

The influence of outsourcing activities on the perception of service quality. An empirical study based on online reviews of hotel customers

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Abstract

Purpose: This study aims to examine the impact of the outsourcing of hotel departments on service quality measured through online customer reviews.

Design/methodology/approach- Three models were developed, considering three important online tourism reputation websites, in order to establish the relationship between the outsourcing of hotel activities and service quality.

Findings: The results show that in the three databases, hotel outsourcing has a negative influence on online reputation. A higher level of outsourcing reduces service quality, the percentage of recommendations, and the value perceived by customers who carry out online reviews of these hotels. In addition, different models were established for each type of department.

Originality/value: Originality/value: This paper presents the first empirical study to analyse the relationship between the impact of process outsourcing and customers' online reviews. It is also the first empirical research to consider the relationship between outsourcing and ratings by hotel end-customers as a performance measure.

Keywords: outsourcing, customer reviews, online tourism database, service quality

1. Introduction

The dynamic and highly competitive nature of the market has made tourism a multidisciplinary, complex phenomenon, and so it is necessary to have analytical tools and develop strategies that lead to customers' satisfaction and improve the competitive advantage. Outsourcing is especially important in the tourism sector, where a growing number of companies are choosing to offer different services to hotels. Hotel outsourcing involves partially or completely transferring activities that were formerly performed internally to an external supplier (Zhang *et al.*, 2018).

The decision about whether to outsource can allow the company to free up the necessary resources to focus on the most important aspects and invest in new or increased return processes or new opportunities (Powell *et al.*, 2006). Although the clients do not know whether an activity is outsourced or not, especially in the case of back-office activities, it is useful for the hotel to know whether outsourcing has an impact on the service quality or online reputation, measured by clients' online reviews. Studies that analyse the impact of outsourcing on organizational performance consider performance measures such as efficiency, costs, productivity, financial performance, and non-financial performance (Bolat and Yilmaz, 2009; Chatzoglou and Satigiannidis, 2009). These studies consider the opinion of the manager or employee, but there are no studies that rate the impact of a certain outsourcing process or the hotel's overall outsourcing on the hotel's reputation, measured through online customer reviews. Outsourcing processes should be carefully selected so that they do not affect the perceived quality and value received by customers. The online reputation measured through online customer reviews in the databases is very useful information that yields a performance measure from the customer's point of view. The online reputation is created through social media. Social media consist of online tools, applications, platforms, and media that make it possible to produce interactions between people who create, share, and exchange information in virtual communities and networks that influence people's behaviours and lives (Zeng and Gerritsen, 2014). Hence, in this paper we analyse the relationship between different hotel outsourcing processes and the online reputation, considering three databases: Booking.com, HolidayCheck, and TripAdvisor. These databases provide a reputation and measures related to the quality of the service, and they are useful sources of information (Korfiatis *et al.*, 2019). Clients increasingly read these online reviews before deciding where to go on holiday (Horster and Gottschalk, 2012).

The literature contains studies that analyse the factors that determine whether a process will be outsourced based on the characteristics or attributes of the activity and aspects related to the competitive strategy (Altin *et al.*, 2018). However, customer perceptions of service quality have not been considered a factor that may indicate whether or not the process should be outsourced. The influence of the information available on websites is so important to the sales of their product or service that hotel managers should consider it when making strategic, tactical, and operational decisions in the area of operations management. Specifically, the present study will help to determine whether hotel outsourcing influences the online reputation, which is considered a useful performance measure that could indicate which processes should be outsourced and which should not.

2. Online reviews and Service Quality

Online reviews provide hotels with direct customer information about service quality at a low cost. This information is quite valuable because it allows them to determine their competitive position in the market, and it helps in the decision-making process (Rodríguez-Díaz *et al.*, 2015). In this study, this information is intended to help in the decision-making process related to outsourcing. Online reviews can be defined as peer-generated product evaluations published on company or third-party websites (Mundambi and Schuff, 2010). Online reviews are part of eWOM (electronic word-of-mouth) and have gained importance with the emergence of new technology tools (Cantallops and Salvi, 2014). Consumers view these reviews as more trustworthy, informative, and useful than commercial information (Grechi *et al.*, 2017).

The motivation for online reviews is linked to altruistic motivations of providing a testimony about service quality (Fine *et al.*, 2017; Oliveira and Casais, 2019). Online reviews are widely used by customers to interact with other consumers, companies, and third parties (D'Acunto *et al.*, 2020). Online reviews provide information about products and aspects of the post-consumer experience, such as quality, value for money, and the overall evaluation (Ye *et al.*, 2014). In the hotel sector, online reviews are a tool for measuring customers' perceptions of quality (Ye *et al.*, 2014; Rodríguez-Díaz *et al.*, 2015; Lee and Ro, 2016). However, none of the studies analyse the relationship between the perceived quality shown in online reviews and operational or back-office strategies. These online reviews are analysed in the hospitality literature to measure

competitiveness, reservations, consumer behaviour, and motivations to participate in them, in other words, marketing issues (Ye *et al.*, 2009; Moe and Scheweidal, 2012; Casaló *et al.*, 2015; Lee and Ro, 2016).

Quality is analysed from two perspectives: the service delivery process (functional quality) and the results, that is, what consumers actually receive (technical quality) (Grönroos, 1984). In the delivery process, efficiency, reliability, goodwill, and employee competence are examined (Mai *et al.*, 2019). In contrast, service results can be analysed in areas such as housing, food, leisure, location, and facilities. Service quality is the result of an evaluation process in which clients compare their expectations with their perceptions after using the service (Parasuraman *et al.*, 1988). In the hospitality sector, perceived service quality measures how the service is viewed by hotel guests in terms of whether their expectations are met (Ye *et al.*, 2014). There are different ways to measure expectations and perceived service quality. In the hospitality sector, the attributes that affect customers' needs and expectations are room cleanliness, location, value for money, and staff friendliness, all of which are key elements in rating the service quality (Li *et al.*, 2013, Ye *et al.*, 2014). Perceived value is defined by Zeithaml (1988) as the customer's perceived worth of the product or service in relation to its cost. The perceived value customers receive from the hotel in relation to the price they pay can contribute to whether they recommend the hotel to others, constituting the quality-price relationship (Rodríguez Diaz *et al.*, 2015; Ye *et al.*, 2014).

Superior service quality allows increased customer satisfaction, improved customer retention, positive word of mouth, and willingness to recommend the service (Ladhari, 2009). Online databases, especially Booking.com, HolidayCheck, and TripAdvisor, consider these variables to be quality attributes that are rated by customers who enter these platforms. Thus, for example, the web platform Booking.com considers a variable that measures the quality/price ratio perceived by the tourist visiting the hotel, and Holiday Check considers the willingness to recommend the service to other clients.

These platforms are valid because they consider variables related to the quality of the service. A recent study by Rodríguez-Díaz and Espino-Rodríguez (2018b) shows that the three scales are reliable and valid when conventional statistical procedures are applied. Customers add their own reviews and are asked to rate each experience on a scale

(O'Connor, 2010). These platforms are successful because of the trust and reliability users perceive, where the benefits of the platform outweigh the disadvantages (Taecharungroj and Mathayomchan, 2019; Gavilan *et al.*, 2018). Recent research has been carried out to study the effect of reviews in the hospitality and tourism sector on hotels, Airbnb, and restaurants and gastronomy (Taecharungroj and Mathayomchan, 2019; Thomsen and Jeong, 2020; Yu and Zhang, 2020). Reviews also have an impact on customers' decisions, such as intention to visit, probability of making reservations, perceived value, loyalty, and intention to recommend (Zhang *et al.*, 2010; Berezina *et al.*, 2016; Rodríguez-Díaz and Espino-Rodríguez, 2018a; Gavilan *et al.*, 2018).

3. Outsourcing and Service Quality

Hotels outsource a variety of activities, such as housekeeping, laundry, training, information systems, food and beverages, maintenance, and leisure operations (Lammimaki, 2011; Zhang *et al.*, 2018). Outsourcing is strategically important, and its effect on the competitive advantage and its harmony with changes in the organization's environment should be evaluated (Espino-Rodríguez and Chun-Lai, 2014). In the hotel sector, due to the increase in competition and the need to respond efficiently to customer demand, the outsourcing of non-core activities has become a common practice (Zhang *et al.*, 2018). The main benefits of outsourcing are: cost reduction, covering specific personnel needs, focusing on core competencies, flexibility, access to resources and capacities that are difficult to develop internally, and improved performance (Bengtsson and Dabholkar, 2009).

The most widely used theoretical perspectives in the study of hotel outsourcing are related to Transaction cost economics (TCE) and the Resource-based view of the firm (RBV). According to TCE, the factors that determine whether an activity can be outsourced or performed in-house are transaction costs, which are determined by asset specificity, opportunism, uncertainty, and bounded rationality (De Vita *et al.*, 2011).

In the study of outsourcing, the RBV has a broader focus because it also considers the impact of this strategy on organizational performance. Firms do not have all the resources to develop a competitive advantage, and so they need resources obtained externally (Yuan *et al.*, 2020). According to the RBV, the decision to outsource is determined by a hotel's ability to invest in developing a capacity in order to create a competitive advantage. If the

investment in capacity development is too high and does not compensate the organization for creating the competitive advantage, the capacity should be outsourced to the best supplier (McIvor, 2009). The most frequently outsourced activities are those that are not part of the core competencies, i.e., not related to the competitive advantage (Patel *et al.*, 2019).

Several studies analyse the impact of hotel outsourcing on organizational performance. Specifically, Zhang *et al.* (2018) show that cost reduction and the supplier's degree of specialization have a positive influence on overall efficiency. In the hotel sector, no studies have analysed the direct relationship between outsourcing and the service quality perceived by the guests. In addition, Bolat and Yilmaz (2009) conclude that when outsourcing decisions are made rationally, organizational performance increases. Other studies in the hotel sector show that outsourcing has a positive influence on financial performance, but it does not influence non-financial performance (Espino-Rodríguez and Ramírez-Fierro, 2018a). Espino-Rodríguez and Ramírez-Fierro (2018a) analyse hotel guests' satisfaction as part of hotels' non-financial performance. In the industrial sector, Bengtsson and Dabhilkar (2009) show that the intensity of outsourcing negatively influences quality, speed, and dependability. Lahiri (2016) reviews the studies that analyse the influence of outsourcing on performance, and the findings suggest that outsourcing can produce a positive, negative, mixed, or non-significant impact on the firm. In these studies, organizational performance has only been considered from the perspective of the manager. Instead, in the present study, we draw on the customer's perspective by considering opinions about aspects of service quality found in online reviews.

Based on the reasoning of the core competency approach within the RBV framework, the outsourcing of core activities would have a negative impact on reputation measured by online reviews, whereas the outsourcing of other activities that are not part of the core competencies would not necessarily have a negative influence on service quality. Moreover, a high level of outsourcing in the hotel can have a negative impact on the online reputation and service quality. Furthermore, outsourcing can erode the organization's potential for organizational learning (Espino-Rodríguez and Ramírez-Fierro, 2018b). Hotels demand exclusive services, but it is unlikely that providers that work with many hotels will spread their best practices among all of them, and so

differentiation and customization are reduced. All of this can have a negative impact on the service quality perceived by the hotel customer. Dabhilkar and Bengtsson (2008) showed that outsourcing negatively affects the general quality of the product, the total lead time, and on-time delivery. Hence, the following hypotheses are proposed:

Hypothesis 1

Outsourcing negatively influences the different quality-related measures available on booking.com (service quality, perceived recommendation, and global evaluation)

Hypothesis 2

Outsourcing negatively influences the different quality-related measures available on HolidayCheck (service quality, recommendations, and global evaluation)

Hypothesis 3

Outsourcing negatively influences the quality measure available on TripAdvisor (service quality)

4. Research Methodology

The study was carried out in Gran Canaria, a relevant sun and beach cluster belonging to the Canary Islands in Spain. After reconciling and updating various existing databases, 71 hotel establishments were identified that met the conditions for our study, that is, having a category of between 3 and 5 stars in the sun and beach segment. Of the 71 hotels, we know the degree of outsourcing of 65 hotels in the tourist destination of Gran Canaria Island, which is part of the Canary Islands. The Canary Islands is the region in Spain with the highest occupancy rate after the Balearic Islands, with 72.2% average hotel occupancy (INE, 2020). Analysing these hotels in the sample, we observed that 43 were listed in the Booking.com databases, 61 in TripAdvisor, and 54 in HolidayCheck. The number of reviews considered on the three platforms totalled 29,888 for Booking.com, 48,805 for HolidayCheck, and 67,517 for TripAdvisor.

The level of outsourcing was obtained directly from the researchers through a survey because this information is not available in the databases of booking.com, TripAdvisor,

and HolidayCheck. Subsequently, the two databases were combined: on the one hand, the hotel outsourcing database and, on the other, the average rating of each hotel offered by Booking.com, HolidayCheck, and TripAdvisor.

The outsourcing level of seven processes was obtained directly from the hotels through a survey. The departments chosen were: accommodations, food and beverages, sales and marketing, information systems, leisure, human resources, and maintenance. The level of outsourcing was measured, as in previous studies, on a Likert scale ranging from 1 to 7, where 1 indicates that the activities or processes of the departments are not outsourced at all, and 7 indicates that they are completely outsourced (Wan and Su, 2010; Espino-Rodríguez and Chun-Lai, 2014).

Each online database has its own scale for obtaining customer information. This information was obtained directly from the Internet. Thus, for example, Booking.com measures the evaluation of the following variables: Staff, facilities, cleanliness, comfort, and Wifi. The Wifi variable was eliminated because it depends on both the public infrastructure and the hotel's infrastructure. In addition, on Booking.com, the perceived value is measured by the value for money variable. According to Ye *et al.* (2014) and Rodríguez-Díaz and Espino-Rodríguez (2018a), these variables measure the quality of the service and the perceived value of the hotel.

By contrast, customers who provide ratings on the HolidayCheck database are asked about the quality of the room, the service location, sports and entertainment, and gastronomy. These variables are used to represent service quality (Rodríguez-Díaz and Rodríguez-Díaz. 2018a). However, although HolidayCheck does not have a variable that measures value for money or the quality/price ratio, it uses the percentage of recommendations to other customers. It also uses another variable that measures the overall evaluation. In contrast, on TripAdvisor, the opinions we currently find refer to a single item rated on a scale ranging from excellent to poor, with five categories. Rodríguez-Díaz and Espino-Rodríguez (2018a) show that the scales of these three databases that measure service quality through online reviews are valid and reliable. In addition, variables such as the size and category of the hotel (star rating) were used as control variables (Martin-Fuentes, 2016).

Harman's one-factor test was used for each model. All variables were entered into an exploratory factor analysis. The results revealed that the one-factor loading explains 33.15% of the variance in Booking.com, 32.12% in HolidayCheck, and 22.12% of the variance in TripAdvisor). These factor loadings are clearly below the cut-off threshold of 50%, which suggests that common method bias was not a major problem in this study.

5. Analysis and Results

Table 1 shows the mean level of outsourcing and its standard deviation in each of the seven departments analysed. The departments that are outsourced the most are those related to leisure, information systems, accommodation, and maintenance. Although the outsourcing is not very high, it has mean values of around three. The departments that are outsourced the least, although showing some outsourcing, are the food and beverage department, the human resources department, and the commercial department.

Table 1

Subsequently, to contrast the relationship between outsourcing and service quality, three structural models were carried out, one for each online database, using Partial Least Squares structural equation modeling (PLS-SEM) (Sarstedt *et al.*, 2017). PLS is appropriate for research topics where there are few studies, as in our case, especially regarding outsourcing and the online reputation in the hotel sector. In addition, our study uses some scales with only a few items, and the model is not complex, and so PLS makes it possible to guarantee the robustness of the results (Qureshi and Compeau, 2009). PLS es adecuado para modelos complejos (Hair *et al.*, 2019).

PLS provides more robust estimations of models for smaller sample sizes than methods based on covariance models. In addition, the present models are composed of formative and reflective indicators, which makes the use of PLS more appropriate (Henseler *et al.*, 2009). PLS is also used for theory development in exploratory research (Barclay *et al.*,

1995). Two stages are analysed in PLS: the measurement model and the evaluation of the structural model (Hair *et al.*, 2017).

5.1. Measurement model

Before beginning the prediction procedure, the researchers should make sure that all the constructs' measurement models meet the relevant quality standards (Shmueli *et al.*, 2019). Measurement models are designed to assess the internal consistency (Cronbach's alpha, composite reliability) and convergent and discriminant validity of the constructs used (Roldan and Sánchez-Franco, 2012; Hair *et al.*, 2017). In all three models (Booking.com, HolidayCheck, and TripAdvisor) tested, outsourcing was considered a formative construct. All the items used to measure the outsourcing variable have a VIF (variance inflation factor) below 2. Therefore, all the values are below the common cut-off threshold of 5, indicating minimum collinearity and construct validity (Chin, 2010; Hair *et al.*, 2017) (See Table 2). Formative dimensions make it possible to consider the variance in a specific item individually, rather than considering the common variance of all the items together, as occurs with reflective indicators (Cenfetelli and Basselier, 2009). The levels of outsourcing of each activity help to define the hotel's overall level of outsourcing, and changes in each level of outsourcing (the items) produce changes in the construct (Total Outsourcing). In addition, the indicators are not interchangeable, and they are independent from each other. In outsourcing, a certain activity may be outsourced and another activity may not be, or it may be to a lesser extent, and so the degree of outsourcing is not a reflective variable, but rather a formative one. With regard to the Weights, the presence of non-significant formative indicators is observed in Table 2. However, the decision was made to keep them because removing a formative indicator would mean eliminating part of the composite latent construct (Roldan *et al.*, 2012). According to Roberts and Thatcher (2009) the formative construct is also assessed for its nomological validity, so that it is as relevant as its items are meaningful. Therefore, by reporting the results of the structural model with a formative construct using the PLS, this nomological validity is verified if there is a significant relationship between the formative construct and the endogenous constructs. The results showed that *outsourcing* is significantly related to aspects of quality, and so the construct has validity.

Reflective variables are evaluated in terms of reliability and validity. The loadings have an accepted threshold of 0.707 for both indicators and for the dimensions related to

Booking.com and HolidayCheck. The item that measures location on HolidayCheck was eliminated because it did not exceed the threshold of 0.7.

Convergent validity of the scales that measure service quality on Booking.com and HolidayCheck is verified by means of the average variance extracted (AVE), with values of 0.827 and 0.772, which are above the threshold of 0.5. For discriminant validity, in all three models, we compared the correlations between all the constructs (i.e., outside the diagonal) with the square root of the AVE (i.e. on the diagonal). Table 3 shows that all the values on the diagonal are higher than the corresponding correlations in the rows and columns. Therefore, the variables used in the three models have discriminant validity. In addition, the discriminant validity was assessed using the heterotrait-monotrait (HTMT) ratio. The global evaluation variable was eliminated because it had an HTMT above 0.9. Table 3 reveals that none of the HTMT scores exceed the threshold value of 0.90. (Henseler *et al.*, 2015). Table 3 reveals that all the HTMT scores does not exceeds the threshold value of 0.90. (Henseler *et al.*, 2015). However, the squared correlation is lower than the AVE, indicating that discriminant validity is achieved. In addition, the variables that measure service quality on Booking.com and HolidayCheck have a Cronbach's alpha and composite reliability (CR) above 0.7, which indicates that they are constructs that present high reliability.

Table 2

Table 3

5.2. Structural models

According to Hair *et al.* (2017), bootstrapping with 500 resamples was used to generate the t-statistics, standardized coefficients (*B*), R^2 values, and Q^2 test. The outsourcing variables were the same in all three models, in addition to the control variables, which were category and size. However, each model, depending on the database to which it belongs, will have different values related to service quality, perceived value, and the overall evaluation

For the Booking.com model, the outsourcing variable and the control variables explain 50.7% ($R^2 = 0.507$) of the variance in Service Quality and 25.3% ($R^2 = 0.253$) of the variance in Perceived Value. In the case of the HolidayCheck model, the outsourcing and control variables explain 34.5% ($R^2 = 0.345$) of the variance in Service Quality and 31.9%

($R^2 = 0.319$) of the variance in the Recommendation Ratio. With regard to TripAdvisor, outsourcing and the control variables explain 40.8 % ($R^2 = 0.408$) of the variance in Service Quality.

All the Q^2 values are expected to be positive (Hair *et al.*, 2017). Table 4 shows that all the values in all the models are greater than zero (Shmueli *et al.*, 2016) ranging from 0.093 to 0.364, and so the models have predictive power. To measure the goodness of fit of the three models, we used the Goodness-of-fit (Gof) indicator (Henseler *et al.*, 2016). GoF values range from 0 to 1, where a value of 0.36 is large. In all three models, it is above 0.36 (Booking.com model, GoF= 0.589; HolidayCheck model, Gof=0.505 and TripAdvisor model, Gof=0.638), which suggests a good fit for all three models.

Table 4 and Figure 1 show that, for Booking.com, outsourcing negatively influences service quality ($\beta = -0.503$, $p < 0.001$) and perceived value ($\beta = -0.538$, $p < 0.001$). Therefore, Hypothesis 1 is supported. The category control variable positively influences service quality ($\beta = 0.384$, $p < 0.001$). In relation to the HolidayCheck model, outsourcing also has a negative and significant influence on service quality ($\beta = -0.407$, $p < 0.001$), and the recommendation ratio ($\beta = -0.482$, $p < 0.001$). (See Table 4 and Figure 2). This result suggests that Hypothesis 2 is accepted. By contrast, there is a positive and expected relationship between the category and service quality ($\beta = 0.359$, $p < 0.01$) and the recommendation ratio ($\beta = 0.223$, $p < 0.10$). The size variable does not affect the proposed quality measures. Therefore, the results suggest that, once the effects of category and size are controlled for, there is a negative and significant relationship between outsourcing and the quality measures used in the HolidayCheck database. The TripAdvisor model shows that there is also a significant and negative relationship between outsourcing and Service Quality ($\beta = -0.501$, $p < 0.001$), which indicates that Hypothesis 3 is supported. In addition, a positive relationship is found between the category and Service Quality ($\beta = 0.268$, $p < 0.01$) (See Table 4 and Figure 3).

Table 4

Figure 1

Figure 2

Figure 3

5.3. PLS models by activity

In order to see the partial effect of each activity on the perceived quality, different PLS models were carried out for each activity in each database. For each database, seven partial models were proposed where each outsourced process was considered. For the Booking.com database, the results show that there is a negative relationship between the level of outsourcing of activities related to food and beverages and human resources and the quality perceived by customers who fill out online evaluations ($\beta=-0.376$, $p<0.001$; $\beta=-0.260$, $p<0.05$). There is also a negative and significant relationship between the degree of outsourcing of the accommodation department and the Service Quality ($\beta=-0.243$, $p<0.01$). In Table 5, there is a negative and significant relationship between the outsourcing of almost all the processes analysed and the value perceived by the customers (Food and beverage $\beta=-0.304$, $p<0.01$; Human Resources $\beta=-0.404$, $p<0.01$; Information Systems, $\beta=-0.277$, $p<0.01$; Accommodation department $\beta=-0.396$, $p<0.01$; Sales and Marketing, $\beta=-0.242$, $p<0.05$). However, for leisure- and maintenance-related activities, there is no significant relationship. For each model, a significant relationship is found at a level of 1% between the category and the service quality.

With regard to HolidayCheck, there is a negative relationship between the outsourcing of food and beverage and accommodations departments and service quality ($\beta=-0.350$, $p<0.01$; $\beta=-0.301$, $p<0.01$). On this platform, there is also a negative relationship between outsourcing of food and beverages and sales and marketing and the recommendation ratio ($\beta=-0.369$, $p<0.01$; $\beta=-0.267$, $p<0.01$). With the outsourcing of the accommodation department, there is a significant and negative, although weak, relationship ($\beta=-0.229$, $p<0.1$). The global evaluation also has a negative relationship with the degree of outsourcing in food and beverage processes, information systems, the accommodations department, and sales and marketing ($\beta=-0.420$, $p<0.001$; $\beta=-0.203$, $p<0.1$; $\beta=-0.371$, $p<0.001$; $\beta=-0.1640$, $p<0.05$). Table 6 shows that for activities such as human resources, leisure activities, and maintenance, there are no significant relationships between the degree of outsourcing and the service quality measures available on the platform.

Table 7 shows that on TripAdvisor, there is a negative and significant relationship between the degree of outsourcing of food and beverage processes and the

accommodations department and the service quality perceived by the customers who fill out the online reviews ($\beta=-0.459$, $p<0.001$; $\beta=-0.176$, $p<0.1$).

Table 5

Table 6

Table 7

6. Conclusions

6.1. Discussion

Although no studies in the literature have analysed the impact of outsourcing on the quality perceived by end clients, the results obtained in this study are consistent with other investigations. Thus, Dabhilkar and Bentsson (2008) show that outsourcing has a negative influence on product quality. However, it must be taken into account that these authors gave the questionnaire to managers, and the clients' opinions were not considered. Although outsourcing positively influences aspects related to costs and other aspects of organizational performance (Bolat and Yilmaz, 2009; Centikaya *et al.*, 2014; Espino-Rodríguez and Ramírez-Fierro, 2018a), this study demonstrates the negative impact of outsourcing on the clients' perceived quality, considering the ratings given in the online reviews. The loss of differentiation and personalization that occurs with outsourcing probably produces a decline in quality for the end client. Espino-Rodríguez and Chun-Lai (2014) point out that outsourcing has a negative influence on a differentiation strategy.

Although the total effect of outsourcing is important, it is necessary to know the impact of each type of outsourced process on service quality. To do so, different models were created for each department. Thus, in the Booking.com database, the outsourcing of processes or activities of the food and beverage, human resources, and accommodations departments has a negative influence on service quality. In addition to these activities, a higher level of outsourcing of information systems and sales and marketing also has a negative influence on the perceived value. In contrast, outsourcing of leisure and maintenance activities does not negatively influence service quality or perceived value. In the HolidayCheck database, a higher degree of outsourcing of food and beverage and

accommodations activities has a negative influence on service quality. In the case of TripAdvisor, only the outsourcing of the food and beverage and accommodations departments has a negative influence on service quality.

We cannot make direct comparisons with similar studies because this is the first study to analyse the relationship between the impact of process outsourcing and the online reputation. However, the analysis of the distinction between core and non-core activities can help us to understand these results. Core activities form part of the basic competencies that allow a competitive advantage to be obtained, i.e., activities that are composed of strategic resources and whose outsourcing can produce worse performance (Espino-Rodríguez and Ramírez-Fierro, 2017). These types of activities in the hotel sector are related to food and beverage and some accommodation processes. Therefore, their outsourcing can have a negative influence on aspects related to quality. Chatzoglou and Sarigiannidis (2009) show that outsourcing core activities has a negative influence on organizational performance. In contrast, non-core activities can have a positive influence on some aspects of performance, especially financial performance. These results might be extrapolated to other activities if we apply the perspective used in this paper, i.e., service quality assessed by online reviews. Activities such as food and beverages and sales have been classified as basic activities, whereas maintenance and animation are non-core or complementary activities (Espino-Rodríguez and Padrón Robaina, 2005). Leisure activity and maintenance outsourcing do not negatively influence clients' perceived quality, if we consider Booking.com and HolidayCheck. However, if we consider TripAdvisor, the number of activities that do not negatively influence clients' perceived quality is greater, even including, in addition to those mentioned above, activities related to information systems, human resources, and sales and marketing.

Activities such as animation and maintenance do not have a negative impact on the online reputation, although the effect is not positive either. Non-core activities, such as maintenance and entertainment, are activities whose outsourcing does not have a negative impact on service quality. In this regard, Chatzoglou and Sarigiannidis (2009) and Espino-Rodríguez and Ramírez-Fierro (2018a) show that outsourcing does not have a significant positive or negative influence on non-financial performance. In reality, clients' perceived quality, measured with the scores clients give on the Internet, is a

measure of non-financial performance. Therefore, the results are coherent with those obtained in the empirical literature.

Therefore, these activities can be outsourced, allowing hotels to take advantage of the benefits of outsourcing related to supplier specialization and cost reduction (Zhang *et al.*, 2018). However, more core activities related to food and beverages, accommodations, human resources, and sales and marketing have a negative influence on the online reputation. Moreover, outsourcing can lead to loss of critical skills, loss of autonomy, and erosion of the organization's potential for organizational learning, particularly in core activities for the development of basic businesses and capabilities (Espino-Rodríguez and Ramírez-Fierro, 2018b). Norman *et al.* (2014) indicate that outsourcing can cause companies to lose good employees, which could potentially lead to less guest satisfaction.

6.2. Theoretical implications

Studies on outsourcing have been carried out in the literature, but the possible impact of outsourcing on service quality measured by customers has not been studied. The paper attempts to answer the question of whether outsourcing influences service quality, taking the reviews of online customers as a reference. In other words, the study examines whether outsourcing has an impact on the online reputation. In the Booking.com model, the results suggest that outsourcing has a negative impact on service quality and the value perceived by customers, which suggests that a higher level of outsourcing by hotels can lead to poorer service quality and lower perceived value. The results from other databases such as HolidayCheck and TripAdvisor test the same idea. With regard to HolidayCheck, the results indicate that higher levels of outsourcing lead to lower perceived quality by customers, fewer recommendations to other customers, and a worse overall evaluation. On TripAdvisor, the results also indicate that a higher level of outsourcing implies lower service quality, measured by the item used by TripAdvisor. These results indicate that outsourcing as a whole has a negative impact on service quality measures, suggesting that outsourcing can negatively affect the hotel.

6.3. Practical implications

From a practical point of view, the results show that this customer perspective can be valid to explain outsourcing because it coincides with the core competences approach,

which is a powerful perspective to explain outsourcing. A new strategic risk can be derived from hotel outsourcing, related to the fact that it can have a negative impact on the online reputation of a hotel, especially for activities that are part of the core competences, such as food and beverages and accommodations. This study can help hotel owners to discern which activities could be outsourced and would not have a negative impact on service quality. Hotels will have to carefully select which activities to outsource. In addition, it appears that hotels need to more carefully monitor the outsourcing processes and contracts in order to engage in specific supplier relationships that improve service quality and have a positive impact on the end customer. The results show that the impact is not positive at the moment.

6.4. Limitations and Future research

This is an exploratory study because no studies have been carried out to date that analyse the impact of outsourcing on the online reputation. For this reason, it is necessary to analyse the effect of outsourcing on the online reputation in other tourist destinations and compare the results with those obtained in this study. It is also necessary to analyse the impact of outsourcing on the quality and value perceived by the customers at the site, i.e., in the hotel (off-line). Measures of perceived quality when answering online questionnaires can be different from those carried out in the presence of a surveyor without leaving the destination. Hence, more complete quality measures than those offered by online platforms could be taken into consideration, even though the latter have been shown to meet the recommended reliability parameters. It is also necessary to consider variables of a more qualitative nature, i.e. complaints, suggestions, and aspects found in the databases. A future study could consider whether customers notice that services are outsourced, and to what extent this awareness might lower the online reputation. Hotels' inter-organizational relationships with suppliers may be a determinant of the service quality perceived by the customers, and they have not been considered in this study. It is also necessary to analyse the impact of other hotel operations decisions on the online reputation because no studies have done this so far. For example, it would be interesting to analyse the impact of online perceived quality on decisions related to hotels' supply chain integration, entrepreneurship, and innovation.

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Tables and Figures

Table 1. Hotel Activity outsourcing

Department	Average outsourcing	Std. deviation
Accommodation	2.569	1.570
Food and Beverage	1.953	1.662
Sales and Marketing	1,615	1.410
Information Systems	2.593	1.949
Leisure activities	3.135	2.308
Human resources	1.812	1.413
Maintenance department	2.553	1.531

Table 2. Measurement models evaluation

Scale item	Weight (p)	Variance Inflation factor	Factor Loadings	Composite Reliability	AVE	Cronbach's alpha
BOOKING.COM						
Service Quality				0.959	0.826	0.946
Cleanliness			0.941			
Comfort			0.964			
Facilities			0.954			
Location			0.739			
Staff			0.929			
Perceived value				1	1	1
Price/quality relationship			1			
Size				1	1	1
Number of rooms			1			
Category						
Number of starts						
Outsourcing				n.a.	n.a.	n.a.
Food and Beverage	0.518 (0.011)	1.360				
Human Resources	0.479 (0.033)	1.631				
Information Systems	0.144 (0,285)	1.750				
Leisure Activities	-0.221 (0.205)	1.496				
Accommodation department	0.331 (0.120)	1.746				

Scale item	Weight (<i>p</i>)	Variance Inflation factor	Factor Loadings	Composite Reliability	AVE	Cronbach's alpha
Maintenance	0.156 (0.274)	1.546				
Sales and Marketing	-0081 (0.366)	1.733				
HOLIDAYCHECK						
Service Quality				0.930	0.772	0.899
Room			0.921			
Service			0.883			
Sports and Entertainment			0.754			
Gastronomy			0.939			
Recommendation						
Recommendation percentage			1			
Global Evaluation				1	1	1
Hotel Rating						
Size				1	1	1
Number of rooms			1			
Category				1	1	1
Number of stars			1			
Outsourcing				n.a.	n.a.	n.a.
Food and Beverage	0.793 (0.006)	1.423				
Human Resources	0.129 (0.396)	1.715				
Information Systems	-0.014 (0.434)	1.678				
Leisure Activities	-0.101 (0.406)	1.164				
Accommodation department	0.328 (0.144)	1.607				
Maintenance	-0.358 (0.083)	1.565				
Sales and Marketing	0.243 (0.134)	1.247				
TRIPADVISOR						
Service Quality				1	1	1
Average Rating			1			
Size				1	1	1
Number of rooms						
Category				1	1	1
Number of stars						
Outsourcing				n.a.	n.a.	n.a.
Food and Beverage	0.973 (0.012)	1.344				
Human Resources	0.470	1.587				

Scale item	Weight (<i>p</i>)	Variance Inflation factor	Factor Loadings	Composite Reliability	AVE	Cronbach's alpha
	(0.031)					
Information Systems	0.006 (0.144)	1.605				
Leisure Activities	-0.221 (0.211)	1.117				
Accommodation department	0.331 (0.116)	1.580				
Maintenance	-0.156 (0.273)	1.490				
Sales and Marketing	-0.082 (0.367)	1.386				

Table 3. Correlations and discriminant validity according to Fornell-Lacker criterion and Heterotrait-monotrait (HTMT) ratios

BOOKING.COM (Fornell-Lacker Criterion)					
	Category	Perceived value	Service Quality	Size	
Category	1.000				
Perceived value	0.061	1.000			
Service Quality	0.544	0.673	0.909		
Size	0.102	0.091	0.052	1.000	
BOOKING.COM (HTMT)					
	Category	Perceived value	Service Quality	Size	
Category					
Perceived value	0.061				
Service Quality	0.549	0.672			
Size	0.102	0.091	0.092		
HOLIDAYCHECK (Fornell-Lacker criterion)					
	Category	Service Quality		Recommendation	Size
Category	1.000				
Service Quality	0.431	0.877			
Recommendation	0.300	0.858		1.000	
Size	0.198	0.048		-0.027	1.000
HOLIDAYCHECK (HTMT)					
	Category	Service Quality		Recommendation	Size
Category					
Service Quality	0.439				
Recommendation	0.300	0.899			
Size	0.198	0.115		0.027	
TRIPADVISOR (Fornell-Lacker's Criterion)					
	Category	Size	Service quality		
Category	1,000				
Size	0,194	1,000			
Service Quality	0,435	0,044	1,000		
TRIPADVISOR (HTMT)					
	Category	Size	Service quality		
Category					
Size	0.178				
Service Quality	0.466	0,045			

**The scores on the diagonal (Fornell-Lacker Criterion) are the square root of the AVE, and the other scores are the correlation coefficients between latent variables.*

Table 4. Structural models

Relations	B	Structural Model	
		t-value	(R ² ; Q ²)
BOOKING.COM			
Category→Service Quality	0.384***	3.621	(50.70%; 0.364)
Size→ Service Quality	-0.116	1.129	
Outsourcing→Service Quality	-0.503***	3.928	
Category→Perceived Value	-0.120	0.866	(25.3% ;0.093)
Size→Perceived Value	-0.035	0.364	
Outsourcing→Perceived Value	-0.538***	4.369	
GoF (Goodness-of-fit criterion)	0.589		
Relations	B	Structural model	
		t-value	(R ² ; Q ²)
HOLIDAYCHECK			
Category→Service Quality	0.359**	2.604	(34.50%;0.224)
Size→ Service Quality	-0.069	0.666	
Outsourcing→Service Quality	-0.407**	2.182	
Category→Recommendation Ratio	0.223	1.579	(31.90%;0.116)
Size→ Recommendation Ratio	-0.124	1.434	
Outsourcing→Recommendation Ratio	-0.482**	2.405	
GoF (Goodness-of-fit criterion)	0.505		
Relations	B	Structural model	
		t-value	(R ² ; Q ²)
TRIPADVISOR			
Category→Service Quality	0.268**	2.398	(40.8%;0.276)
Size→ Service Quality	-0.075	0.903	
Outsourcing→Service Quality	-0.501**	2.323	
GoF (Goodness-of-fit criterion)	0.639		

*p<0.05, **p<0.01, ***p<0.001

Table 5. Structural model by department considering the Booking.com database

BOOKING.COM							
	Food and beverage	Human resources	Informat. Systems	Leisure activities	Accommodation	Maintenance	Sales and Marketing
	B (t)	B (t)	B (t)	B (t)	B (t)	B (t)	B (t)
Category→Service Quality	0.420*** (3.600)	0.479*** (4.351)	0.497*** (4.242)	0.565*** (4.820)	0.519*** (4.572)	0.552*** (4.420)	0.533*** (4.407)
Size→ Service Quality	0.019 (0.146)	-0.051 (0.387)	-0.037 (0.263)	-0.061 (0.453)	-0.027 (0.211)	-0.020 (0.156)	-0.007 (0.049)
Outsourcing→Service Quality	-0.376*** (3.134)	-0.260* (1.890)	-0.153 (1.077)	0.163 (0.989)	-0.243* (2.159)	0.092 (0.696)	-0.059 (0.509)
Category→Perceived Value	-0.049 (0.317)	-0.053 (0.360)	-0.034 (0.211)	0.057 (0.361)	0.009 (0.055)	0.046 (0.278)	-0.002 (0.013)
Size→Perceived Value	0.103 (1.084)	0.007 (0.070)	0.024 (0.228)	0.073 (0.570)	0.044 (0.433)	0.099 (0.985)	-0.007 (0.049)
Outsourcing→Perceived Value	-0.304** (1.890)	-0.404** (2.605)	-0.277** (1.798)	0.036 (0.183)	-0.396** (2.818)	-0.084 (0.495)	-0.242* (1.738)

†p<0.1 *p<0.05, **p<0.01, ***p<0.001

Table 6. Structural model by department considering the HolidayCheck database

HOLIDAYCHECK							
	Food and beverage	Human resources	Informat. Systems	Leisure activities	Accommodation	Maintenance	Sales and Marketing
	B (t)	B (t)	B (t)	B (t)	B (t)	B (t)	B (t)
Category→Service Quality	0.373 (0.003)	0.431** (2.760)	0.417** (2.800)	0.452*** (3.191)	0.456*** (3.477)	0.450** (3.122)	0.437** (2.930)
Size→ Service Quality	-0.040 (0.312)	-0.066 (0.488)	-0.094 (0.648)	-0.061 (0.411)	-0.044 (0.365)	-0.053 (0.349)	-0.050 (0.385)
Outsourcing→Service Quality	-0.350** 2.416	-0.068 (0.317)	-0.134 (0.813)	0.044 (0.326)	-0.301** (2.192)	-0.022 0.151	-0.106 (0.876)
Category→ Recommendation	0.244* 1.656	0.297* (1.870)	0.275† (1.634)	0.317* (1.962)	0.333** (2.195)	0.315** (1.889)	0.296* (1.840)
Size→ Recommendation	-0.082 0.691	-0.116 (1.004)	-0.134 (1.162)	-0.087 (0.723)	-0.091 (0.807)	-0.094 (0.786)	-0.111 (0.980)
Outsourcing→ Recommendation	-0.369** 2.345	-0.102 (0.524)	-0.176 (1.044)	-0.013 (0.103)	-0.229† (1.551)	0.048 (0.302)	-0.267* (2.126)
Category→Global evaluation	0.353** 2.474	0.398*** (2.530)	0.388** (2.232)	0.442** (2.746)	0.462*** (3.356)	0.45*** (2.994)	0.424* (2.668)
Size→ Global evaluation	-0.008 0.072	-0.068 (0.559)	-0.066 (0.565)	-0.024 (0.205)	-0.019 (0.181)	-0.002 (0.018)	-0.030 (0.262)
Outsourcing→Global evaluation	-0.420*** 3.110	-0.194 (1.254)	-0.203† (1.450)	0.042 (0.332)	-0.371** (2.967)	-0.163 (1.122)	-0.164* (1.730)

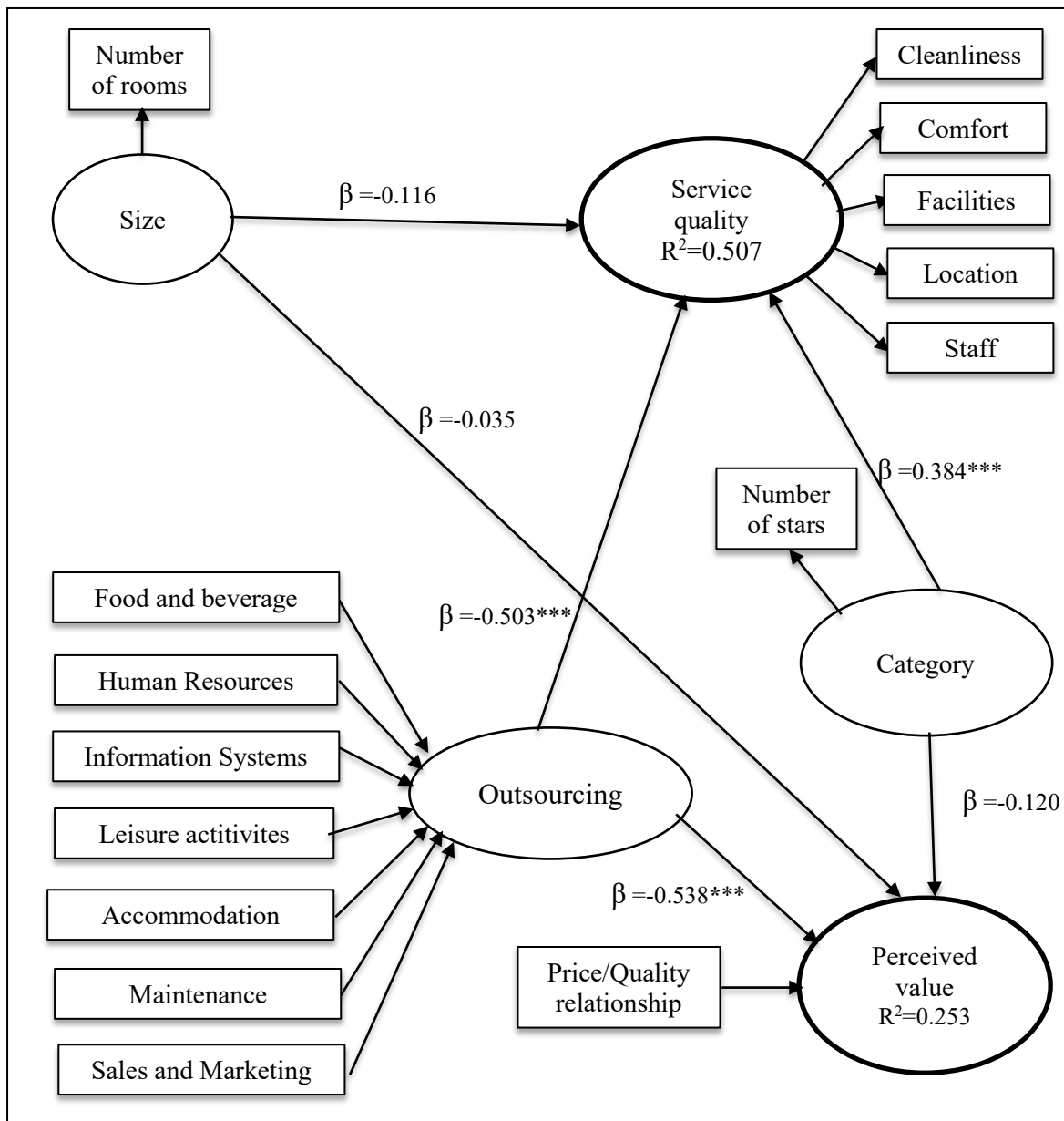
†p<0.1 *p<0.05, **p<0.01, ***p<0.001

Table. 7. Structural model by department considering the TripAdvisor database

TRIPADVISOR							
	Food and beverage	Human resources	Informat. Systems	Leisure activities	Accommodation	Maintenance	Sales and Marketing
	B (t)	B (t)	B (t)	B (t)	B (t)	B (t)	B (t)
Category→Service Quality	0.294** (2.495)	0.476*** (3.546)	0.447*** (3.225)	0.484*** (3.877)	0.483*** (3.877)	0.469 (3.870)	0.472*** (3.597)
Size→ Service Quality	-0.028 (0.274)	-0.036 (0.352)	-0.057 (0.559)	-0.063 (0.642)	-0.034 (0.351)	-0.044 (0.444)	-0.040 (0.393)
Outsourcing→Service Quality	-0.459*** (3.285)	0.014 (0.11)	-0.081 (0.59)	0.131 (1.044)	-0.176† (1.62)	0.045 (0.359)	-0.009 (0.109)

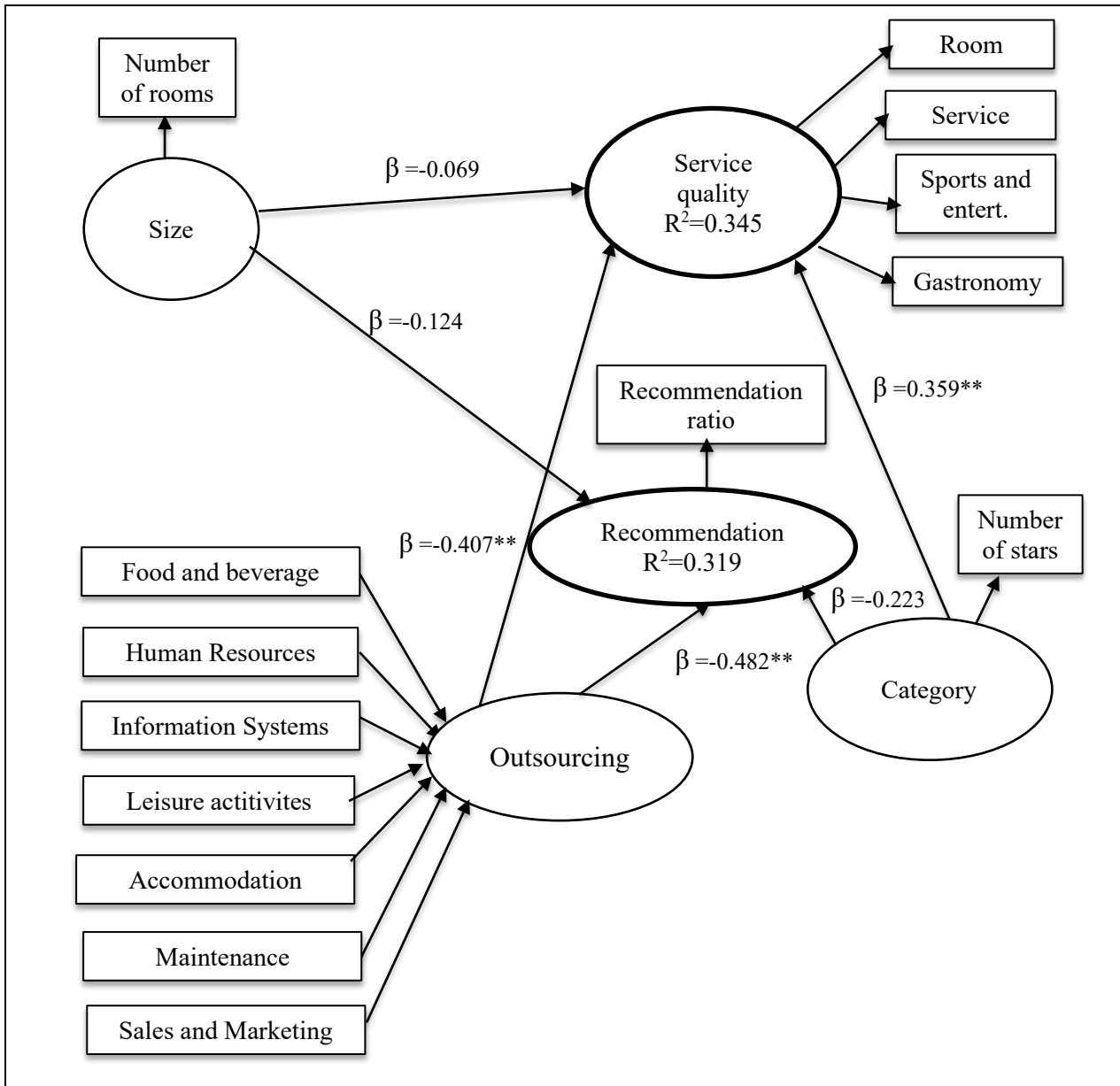
†p<0.1 *p<0.05, **p<0.01, ***p<0.001

Figure 1. Structural model for Booking.com



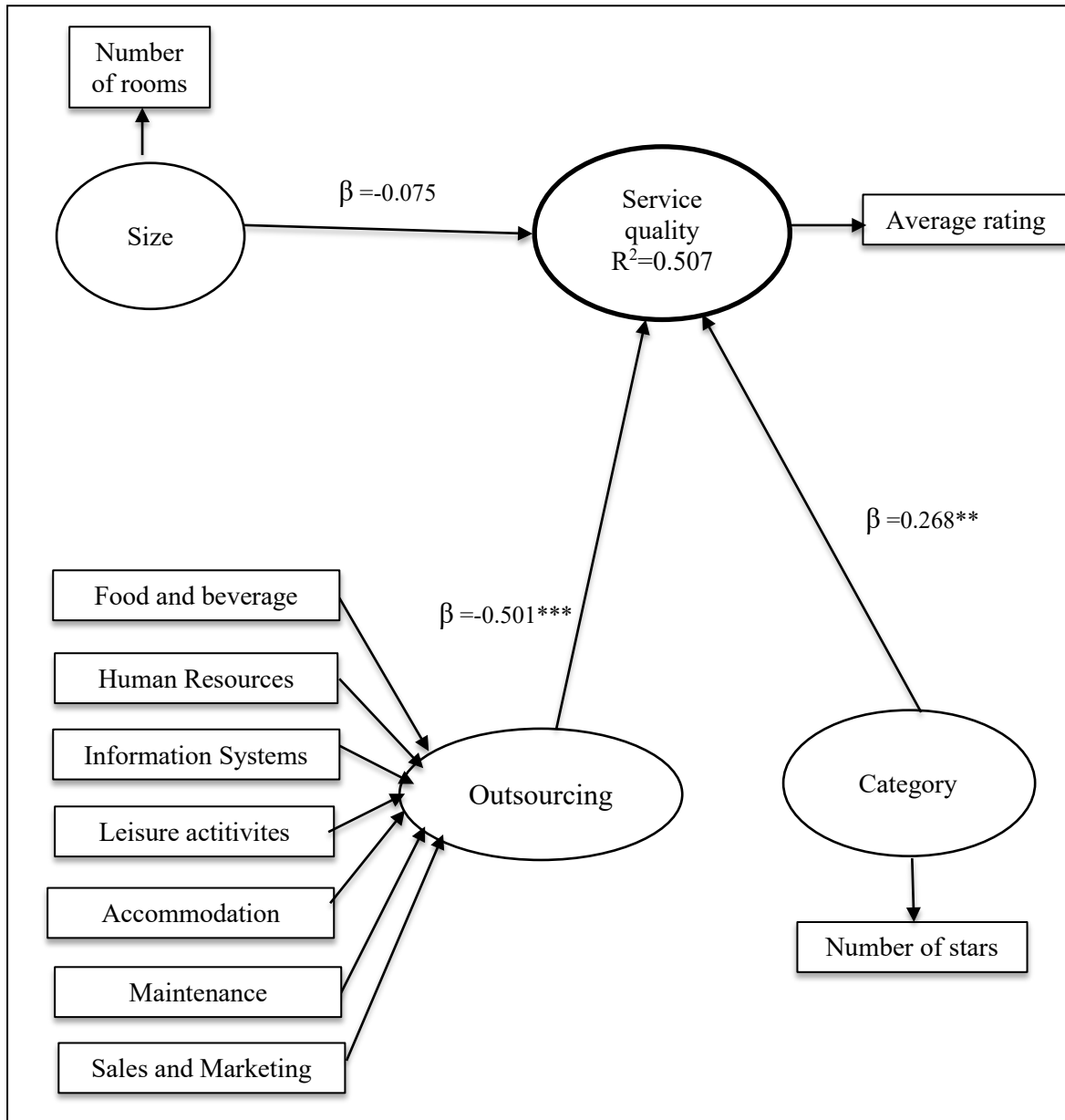
***p<0.001, **p<0.01, *p<0.05

Figure 2. Structural model for Holiday Check



*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Figure 3. Structural model for TripAdvisor



*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$