 |

Note: * means rotation converged in 7 iterations.

### Table 3. Composite reliability (CR) and average variance extracted (AVE)

| CR | AVE | MSV | ASV | AV | IS | SQ | MO | FL | RU | HOTSP | IM |
|----|-----|-----|-----|----|----|----|----|----|----|-------|----|
| IS | 0.933 | 0.735 | 0.334 | 0.163 | 0.858 |
| SQ | 0.940 | 0.566 | 0.158 | 0.080 | 0.196 | 0.752 |
| MO | 0.939 | 0.721 | 0.213 | 0.136 | 0.367 | 0.259 | 0.849 |
| FL | 0.935 | 0.743 | 0.334 | 0.166 | 0.578 | 0.264 | 0.446 | 0.862 |
| RU | 0.933 | 0.735 | 0.158 | 0.084 | 0.272 | 0.398 | 0.213 | 0.279 | 0.858 |
| HOTSP | 0.791 | 0.558 | 0.157 | 0.126 | 0.359 | 0.319 | 0.392 | 0.396 | 0.350 | 0.747 |
| IM | 0.901 | 0.647 | 0.266 | 0.134 | 0.516 | 0.206 | 0.462 | 0.402 | 0.163 | 0.302 | 0.804 |
Figure 2. Results of confirmatory factor analysis
Discriminative validity was satisfied as all factors’ correlation coefficients were less than the square root of the AVE’s estimation, or in other words, less than 0.7 (Kline, 2015) (see Table 4).

Table 4. Factor correlations

| Correlations | Estimate |
|--------------|----------|
| FL ↔ RU      | 0.279    |
| FL ↔ HOTSPE  | 0.396    |
| FL ↔ IS      | 0.578    |
| FL ↔ IM      | 0.402    |
| HOTSPE ↔ IS  | 0.359    |
| HOTSPE ↔ IM  | 0.302    |
| IS ↔ IM      | 0.516    |
| MO ↔ FL      | 0.446    |
| MO ↔ RU      | 0.213    |
| MO ↔ HOTSPE  | 0.392    |
| MO ↔ IS      | 0.367    |
| MO ↔ IM      | 0.462    |
| RU ↔ HOTSPE  | 0.35     |
| RU ↔ IS      | 0.272    |
| RU ↔ IM      | 0.163    |
| SQ ↔ MO      | 0.259    |
| SQ ↔ FL      | 0.264    |
| SQ ↔ RU      | 0.398    |
| SQ ↔ HOTSPE  | 0.319    |
| SQ ↔ IS      | 0.196    |
| SQ ↔ IM      | 0.206    |

3.3. Hypotheses testing

The hypothesis testing was carried out by using the SEM model. Chi-square/df less than 2 and RMSEA less than 0.08 indicated the model having good fits (see Figure 3).

The model presents the regression coefficient estimations, standardized errors, and composite reliability (see Table 4). Results show that innovation-performance and market orientation-performance relationships were not statistically significant (p > 0.05). Market orientation had the highest impact on innovation (β = 0.322). Although the service quality had the lowest impact on HOTSPE (β = 0.118, p < 0.05), this result could confirm that H1 was correct. H2 and H3 were also proven since the results showed positive associations between flexibility and performance (β = 0.173; p < 0.05) and resources utilization and performance (β = 0.172; p < 0.05). Innovation had the highest impact on HOTSPE (β = 0.281; p > 0.05); however, H4 was not supported given the p-value was more than 0.05. Based on the results that market orientation was not significantly correlated with performance (β = 0.135; p > 0.05), H5 was not supported. A sig-
nificantly positive association between innovation and service quality proved H6 ($\beta = 0.311; p < 0.05$). In addition, market orientation positively affected the service quality ($\beta = 0.146; p < 0.05$), which supports H7. Finally, H8 was supported as the market orientation indirectly affected the performance through innovation ($\beta = 0.322; p < 0.05$).

**Table 5. Results of hypothesis testing**

| Correlations | Estimated | S.E. | C.R.   | P-Value |
|--------------|-----------|------|--------|---------|
| IN ← MO      | 0.322     | 0.045 | 7.224  | ***     |
| SQ ← MO      | 0.146     | 0.073 | 2.008  | .045    |
| SQ ← IN      | 0.311     | 0.156 | 1.992  | .046    |
| HOTSPE ← SQ  | 0.118     | 0.058 | 2.039  | .041    |
| HOTSPE ← FL  | 0.173     | 0.069 | 2.512  | .012    |
| HOTSPE ← MO  | 0.135     | 0.076 | 1.773  | .076    |
| HOTSPE ← IN  | 0.281     | 0.154 | 1.828  | .068    |
| HOTSPE ← RU  | 0.172     | 0.054 | 3.191  | .001    |

**4. DISCUSSION**

The purpose of this study was to examine the impact of non-financial factors on operational performance in the context of hospitality companies in Vietnam – an emerging tourism market. Results identified and categorized non-financial factors into innovation, market orientation, service quality, resource utilization, and flexibility. Evidence showed either direct or indirect impacts of these factors on the performance such as OCR, ADR, and RevPAR.

Findings confirmed that service quality had a direct positive effect on the performance of Vietnam's hotels. It was different from several studies (Ittner et al., 2003), but in line with other studies that corroborated the importance of service quality to a company's success (Chu & Choi, 2000). Service quality is a significant factor that helps a company distinguish itself from the competitors and take sustainable competitiveness (Gounaris et al., 2003).

Flexibility positively affected the performance of Vietnam's hospitality companies. The finding was consistent with prior studies (Worren et al., 2002; Fitzgerald et al., 1991). Flexibility can assist hospitality companies with special competitive advantages and effective responses to environmental changes in a given hospitality context by offering various strategic choices which enable firms to adopt these changes. Hotels can reallocate sources, satisfy customer habits, and discover new business opportunities and enhance performance.

In this study, resource utilization covered both human resources and technological aspects. The finding showed that resource utilization had a direct positive effect on the performance of Vietnam's hospitality companies, which was similar to prior studies (Tavitiyaman et al., 2012; Fitzgerald et al., 1991). It indicated that Vietnam's hotels with higher use of resources had a better performance compared to others. Barney (1991) stated that when the companies change the business strategy, the efficient use of the human resource could help them enhance their performance. While a competitor can easily copy the technical resources to create competitive advantages, the human resource is unique which cannot mimic in any company. Thus, a company needs to focus on the use of human resources with accumulated competency and trained skills to enhance and maintain the advantage.

Findings indicated that innovation did not impact the performance of Vietnam's hotels, which was different from other prior studies (Ho et al., 2018; Tuan et al., 2016; Salem, 2014). However, Campo et al. (2014) and Hjalager (2010) confirmed that the positive effects of innovation on performance did not occur in the short-term period but the mid and long-term periods. Hjalager (2010) also explained that when companies invested in innovation, their short-term expenses increase, resulting in the reduction of companies' profits. Although the study could not find the effect of the innovation factor on the performance of Vietnam's hospitality companies, this factor could directly impact the service quality. The service quality factor could play a mediating role to connect innovation and performance. Thus, based on this connection, innovation positively influenced performance. The finding also suggested that if a hospitality company boosted innovative activities, this company could improve the quality of services and eventually enhance its performance. The result alighted with the previous findings of Cheng et al. (2012), and Lin (2013).

The current finding revealed that market orientation did not directly influence the perfor-
mance of Vietnam’s hospitality companies. This result contradicted prior studies which confirmed that market orientation positively affected the business outcomes (Narver & Slater, 1990; Ramayah et al., 2011; Shah & Dubey, 2013). However, the study showed that the market orientation factor positively impacted service quality, which had a positive influence on performance. Thus, market orientation could have an indirect effect on performance, which was similar to the findings of Chang et al. (1999) and Ramayah et al. (2011). Additionally, market orientation had a direct positive impact on innovation, which was similar to Bodlaj (2011), Carbonell and Escudero (2010), and Slater and Narver (1994). Specifically, market orientation significantly contributes to the creativity of a company that is measured by the increase in sales of new products or services and productive improvements (Bodlaj, 2011). Slater and Narver (1994) found a positive relationship between the market orientation and performance through the innovation factor, especially the creation of a new product.

CONCLUSION

This study had synthesized evidence about the effects of the non-financial factors on the performance of Vietnam’s hospitality companies. It also summed up the views and clarified the theoretical background of the non-financial factors and the operational performance.

Findings illustrated the direct and indirect relationships, degree of impacts, and relevant directions of the effects of non-financial factors on the performance of Vietnam’s hospitality companies. Factors such as service quality, flexibility, and resource utilization positively impacted performance. The innovation factor positively affected service quality and indirectly influenced performance. Market orientation did not affect performance directly, but it had a positive impact on either innovation or service quality. Service quality was a mediator variable in two relationships including innovation-performance and market orientation-performance.

Based on a greater understanding of the impact of non-financial factors on operational performance regarding specified industry-based performance measures, the study suggested important implications towards efficient improvement for senior managers of Vietnam’s hospitality companies. To succeed in the market, companies should be market-oriented by specifying customer orientation and competitor orientation. A market-oriented hotel was more likely to enhance innovation that improved service quality and, in turn, enhance operational performance. If a hotel had better service quality, more efficient and flexible use of resources could result in higher performance. Additionally, hospitality companies’ management could enhance the performance in designing services and making relevant decisions beyond priorities and alternatives.

AUTHOR CONTRIBUTIONS

Conceptualization: Trung Kien Phan, Thu Ha Dang. Data curation: Trung Kien Phan, Thi Hong Thuy Nguyen, Thu Ha Dang, Van Thuan Tran, Kim Ngoc Le. Formal analysis: Trung Kien Phan, Thi Hong Thuy Nguyen, Thu Ha Dang, Van Thuan Tran, Kim Ngoc Le. Investigation: Trung Kien Phan, Thi Hong Thuy Nguyen, Thu Ha Dang, Van Thuan Tran, Kim Ngoc Le. Methodology: Trung Kien Phan, Thi Hong Thuy Nguyen, Thu Ha Dang. Validation: Trung Kien Phan, Thi Hong Thuy Nguyen, Thu Ha Dang, Van Thuan Tran. Visualization: Trung Kien Phan, Thi Hong Thuy Nguyen, Thu Ha Dang, Kim Ngoc Le. Writing - original draft: Trung Kien Phan, Thu Ha Dang. Writing - review & editing: Trung Kien Phan, Thi Hong Thuy Nguyen.
REFERENCES

1. Arshad, A. M., & Su, Q. (2015). Interlinking Service Delivery Innovation And Service Quality: A Conceptual Framework. The Journal of Applied Business Research, 31(5), 1807-1823. https://doi.org/10.19030/jabr.v31i5.9393

2. Atuahene-Gima, K. (1996). Market orientation and innovation. Journal of Business Research, 35(2), 93-103. https://doi.org/10.1016/0148-2963(95)00051-8

3. Au, A. K. M., & Tse, A. C. B. (1995). The Effect of Marketing Orientation on Company Performance in the Service Sector. Journal of International Consumer Marketing, 8(2), 77-87. https://doi.org/10.1300/J046v08n02_06

4. Bagossi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. Journal of the Academy of Marketing Science, 16(1), 74-94. https://doi.org/10.1007/BF02723327

5. Banker, R. D., Potter, G., & Srinivasan, D. (2005). Association of non-financial performance measures with the financial performance of a lodging chain. Cornell Hotel and Restaurant Administration Quarterly, 46(4), 394-412. https://doi.org/10.1177/0010880405275597

6. Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. Journal of Management, 17(1), 99-120. https://doi.org/10.1177/014920639101700108

7. Berger, P. G., & Ofek, E. (1995). Diversification’s effect on firm value. Journal of Finance Economics, 37(1), 39-65. https://doi.org/10.1016/0304-405X(94)00079-6

8. Bodlaj, M. (2011). Market Orientation and Degree of novelty. Managing Global Transitions, 9(1), 63-79. Retrieved from https://ideas.repec.org/a/mgt/yomgt/v9y2011i1p063-079.html

9. Brown, J. R., & Dev, C. S. (1999). Looking Beyond RevPAR. Hotel Management, April, 23-33.

10. Budhwar, P. S., & Varma, A. (2011). Emerging HR management trends in India and the way forward. Organizational Dynamics, 40(4), 317-325. https://doi.org/10.1016/j.ordyn.2011.07.009

11.Campo, S., Díaz, A. M., & Yagüe, M. J. (2014). Hotel innovation and performance in times of crisis. International Journal of Contemporary Hospitality Management, 26(8), 1292-1311. https://doi.org/10.1108/IJCHM-08-2013-0373

12. Carbonell, P., & Escudero, A. I. R. (2010). The effect of market orientation on innovation speed and new product performance. Journal of Business and Industrial Marketing, 25(7), 501-513. https://doi.org/10.1108/08858621011077736

13. Chang, T. Z., Mehta, R., Chen, S. J., Polsa, P., & Mazur, J. (1999). The effects of market orientation on effectiveness and efficiency: The case of automotive distribution channels in Finland and Poland. Journal of Services Marketing, 13(4/5), 407-418. https://doi.org/10.1108/08876049910282709

14. Chen, T. H. (2009). Performance measurement of an enterprise and business units with an application to a Taiwanese hotel chain. International Journal of Hospitality Management, 28(3), 415-422. https://doi.org/10.1016/j.ijhm.2008.10.010

15. Cheng, C. C., Chen, J. S., & Tsou, H. T. (2012). Market-creating service innovation: Verification and its associations with new service development and customer involvement. Journal of Services Marketing, 26(6), 444-457. https://doi.org/10.1108/08876041212157927

16. Chi, C. G., & Gursoy, D. (2009). Employee satisfaction, customer satisfaction, and financial performance: An empirical examination. International Journal of Hospitality Management, 28(2), 245-253. https://doi.org/10.1016/j.ijhm.2008.08.003

17. Chin, W. W., & Todd, P. A. (1995). On the use, usefulness, and ease of use of structural equation modeling in mis research: A note of caution. MIS Quarterly: Management Information Systems, 19(2), 237-246. https://doi.org/10.2307/249690

18. Chiu, Y. H., & Huang, C. W. (2011). Evaluating the optimal occupancy rate, operational efficiency, and profitability efficiency of Taiwan’s international tourist hotels. Service Industries Journal, 31(13), 2145-2162. https://doi.org/10.1080/02662069.2010.503889

19. Cho, S., Woods, R. H., Jang, S. C. S., & Ercan, M. (2006). Measuring the impact of human resource management practices on hospitality firms’ performances. International Journal of Hospitality Management, 25(2), 262-277. https://doi.org/10.1016/j.ijhm.2005.04.001

20. Chu, R. K. S., & Choi, T. (2000). An importance-performance analysis of hotel selection factors in the Hong Kong hotel industry: A comparison of business and leisure travelers. Tourism Management, 21(4), 363-377. https://doi.org/10.1016/S0261-5177(99)00070-9

21. De Jong, J., Shaughnessy, K. O., & Vermeulen, P. (2003). Innovation in SMEs: An Empirical Investigation of the Input (Report). EIM Business and Policy Research. Retrieved from https://economics.repec.org/paper/eimpapers/n200302.htm

22. Ernest, Y., Tweneboah-Kodua, Thomas, A., & Michael, B. N. (2020). Impact of customization and innovation on hospitality firms’ performance. Journal of Hospitality Marketing & Management, 29(1), 106-120. https://doi.org/10.1080/19368623.2019.1528917

23. Fitzgerald, L., Johnston, R., Brignall, S., Silvestro, R., & Voss, C. (1991). Performance Measurement in Service Businesses, CIMA. Journal of Computers in Industry, 58, 474-485.
24. Gounaris, S. P., Stathakopoulos, V., & Athanassopoulos, A. D. (2003). Antecedents to perceived service quality: An exploratory study in the banking industry. *International Journal of Bank Marketing, 21*(4), 168-190. https://doi.org/10.1108/02652320310479178

25. Gronroos, C. (1984). A Service Quality Model and its Marketing Implications. *European Journal of Marketing, 18*(4), 36-44. https://doi.org/10.1108/EUM00000000004784

26. Gummesson, E. (1998). Productivity, quality and relationship marketing in service operations. In *Handbuch Dienstleistungsmanagement* (pp. 843-864). Springer.

27. Guo, H., & Cao, Z. (2014). Strategic flexibility and SME performance in an emerging economy: A contingency perspective. *Journal of Organizational Change Management, 27*(2), 273-298. https://doi.org/10.1108/JOCM-11-2012-0177

28. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice-Hall.

29. Hjalager, A. M. (2010). A review of innovation research in tourism. *Tourism Management, 31*(1), 1-12. https://doi.org/10.1016/j.tourman.2009.08.012

30. Ho, K. L. P., Nguyen, C. N., Adhikari, R., Miles, M. P., & Bonney, L. (2018). Exploring market orientation, innovation, and financial performance in agricultural value chains in emerging economies. *Journal of Innovation and Knowledge, 3*(3), 154-163. https://doi.org/10.1016/j.jik.2017.03.008

31. Hoque, K. (1999). Human resource management and performance in the UK hotel industry. *British Journal of Industrial Relations, 37*(3), 419-443. https://doi.org/10.1111/1467-8543.00135

32. Im, S., & Workman, J. P. (2004). Market Orientation, Creativity, and New Product Performance in High-Technology Firms. *Journal of Marketing Management, 68*(2), 114-132. https://doi.org/10.1109/jmkj.68.2.114.27788

33. Ittner, C. D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society, 28*(7-8), 715-741. https://doi.org/10.1016/S0361-3682(03)00033-3

34. Josiassen, A., Assaf, A. G., & Cvelbar, L. K. (2014). Does CRM dimensions affect firm performance? *International Journal of Hospitality Management, 36*, 130-136. https://doi.org/10.1016/j.ijhm.2013.08.005

35. Kang, K. H. (2011). The moderating effect of product and brand diversification on the relationship between geographic diversification and firm performance in the hospitality industry (Thesis). Temple University.

36. Khuong, M. N., Nguen, P. L. H., & Phuong, N. T. M. (2015). Factors of Affecting Guests’ Satisfaction and Their Loyalty – A Study of Luxury Hotels in Ho Chi Minh City, Vietnam. *International Journal of Innovation, Management and Technology, 6*(3), 186-190. https://doi.org/10.7763/ijimt.2015.v6.599

37. Kirca, A. H., Jayachandran, S., & Bearden, W. O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing, 69*(2), 24-41. https://doi.org/10.1509/jmkg.69.2.24.60761

38. Kline, R. B. (2015). *Principles and practices of structural equation modeling* (4th ed.). Guilford Press.

39. Lin, L. (2013). The impact of service innovation on firm performance. *Service Industries Journal, 33*(15-16), 1599-1632. https://doi.org/10.1080/026642069.2011.638712

40. Mandelbaum, R. (2011). U.S. hotel demand powers ahead: Impact on ADR and NOI. *Cornell Hospitality Quarterly, 52*(4), 374-376. https://doi.org/10.1177/193865511420549

41. Mauri, A. G. (2013). *Hotel Revenue Management: Principles and Practices*. Milano-Torino, Italy: Pearson.

42. Narver, J. C., & Slater, S. F. (1990). The Effect of Market Orientation on Business Profitability: In *Developing a Market Orientation* (pp. 45-78). Sage. https://doi.org/10.4135/9781452231426.n3

43. Narver, J. C., Slater, S. F., & MacLachlan, D. L. (2004). Responsive and proactive market orientation and new-product success. *Journal of Product Innovation Management*, 21(5), 334-347. https://doi.org/10.1111/j.0737-6782.2004.00086.x

44. O’Neill, J. W. (2003). AD&R Rule of Thumb: Validity and Suggestions for Its Application. *Cornell Hotel and Restaurant Administration Quarterly, 44*(4), 7-16. https://doi.org/10.1177/001088004044001

45. O’Neill, J. W., & Mattila, A. S. (2006). Strategic hotel development and positioning: the effects of revenue drivers on profitability. *Cornell Hotel and Restaurant Administration Quarterly, 47*(2), 146-154. https://doi.org/10.1177/0010880405281519

46. Phillips, P. A. (1996). Strategic planning and business performance in the quoted UK hotel sector: Results of an exploratory study. *International Journal of Hospitality Management, 15*(4), 347-362. https://doi.org/10.1016/S0278-4319(96)00034-5

47. Phillips, P., Davies, F., & Moutinho, L. (1999). The interactive effects of strategic planning on hotel performance: A neural network analysis. *Management Decision, 37*(3), 279-288. https://doi.org/10.1108/00251749910264514

48. Piening, E. P., & Salge, T. O. (2015). Understanding the antecedents, contingencies, and performance implications of process innovation: A dynamic
52. Schumpeter, J. A. (1961). The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle. Harvard University Press.

53. Schwartz, Z., Altin, M., & Singal, M. (2017). Performance measures for strategic revenue management: RevPAR versus GOPPAR. Journal of Revenue and Pricing Management, 16(4), 357-375. https://doi.org/10.1057/rpm.2016.23

54. Segars, A. H., & Grover, V. (1993). Re-examining perceived ease of use and usefulness: A confirmatory factor analysis. MIS Quarterly: Management Information Systems, 17(4), 517-525. https://doi.org/10.2307/249590

55. Shah, S. N. A., & Dubey, S. (2013). Market Orientation and Organizational Performance of Financial Institutions in United Arab Emirates. Journal of Management & Public Policy, 4(2), 17-26. Retrieved from http://jmp.ium.ac.in/index.php/jmpp/article/view/1060

56. Sharma, A., & Upneja, A. (2005). Factors influencing financial performance of small hotels in Tanzania. International Journal of Contemporary Hospitality Management, 17(6), 504-515. https://doi.org/10.1108/09596110510612149

57. Sin, L. Y. M., Tse, A. C. B., Heung, V. C. S., & Yim, F. H. K. (2005). An analysis of the relationship between market orientation and business performance in the hotel industry. International Journal of Hospitality Management, 24(4), 555-577. https://doi.org/10.1016/j.ijhm.2004.11.002

58. Sirirak, S., Islam, N., & Khang, D. B. (2011). Does ICT adoption enhance hotel performance? Journal of Hospitality and Tourism Technology, 2(1), 34-49. https://doi.org/10.1108/17579881111112403

59. Slater, S. F., & Narver, J. C. (1994). Market orientation, customer value, and superior performance. Business Horizons, 37(2), 22-28. https://doi.org/10.1016/0007-6813(94)90029-9

60. Srinivasan, D. (1997). Relation Between Financial and Nonfinancial Measures of Performance (Thesis). University of Minnesota, Minneapolis. Retrieved from https://proquest.com/docview/3043599547pq-origsite=g scholar&fromopenview=true

61. Tavityayanon, P., Qiu Zhang, H., & Qu, H. (2012). The effect of competitive strategies and organizational structure on hotel performance. International Journal of Contemporary Hospitality Management, 24(1), 140-159. https://doi.org/10.1108/09596111211197845

62. Taylor, S. A., Sharland, A., Cronin, J. J., & Bilard, W. (1993). Recreational Service Quality in the International Setting. International Journal of Service Industry Management, 4(4), 68-86. https://doi.org/10.1108/09564239310044316

63. Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28(13), 1319-1350. https://doi.org/10.1002/smj.640

64. Tsai, Y., & Wu, S. W. (2007). Use the concept of market orientation and internal marketing to improve service quality. 2007 International Conference on Wireless Communications, Networking and Mobile Computing. 6611-6614. https://doi.org/10.1109/WICOM.2007.1624

65. Tse, A., Sin, L. Y., Yim, F., & Heung, V. (2005). Market orientation and hotel performance. Annals of Tourism Research, 32(4), 1145-1147. https://doi.org/10.1016/j.annals.2004.08.006

66. Yuan, N., Nhan, N., Giang, P., & Ngoc, N. (2016). The effects of innovation on firm performance of supporting industries in Hanoi – Vietnam. Journal of Industrial Engineering and Management, 9(2), 413-431. https://doi.org/10.3926/jiem.1564

67. Tweneboah-Koduah, E. Y., Anning-Dorson, T., & Nyamekeye, M. B. (2020). Impact of customization and innovation on hospitality firms’ performance. Journal of Hospitality Marketing & Management, 29(1), 106-120. https://doi.org/10.1080/19368623.2019.1528917

68. Verdú-Jover, A. J., Gómez-Gras, J. M., & Llorêns-Montes, F. J. (2008). Exploring managerial flexibility: Determinants and performance implications. Industrial Management and Data Systems, 108(1), 70-86. https://doi.org/10.1108/02635570810844098

69. Victorino, L., Verma, R., Plaschka, G., & Dev, C. (2005). Service innovation and customer choices in the hospitality industry. Managing Service Quality: An International Journal, 15(6), 555-576. https://doi.org/10.1108/09604250510634023

70. Volberda, H. W. (1996). Toward the flexible form: How to remain vital in hypercompetitive environments. Organization Science, 7(4), 359-467. https://doi.org/10.1287/orsc.7.4.359
71. Voon, B. H. (2006). Linking a service-driven market orientation to service quality. *Managing Service Quality: An International Journal, 16*(6), 595-619. https://doi.org/10.1108/09604520610711927

72. Wang, C. H., Chen, K. Y., & Chen, S. C. (2012). Total quality management, market orientation and hotel performance: The moderating effects of external environmental factors. *International Journal of Hospitality Management, 31*(1), 119-129. https://doi.org/10.1016/j.ijhm.2011.03.013

73. Wang, Z., Wang, N., & Liang, H. (2014). Knowledge sharing, intellectual capital and firm performance. *Management Decision, 52*(2), 230-258. https://doi.org/10.1108/MD-02-2013-0064

74. Whittington, R., Pettigrew, A., Peck, S., Fenton, E., & Conyon, M. (1999). Change and Complementarities in the New Competitive Landscape: A European Panel Study, 1992–1996. *Organization Science, 10*(5), 519-690. https://doi.org/10.1287/orsc.10.5.583

75. Wilkins, H., Merrilees, B., & Herington, C. (2007). Towards an understanding of total service quality in hotels. *International Journal of Hospitality Management, 26*(4), 840-853. https://doi.org/10.1016/j.ijhm.2006.07.006

76. Worren, N., Moore, K., & Cardona, P. (2002). Modularity, strategic flexibility, and firm performance: A study of the home appliance industry. *Strategic Management Journal, 23*(12), 1123-1140. https://doi.org/10.1002/smj.276