

## **Luxurious or economical?**

### **An identification of tourists' preferred hotel attributes using best–worst scaling (BWS)**

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## **Abstract**

This article explores consumer tendencies to opt for luxury or economy hotels by identifying their most and least important selection attributes. The researchers investigate how sociodemographic and behavioral characteristics influence traveler assessments of hotel attributes. In explaining consumer hotel selection preferences, the researchers used an unconditional method—best–worst scaling (BWS). Based on an analysis of responses from 397 luxury hotel customers and 351 economy hotel customers in the United States, it was found that the two groups perceive hotel attributes differently. Differentials were also identified on the basis of gender, income, and frequency of purchase. While acknowledging that the task is complex, there is an urgent need to identify the factors influencing hotel selection, because hoteliers need to attract new markets and also balance this by retaining existing patrons. The findings extend existing literature by applying BWS to the identification of hotel selection attributes.

## **Keywords**

Behavioral and sociodemographic characteristics, best–worst scaling, hotel selection attributes, hotel type

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## Luxurious or economical?

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#### Introduction

Researchers have shown that product and service features are the key influences on tourists' hotel selection decisions (Pan et al., 2013). Hotel users tend to pursue what may be described as optimum utility, reflective of their preferences and values (Jannach et al., 2012; Lockyer, 2005). Tourism scholars have undertaken extensive research on hotel selection attributes, often focusing on the marketing and hotel customers' behavior aspects (e.g. Li et al., 2013; Sohrabi et al., 2012). From a practitioner perspective, understanding hotel selection preferences can inform the formulation of positioning strategies and the prioritization of future product developments. In the increasingly dynamic and competitive hospitality environment, researchers should acquire deep insights into how customers prioritize hotel attributes.

According to random utility theory, the ranking of alternatives can be estimated by determining an independent value scoring for each alternative and then using the scores to generate a ranking system (Louviere et al., 2013; Soufiani et al., 2012). The probability of a specified pair between a choice and an alternative is relative to the distance between the two attribute levels on the latent utility scale (Flynn et al., 2007). This approach has been applied in developing a “best–worst scaling (BWS)” statistical model.

Previous researchers have adopted BWS as a choice-based measurement approach (Louviere et al., 2013; Scarpa et al., 2011). Among a set of choices, a pair of response categories should be compared and discerned forcefully between one another.

Understanding the trade-offs that customers make between the attributes associated with different properties can be particularly informative for hotel chains that embrace a multibrand strategy.

The many studies that have explored the determinants of hotel selection using a variety of methodologies are indicative of the importance of the topic (Masiero et al., 2015). While hotel selection attributes have been identified previously, researchers have not made use of the random utility theory for decision-making, though it is a potentially straightforward and effective optimum utility concept. In other words, the current authors note that researchers have given insufficient attention to the subtle distinctions affecting the relative importance derived from the maximum utilities, notably the trade-offs that an individual

must seek when choosing between various options. Meanwhile it may be impossible to quantify differentials between evaluations of various attributes. The research results have been inconsistent, perhaps due to an overconfidence among researchers that the applicable ratings can be captured along an interval scale (Cohen, 2009). In practice, it is probable that respondents emanating from various cultural backgrounds have differential perceptions of the scale items and may subconsciously adopt their own criteria (Cohen, 2009; Lee et al., 2008).

The researchers use hotel selection attributes and the BWS method to develop a comprehensive range of choice sets. The chosen approach applies an innovative research method that overcomes the previous overreliance on aligning selection attributes with perceived importance. Secondly, the researchers examine the relative importance of hotel selection attributes for the luxury and economy categories. The present investigation explores salient hotel selection attributes that indicate customer preferences using an unconditional approach consistent with hotel purchasing patterns. It is important to compare different classes of hotel because of the differential customer expectations about service quality (Knutson et al., 1993). This prompts such hotels to target different markets.

Thirdly, the researchers investigate whether the selection attributes apply to different hotel types according to segmentation characteristics such as gender, income, and frequency of use. These have been shown to be determinants of salient customer selection (Spiggle and Sewall, 1987). Most previous investigations concluded that demographic and behavioral factors influence the perceived importance of hotel selection attributes (e.g. Hart, 1993; McCleary et al., 1994; Weaver and Oh, 1993). The present researchers consider such characteristics as potentially influential variables when selecting a hotel and apply BWS to choices about the most preferred hotel selection attributes.

## **Literature review**

### **Hotel selection attributes and hotel users' preferences**

Researchers have used a variety of methods to explore the nature and significance of hotel selection attributes (Chu and Choi, 2000; Dolnicar, 2002). Various studies have identified the factors or attributes that apply to hotel selection (Chu and Choi, 2000; Dolnicar, 2002; Masiero et al., 2015). However, less attention has been given to what influences and leads to satisfaction on the part of customers who are active social media users (Kim et al., 2016). The hotel choice preferences of contemporary customers are particularly complex

because of the diversity of utility functions that they are seeking (Lockyer, 2005; Pan et al., 2013). A review of the previous literature shows five main variables that appear to determine the preferences and selection behaviors of hotel users: purpose of travel, gender, age, cultural differences, and accommodation types.

Some studies have considered the purpose of travel as a potential influence on hotel selection (Griffin et al., 1997; Weaver and Oh, 1993; Wong and Lam, 2002). Weaver and Oh (1993) concluded that compared with their less frequent counterparts, frequent business travelers attach greater importance to complementary facilities. Some studies have focused on business traveler hotel selection attributes (Griffin et al., 1997; Wong and Lam, 2002). Griffin et al. (1996) identified certain prominent factors in the mid-priced and luxury hotel categories, comprising mainly service-oriented features such as bell service, concierge service, and prearranged check-in service. Wong and Lam's (2002) Hong Kong study identified several selection attribute criteria, with price being the most crucial, followed by star rating, location, brand, and room type. Business travelers prioritized star rating, while leisure travelers focused more on room rate. Lockyer (2002) investigated hotel selection attributes from the guest and management perspectives and found that business travelers prefer facility-related attributes, whereas management attaches high importance to service and staff-oriented attributes.

Demographics such as gender (Hart, 1993; McCleary et al., 1994) as well as age cycle stage (Ananth et al., 1992; Callan and Bowman, 2000) can influence perceptions of hotel selection attributes. McCleary et al. (1994) identified 12 attributes and concluded that females prioritize security facilities, room service, and price. Male customers attach greater importance to business services and facilities and to special room features. Focusing on female travelers, Hart (1993) identified security, convenient location, clean room, reasonable cost, and a workout facility as the priorities.

It is evident that age influences the importance attached to selection attributes (Ananth et al., 1992; Callan and Bowman, 2000). According to Ananth et al. (1992), younger travelers attach importance to value for money, location, special discounts, temperature control, fire alarms, and bed mattress. Callan and Bowman (2000) identified value for money as the most significant selection factor for mature British travelers, followed by safety and security and location.

Some studies highlighted that cultural differences may influence the common core attributes impacting hotel selection (Li et al., 2013; Mehta and Vera, 1990). Particular

traveler groups evidently attach greater importance to certain hotel attributes. Li et al. (2013) conducted interaction analyses to identify selection preferences. They concluded that service is a core attribute for business travelers from Asia, Europe, and North America. Room quality is the most salient factor for European business travelers and for couples from North America and Oceania. Hotel customer segments evidently attach differential importance to salient attributes. Sohrabi et al.'s (2012) study on Iran extracted core hotel selection factors, namely, hotel staff and service, recreational information, cleanliness and room comfort, expenditure, room facilities, parking, promenade and comfort, security, and network service. Shanahan (2003) highlighted the attributes when advertising a motel, with cleanliness identified to be the most important, followed by low price and nonsmoking room. The least important factors were parking and special functional rooms such as pet friendly and conference rooms.

Mehta and Vera (1990) listed 26 attributes that were regarded as important by individual hotel customers in Singapore across several market segments. The key attributes were identified as cleanliness, security, overall service, location, and check-in service. However, the prioritization of attributes varied by customer segment, with those staying at higher-class hotels having greater expectations about service and amenities and being more willing to pay higher prices (Griffin et al., 1997; Knutson, 1988). The study concluded that upscale and budget hotel selection diverge because of differing customer needs.

In attempting to identify the most decisive factors in making decisions about the type of accommodation, Chen et al. (2017) deployed multinomial logit and nested logit models. Their study concluded that spending is the most significant factor when considering a diverse set of accommodation types ranging from international tourist hotels, tourist hotels, ordinary hotels, and youth hostels, to B&Bs. Tanford et al. (2012) compared customers of limited-service hotels and those of full-service hotels and found different selection factors including utility, green, brand, amenity, image, and price. They concluded that price was the most important attribute for limited-service hotel customers, whereas utility and price were of equally great importance for full-service hotel customers.

Chu and Choi (2000) identified six hotel selection attributes, namely, quality of service, business facility, value, room, food, and security. Most of these attributes were considered to be important by both business and leisure travelers, though business travelers attach greater importance to business facilities than their leisure traveler counterparts. All six attributes are considered to be important for selection of higher-priced hotels compared

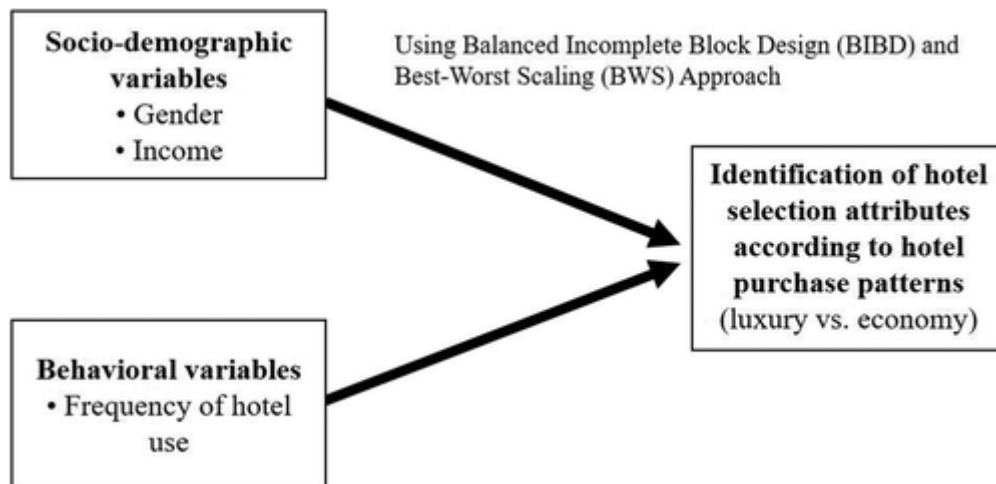
with their lower-priced equivalents. This suggests that the customers of different hotel types apply different standards toward levels of service and quality of facilities (Jeong and Jeon, 2008; Musante et al., 2009). According to recent statistics about the US hotel market (Gallup, 2014), luxury hotel customers spend an average of US\$910 on their hotel stay, whereas economy hotel customers typically spend US\$176. This indicates that the class of hotel is a key determinant for segmenting target markets that range from economy to luxury, based on the needs and preferences of their customers.

According to adaptation-level theory, individual judgments can be explained by considering the heaviness of several weights (Helson, 1948). Standards are the key influence in judging the target weights. Four- and five-star hotels are generally more luxurious and provide higher-level services and facilities than their one- and two-star equivalents (Griffin et al., 1997). Accordingly, five-star hotel users will pay more than those who opt for their one-star counterparts (Guillet and Law, 2010). User standards and purchasing patterns vary according to hotel type, thereby influencing the selection criteria.

Previous researchers theorized the role of hotel types in determining hotel users' purchasing patterns as their standard of judgment (Griffin, et al., 1997; Knutson, 1988; Knutson et al., 1993). Knutson et al. (1993) identified that expectations about services and room amenities relate to categories such as economy, mid-price, and luxury. Griffin et al. (1997) confirmed that hotel guests anticipate higher standards as prices increase. Although previous researchers have shown that selection standards vary according to hotel type, this study proposes that purchasing patterns are influenced by hotel type.

As mentioned previously, hotel selection attribute studies concluded that differentials are attributable to sociodemographic, psychological, and behavioral variables. Conventional sociodemographic variables include gender, income, age, and education level, while behavioral indicators include behavioral pursuits (Kotler and Armstrong, 2010). In the tourism context, hotel operators of different classes provide users with distinct physical features and services, and these criteria form a basis for categorizing hotels from economy to luxury (Knutson, 1988). In considering customer selection, the present study deploys the balanced incomplete block design (BIBD) and BWS methods as the respective choice set and scale method. Figure 1 presents the proposed conceptual framework.

**Figure 1.** Conceptual framework.



### **The BWS method**

Numerous researchers who used rating scales to explore the importance of attributes have not provided respondents with an opportunity to undertake subtle trade-offs between pairs of attributes and have underestimated individual idiosyncrasies caused by cultural differences or verbal ambiguities (Lee et al., 2008). In practice, respondents who are asked to make paired comparisons in survey settings are unable to analyze all possible pairs of multiple comparisons between items. However, using BWS allows the most important attributes to be explained by asking respondents to select one most important and one least important item from a choice set by making a trade-off between the attributes (Cohen, 2009).

The statistical model underlying BWS assumes that the relative choice probability of a specified pair relates to the distance between the two attribute levels on the latent utility scale (Flynn et al., 2007). This experimental method tested customer judgments in choice modeling (Auger et al., 2006; Goodman et al., 2005). Its base theory explains how customers undertake an orderly ranking of both the most important and the least important items on a list (Flynn and Marley, 2014).

The BWS explores how individuals evaluate an object that includes several attributes by choosing both the top- and the bottom-ranked items as valid and reliable selections (Louviere et al., 2013; Scarpa et al., 2011). The BWS model involves a cognitive process by allowing respondents to make repeated selections of the best and the worst in sets of

items. This in turn exhibits the largest perceptual differences on an underlying continuum of their judgments by providing a best–worst (BW) score (Finn and Louviere, 1992). It has rarely been used, despite being one of the most useful experimental scaling methods. In the present study, it is used to identify the hotel selection attributes that have the most marked influence on final customer choices.

The BWS method has been deployed in diverse settings outside the hospitality and tourism domain (Auger et al., 2006; Flynn et al., 2007; Loureiro and Arcos, 2012). Selection of food and wine may be regarded as sitting both within and beyond the hospitality field. The diverse cultural traits that apply to food and wine consumption in different national and local settings and the variety of intrinsic and extrinsic product attributes have stimulated researchers' interest (Bernabéu et al., 2012; Casini et al., 2009; Chrysochou et al., 2012). Some cultural tourism studies explored the macro environment by applying BWS to estimating willingness to pay or customer preferences (Louviere et al., 2013; Scarpa et al., 2011).

A conjoint analysis can be applied to calculate the relative importance of several attributes (Kim et al., 2016; Park et al., 2010). This approach to design identifies a preferred level for each attribute, by combining the preferred levels of each attribute within the wider attribute set. To ensure its applicability, a conjoint analysis requires the formation of a small number of combination sets in designing a set of attribute profiles. In considering the relative merits of the alternative approaches, BWS is unique in identifying trade-offs between preferences by comparing all of the different attributes at the same level. The preferred levels of the various attributes are determined in the minds of the respondents and importance levels are recorded on an optimal and objective basis as the “best or worst” preferred attributes.

Consistent with the primary study objectives, BWS is better suited for identifying the most important hotel selection attributes in a consideration of two distinct groupings—luxury and economy hotel customers. It is anticipated that the results may generate distinct features that align with customers' demographic and behavioral characteristics. While the authors note that a few tourism scholars have adopted BWS, the approach has been absent in the tourism literature notably as a means of trade-off to investigate hotel customers' hotel selection attributes. From the foregoing, the potential to understand their preferences by identifying the attributes that affect their behaviors is evident (Cohen, 2009).



## Study design and data analysis

A procedure involving multiple BWS steps was designed and followed in order to identify the most salient hotel selection attributes. The initial adoption of the BWS method led to the identification of hotel selection determinant attributes. The exploration of key hotel selection determinant attributes proceeded in two ways. First, a variety of attributes were identified based on a review of the literature on hotel selection attributes. The review extended to articles published between 1984 and 2013 in eight leading hospitality and tourism-related journals (e.g. [Ananth et al., 1992](#); [Callan and Bowman, 2000](#); [Chow et al., 1995](#); [Griffin et al., 1997](#); [Hart, 1993](#); [Lewis, 1984](#); [Li et al., 2013](#); [Lockyer, 2002](#); [McCleary et al., 1994](#); [Saleh and Ryan, 1992](#); [Shanahan, 2003](#); [Sohrabi et al., 2012](#); [Weaver and Oh, 1993](#); [Wong and Lam, 2002](#)). The search generated a total of 34 key hotel selection attributes. During the next stage of the research, a review of comments generated by customers on Trip Advisor was used to generate some key attributes that are considered by customers when selecting hotels. Researchers compiled a list of 10 hotel selection attributes that were consistently confirmed as the most influential by considering the levels of preference on the hotel selection attributes. The following “top 10” attributes were identified: location, price, cleanliness, security, room comfort and decor, parking, restaurant and food quality, service, bed, and quietness.

In the second step, the attributes were compared with each other to identify between individual items the best or worst as trade-off decisions. In designing the choice sets, all items appearing over an equal number of times were included to allow for all possible comparisons based on multinomial logit model ([Louviere and Woodworth, 1983](#)). The researchers applied BIBD in designing the BWS questionnaire.

The BIBD is the most widely used approach for conducting counting-based analyses to organize a series of choice sets ([Auger et al., 2006](#); [Cohen, 2009](#); [Flynn and Marley, 2014](#)). A large number of items can be usefully compared in order to obtain the full rank of all items in a small number of subsets ([Auger et al., 2006](#); [Cohen, 2009](#)). It controls the number of times that each pair is compared since the total number of subsets and the number of items in a subset grows by increasing the number of comparisons. The design is rooted on a Latin Square design with  $n$  items arranged by  $n$  rows and  $n$  columns. The items for each row and column are in different positions and are indicative of a block or a choice set ([Weller and Romney, 1988](#)).

Since the BIBD assumes that the occurrence of items and the comparison of set sizes are constant, it minimizes the chance that respondents respond to aspects of the design and make unintended assumptions about the objects (Flynn and Marley, 2014). The method enables each item to appear in every possible position at the same number of times in the same number of choice sets (Louviere and Woodworth, 1983). A large number of items can be compared in order to obtain the full rank of all items in a small number of subsets (Cohen, 2009).

In the present study, the BWS method was constructed using hotel selection attribute choice sets. A BWS model contains three or more items in a set and the method allows participants to pick the two attributes that are the furthest on the underlying dimension of their interest by picking the best/most important and the worst/least important attributes. Respondents provide easy and quick responses to each set of experimental cases (Goodman et al., 2005). The researchers are well-placed to analyze the importance of each choice.

Drawing upon the 10 hotel selection attributes, the researchers designed 10 subsets that include three attributes. Each was repeated three times in choice set. The design of the 10 choice sets took account of the need for a manageable length for the questionnaire (Cohen, 2009). The composition of the BIBD choice sets for hotel selection attributes was as follows: (1,2,4), (2,3,5), (3,4,6), (4,5,7), (5,6,8), (6,7,9), (7,8,10), (1,8,9), (2,9,10), and (1,3,10). Each attribute was labeled somewhere between 1 and 10 of a total of 10. Therefore, the BIBD for 10 attributes is regarded as  $(b, r, k, \lambda)$ , where  $b$  is the number of choice sets (10),  $r$  is the repetition per level (3),  $k$  is the number of items in each choice set (3), and  $\lambda$  is the pair frequency (1).

Third, to discern two distinct levels of customers who might stay at luxury or economy hotels, two screening questions sought their views about hotel stays undertaken during the previous year, including the applicable class. Further involvement was confined to respondents whose experiences met the applicable criteria. The respondents were assigned to two categories: luxury hotels (4/5 star) or economy hotels (1/2 star). The BWS questionnaire procedure begins with the selection of a best/most important hotel attribute and a worst/least attribute in a set of options including identified attributes. To conduct the study, the researchers recruited an online survey company—Qualtrics. The basis for survey participation was the database pool, namely, US hotel users. The survey was administered

in October and November 2014 and generated a total of 748 responses for data analysis purposes (i.e. 397 from luxury hotels and 351 from economy hotels).

For data analysis purposes, it was necessary to transform each choice set of attributes to the original number of attributes. The occurrences of best and worst choices for each item were cumulated into frequencies. The data consisted of a combination of best and worst frequencies from each set. On the 10 choice sets, each attribute can be chosen three times as the best/most important or as the worst/least important.

The BW scores indicate the total worst score was subtracted from its total best score counterpart, and each attribute may range from +3 to -3. The average BW (ABW) scores were calculated by dividing the total BW scores by the number of respondents and the frequency of each attribute in the design of the choice sets in descending numerical order. The attribute rankings were obtained by the BW score and listed according to the ABW scores. The standard scores for each attribute were calculated as follows:

$$\text{Average BW Score} = \frac{(\text{Count Best or Most} - \text{Count Worst or Least})}{a \times n}$$

where the count best (most) is the total number of attributes chosen as the most important; count worst (least), the total number of attributes chosen as the least important;  $a$ , the pair frequency of each attribute; and  $n$ , the number of total respondents.

## Results

According to the respondent demographic profiles, in the luxury hotel data set 40.6% of the respondents were male. The most prominent age range was 21–40 years (51.1%) and older than 51 years (33%). Over half (58.2%) of the respondents possessed an associate or bachelor's degree. Income levels were evenly distributed from the category "less than US\$40,000" to "US\$80,000–99,999." Over half of the respondents (about 51%) had stayed at luxury hotels on two or three occasions. Most reported that they usually stay at a hotel priced in the range "US\$151–US\$400." Of the economy hotel data set, 32.8% were male and almost half (44.8%) were aged 21–40. Of the respondents, 33.9% were associate degree holders and the most prevalent income level was "less than US\$40,000" (39.6%). Nearly 75% of the respondents had stayed at economy hotels more than once, though

fewer than three times. About 89% of the respondents paid between US\$51 and US\$150 for a hotel room.

Table 1 illustrates the rankings of the hotel selection attributes between the luxury and economy hotel data sets. A total best score consists of the number of times that each respondent identified the attribute as the most important, whereas a total worst score is the number of times that the attribute was selected as the least important. As illustrated in Table 1, luxury and economy hotel users perceive the importance of selection attributes differently. “Cleanliness” was the most important attribute in luxury hotels, followed by “bed,” “service,” “room comfort and decor,” “security,” and “price.” The most important attribute in economy hotels was cleanliness, followed by bed, price, security, and service.

**Table 1.** Attributes considered by luxury and economy hotel users.

Luxury hotel data set (N = 397)					Economy hotel data set (N = 351)				
Attribute	Total best	Total worst	BW score	ABW score	Attribute	Total best	Total worst	BW score	ABW score
Cleanliness	768	85	683	0.573	Cleanliness	672	36	636	0.604
Bed	630	213	417	0.350	Bed	529	162	367	0.349
Service	521	197	324	0.272	Price	535	202	333	0.316
Room comfort and decor	420	306	114	0.096	Security	450	232	218	0.207
Security	396	306	90	0.076	Service	408	224	184	0.175
Price	461	403	58	0.049	Room comfort and decor	304	369	-65	-0.062
Location	409	422	-13	-0.011	Location	323	397	-74	-0.070
Quietness	242	444	-202	-0.170	Quietness	221	425	-204	-0.194
Restaurant and its food quality	127	676	-549	-0.461	Parking	69	676	-607	-0.576
Parking	63	883	-820	-0.688	Restaurant and its food quality	52	752	-700	-0.665

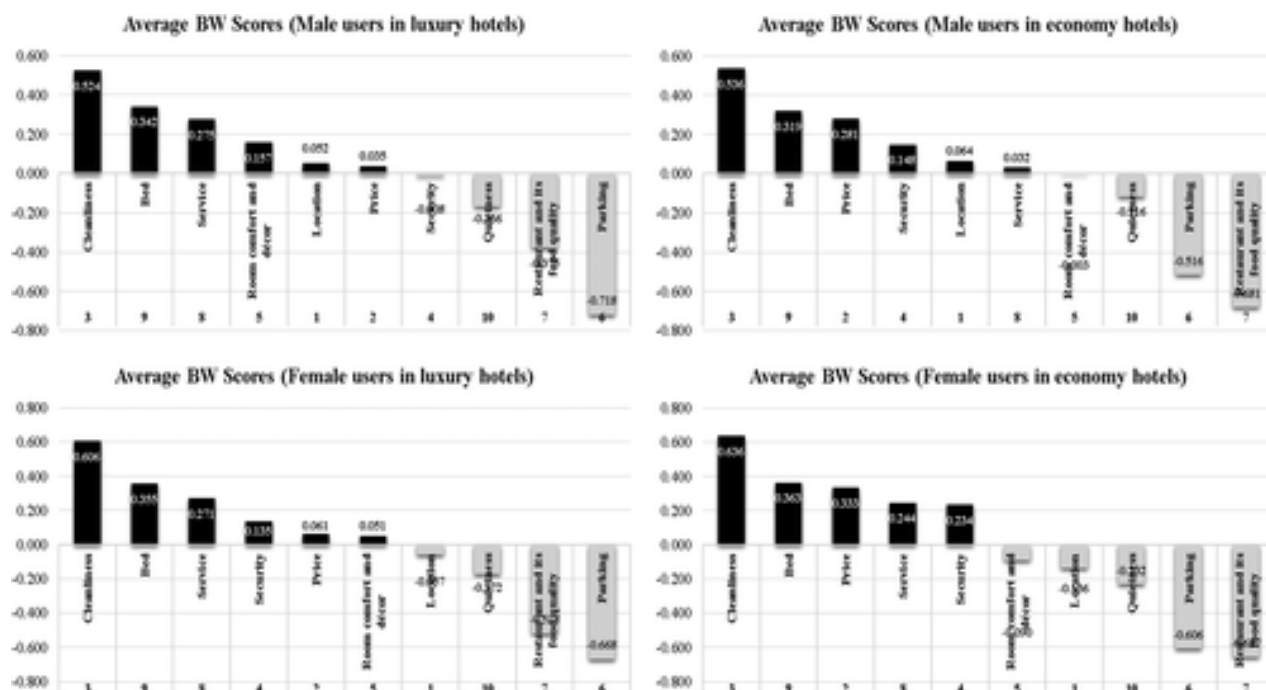
BW: best-worst; ABW: The average best-worst.

Note: Positive signs on the BW and ABW scores indicate that the total number of attributes chosen as the most important is greater than the total number of attributes chosen as the least important. Negative signs indicate vice versa.

There is evidently a differential gap between luxury and economy hotel user perceptions about selection attributes. For example, service was reported as the third most important attribute for luxury cohorts, compared to the fifth place for economy ones. In addition, price was considered more important by economy cohorts than by luxury ones, while room comfort and decor was only considered to be an important attribute in the case of luxury cohorts. Luxury cohorts considered room comfort and decor to be important when selecting a hotel, whereas economy cohorts do not attach importance to this aspect. It was commonly shown in both hotel classes, wherein four attributes were insignificant, namely, “location,” “quietness,” “parking,” and “restaurant and food quality.”

The researchers identified gender-based hotel selection attributes for luxury and economy hotels. The plots reported in [Figure 2](#) provide a graphic illustration of the ABW score by showing the significant attributes in the black column ( $ABW > 0$ ) and the insignificant attributes in the white column ( $ABW < 0$ ). Graphical presentation indicates ABW scores by highlighting the most and the least important attributes.

**Figure 2.** The average best–worst (ABW) scores for luxury and economy hotels by gender.

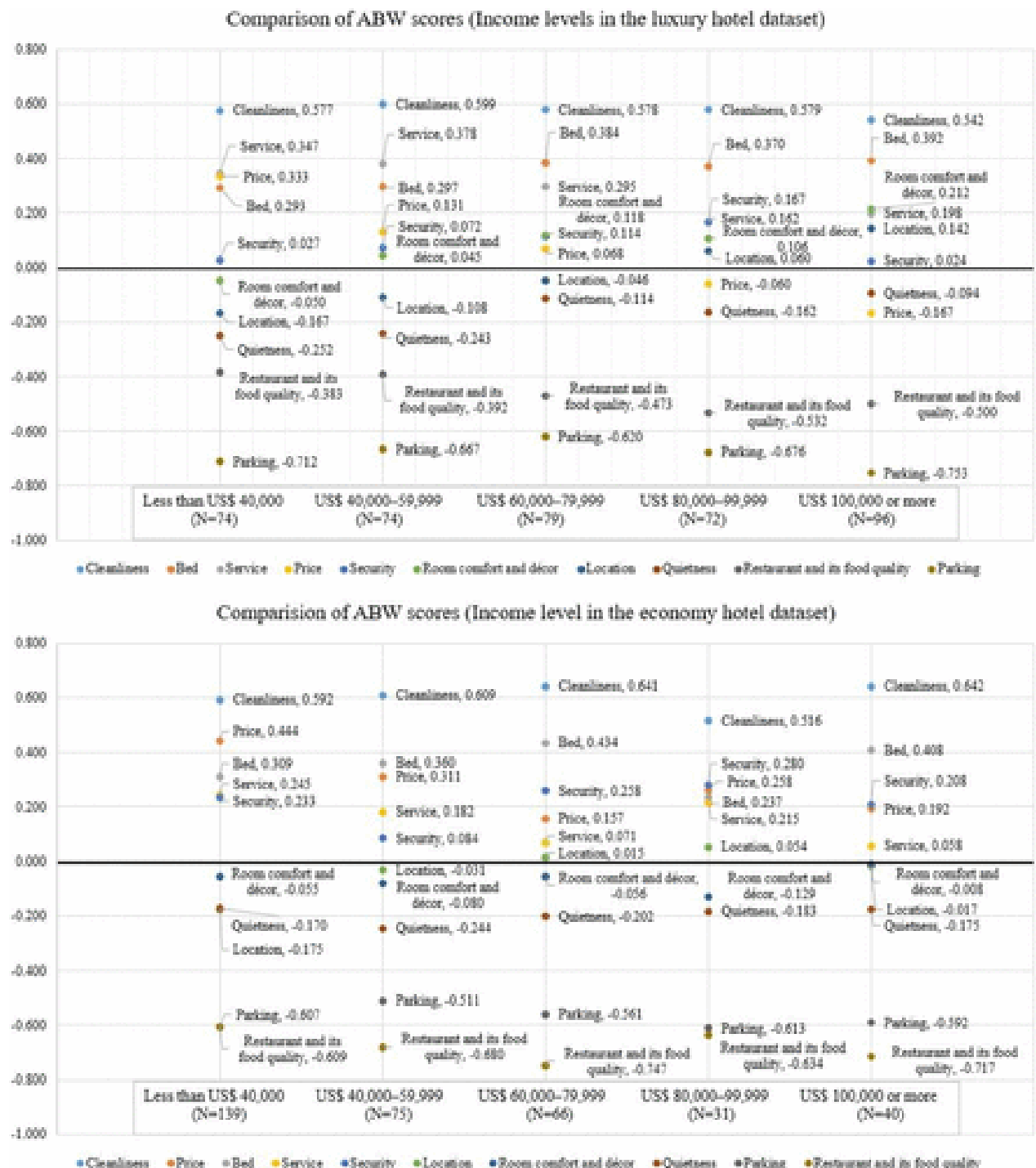


[Figure 2](#) indicating ABW scores illustrates important attributes from the perspective of male and female luxury and economy hotel cohorts. The three most significant attributes indicated by both male and female luxury hotel users were cleanliness, bed, and service. Location was only regarded as important by males, whereas this was not the case for females. On the other hand, security was regarded as important by females, whereas this was not the case for males. Given the analysis of gender-based attributes from the economy hotel data set, the three most important attributes were cleanliness, followed by bed and price. Interestingly, location was only an important attribute among the male economy hotel users and not among females.

The next analysis involved segmenting the importance of hotel selection attributes on the basis of their incomes. [Figure 3](#) presents the results of the ABW scores for the data sets of luxury hotels. Luxury cohorts earning more than US\$60,000 and a lower-income group considered location distinctively. The perceived importance level of bed and service were

different between groups. The ranking of perceived importance for price was widely dispersed across all the income categories. As incomes drop, price increases in importance when choosing a luxury hotel. However, its ranking of perceived importance when selecting a luxury hotel drops as incomes rise. Luxury hotel users with lower incomes perceive room comfort and decor as less important, but higher-income respondents perceived this attribute as very important.

**Figure 3.** The average best–worst (ABW) scores by income level.

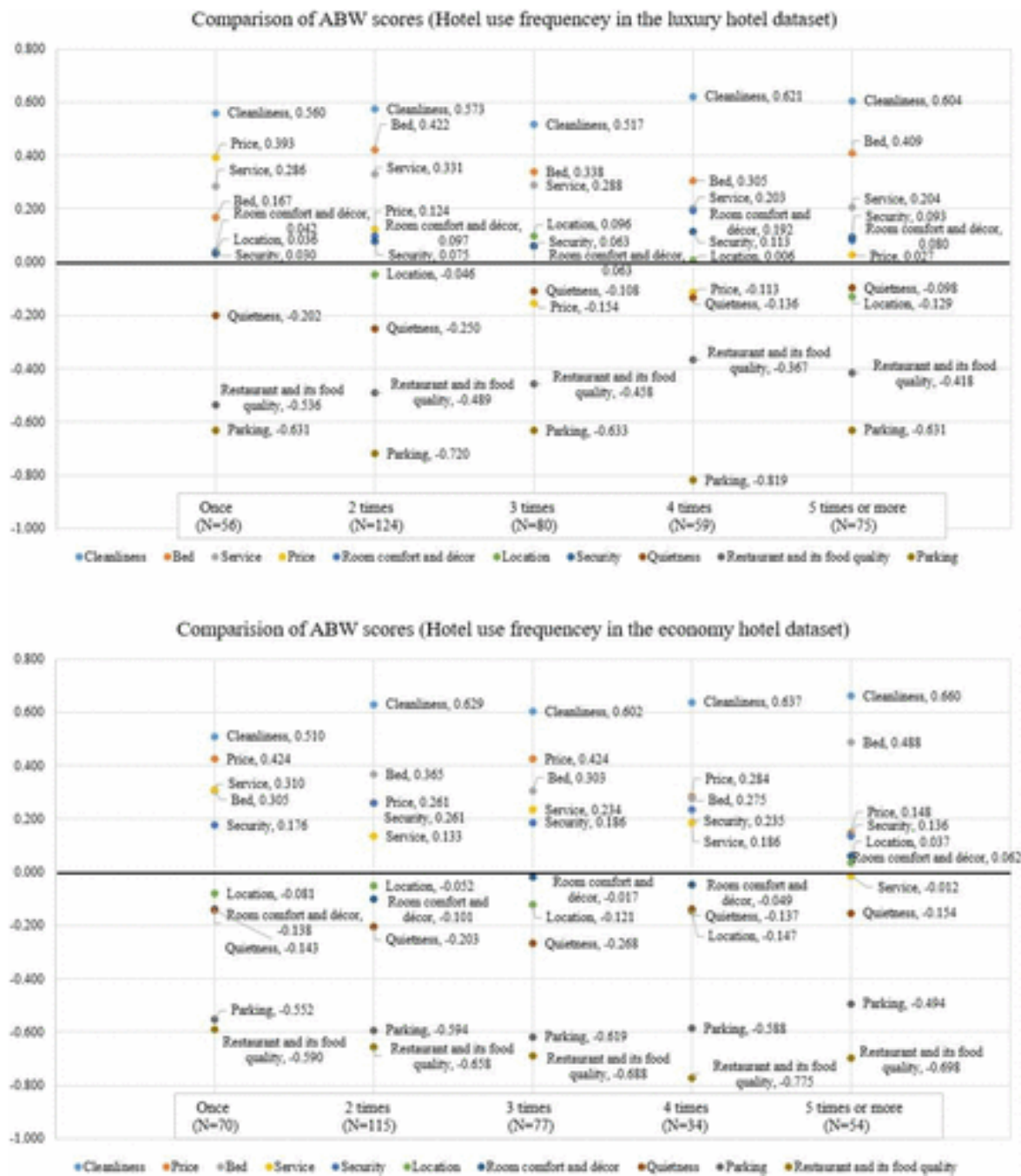


Customers in the economy hotel data set considered cleanliness to be the most salient attribute, irrespective of their income. The respondents who were on lowest income considered price as the second most important factor, whereas those on higher incomes considered security as the second or third most important factor when selecting an economy hotel. Only three categories who had lower incomes and the highest income considered location to be unimportant. Restaurant and food quality were the least important factor of all categories, followed by parking. [Figure 3](#) presents the important attributes and the ABW values of luxury and economy hotel users across the five categories of income.

Next, the various hotel attributes were categorized on the basis of frequency of use. Luxury hotel users who stayed once a year considered price to be the second most important, whereas those who stayed more than twice considered bed to be the second most important. The third most important factor across all categories was service. Price was an important factor for those who used luxury hotels once, twice, five times, or even more, whereas it was unimportant for those who stayed three and four times. Location was considered to be important for only two categories, namely, traveling two times and five times or more. Interestingly, those who stayed at hotels on more than five occasions a year were more likely to consider price as relatively significant and location as relatively insignificant compared with other frequent users.

In the economy hotel data set, the results showed that they considered price to be relatively important across all categories. It is interesting to note that the most frequent hotel users who travel more than five times a year considered room comfort and decor and location to be significant, whereas users in other categories considered these two factors as insignificant. In addition, respondents who stayed more than five times considered only service as unimportant. [Figure 4](#) displays important hotel attributes and the ABW values of luxury and economy hotel users according to the frequency of use.

**Figure 4.** The average best–worst (ABW) scores by frequency of hotel use.



## Discussion and conclusions

Consistent with previous research, the present investigation confirmed that cleanliness is the most influential hotel selection determinant (Lockyer, 2002; Shanahan, 2003). It is useful to compare the results with previous identifications of location as the most important factor (Aksoy and Ozbuk, 2017; Lewis, 1984; McCleary et al., 1994) together with service (Xue and Cox, 2008). Several significant factors were consistent with those identified in other studies, namely, value for money (Callan and Bowman, 2000; Chen et



al., 2017; Wong and Lam, 2002), interior decor (Saleh and Ryan, 1992), and security issue (Hart, 1993). In the current study, bed was identified as the second salient attribute, followed by service, security, and price, although their importance levels were regarded differentially by luxury and economy hotel users. In addition, room condition was a significant determinant for luxury hotel customers, though not among economy hotel customers. The results show a consensus that luxury hotel users attach greater emphasis to room ambience than their economy hotel counterparts (Lewis, 1984).

According to the results of the present study, the four least considered attributes were location, quietness, restaurant, and parking. These differ from the findings of previous studies that have stressed the importance that is attached to these attributes in hotel selection (Aksoy and Ozbuk, 2017; Ananth et al., 1992; Lockyer, 2002). Such inconsistent results may be attributed to different methodologies, noting that previous studies employed Likert-type scales which do not undertake rankings on the basis of preferences. Likert-type scales do exhibit a tendency to one-sided responses (i.e. “yes sayers” and “no sayers”). By way of contrast, the BWS approach facilitates trade-offs by allowing respondents to compare attributes and assists researchers to discriminate between the levels of importance for various attributes (Cohen, 2009).

The findings for the luxury and economy hotel categories are consistent with the previously held view that high-end hotel customers seek higher-quality service (Walls et al., 2011) and low-end customers are price sensitive (Chen et al., 2017; Senior and Morphew, 1990). This study has confirmed that service is more important in luxury hotel selection, while price is more important in economy hotel selection. The findings can derive a reasonable level of support from previous studies which indicated that luxury hotel customers expect to experience professional and proactive services, and space and furnishings can be assured in luxury hotel settings (Walls et al., 2011). Interestingly, it was found that luxury hotel users were the only respondent category to attach importance to room comfort and decoration. On the other hand, customers who chose economy hotels expect a minimum level of room facilities or service, perhaps because of their budgetary constraints (Chen et al., 2017).

The gender-based segmentation that formed part of this study indicates that males emphasize location, whereas females did not do so, regardless of the category of hotel. Female luxury hotel users attached importance to security, whereas male luxury hotel users

did not do so. Both male and female economy hotel users considered security to be a priority.

Regarding respondent levels of income, high-income users of luxury hotels tended to stress on bed quality, while luxury hotel users on low income prioritized service quality. A distinct pattern was evident in price and room condition among those on different income levels. The results support the findings of previous researchers that higher-income customers attach less importance to price and more importance to room-related attributes (Chen et al., 2017; Tanford et al., 2012). The location of their hotel was more important for high-income luxury hotel users than for low-income earners. Economy hotel users with high incomes view security as important, whereas users of economy hotels on middle-level incomes viewed hotel location as a significant attribute. With the exception of parking facilities, the least significantly rated attributes were restaurant related.

Consistent with their usage patterns, less frequent luxury hotel users considered price as an important attribute, while most luxury hotel users attached more significance to the bed. This is consistent with the study by Chu and Choi (2000) which concluded that their different purposes of travel prompted business travelers to give greater consideration to business facilities than their leisure travel counterparts. Price was an important issue for luxury hotel users who stay once or twice and even five times or more. Less frequent luxury hotel users evidently consider price to be important, whereas more frequent hotel users show less price sensitivity. It was, however, found that very frequent luxury hotel users consider price to be important. Economy hotel users who use hotels more frequently show greater price sensitivity. Interestingly, most frequent economy hotel users regard room decoration, comfort, and hotel location as significant when choosing a hotel, while they did not attach importance to service quality. The results differ when the frequency of use and the level of property are analyzed.

### **Implications, limitations, and suggestions for further research**

This study contributes to knowledge by deploying a novel research method that identifies hotel selection attributes and has various scholarly merits. First, although BWS has been widely applied over the past 15 years across a variety of domains, hospitality applications have been rare. Unlike previous studies, this investigation introduced a forceful ranking method that permits trade-offs between attributes. By identifying six salient hotel selection attributes, the results should facilitate a better understanding of persuasive attributes that may guide hotel selection.

Second, this study has explored how attributes are considered differentially by comparing them on the basis of hotel type. Hotel class is evidently a relevant criterion for providing levels of customers' purchasing patterns (Griffin et al., 1997; Knutson et al., 1993). However, relatively few studies investigated the theoretical aspects of hotel class. The few studies served as criteria for assessing satisfaction and/or dissatisfaction among hotel attributes (Dolnicar, 2002). The present study provides an advance by identifying selection attributes in the context of two different luxury and economy hotels.

Third, this study shows the importance of intrinsic features in the backgrounds of individual customers, thereby complementing the extrinsic consumption patterns that have been demonstrated in previous customers' behavior research. For example, customers had differing perceptions of the four attributes when making selections on the basis of gender, income level, and frequency of hotel use. Since hotel selection attributes appear to differ according to target market characteristics or hotel class, future researchers may seek more in-depth understanding of customer diversity in different target markets.

The research findings have a number of implications for practitioners. First, customers have been shown to base their hotel selection by considering different attributes, with cleanliness and bed being rated as the most important. These two attributes were highlighted by all respondents, regardless of demographics or behavioral characteristics. As an outcome for practitioners, it is suggested that marketers promoting both luxury hotel chains and independent economy hotels should emphasize these two guest room features to appeal customers. For example, when communicating with prospective customers and providing reservation opportunities through hotel websites or social media, hoteliers could stress on cleanliness and a good night's sleep (the bed). Awareness training should also be enhanced among sales and reservations staff. Noting that some hotel companies do emphasize the quality and comfort of their beds, housekeepers could be reminded about the importance of tidiness for guests to enhance the perception of bed. The provision of high-quality bedding could be further emphasized as an aspect of providing guests with a good night's sleep.

Second, the research findings imply that different classes of hotel should undertake differentiated marketing strategies and campaigns. Managers of luxury hotels may place an emphasis on the hardware aspect such as room facilities and decor as well as service aspect, whereas their economy hotel counterparts should stress on price competitiveness, noting that economy hotel respondents were rate sensitive. Above all, the results indicate a

need for differentiation when managing different classes of hotel. A hotel room is not an undifferentiated “commodity.” This principle applies equally to hotel chains with an extensive portfolio of properties across different class or star levels and also for independent properties that operate within competitive local markets.

Third, hotel management should consider all target markets, taking into account their diverse demographics and any critical attributes. This research found that clients have different perceptions of the importance of five attributes—service quality, security level, price competitiveness, hotel location, and room comfort and its decor—on the basis of gender, income, and the frequency of hotel use. Noting the disparate preferences, the findings indicate that marketing and management activities should be tailored to the needs of particular market segments. Hotels can present customized messages to particular client groups. For example, female customers expressing concern about security in both hotel categories and by male customers at economy hotels may benefit from some subtle messaging about prevailing security arrangements both inside the hotel and rooms and also in the surrounding areas.

In aligning with the preferences of different customer segments, hotels should target more accurately and build stronger relationships. Hotel promotions should customize the alignment between prevailing messaging and the guest experience and remodel hotel facilities that align with priority attributes. To guarantee their longer-term success and positioning, hotels should communicate effectively with customers about their priority selection attributes and tailor the product offer to their needs.

Given the explicit focus of the current study on the hotel sector, its scope—to view any similarities or dissimilarities in the results of a hotel sector—has been limited to a single method. There might be merit in extending the scope to other sectors with a view to identifying any sector wide prevalence in tourism. Future studies are needed to compare the results using different methods and explore other types of accommodation such as condominiums, B&Bs, even focusing on aspects of the shared economy such as Airbnb.

Secondly, it is noted that the study has applied a limited number of attributes and choice sets to two classes of hotel. In addition, the researchers have mainly investigated hotel selection attributes in accordance with customer demographics and behaviors. It is noted that the present study has explored the preferences of US hotel customers when selecting hotels across two classes and that future studies might explore applications in different countries or tourism destinations. Finally, it is noted that future researchers might

investigate whether hotel selection attributes differ on the basis of psychological traits such as perceived value (e.g. hedonic vs. utilitarian) or cultural background.

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