

Papers

Customer Satisfaction based on the Attributes of Accommodation Services

Satisfação do Consumidor com Base nos Atributos do Serviço de Hospedagem

Satisfacción del Consumidor Basada en los Atributos del Servicio de Alojamiento

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Keywords:

Hotel attributes;
Customer satisfaction;
TripAdvisor.

Palavras-chave:

Atributos do serviço de hospedagem;
Satisfação do consumidor;
TripAdvisor.

Palabras clave:

Atributos del hospedaje;
Satisfacción de los consumidores;
TripAdvisor.

Abstract

The present research seeks to evaluate the contribution of attributes of lodging presented on TripAdvisor website - service, value, cleanliness, location, sleep quality, and room - to guest satisfaction in hotels and bed and breakfasts (B&B) located in Espírito Santo. The research follows a quantitative methodological approach, using secondary data automatically collected on the website. Data were analyzed using descriptive statistics and multiple linear regression. The results indicate that the attributes investigated contribute differently to customer satisfaction depending on the self-reported type of traveler ("Friends", "Couple", "Family", "Business", and "Solo") and price category of the accommodation establishment.

Resumo

A presente pesquisa busca avaliar a contribuição dos atributos da hospedagem disponibilizados no site TripAdvisor — atendimento, custo-benefício, limpeza, localização, qualidade do sono e quarto — para a satisfação dos consumidores de hotéis e pousadas localizados no Espírito Santo. A pesquisa segue a abordagem metodológica quantitativa, utilizando-se de dados secundários coletados automaticamente no site TripAdvisor. Os dados foram analisados por meio da estatística descritiva e da regressão linear múltipla. Os resultados indicam que os atributos pesquisados contribuem de maneira diferente para a satisfação do consumidor dependendo do "Tipo de viajante" informado ("Amigos", "Casal", "Família", "Negócios" e "Sozinho") e da categoria de preços dos meios de hospedagem.

Resumen

La presente investigación busca evaluar la contribución de los atributos del hospedaje disponibles en el sitio web TripAdvisor - servicio, relación calidad-precio, limpieza, ubicación, calidad del descanso y habitaciones - para la satisfacción de los consumidores de hoteles y posadas ubicados en Espírito Santo. La investigación sigue el enfoque metodológico cuantitativo, utilizando datos secundarios recogidos automáticamente en el sitio web. Los datos fueron analizados por medio de la estadística descriptiva y de la regresión lineal múltiple. Los resultados indican que los atributos investigados contribuyen de manera diferente a la satisfacción del consumidor dependiendo del tipo de viajero informado ("Amigos", "Pareja",

Peer-reviewed article.
Received in: 14/09/2018.
Accepted in: 28/11/2018.

“Famílias”, “De negócios” y “Solitario”) y de la categoría de precios de los medios de hospedaje.



How to cite: Almeida, G. S.; Pelissari, A.S.;(2018). *Customer Satisfaction based on the Attributes of Accommodation Services*. *Revista Brasileira de Pesquisa em Turismo*, São Paulo, 13 (2), p. 32-53, maio/ago. <http://dx.doi.org/10.7784/rbtur.v13i2.1516>

1 INTRODUCTION

The tourism industry has played a major role in the growth of the service sector in Brazil in the last decades. One of its main characteristics is to enable the development not only of large, wealthy cities, but also of small cities, which have important natural resources, thus contributing to a more even growth of the service sector in the various parts of the country (Perobelli, Cardoso, Vale, & Souza, 2016).

Services, in general, are processes that lead to value creation and benefits to consumers by meeting their needs (Parasuraman, Zeithaml, & Berry, 1985; Grönroos, 2001). When a consumer considers that a service has provided a pleasurable level of consumption-related fulfillment, to a lesser or greater extent, it is understood that the consumer was satisfied with the service provided (Oliver, 2015). Customer satisfaction with lodging has been a frequent object of study since it is known that satisfied consumers are more willing to pay a premium price for the service, to repeat patronage (repurchase) and to recommend a company to others (Lai, Liu, & Lin, 2011; Suh, Moon, Han, & Ham, 2015; Lehto, Park, & Gordon, 2015; Casidy, & Wymer, 2016).

One of the main objectives of research in this area has been to identify the attributes of the service that contribute most to customer satisfaction. In this context, research using travel and tourism reviews on user-generated content platforms has stood out (Stringam, Gerdes, & Vanleeuwen, 2010; Limberger, Anjos, Meira, & Anjos, 2014a; Limberger, Boaria, & Anjos, 2014b, Rhee, & Yang, 2014; Banerjee, & Chua, 2016). This research focuses on TripAdvisor (TripAdvisor, 2017), a social platform for sharing travel experiences.

TripAdvisor website allows users to express overall satisfaction with accommodation establishments and to rate six service attributes: room, service, value for money, location, sleep quality, and cleanliness. In the study by Stringam et al. (2010), using ratings taken from Expedia website (TripAdvisor partner), it was verified through correlation analysis of variables that service, cleanliness, and room comfort were strongly correlated with customer satisfaction, being the room the most influencing attribute.

With a different focus, Rhee and Yang's (2014) study, using conjoint analysis, found that consumers attributed higher or lower value to the attributes according to "Type of traveler" identified at the time of evaluation: "Business", "Couple", "Family", "Friends" and "Solo". The results indicated that those who traveled for "Business" and "Solo" valued sleep quality while those who identified as "Family" or "Friends" considered value for money more important and the room was the most important attribute for travelers who identified themselves as "Couple".

Banerjee and Chua (2016) analyzed these types of traveler and found that both for chain and independent hotels, the least satisfied consumers were those who identified themselves as "Business". Among European hotels, the satisfaction of couples was greater than that of other types of traveler, while among Asian hotels, the "Friends" group showed the highest level of satisfaction. The results of Park, Yang and Wang's (2019) research, with a sample of hotels in different US cities, were consistent with the findings of Banerjee and Chua (2016). The authors verified differences between types of travelers, mainly regarding satisfaction levels, indicating that travelers identified as "Business" and "Family" were more demanding and had lower levels of satisfaction than travelers identifying as "Couple."

In the Brazilian context, the research by Limberger et al. (2014a) stands out. The study found that in 4- and 5-star hotels, that is, more expensive, value was the factor most correlated with satisfaction, while room was

the most correlated with satisfaction among 3-star hotels (intermediate category); another study, by Limberger et al. (2014b), found that the ability of the attributes considered on TripAdvisor to explain consumer satisfaction varied according to the establishment, being more efficient among the budget hotels and B&Bs.

The results of the cited studies show that there are differences in consumer ratings, according to “Type of traveler” identified and the cost of the stay. However, it was not statistically verified if the contribution of each attribute on customer satisfaction varied according to the “Type of traveler”, nor a more objective characterization of the accommodation establishment, such as the daily rate. Therefore, the purpose of this research is to statistically analyze the different contributions of hotel attributes to customer satisfaction, considering the “Traveler type” and daily rates, according to the ratings posted on TripAdvisor.

The present research is also justified, because it intends to provide hotel managers with insights into the contribution of each attribute to customer satisfaction, seeking to verify the differences according to consumer segmentation and the characteristics of accommodation establishments.

2 THEORETICAL FRAMEWORK

The theoretical framework presented here first addresses the importance of customer satisfaction, and then, the main attributes of hotel service is presented, according to previous research.

2.1 Customer satisfaction

Literature on marketing presents different definitions and ways of measuring customer satisfaction, which generally are framed within three main perspectives (Giese, & Cote, 2000): the cognitive approach, which addresses satisfaction as a rational response given by the consumer, based on a positive evaluation between expectation and perception of service or product quality (Suh et al., 2015; Casidy, & Wymer, 2016; Lai, & Hitchcock, 2017; Xu, & Li, 2016); the approach that considers satisfaction a pleasant emotional reaction, originating from an event that has reached or surpassed consumption expectations (Bagozzi, Gopinath, & Nyer, 1999); and the approach that joins the two previous perspectives (Lai et al., 2011; Lehto et al., 2015). The present research draws on the cognitive approach, understanding satisfaction as a response that results from the consumer’s rational judgment of service regarding the achievement of pleasant levels of performance that vary to a lesser or greater degree (Oliver, 2015).

Such a concept of satisfaction is compatible with the rating system on TripAdvisor, where users can rate their experiences with lodging services. The overall score, ranging from 1 to 5, has already been validated as a measure of satisfaction by Stringam et al. (2010), to study customer satisfaction with the 100 largest North American hotels at the time; by Rhee and Yang (2014) to verify customer satisfaction with a New York hotel; by Limberger et al. (2014a) and Limberger, Meira, Añaña and Sohn (2016) to verify customer satisfaction of consumers with Brazilian hotels; by Limberger et al. (2014b) to measure customer satisfaction of the 22 leading hotels listed by TripAdvisor in 2014; and by Banerjee and Chuá (2016) to assess customer satisfaction with hotels located in America, Europe, Asia, and the Middle East.

Customer satisfaction has attracted researchers' interest primarily due to its influence on consumers' behavioral intentions. “A behavioral intention indexes a person’s motivation to perform a behavior” (Sheeran, 2002, p. 2). These behavioral intentions include: the intention to pay a premium price for the service, the intention to do business with other companies, the intention to repurchase, and the intention to recommend a company to others (Lai et al., 2011; Suh et al., 2015; Lehto et al., 2015; Casidy, & Wymer, 2016).

As for the willingness to pay a premium price, Casidy and Wymer's (2016) survey of 364 US-based consumers confirmed that those who were very satisfied with the service were willing to pay a higher price to stay in the same hotel or in hotels of the same brand, even if competitors offered lower prices. It is known that customer satisfaction is linked not only to the daily rate, but also to the perception of receiving benefits that go beyond the costs incurred, and such benefits positively influence customer loyalty (Liat, & Chiau, 2015).

Customers satisfied with the services provided are less likely to seek a new provider, because the current one already meets their needs, thus, they tend to be loyal to the company (Liat, & Chiau, 2015). Customers who are dissatisfied with services tend to value market alternatives, switching suppliers when possible (Suh

et al., 2015). However, dissatisfied consumers not always leave the company, as there are other factors related to this decision, be it customer inertia (Lai et al., 2011), or perceived switching costs or barriers (Lehto et al., 2015).

In any case, investing in customer satisfaction has proved to be more efficient than relying on inertia or switching costs, as dissatisfied customers can complain about the company and engage in negative word-of-mouth, even if they are still customers (Ladeira, Santini, & Falcão, 2015). In turn, satisfied consumers usually recommend the services to family and friends or even strangers, through social networks. Word-of-mouth is something that cannot be neglected, because it can directly influence potential customers' decisions (Leong, Hew, Ooi, & Lin, 2017).

Given the strategic importance of satisfaction for companies' survival, it is essential to verify the aspects of hotel service that can influence it. Online social networks, such as TripAdvisor, have established themselves as a tool for sharing useful user generated content, allowing quick access to a wealth of information about their satisfaction, which deserve to be the object of researchers' attention.

2.2 Attributes of Hotel Services

Services, in general, are processes that create value and benefits for customers, according to their needs (Grönroos, 2001). An important feature of service is the fact that its consumption occurs during the delivery process itself (Parasuraman et al., 1985). Such an inseparability makes it impossible for services to be stored, also they present great heterogeneity, since supplier-consumer interaction can modify service delivery and the perception of it (Parasuraman et al., 1985; Grönroos, 2001). Although the human factor is essential to the provision of service in the lodging business, tangible aspects such as the room and its equipment also deserve prominence.

Among the main factors of customer satisfaction with hotel service are: staff, room and hotel physical attributes, food, value for money, location, (Zhou, Ye, Pearce, & Wu, 2014; Limberger et al., 2016), cleanliness, maintenance, silence, odor, temperature (Ren, Qiu, Wang, & Lin, 2016), among others. These factors are verified, in summary, through the 6 attributes of hotel service provided by TripAdvisor: rooms, service, value for money, location, sleep quality, and cleanliness, on which the theoretical framework of this article was built.

Among business travelers, Stefanini, Yamashita and Souza's (2012) survey found that customers valued room size, subscription TV services, and air conditioning, a result similar to that of Radojevic, Stanistic, Stanic and Davidson (2018). The importance of air conditioning has also been verified among those traveling as a family, according to Radojevic, Stanistic and Stanic (2015), being one of the few amenities required by these consumers (Kim, & Park, 2017). Among couples, romantic views and decoration can also be important (Winchester, Winchester, & Alvey, 2011), as these consumers focus not only on the basics but also on complementary aspects of service (Rhee, & Yang, 2014). Amongst those traveling alone, aspects related to the possibility of entertainment, such as wireless internet and smart tv, may be important (Lai, & Hitchcock, 2017).

Among budget hotel customers, room size was found to be important by both Kim, Kim and Heo (2016), and by João, Merlo and Morgado (2010). For mid-scale hotels, research by Rauch, Collins, Nale and Barr (2015) indicated that general room-maintenance conditions were important to consumers, while Kucukusta's survey (2017) identified the importance of wireless internet. The valuation of this item was also verified in full-service hotels (Xu, & Li, 2016), as well as other complementary aspects, such as room safety and the personal care products available (Lai, & Hitchcock, 2017).

Service is related to how staff interact and treat guests (Kim et al., 2016; Ren et al., 2016). Xu and Li's (2016) research found that friendly, polite, and helpful staff were important contributors to satisfaction in either full- or limited-service hotels. Responsiveness to requests and welcoming staff was also verified by Ren et al. (2016) when studying customer satisfaction with budget hotels service. According to Ladeira, Costa, Santini, & Araújo (2013), the importance of social interactions tends to intensify as the daily rate increases. This finding is corroborated by Lai and Hitchcock (2017), whose study on luxury hotels revealed that staff's ability

to demonstrate they understood guests' needs was more important to satisfaction than adequately handling the complaints received.

For business travelers, it is important that check-in and check-out processes are quick, since they cannot waste time (Stefanini et al., 2012; Petry, Pickler, & Tomelin, 2016; Chen, 2017). In addition, this group is often dissatisfied when staff is inexperienced and unpleasant (Banerjee, & Chua, 2016). Among those who travel with friends, the general behavior of employees is important (Banerjee, & Chua, 2016), in particular, the staff's ability to know the guests or call them by name (Lai, & Hitchcock, 2017). As for couples, Winchester et al. (2011), identified that this group used to demand good room service, with personalized service to enhance the occasion experienced by the couple. Consumers who travel as a family do not tend to require much attention, as their main concern is value for money (Rhee, & Yang, 2014).

Value for money refers to the relationship between the sacrifice the consumer makes to pay for lodging and the benefits received in exchange for the money invested (Ye, Li, Wang, & Law, 2014). Thus, this relationship can be affected by both price sensitivity and expected benefit. According to Kim and Park (2017), there is a tendency for leisure travelers to be more price sensitive, as they would be responsible for paying the daily rate, contrary to business travelers, who are not paying for their stays themselves. This difference in price sensitivity was already verified by Ghose, Ipeiritos and Li (2012). Research by Radojevic et al. (2018), however, did not confirmed the price capacity to influence differently business or leisure travelers' satisfaction.

Regarding couples, sensitivity to daily rate can be affected by the intention of experiencing various destination attractions, which ends up limiting money available for lodging (Rhee, & Yang, 2014). Family travelers tend to prioritize value because they need more rooms to accommodate everyone, which increases travel costs (Rhee, & Yang, 2014). On the other hand, consumers are also aware of the benefits they are getting in return for what they are paying (Kim, & Park, 2017). In turn, business travelers tend to be more sensitive to the benefits of staying at the hotel, for example, saving time and effort in finding another establishment (Lehto et al., 2015), or convenient location (Chen, 2017).

Regarding daily rates categories, Kucukusta's (2017) study found that consumers who used to stay in budget hotels were more sensitive to daily rates, but those who stayed in intermediate and luxury hotels had a similar sensitivity, and it is not possible to verify a statistical difference between the categories. In Xu and Li's (2016) research, value was only important for the satisfaction of customers staying in limited-service hotels, and in all-inclusive hotels. For the former, the reviews focused mainly on the fact that the price is considered low and fair, for the latter, what mattered most was value for money or the fact of having a better price than competitors.

Location was the most important aspect in satisfied customer ratings, both in limited or full-service hotels, as identified in Xu and Li's (2016) survey; while research by Kim et al. (2016) confirmed this importance only for full-service hotels. In the study by Limberger et al. (2014b), the importance of location was verified only among customers who have chosen "Best Hotels" category. These results seem to indicate that consumers staying at hotels with higher rates are more sensitive to location, as confirmed by Kucukusta's (2017) study.

As far as the profile of consumers is concerned, business travelers tend to value airport proximity, since such consumers aim to reduce possible discomforts caused by constant travel (Chen, 2017), as well as proximity to alternative means of transportation: subway and roads (Yang, Mao, & Tang, 2018). Among leisure travelers, what seems to be more important in terms of hotel or B&B location is the proximity to tourist attractions (Zhou et al., 2017). According to results of Yang et al.'s (2018) research, those traveling solo valued more access to parks, gardens, and historic centers, while those traveling as a family, valued the proximity to sports stadiums. Easy access to the hotel (paths traveled to reach the site) is also an important location aspect (Zhou et al., 2017).

Sleep quality is related to peace and comfort experienced by the guest during sleep (Kim, & Park, 2017). For business travelers the main aspects identified in this attribute are bed and pillows quality, temperature control (Chen, 2017) and mattress type (Stefanini et al., 2012). According to Gustafson (2012), these consumers seize the travel opportunity to relax and rest, and for this, they need peace. Another type of traveler who usually relishes sleep quality is friends, as verified by Rhee and Yang (2014). These researchers also found

that among consumers traveling as a family, sleep quality was of little importance, since such consumers were already used to night-time noises because of their children.

In terms of hotel types, quiet accommodation and temperature control were important aspects among budget hotel guests (João et al., 2010; Kim et al., 2016). The study by Suh et al. (2015), with more expensive hotels (5 stars), did not confirm the importance of room temperature to customer satisfaction, however, silence and air quality (pure and fresh) were found to be important aspects. In turn, the results of Lai and Hitchcock's (2017) research indicated that customers expected a certain level of silence in the room to be satisfied with the stay and, also, found that quality pillows and blankets can delight luxury-hotel guests.

Finally, cleanliness is one of the most basic attributes of hotel service, and although some studies indicate its influence on satisfaction (Banerjee, & Chua, 2016; Lai, & Hitchcock, 2017), others only confirmed that poor cleaning can cause customer dissatisfaction (Kim et al., 2016; Chen, 2017). A study by Chen (2017) found that among business travelers, poor laundry service, especially in relation to towels and bathrobes, caused dissatisfaction and stress among guests. Banerjee and Chua (2016), found that ratings of customers identified as "Family" associated the words "bathroom" and "dirt", suggesting that cleaning is valued and important to satisfaction in a situation where the same bathroom is used by several people.

Regarding the hotel type, Kim et al. (2016) found that in budget hotels, which offered limited or basic services, bathroom and room cleanliness influenced satisfaction, which did not happen with hotels with higher daily rates. In this case, cleanliness was not related to satisfaction, but dirt, either in the bedroom or bathroom, were important dissatisfaction factors. In the case of Lai and Hitchcock's (2017) investigation on satisfaction among luxury hotels, researchers confirmed that bathroom cleaning and towels may lead to customer dissatisfaction and they also confirmed that these aspects can drive satisfaction ratings up.

In the following, the methodological aspects of the investigation are presented, seeking to briefly identify the steps performed for data collection and selection.

3 RESEARCH METHODS

This research is characterized as quantitative, using metrics and statistical analysis processes to verify the ability of hotel attributes, as defined by TripAdvisor, to influence customers' overall satisfaction.

The sample of hotels and B&B analyzed was composed of lodgings located in the state of Espírito Santo. This state was chosen because it was the only one in the Southeast region (the most economically developed in the country) that did not host the Games, either the World Cup or the Olympics. It is assumed that the infrastructure and attributes of lodgings in the state behaved more regularly in recent years than those in the other three states that were affected by these events (Ministério do Turismo, 2017).

The sampled cities were Vitória, Vila Velha, Cariacica, Serra, and Guarapari, because they are included in the same tourist region in the state, known as "Metropolitana". This region was chosen because it includes the state capital, Vitória, and because it is the state region with the highest number of posted ratings. Data from the 2017 Espírito Santo Hotel Census (Secretaria de Turismo do Estado do Espírito Santo, 2017), showed that of the 891 accommodation establishments that participated in the survey, the majority were B&B (48.4%) and hotels (33.9%), classified as microenterprises (52.9%) and as individual micro-entrepreneurs (33.3%), which helps explain why the sector was composed mainly of family businesses (85.7%), while only 4% of the 891 establishments were part of a chain.

The data used in the survey were collected from TripAdvisor during the month of September 2017 using crawler software (Esuli, 2017), whose script can be found at <<https://github.com/aesuli/trip-advisor-crawler>>. The crawler was run through the Eclipse Oxygen program interface version 4.7.0 on a Windows 8.1 Pro, 64-bit operating system.

Ratings posted on the website specify: the user who made the review, the overall experience rating (mandatory), the title of the review, the detailed review description, the ratings of service predetermined attributes (it is not mandatory to answer these items), the "Traveler type" ("Business", "Couple", "Family", "Friends" and "Solo"), and the period of stay. The rating scale ranged from 1 to 5, in which 1 indicates that the customer considers the attribute as "very bad", 2 as "bad", 3 as "reasonable", 4 as "very good", and 5 as "excellent".

For setting price categories, manual collections were made on TripAdvisor, seeking to identify the daily rates of each sampled establishment. The website provided the minimum and maximum price range practiced. Data were collected in December 2017 and recorded in Excel. The distribution approaching normal distribution, at minimum prices, was chosen to generate the categories (see APPENDIX). Then, the sample was divided into 4 categories: Category 1, daily rate up to R\$100.00; Category 2, from R\$101.00 to R\$200.00; Category 3 from R\$201.00 to R\$300.00; and Category 4, for daily rates above R\$301.00. However, the latter category did not present enough reviews to perform the regression.

To extract the relevant data from the reviews, a parser (Almeida, 2017) was used, whose script is <<https://bitbucket.org/almeidags/parsertripadvisor/src>>. In Excel 2013, reviews with missing data were excluded, and the parameter "Traveler Type" was also parameterized, since some evaluations presented the criterion "Two" instead of "Couple" and "Work" instead of "Business". To analyze the extracted data, descriptive statistics were used first, aiming to identify the profile of the sample. Subsequently, the data were analyzed using the statistical technique known as multiple linear regression, using SPSS (Statistical Package for the Social Sciences) software, version 25.

The regression model should be based on clear theoretical underpinnings that support the relationships to be tested. The variance inflation factor (VIF) was used to verify possible problems with multicollinearity. In order to guarantee the robustness of the results, graphical analysis of regression residuals was carried out to analyze the residual distribution, its linearity in relation to the dependent variable, homoscedasticity, and independence among observations (Hair, Black, Babin, Anderson, & Tatham, 2009; Montgomery, Peck, & Vining, 2012). The tests carried out ensured the robustness of the results. The relationships among the variables were represented by the following formula:

$$\text{Satisfaction} = \beta_0 + \beta_1 \text{ Service} + \beta_2 \text{ Value for money} + \beta_3 \text{ Cleanliness} + \beta_4 \text{ Location} + \beta_5 \text{ Sleep Quality} + \beta_6 \text{ Room} + \varepsilon \quad (1)$$

In the above formula, the coefficient β_0 refers to the satisfaction value when the ratings attributed to the independent variables are equal to 0, but among the analyzed data the answer 0 is impossible, thus, "the constant merely participates in the forecasting process and does not offer any clues for interpretation" (Hair et al., 2009, p. 212). The other coefficients β represent the contributions of each attribute to consumer satisfaction. Next, a summary of the characteristics of the sample is presented, using descriptive statistics, and then the results for each analyzed group, according to the multiple regressions, are presented.

4 DATA ANALYSIS AND PRESENTATION

A total of 21789 reviews were collected between June 2006 and September 2017, although only the reviews posted between September 2012 and August 2017 were used. In this way, 811 (3.72%) reviews were excluded because they were posted outside that period. Other 978 (4.49%) reviews were excluded because they did not identify the "Traveler Type". We also excluded 4502 (20.66%) reviews because only the overall satisfaction was rated, 7090 (32.54%) because they did not present the ratings for all attributes and, finally, 139 (0.64%) reviews were excluded because they did not refer to hotels or B&Bs.

The final sample thus included 8269 reviews, referring to 110 hotels and B&Bs, located in the five cities in the "Metropolitan" tourist region in the state of Espírito Santo, representing 21% of tourist accommodation in the state. Satisfaction, in a total 8269 reviews, scored 1 in 130 cases (1.57%), in 283 reviews it scored 2 (3.42%), and in 1227 it scored 3 (14.84%). Most customers, 3674, rated overall satisfaction as 4 (44.43%), and 2955 assigned it a score of 5 (35.74%). In general, it is noticed that most of the consumers that compose the sample are satisfied with lodgings.

Table 1 shows the data referring to the ratings given for each attribute of accommodations. The "Mean" column represents the means of ratings assigned to each attribute. We notice that the attribute with the highest mean score, 4.47, is location, since it has the highest number of scores of 5 (excellent) and the lowest number of scores of 1 (very bad), showing that most customers were satisfied with location. In turn, value for money attribute was the one that yielded the lowest mean score, 4.04, even so, a positive score for hotels and B&Bs. The service attribute was the one that received the highest number of scores of 1 (161),

indicating that this attribute was the least pleasing. The mean score of the sampled establishments can be considered as “very good” for all six attributes analyzed, since all the means values were higher than 4.00.

Table 1 - Accommodation attributes x ratings

Attributes	Ratings					Mean
	1	2	3	4	5	
Service	161	245	1009	2988	3866	4.22
Value for Money	134	284	1607	3276	2968	4.04
Location	41	106	683	2484	4955	4.47
Cleanliness	138	204	774	3031	4122	4.30
Sleep Quality	117	213	870	2759	4310	4.32
Room	124	260	1296	3038	3551	4.16

Note: research data

The survey data indicated that, on average, customers rated highly the attributes of lodgings, showing satisfaction. The results of the regressions are presented below, seeking to show the contribution of each attribute to overall satisfaction with accommodation services.

4.1 Presentation of results

The investigation of the contribution of the attributes of lodgings to customer satisfaction was conducted with samples segmented according to the "Type of traveler", and categories related to standard room daily rates.

4.1.1 Results of multiple linear regressions

To perform the regressions, we sought to form each of the eight samples with 250 reviews each, randomly selected. In cases where there were not enough reviews, the regressions were performed with the available reviews, provided the samples were composed with at least 50 reviews. This strategy was adopted because regressions with very large samples tend to present all the contributions as significant (George, Haas, & Pentland, 2014); in addition, this sample size was aimed at minimizing the possible statistical effects caused by a non-normal distribution of residuals (Hair et al., 2009). The summary of results is shown in Table 2. The data show that the six attributes are more capable of explaining satisfaction of those who have identified themselves as “Friends” (74.2%), and among those who have chosen Category 3 of accommodation establishments (76%). T-test results, with 95% confidence, for differences between coefficients of determination (R^2) found in the research (see APPENDIX), indicate that the R^2 of “Friends” is statistically superior to all other types of travelers, but between the price categories there is only a significant difference between categories 2 and 3.

Table 2 - Ability of the independent variables to explain the variable Satisfaction

Group	R^2	Standard Error
Friends	0.742	0.464
Couple	0.731	0.462
Family	0.699	0.452
Business	0.703	0.469
Solo	0.610	0.506
Category 1	0.712	0.513
Category 2	0.686	0.461
Category 3	0.760	0.438

Note: research data

(R^2) = coefficient of determination; ability of variables to explain satisfaction.

Table 3 shows the regression coefficients for each attribute, together with the respective standard error and VIF (Variance Inflation Factor).

Table 3 - Regression Coefficients of Dependent Variables for Each Group

Groups	Results	Service	Value for money	Cleanliness	Location	Sleep Quality	Room
Friends	β	0.314*	0.126*	0.096	0.015	0.161*	0.298*
	Stand. Error	0.050	0.047	0.052	0.049	0.057	0.054
	VIF	2.408	2.276	2.519	1.378	2.846	2.980
Couple	β	0.327*	0.205*	0.095*	0.043	0.026	0.405*
	Stand. Error	0.043	0.043	0.046	0.044	0.050	0.050
	VIF	1.643	1.618	1.782	1.105	2.026	2.544
Family	β	0.137*	0.209*	0.160*	0.011	0.160*	0.284*
	Stand. Error	0.046	0.041	0.053	0.048	0.051	0.053
	VIF	1.893	1.751	2.339	1.243	2.113	2.611
Business	β	0.290*	0.161*	0.117*	0.055	0.013	0.380*
	Stand. Error	0.044	0.039	0.053	0.042	0.053	0.053
	VIF	1.730	1.353	2.288	1.358	2.542	2.622
Solo	β	0.235*	0.126*	0.090	0.077	0.188*	0.229*
	Stand. Error	0.053	0.045	0.061	0.043	0.051	0.055
	VIF	1.797	1.536	2.401	1.217	2.010	2.191
Category 1	β	0.218*	0.112*	0.146*	-0.007	0.127*	0.298*
	Stand. Error	0.047	0.047	0.044	0.050	0.049	0.045
	VIF	2.329	2.248	2.103	1.346	2.630	2.579
Category 2	β	0.301*	0.171*	0.068	0.057	0.102	0.229*
	Stand. Error	0.042	0.041	0.057	0.041	0.056	0.058
	VIF	1.778	1.923	2.361	1.253	2.222	2.295
Category 3	β	0.301*	0.145*	0.159*	0.153*	0.221*	0.131*
	Stand. Error	0.049	0.045	0.052	0.052	0.051	0.058
	VIF	2.524	1.953	3.018	1.485	2.558	3.395

Note: research data.

(β) = Unstandardized regression coefficient.

*significant at 95%.

As shown in Table 3, the attributes that contributed to satisfaction in all cases were service, room, and value for money, while cleanliness and sleep quality were significant only among some groups. In general, the location attribute was not significant for satisfaction, except for Category 3. The results indicate that there is a difference between the regression results according to “Traveler type” or price category. The VIF analysis shows that the independent variables do not present problems of multicollinearity, since in all cases the value of VIF was lower than 5.

Results of t-test for differences between significant coefficients (β) (see APPENDIX), with 95% confidence, showed that for value for money attribute only the coefficients of the groups “Friends” and “Solo” were not statistically different. For sleep quality attribute, only the coefficients presented by “Friends” and “Family” groups were not statistically different. Also, the coefficients of cleanliness attribute of “Couple” and “Solo” groups were not statistically different. For all other groups the differences were significant. For price categories, the t-test indicated that the coefficients of cleanliness attribute of Categories 1 and 3 were not statistically different, as well as the coefficients of service attribute of Categories 2 and 3. All other differences were statistically significant.

In the next section, we present the analysis and discussion of results shown in this section.

5 ANALYSIS AND DISCUSSION OF RESULTS

The regression of customers' ratings who identified themselves as “Friends” showed that the attributes service, room, sleep quality, and value for money presented a significant contribution to customer satisfaction. This group has shown to be more concerned with service (Banerjee, & Chua, 2016) than with value for money (Rhee, & Yang, 2014). Rhee and Yang (2014) argued that the valuation of value for money attribute by these

consumers indicates their preference for sharing rooms and costs. Thus, this result may indicate that consumers traveling with friends do not necessarily share rooms, and may only have traveled together and stayed in different rooms.

The valuation of service by “Friends” may also indicate that even among those who shared the room, the focus was not on this attribute, but on service or room options (Radojevic et al., 2015) and both are usually found in high-priced lodgings (Ye et al., 2014). Finally, these consumers also consider sleep quality as an important attribute for satisfaction, in line with research by Rhee and Yang (2014).

The regression results for “Couple” group show that the attributes room, service, value for money, and cleanliness presented significant contributions to customer satisfaction. This was the group that placed the greatest importance on room attribute, as expected (Rhee, & Yang, 2014). This group was also the one that most valued the service, confirming that the concern of couples goes beyond good rooms, also valuing good service, sometimes personalized and that values the occasion (Winchester et al., 2011).

The significance of value for money is similar to that found by Rhee and Yang (2014), and demonstrates that couples are concerned with it. However, in Rhee and Yang’s (2014) study the results seem to indicate that North American couples focus only on room attributes, while Brazilian consumers also focus on service attributes. The poor contribution of cleanliness was not expected (Rhee, & Yang, 2014), but this result may indicate that cleanliness behaves as a basic aspect, depending on consumer profiles and type of lodging (Lai, & Hitchcock, 2017).

The regression of customers’ ratings who identify themselves as “Family” showed that the attributes room, value for money, cleanliness, sleep quality, and service presented a significant contribution to customer satisfaction. The importance given to room and value for money attributes was expected, as well as the lesser importance given to service among these consumers (Rhee, & Yang, 2014).

Among the significant attributes, service was the least important for satisfaction. The analysis of this result, together with value for money and room coefficients, reinforces that the most valued attribute for these consumers is room. This room must meet their needs, including good sleep conditions, at an affordable price. It is known that well-equipped lodgings usually charge higher daily rates (Ye et al., 2014) and, as these consumers are unwilling or unable to pay more for accommodation (Ghose et al., 2012), they tend to focus on other aspects considered to be inherent to the service, such as room and cleanliness (Lai, & Hitchcock, 2017).

The regression of customers’ ratings who identified themselves as “Business” showed that the attributes service, room, value for money, and cleanliness were significant for customer satisfaction. Sleep quality was expected to be significant while value for money was expected to be less important (Rhee, & Yang, 2014; Kim, & Park, 2017). The importance given to value for money shows that such consumers are as cost-sensitive as leisure travelers, perhaps because in the present survey they themselves had to pay for the stay instead of employers.

Room was the attribute that most contributed to the satisfaction of this group, possibly because the room was used both for rest and for work (Gustafson, 2012; Stefanini et al., 2012). When comparing the contribution of attribute room among all types of travelers, it is perceived that consumers who tend to spend more time in the hotel or B&B – couples or executives – value the room more than travelers who tend to spend less time – solo or family (Kim, & Park, 2017). Both service, which should preferably be well executed, fast, and agile (Petry et al., 2016), and cleanliness, focused mainly on the bedroom (Stefanini et al., 2012) and bath linen (Chen, 2017), have also proved to be important to such consumers.

The regression of customers’ ratings identified themselves as “Solo” showed that the attributes service, room, sleep quality, and value for money presented a significant contribution to customer satisfaction. The importance given to service by Brazilian consumers traveling alone suggests that the focus of this group is not on cost (Radojevic et al., 2015), but on good service, and on room quality, which usually happens in more expensive establishments (Ye et al., 2014). Although the significance of value for money shows that this attribute was also a criterion evaluated in the formation of satisfaction, those who travel alone may not present a high sensitivity to price, focusing more on the benefits generated by service, thus differentiating themselves from those traveling in “Family”.

The regression on lowest price criterion for a standard room showed that for Category 1 (up to R\$100.00) the significant attributes were room, service, cleanliness, value for money, and sleep quality. The results show that value for money is really an important factor for customer satisfaction of those staying in budget hotels or B&Bs (Xu, & Li, 2016), indicating that lowering prices is an important strategy for competitiveness of these establishments. Those who pay less seem to be very sensitive to room attributes, since this was the highest coefficient found, regardless of price sensitivity (Kim et al., 2016; Kim, & Park, 2017), it is assumed that room should not be neglected in exchange for a reduction in costs and price.

People staying in cheaper accommodation tend to place greater emphasis on physical aspects and as they have little contact with staff (João et al., 2010) it is expected that they value service less thus, shortcomings in this respect may go unnoticed. Although these consumers do not require any special service, staff should always behave politely, courteously, always with a smile on their face, and able to give correct answers to guests' questions (Ren et al., 2016).

The regression on Category 2 (R\$101.00 to R\$200.00), i.e., mid-range establishments, showed among this group the least number of significant attributes for satisfaction with accommodation, being: service, room, and value for money. The results showed that value for money contributed more to the satisfaction of people who stayed in places that offered mid-range rates than among those who stayed in cheaper hotels, unlike Xu and Li (2015), who did not confirm the importance of value for this category of establishments.

Such a result may be related to the fact that Category 2 consumers value more the benefits of good service, and not only daily rates, as happens with Category 1 consumers. Those who use mid-range establishments do not opt for the lowest-cost options because they know that budget hotels offer more basic services (João et al., 2010) and may have maintenance problems, but do not want to pay too much for a good service and a good room. Moreover, the possibility of comparing different types of lodging (economy vs. mid-range) leads consumers to value more what is offered during their stay (Lehto et al., 2015).

The results of regression on Category 3 (R\$201.00 to R\$300.00), referring to high-standard establishments, showed that all attributes were significant for those customers' satisfaction, confirming that the higher the category of the accommodation the more demanding consumers become (Ye et al., 2014). Service was the attribute that contributed the most to satisfaction because when prices are higher, the influence of the interactions between guests and staff tends to be higher (Ladeira et al., 2013).

Although high-end accommodation guests seek good service (Ye et al., 2014), this does not mean that they do not care about value for money. This attribute also contributes to satisfaction, but a little less than it contributed to satisfaction in Category 2, possibly because besides having a larger budget (Kucukusta, 2017), a factor that reduces the impact of daily rates on travel costs, this consumer already expects high performance and, thus, most of what is offered is seen as standard service and not as something extra (Albayrak, & Caber, 2015).

Finally, it should be noted that location was significant for Category 3. This fact led to new analyses, which showed the significance of attribute location only among those who identified themselves as "Business" (see APPENDIX). It is inferred from this result that although location was not significant for the entire "Business" group, it was rather significant for a specific group of possible executives who were willing to pay a higher price for convenience (Gustafson, 2012). Ratings from these consumers influenced "Category 3" regression results.

6 FINAL REMARKS

The present study demonstrated that the attributes room, service, value for money, cleanliness, sleep quality, and location can influence customer satisfaction of the sample, however this influence may vary according to "Type of traveler" and category of standard room price. Thus, this study contributes theoretically to tourism and hospitality literature by extending knowledge of the influence of both the consumer profile and type of lodging on satisfaction with attributes of these establishments. The present research exposes the importance of performing analyses with samples of segmented consumers, seeking to perceive differences between segments that would not be perceived if samples were very heterogeneous. Due to the use of segmented

samples, it was possible to verify, among other things, that the location is an important attribute for the satisfaction of those business travelers who pay higher rates.

The practical value of this study lies in the use that might be made of TripAdvisor data to guide decision-making of lodging managers, in Espírito Santo State. In general, it is suggested that rooms be of adequate size, offer the standard equipment, and be kept clean, especially the bathroom, and bed and bath linen. If lodging managers can identify the reason for travel, they can, for example, provide a more comfortable room for a couple, a bigger bed or deliver a special treat or surprise on a special occasion.

For business travelers, it would be interesting that rooms have broadband Internet access that allows videoconferencing, are located in less noisy areas, away from recreation areas, allowing the consumer to focus on their meetings or to enjoy the stay for both rest and work. In the case of family traveling consumers, the rooms should be large to accommodate everyone if possible. If this is not possible, it is important that everyone stays in neighboring rooms, facilitating the interaction between trip participants.

Since staff behavior has a strong influence on service, it is important that hotels or B&Bs properly train their employees so that they serve guests in a courteous and helpful manner. For consumers who travel on business, accommodation services can develop fast check-in and check-out, as well as quick resolution of any problems that may occur. For couples and friends, service can provide important information about sights, make suggestions for tours, provide good room service, among others. For those who travel with family, the service can be simpler, such as correct reservation, and clarification of questions.

Since value for money is an important attribute for customer satisfaction, managers' decisions should always consider customer profile to evaluate how much the consumer is willing to pay for the room. A very specialized service or rooms with specific equipment can be valued by couples, business travelers, or friends, but may not be valued by those traveling with family members, and the costs incurred can be considered as a disadvantage to the hotel or B&B. Managers can seek to influence the perception of benefits offered to consumers, thus seeking to improve the value-for-money of their service.

In case the approach of accommodation establishments is the lowest price for a standard room, it is suggested that budget hotels focus on the most basic aspects of service, such as rooms and cleanliness, offering basic reception services, provided these are well executed. As the price category increases, establishments can offer more specialized services, focusing on custom service, since this is the attribute that exerts greater influence on satisfaction of those who stay in this hotel category. However, the other aspects of the service cannot be overlooked, especially room and cleanliness, as consumers tend to demand regarding these attributes because they consider them part of a high standard service.

For more expensive lodgings, location can be an important aspect to be explored with business travelers. Convenient location, such as near airports or highways, may mean time -and -money -saving advantages for customers and this attribute can be used as a promotional argument. In this sense, hotels and B&Bs may offer a better experience to guests and, thus, influence customer satisfaction and ratings.

There are some limitations to this study. For example, demographic variables were not considered, and the fact that only a quantitative approach of the data was adopted. It is suggested that future research seek to replicate the study in different contexts, in order to confirm or refute the findings of this study, in addition, it is suggested that a qualitative analysis of the reviews be conducted, through text analysis. Finally, it would be interesting if other studies sought to further the knowledge on the preferences of consumers who identify themselves as "Friends", since during the research the absence of studies on this group was verified.

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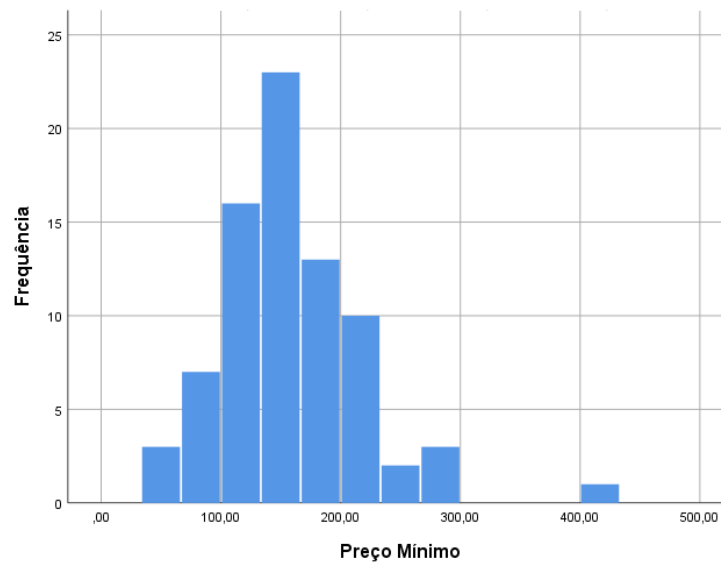
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Appendix

Figure 1 - Histogram of lowest price for standard room rates.



Source: research data (2018).

Table 4 - Results of t-test for differences between coefficients of determination (R^2)

Groups	T-test results
Friends x Couple	5.50*
Friends x Family	3.58*
Friends x Business	-7.80*
Friends x Solo	-3.14*
Couple x Family	3.20*
Couple x Business	-4.00*
Couple x Solo	0.165**
Family x Business	0.235**
Family x Solo	-1.64**
Business x Solo	0.130**
Category 1 x Category 2	0.500**
Category 1 x Category 3	-0.640**
Category 2 x Category 3	-3.217*

Note: * Significant at 95% confidence level. ** Not significant

Source: research data (2018)

Table 5 - Results of t-test for differences between coefficients (β)

	Service	Value for money	Cleanliness	Sleep Quality	Room
T-test results					
Friends x Couple	-1.995*	-21.047*			-27.631*
Friends x Family	40.411*	-14.447*		0.139**	33.432*
Friends x Business	4.287*	-4.566*			-176.707*
Friends x Solo	-30.493*	-0.359**		-4.012*	-50.175*
Couple x Family	-87.345*	-2.203*	10.030*		-34.647*
Couple x Business	-39.312*	10.567*	3.166*		-7.376*
Couple x Solo	-10.061*	-45.262*	-0.298**		-33.505*
Family x Business	-124.192*	23.084*	-77.402*		-1484.212*
Family x Solo	14.077*	-22.046*	-8.564*	-33.360*	-31.256*
Business x Solo	-6.690*	-6.030*			-82.242*
Category 1 x Category 2	-15.739*	-11.139*			-5.043*
Category 1 x Category 3	51.436*	-17.677*	1.761**	40.325*	-12.532*
Category 2 x Category 3	-0.076**	-7.620*			308.233*

Note: * Significant at 95% confidence level. ** Not significant

The attribute location was excluded because it did not present a significant β

Source: research data (2018)

Table 6 - Regression results of group "Category 2"

Groups	Results	Service	Value for money	Cleanliness	Location	Sleep Quality	Room
Friends	β	0.359*	0.236*	0.064	-0.079	0.036	0.279*
Couple	β	0.391*	0.173*	0.198*	0.037	-0.060	0.217*
Family	β	0.258*	0.266*	0.222*	-0.037	0.098	0.173*
Business	β	0.213*	0.277*	0.087	0.131*	0.138*	0.295*
Solo	β	0.515*	0.090	0.050	0.200	0.200*	0.000

Note: (β) = Non-standard regression coefficient

* Significant at 95% confidence level

Table 7 - Correlation matrix of group "Friends"

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.469**	.617**	.647**	.612**	.672**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.469**	1	.434**	.446**	.399**	.452**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.617**	.434**	1	.749**	.689**	.667**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.647**	.446**	.749**	1	.716**	.624**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.612**	.399**	.689**	.716**	1	.644**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.672**	.452**	.667**	.624**	.644**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)

Table 8 - Correlation matrix of group "Couple"

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.229**	.479**	.529**	.467**	.514**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.229**	1	.249**	.283**	.233**	.206**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.001
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.479**	.249**	1	.691**	.523**	.437**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.529**	.283**	.691**	1	.613**	.542**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.467**	.233**	.523**	.613**	1	.500**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.514**	.206**	.437**	.542**	.500**	1
	Sig. (2-tailed)	0.000	0.001	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)

Table 9 - Correlation matrix of group "Family"

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.381**	.522**	.566**	.552**	.525**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.381**	1	.378**	.355**	.323**	.273**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.522**	.378**	1	.663**	.612**	.572**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.566**	.355**	.663**	1	.705**	.608**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.552**	.323**	.612**	.705**	1	.595**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.525**	.273**	.572**	.608**	.595**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)

Table 10 - Correlation matrix of group “Business”

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.298**	.426**	.377**	.420**	.444**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.298**	1	.456**	.462**	.420**	.375**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.426**	.456**	1	.730**	.659**	.538**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.377**	.462**	.730**	1	.680**	.540**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.420**	.420**	.659**	.680**	1	.573**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.444**	.375**	.538**	.540**	.573**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)

Table 11 - Correlation matrix of group “Solo”

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.254**	.465**	.477**	.552**	.448**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.254**	1	.358**	.305**	.359**	.350**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.465**	.358**	1	.626**	.636**	.483**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.477**	.305**	.626**	1	.647**	.586**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.552**	.359**	.636**	.647**	1	.591**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.448**	.350**	.483**	.586**	.591**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)

Table 12 - Correlation matrix of group "Category 1"

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.383**	.664**	.621**	.604**	.650**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.383**	1	.436**	.438**	.294**	.445**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.664**	.436**	1	.701**	.636**	.649**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.621**	.438**	.701**	1	.647**	.658**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.604**	.294**	.636**	.647**	1	.590**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.650**	.445**	.649**	.658**	.590**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)

Table 13 - Correlation matrix of group "Category 2"

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.371**	.512**	.561**	.528**	.590**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.371**	1	.384**	.332**	.235**	.243**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.512**	.384**	1	.650**	.656**	.496**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.561**	.332**	.650**	1	.673**	.495**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.528**	.235**	.656**	.673**	1	.552**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.590**	.243**	.496**	.495**	.552**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)

Table 14 - Correlation matrix of group "Category 3"

		Value for Money	Location	Sleep Quality	Room	Cleanliness	Service
Value for Money	Pearson's correlation	1	.417**	.595**	.650**	.595**	.587**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Location	Pearson's correlation	.417**	1	.457**	.490**	.521**	.511**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000
	N	250	250	250	250	250	250
Sleep Quality	Pearson's correlation	.595**	.457**	1	.754**	.627**	.619**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000
	N	250	250	250	250	250	250
Room	Pearson's correlation	.650**	.490**	.754**	1	.739**	.642**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000
	N	250	250	250	250	250	250
Cleanliness	Pearson's correlation	.595**	.521**	.627**	.739**	1	.732**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000
	N	250	250	250	250	250	250
Service	Pearson's correlation	.587**	.511**	.619**	.642**	.732**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	
	N	250	250	250	250	250	250

Note: ** Correlation is significant at 0.01 level (2-tailed)

Source: research data (2018)