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## How do spa-goers make decisions when faced with a choice conflict? Discrete choice experiments for day spas in Thailand

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### Abstract

The Asia-Pacific region shows potential for growth in the spa market, particularly in Thailand. However, the contrast between the growing day spa industry and the industry's lack of knowledge about day spa users highlights the importance of understanding spa-goers' preferences and considerations with regard to spa selection. Studies of consumers' decision making regarding spa choice commonly cite product quality, therapist quality, ambience quality and price as important determinants. This study used a choice experiment to examine consumers' decisions about day spas via a simulation in which trade-offs were inevitable. The findings suggested that therapist quality was the most dominant attribute in determining spa-goers' choices, followed by product quality, ambience quality, and price. Good therapist and treatment quality led respondents to select spas, whereas poor therapist and treatment quality led them to reject spas. Good ambience quality did not significantly affect spa choice; however, poor ambience quality led to spa rejection. The findings of this study are discussed together with implication for spa managers. The results of this study have important implications for the spa industry in terms of understanding the key drivers of choice among spa customers.

Keywords: Day spa; decision making; discrete choice; spa choice; spa-goers; trade-offs.

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## 1. Introduction

The spa industry has become the fastest-growing service industry in Thailand. According to the Thai Spa Association's 2014 report, Thailand now has one of the largest spa markets in the Asia-Pacific region, and this market generated revenues of approximately 30 billion baht in 2014 (Thai Spa Association, 2014). Moreover, the number of spas has expanded to more than 1500 across the entire country (Siam Business, 2011). Consequently, the Thai spa market has become very competitive, and Thai spa operators must develop distinctive marketing strategies to attract customers. To boost sales, many spas have improved service quality, introduced high-quality products, and engaged in price competition, in addition to improving their service environments. Whether a spa will be successful in attracting more spa-goers depends on spa-goers' satisfaction, which affects their decision making regarding spa choice. Several research studies have focused on customer behaviours, particularly the consumer decision-making process, in seeking to understand the key drivers of choice among spa customers (Dimitrovski & Todorovic, 2015; Koh et al., 2010; Kucukusta et al., 2013; Monteson & Singer, 2004).

A customer decision-making model generally involves 5 steps. Consumers first examine their personal needs and then search for information about a product. After acquiring information and learning about possible alternatives, consumers define a set of determinant attributes they can use to compare and evaluate alternatives. Then, they eliminate some of the alternatives and form a final choice set that contains a few alternatives. Next, consumers form impressions of each alternative's position with respect to the determinant attributes, make trade-offs for these attributes and combine the attributes to make a decision. Then, they will then evaluate their choice and engage in post-purchase behaviour. The present study focuses on the evaluating alternatives step of the pre-purchase process to examine how customers make decisions when there are conflicts between various options and to determine which options customers prefer. For example, when you are hungry (personal need) and would like to find somewhere to eat (search for information), you probably already have a restaurant in mind. However, you may change your mind if your friends recommend another restaurant or if you discover a good promotion from another restaurant (evaluating alternatives).

Quality and price are important determinants of consumers' decision making. In the decision-making process, quality and price compete with one other, and consumers may trade one for the other. The relationship between price and quality can be complicated. Price has been widely regarded as a main component of monetary sacrifice (i.e., what is given up) for acquiring a certain product or service (i.e., what is received). Price can serve as an indicator of quality when customers are uncertain about the product's quality (Zeithaml, 1988; Monroe, 2003). Some consumers are willing to pay more for superior quality and brands (Kucukusta & Guillet, 2014), whereas others may prefer to pay less for standard services.

In spa service, quality, which may include therapist quality, spa product quality, and ambience quality (Kucukusta et al., 2013), and price are clearly among the major determinants of spa choice (Kucukusta & Guillet, 2014). Kucukusta et al. (2013) pointed out that price was considered very important in respondents' hotel spa selection. Moreover, Kucukusta and Guillet (2014) observed that price was the most important attribute in the decisions of spa customers from both the Asia-Pacific region and from Europe and North America. Despite the large number of consumer behaviour studies of decision making and choice in the hospitality literature – including for hotels (Masiero et al., 2015; Kim and Perdue, 2013); restaurants (Jung et al., 2015; Peng et al., 2015; Keane et al., 2012); tourism (Ozdipciner et al., 2010); hotel spas (Kucukusta et al., 2013; Kucukusta and Guillet, 2014; Mak et al., 2009; Koh et al., 2010; Dimitrovski and Todorovic, 2015); and health care (Ryan & Gerard, 2003) – experimental research examining discrete choice trade-offs among day spa attributes is very limited. Consistent with Jung et al. (2015), the present study, thus, attempts to examine spa-goer choice or decision making based on competition between the quality and price in spa services to see whether and how spa-goers trade off quality and price when selecting a spa. This study poses four questions: (1) How do spa quality and price influence spa-goer choice when consumers are faced with conflicts between quality and price? (2) Do consumers trade off therapist quality, spa product quality, and ambience quality for price when

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choosing a spa? (3) If consumers trade off spa quality for price, to what extent do they do so? and (4) Which attribute is most important for spa-goer choice? This study utilized a simple discrete choice experiment, which is explained in the following section, asking respondents to choose a spa based on quality (i.e., therapist, spa product, and ambience) and price attributes.

## **2. Conceptual Framework and Theoretical Background**

### **2.1. Spa attributes**

Many studies in the tourism and hospitality literature have investigated the key attributes that affect individuals' spa selection, particularly with respect to hotel spas (Dimitrovski & Todorovic, 2015; Koh et al., 2010; Kucukusta et al., 2013, Monteson and Singer, 2004). Kucukusta et al. (2013) showed that the most important attribute among spa goers in terms of spa selection was therapist quality, which includes the therapists' professional skills, followed by product and service knowledge, sense of privacy, range of facilities, and product branding. Similarly, Kucukusta and Guillet (2014) found that therapist quality, their qualifications, were consistently noted as one of the influential factors driving consumers' spa choices. Terry (2007) even claimed that certified and experienced therapists were perceived as the most important spa attribute. In addition, spa product quality, which includes the quality of the products used and the treatments offered in spas, are also an important determinant of spa choice among spa-goers. Kucukusta and Guillet (2014) noted that apart from therapists' qualifications, product quality was among the most important decision-driving factors for Chinese spa-goers. Chinese spa-goers were willing to pay more for superior service quality and branded and distinctive products. In Thai spas, spa-goers can select from product options that include Thai traditional or signature treatments. The exoticness of treatments such as herbal ball compressed massage, Tok-Sen therapy, and Thai medicinal massage may aid in attracting vacation travellers or those seeking a new type of spa experience. Moreover, the ambience attribute, which relates to spa themes and decorations, may be particularly appealing to the women and young people who represent core spa-goers. Therefore, well-designed rooms with special themes or decor may have a considerable effect on these consumers' overall spa experience (Kucukusta et al., 2013; Lo et al., 2013). Additionally, room designs should emphasize privacy, with single rooms offered to people who visit a spa alone as a sense of privacy was also rated as a critical factor for hotel spa selection (Heung et al., 2001; Koh et al., 2010; Kucukusta & Guillet, 2014; Mak et al., 2009; Yavas & Babakus, 2005). However, price has also been cited as a prime determinant of spa choice because price always affected people's choices (Kucukusta et al., 2013).

### **2.2. Spa-goers choice and multi-attribute decision making**

The contrast between the growing day spa industry and the industry's lack of knowledge about day spa users highlights the importance of understanding spa-goers' preferences and considerations with regard to spa selection. Understanding consumer choice is critical to marketing success (Bettman et al., 2008). Considering the growing number of features of and potential motivations for visiting a spa, many people may find it difficult to make a choice, particularly if that choice involves multiple attributes. Choice behaviour studies have evolved from classical decision theory based on rational choice models of utility maximization (Montgomery & Svenson, 1976). Customers use choice criteria to select a product or service from among a set of alternatives that they perceive to have the potential to satisfy their motives, needs and utility. This type of assumption is reflected in conjoint models and part-worth utilities, suggesting that people weigh and consider all available product information and then derive a global utility value for each option that reflects the sum of its part-worth utilities. The concept of part-worth utilities suggests that the option that possesses the highest utility is preferred over options with lower utility (Dieckmann et al., 2009). Multi-attribute models of consumer behaviour originated with Lancaster's (1966) theory of consumer demand. When consumers approach a choice and purchase situation, they employ one of two behavioural models: compensatory strategies and non-compensatory strategies (Bettman et al., 1998; Payne et al., 1988). Consumers who use compensatory strategies to choose a product allow the higher value of one attribute of a product compensate for the lower value of another attribute of the product. For example, if a consumer is considering automobiles, a high value for brand name might compensate for a lower value for engine size. This compensation approach is

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called a “trade-off.” When non-compensatory strategies are used, there is no comparison of attributes and there is no trade-off – in other words, there is no compensation for a lower attribute with a higher attribute. Typically, in non-compensatory strategies, the values of attributes are set at a certain level, and to consider a product as a choice, the product’s attributes must meet that cut-off value. Although one attribute of a product may have a very high value, if one attribute is very low in value, a consumer may nonetheless eliminate that product from consideration.

### **2.3. Trade-offs in decision making**

Whether a decision-making strategy is compensatory or non-compensatory is the subject of much of the choice literature (Bettman et al., 1998). In compensatory decision making, consumers calculate the subjective value of a set of options and select the option that maximizes their perceived utility (Bettman, 1979). This is considered a multi-attribute utility model in which a set of alternatives is evaluated – alternative by alternative – with respect to utility so that the one option with the highest utility is selected (Shiloh et al., 2001; Zeleny, 1976). This type of decision making requires trade-offs among attributes (Arana and Leon, 2009; Khan et al., 2005) and allows a positive evaluation on one attribute (within a set of attributes) to compensate for a poor evaluation on another, (Foerster, 1979). For example, a customer may not find a combination of attributes (i.e., spa product quality, service quality, ambience quality and price) that optimizes her utility. In such a case, she would turn to the ‘next best alternative’, which may be a spa with a slightly higher price and optimal quality or with an optimal price and slightly lower quality. With respect to quality-price trade-offs in the spa industry, customers who are motivated by price may use a compensation strategy that leads to selection of a combination of acceptable quality and low price. With a moderate budget and willingness-to-pay, day spa consumers will be somewhat reluctant to trade off the price attribute to gain utility from a small increase in spa product or therapist (service) quality. By contrast, non-compensatory decision making involves a sequential consideration of attributes in which the best value for the most important attribute is selected and the benefits related to some attributes cannot compensate for the weaknesses of other attributes (Fishburn, 1974). For example, an Islamic spa-goer must consider only therapists of the same gender, rendering gender the most important attribute in these consumers’ selection of therapists and generating a consideration set that includes only those Islamic spas with therapists of the same gender (Yaman et al., 2012).

In addition, the hospitality choice research is largely based on revealed choice studies, and no researchers have examined actual trade-offs among different attributes in the day spa choice context. Therefore, this study used a choice experiment to examine consumers’ choice of day spas via a simulation in which trade-offs were inevitable.

## **3. Materials and Method**

### **3.1. Procedure for choice experiment questionnaire construction**

The choice experiment questionnaire used in this study was adopted from Jung et al. (2015) and Kucukusta and Guillet (2014). The list of the choice criteria was developed by reviewing a collection of related studies in the literature. The four spa choice attributes used in the questionnaire were adapted from the literature: price (Jung et al., 2015; Kim and Perdue, 2013; Kucukusta & Guillet, 2014; Kucukusta et al., 2013), therapist quality (Terry, 2007; Kucukusta & Guillet, 2014), spa product quality (Lo et al., 2013; Kucukusta et al., 2013; Tabacchi, 2010; Ellis, 2008), and ambience quality (Lo et al, 2013; Kim & Perdue, 2013; Heung et al., 2001; Koh et al., 2010; Mak et al., 2009; Yavas & Babakus, 2005; Kucukusta & Guillet, 2014). The questionnaire was designed to examine consumers’ trade-offs between quality attributes and price in relation to spa choice aiming (1) to investigate the influence of spa quality attributes and price attribute on consumers’ spa choice and (2) to determine the relative importance of the four spa attributes under the study to identify which of the four attributes is the most important factor for spa-goer choice.

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In the questionnaire, spa quality, which includes product quality, therapist quality, ambient quality, and price were set in conflict with each other to form different choice sets for respondents to choose. To avoid choice overload (Scheibehenne et al., 2010) or information overload (Lee & Lee, 2004), the rating scale for product quality, therapist quality, and ambience quality was divided into three levels: good, average, and poor. In addition, the price attribute was also rated into three levels: low, average, and high. The definition of each quality level and price level was adapted from Jung et al. (2015).

As spa choice can be influenced by spa type, legal day spas were selected for the study because they were considered the most frequently and commonly used spas by local consumers and tourists (Thai Spa Association, 2014). The spa service used to control the quality and price in this study was the body treatment service. The set prices for a body treatment service were obtained from actual prices for body treatments as shown in the spa service menus in average legal day-spas in Thailand, at the time of the study (see Appendix A). The mean price of body treatments in the sample spas was 1,000 THB (\$1 equal 35 THB), so the 1000 THB price was used as the average price level. The high price level was then set at 1500 THB and the low price level at 500 THB. Consequently, the study used 500, 1,000, and 1,500 THB as the low, average, and high prices, respectively. The procedure used to construct the three price levels is presented in Appendix B.

Following the discrete choice experiment model, the four attributes with three different rating levels were combined to generate choice sets for respondents to choose. With four attributes and three rating levels each, the number of possible combinations or choice sets can go as high as 81 (3x3x3x3), which represented too many combinations for the respondents to rank efficiently. Therefore, this study used a fractional factorial design to generate a smaller fraction of all the possible alternatives by considering only the main effects and assuming the interactions to be negligible (Green, 1974; Hair et al., 2006). The calculation of a fractional factorial design for this study (using SPSS Conjoint 20.0) generated 16 combinations for the respondents to rank. The researchers eliminated the combinations that would be chosen naturally or eliminated by respondents without consideration, such as good product and service quality and low price or poor product and service quality and high price. The feasible number of combinations was reduced from 16 to 13, yielding a total of thirteen choice sets for the experiment. Then the combination in which all four attributes' levels were at average (average product quality, average therapist quality, average ambience quality, and average price), was used as a controlled choice and set as Spa A. Each of the 13 combinations was placed against Spa A as Spa B and the respondents were asked to choose between Spa A (controlled) or Spa B (13 different combinations of attributes' levels).

## **4. Data Collection**

### **4.1. The survey questionnaire**

The survey questionnaire is divided into two sections. The first section includes the respondents' demographic information and their spa behavior, while the second section involves 13 choice experiment questions where the respondents are asked to choose between Option-A spa and Option-B spa, as described above. The items on the questionnaire were first written in English, then translated into Thai, and then back-translated to English. Back translation was performed to ensure that the items in Thai communicated similar information to those in English. To ensure the questionnaire was clear and understandable and to test the validity and reliability of the measurement instrument, a pilot test with fifty customers was conducted prior to the administration of the actual survey. The questionnaire used for this study is found in Appendix C.

### **4.2. The respondents**

The respondents were local customers and inbound travellers who had or had not visited spas in Thailand. The eligibility criteria for survey participation required the respondents to be at least 18 years old and to have visited a spa within the past year; those who had not visited a spa at least once in the past year were excluded from the study. The respondents were selected using the random sampling approach. They were local and foreign tourists in Bangkok, Chiang Mai, Pattaya, Phuket and Hua-Hin,



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which are popular tourism destinations in Thailand and have the largest concentrations of spas in their various areas of the country (Thaiways, 2002; Tourism Authority of Thailand 2015). The individual participants were asked to read about the hypothetical spa context and respond to the questions.

#### **4.3. Data Analysis Method**

The study utilized three separate procedures to model and analyse consumers' behaviours with respect to a day spa choice event. First, descriptive analyses were performed to examine the profile of the respondents. Second, repeated measures logistic regression (Kutner et al., 2004) was used to examine the influences of spa attributes on the respondents' spa choices. The logistic regression model was based on the concept of utility-maximizing behaviour by a decision-maker (McFadden, 1974). In a given scenario, rational respondents were expected to choose the spa option that provided the greatest utility. They were expected to choose a spa only if the utility of the spa was greater than that of the other spa options. The binary logistic model estimated the natural logarithm of the odds (log odds) of falling into one of two discrete categories of the dependent variable, conditional on the independent variables (Hilbe, 2009). In the present study, the binary dependent variable was coded as unity when Spa A was chosen by the respondent and as zero when Spa B was chosen. The independent variables were the four controlled spa attributes. The attribute levels of Spa B were coded as dummy variables. Because each attribute level of Spa A was fixed at the average level throughout all the choice sets, the average level of each attribute was designated as the reference level to examine how a change in attribute level influenced the respondents' choices. Due to the trade-off nature of the choice sets presented, an average level of price was not given for Spa B; the researchers coded the low price level as zero and the high price level as unity. Repeated measures logistic regression was employed in the study because each participant responded to the choice experiment multiple times, thereby allowing the data to be influenced by unobserved individual characteristics (Nielsen et al., 2010). Third, the Kruskal-Wallis analogue to the one-way analysis of variance was used to test for significant differences in attribute importance across different groups according to the respondents' socio-demographic characteristics. To understand the respondents' preferences, we analysed each socio-demographic group according to gender, age, nationality, and income and compared their preferences. Moreover, to provide insights for spa professionals regarding how to design and market their spa products and services, we grouped the respondents based on their spa visit characteristics and analysed their preferences accordingly.

#### **5. Results**

Approximately 800 copies of the survey questionnaire were distributed and only 479 copies were returned yielding the returning rate of nearly 60%. Table 1 shows the demographic profile of the respondents. The respondents were divided into five groups based on their countries of origin: Thailand, China and Taiwan, other Asia-Pacific countries, Europe, and the USA. Of the 479 respondents, 50.52% were from Thailand, 24.01% were from China and Taiwan, 12.11% were from Europe, 7.72% were from other Asia-Pacific countries, and 5.64% were from the USA. In terms of gender, there were more female (64.72%) than male (35.28%) respondents. The majority of the respondents were 25 to 34 years old (58.46%), followed by 35 to 44 years old (27.56%), 45 years of age or older (7.72%), and less than 25 years old (6.26%). Of the 479 respondents, 35.70% reported having an upper middle income (50,001-100,000 THB), 31.32% had a middle income (20,001-50,000 THB), and 25.47% had a high income (more than 100,000 THB), whereas 7.52% had a low income (less than 20,000 THB). When comparing gender, age, and monthly income between the Thais and foreigners, approximately the same proportion of male and female respondents were found for both groups, and there were approximately twice as many female respondents as male respondents in both groups. In terms of age, most of the Thai (58.68%) and foreign respondents (59.49%) were between 25 and 34 years old. In terms of income, the foreigners all fell into the upper middle-income and high-income categories (54.87% and 45.15%, respectively), whereas all the respondents in the low-income category were Thai (14.87% of the Thai respondents), and the majority of the Thai respondents were in the middle-income category (61.98%).

**Table 1. Descriptive characteristics of the respondents**

Category	Response	Frequency (N = 479)			Percentage (%)		
		Thai	Foreigner	Total	Thai	Foreigner	Total
Nation	Thailand	242	-	242	50.52	-	50.52
	China/Taiwan	-	115	115	-	24.01	24.01
	European countries	-	58	58	-	7.72	7.72
	Asia-Pacific countries	-	37	37	-	12.11	12.11
	USA	-	27	27	-	5.64	5.64
Gender	Male	88	81	169	36.36	34.18	35.28
	Female	154	156	310	63.64	65.82	64.72
Age	Less than 25	22	8	30	9.09	3.38	6.26
	25 - 34	139	141	280	58.68	59.49	58.46
	35 - 44	65	67	132	25.62	28.27	27.56
	45 and older	16	21	37	6.61	8.86	7.72
Income	Less than 20,000 THB	36	0	36	14.87	0.00	7.52
	20,001 ~ 50,000 THB	150	0	150	61.98	0.00	31.31
	50,001 ~ 100,000 THB	41	130	171	16.94	54.85	35.70
	More than 100,000 THB	15	107	122	6.20	45.15	25.47

### 5.1. Choice experiment results

Table 2 and Figure 1 summarize the responses from the choice experiment and focus on trade-offs relating to quality: product quality, therapist quality, and ambience quality, and price. The respondents were asked to select between Spa A and Spa B in 13 different choice sets. In each choice set, Spa A was controlled and fixed at the average level for all attributes, whereas Spa B differed across the sets in terms of the attributes' levels. Choice set 3 represented a trade-off between price and product quality, choice set 6 involved a trade-off between price and therapist quality, and choice set 7 represented a trade-off between price and ambience quality. The remaining choice sets – 1, 2, 4, 5, 8, 9, 10, 11, 12, and 13 – supported choice sets 3, 6, and 7. Simple observation revealed interesting results: the majority of the respondents traded off price for quality. Of the three quality attributes, therapist quality appeared to be the most valued, followed by product quality and ambience quality. When the product quality and ambience quality of two spa options were equally averaged but therapist quality and price conflicted (choice set 6), most of the respondents (82.05%) preferred the utility gained from therapist quality over price. This fact was confirmed by the results of choice sets 5, 9 and 12, in which most of the respondents did not compensate for low therapist quality with low price. Similarly, in terms of product quality, when the therapist and ambience quality of two spa choices were equally average and there was a conflict between product quality and price (choice set 3), a high percentage of the respondents (61.17%) traded off price for product quality. In all the choice sets with poor product quality and low price (choice sets 11, 12 and 13), few of the respondents compensated for poor product quality with low price. In terms of ambience quality, when the product and therapist quality of two spas were equally average but ambience quality and price were in conflict, more than half of the respondents (54.49% in choice set 7) preferred ambience quality to price. Moreover, in all the choice sets with poor ambience quality and low price (choice sets 5, 8, and 11), a small share of the respondents compensated for poor ambience quality with low price. As shown in choice set 1, the majority of the respondents were willing to pay more for good product quality, therapist quality, and ambience quality. Of the four attributes,

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the respondents were most sensitive to therapist quality, followed by product quality, ambience quality, and price.

**Table 2. Percentage of the respondents selecting Spa A and Spa B in each choice set**

Choice set	Attribute level Spa B				Choice decision (n = 479)			
	PQ	TQ	AQ	Price	Spa A	%	Spa B	%
1	Good	Good	Good	High	100	(20.88)	379	(79.12)
2	Good	Good	Poor	High	341	(71.19)	138	(28.81)
3	Good	Average	Average	High	186	(38.83)	293	(61.17)
4	Good	Poor	Good	High	343	(71.61)	136	(28.39)
5	Good	Poor	Poor	Low	387	(80.79)	92	(19.21)
6	Average	Good	Average	High	86	(17.95)	393	(82.05)
7	Average	Average	Good	High	218	(45.51)	261	(54.49)
8	Average	Average	Poor	Low	421	(87.89)	58	(12.11)
9	Average	Poor	Average	Low	445	(92.90)	34	(7.10)
10	Poor	Good	Good	High	342	(71.40)	137	(28.60)
11	Poor	Good	Poor	Low	372	(77.66)	107	(22.34)
12	Poor	Poor	Good	Low	455	(94.99)	24	(5.01)
13	Poor	Average	Average	Low	358	(74.74)	121	(25.26)

## 5.2. Results of the repeated measures logistic regression

The results of the repeated measures logistic regression estimating the influence of attribute level on the choice of spa are shown in Table 3. The model diagnostics were adequate with a Chi-square statistic of 364.22 with seven degrees of freedom ( $\chi^2 = 364.22$ ) and significant at  $p < 0.001$ . As expected, the coefficient for good therapist quality was significant at  $p < 0.001$  with a positive effect on the respondents' choice of a spa. By contrast, poor therapist quality had a significant negative effect at  $p < 0.001$ . The odds of a spa with good therapist quality being selected over a spa with average therapist quality was 2.381 to 1, whereas the odds of a spa with poor therapist quality being selected over a spa with average therapist quality were 0.212 to 1. As such, a spa with good therapist quality was 2.4 times more likely to be selected than a similar spa with average therapist quality, and a spa with poor therapist quality was approximately 5 times less likely to be selected than a similar spa with average therapist quality. This result is consistent with prior observations concerning the relative importance of attributes in spa selection (Kucukusta and Guillet, 2014; Kucukusta et al., 2013). Moreover, the results for product quality indicated that the odds of a spa with good product quality being selected over a spa with average product quality were 1.741 to 1 and significant at  $p < 0.001$ , whereas the odds of selecting a spa with poor product quality over one with average product quality were 0.272 to 1. This indicates that a spa with good product quality was 1.7 times more likely to be selected than a spa with average product quality and that spas with poor product quality were approximately 4 times less likely to be selected than those with average quality. The results for ambience quality also revealed interesting findings. Poor ambience quality had a negative influence ( $p < 0.001$ ) on the odds of the respondents choosing a spa with average ambience quality (ratio of 0.193 to 1), indicating that spas with a poor environment were 5 times less likely to be selected than similar spas with average ambience quality. However, high ambience quality did not significantly influence the respondents' decisions. Most of the customers were not willing to pay more and/or downgrade therapist and product quality for above-average ambience quality, which is consistent with the results of Kucukusta et al. (2013). Price, however, is a common selection attribute in many industries including the spa industry (Tabacchi, 2010). In this study, the high price variable was not significant, which indicates that the customers were willing to pay more for better



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spa products and services. This finding is consistent with results from the study by Kucukusta and Guillet (2014).

**Table 3. Results of the repeated measures logistic regression**

Variable	β	Odds ratio	95% Confidence interval		Standard error	Sig
			Lower	Upper		
Product quality (reference level = average)						
Good	0.555***	1.741	1.463	2.072	0.89	0.000
Poor	-1.303***	.272	0.222	0.332	0.102	0.000
Therapist quality (reference level = average)						
Good	0.867***	2.381	2.001	2.832	0.089	0.000
Poor	-1.553***	0.212	0.172	0.260	0.105	0.000
Ambience quality (reference level = average)						
Good	-0.017	0.983	0.826	1.171	0.089	0.851
Poor	-1.644***	0.193	0.158	0.236	0.102	0.000
Price (reference level = low)						
High	-0.256	0.774	0.578	1.036	0.149	0.085
Intercept	0.183		0.578	1.036	0.106	0.084

Sig. code: \*\*\*: P < 0.001; N = 6227.

Model fit:  $X^2_{(7)} 364.22^{***}$ .

### 5.3. The results of the Kruskal-Wallis Test based on socio-demographic information

This study also investigated whether there are significant differences in terms of the importance people attach to therapist quality, product quality, ambience quality and price based on demographic profile.

Table 4 describes the results of the Kruskal-Wallis test examining variations in the respondents' opinions about the four choice attributes – product quality, therapist quality, ambience quality, and price – based on their country of origin, gender, age, and income. In terms of country of origin, most of the respondents from China and Taiwan (52.17%) placed higher importance on spa product quality, whereas most of those from Thailand (57.02%), the Asia-Pacific countries (62.16%), Europe (55.17%) and the USA (77.78%) considered therapist quality the most important attribute. The respondents from all the countries considered ambience quality and price less important than the other two attributes. Notably, none of the respondents from the Asia-Pacific countries, Europe, and the USA emphasized price in their decisions. In terms of gender, both the male (62.13%) and female (39.03%) respondents placed a greater emphasis on therapist quality, and the female respondents (34.84%) cared more about product quality than the male respondents (15.98%). Both the male and female respondents placed little emphasis on ambience quality and the least emphasis on price. With regard to age, the respondents in all the age groups clearly placed the highest value on therapist quality, followed by product quality. The respondents who were younger than 25 years old considered price (6.67%) more important than ambience quality (0.00%), whereas those in the other age groups perceived ambience quality as more important than price. In terms of income, the low-income (less than 20,000 THB), middle-income (20,001-50,000 THB), and upper middle-income (50,001-100,000 THB) respondents considered therapist quality the most important attribute (61.11%, 67.68%, and 45.03%, respectively), whereas the high-income (more than 100,000 THB) respondents placed greater emphasis on product quality (44.26%). Moreover, the low-income respondents cared the least for ambience quality, and the middle-, upper middle-, and high-income respondents cared the least for price. Thus, the less income a respondent had, the more price-sensitive he or she was.

**Table 4. Kruskal-Wallis test results according to socio-demographic characteristics**

Socio-demographic characteristic	Product quality	Therapist quality	Ambience quality	Price	p-value
Nation					0.000
Thailand	23.14	57.02	14.88	4.96	
China/Taiwan	52.17	22.61	6.96	18.26	
Asia-Pacific countries	27.03	62.16	10.8	0.00	
European countries	36.21	55.17	8.62	0.00	
USA	7.41	77.78	14.81	0.00	
Gender					0.001
Male	15.98	62.13	14.79	4.73	
Female	34.84	39.03	17.74	8.06	
Age					0.249
Less than 25	36.67	40.00	0.00	6.67	
25 ~ 34	27.50	49.29	16.07	6.79	
35 ~ 45	26.52	41.67	24.24	8.33	
45 and older	27.03	56.76	13.51	2.70	
Income					0.032
Less than 20,000 THB	27.78	61.11	0.00	11.11	
20,001 ~ 50,000 THB	16.67	66.67	12.67	4.00	
50,001 ~ 100,000 THB	34.50	45.03	17.54	2.92	
More than 100,000 THB	44.26	34.43	18.85	2.46	

Note: All figures are percentages

## 6. Discussion and Conclusion

The present study investigated the compensatory decision-making strategies of customers in relation to a spa choice setting under different competing conditions for quality –product, therapist, and ambience – and price and also investigated the significant factors influencing spa-goers based on country of origin, age, gender, and income group.

The discrete choice experiment’s findings suggested that therapist quality was the most dominant attribute in determining spa-goers’ choice, followed by product quality, ambience quality, and price. This result was consistent with theory and empirical evidence. Good therapist and treatment quality led the respondents to select spas, whereas poor therapist and treatment quality led them to reject spas. Good ambience quality did not significantly affect spa choice; however, poor ambience quality led to spa rejection, signalling that good ambience quality may be related to a “décor” and “hygiene” factor in spa choice (Kucukusta et al., 2013; Kucukusta & Guillet, 2014). Additionally, although price was indicated as one of the most important attributes in the spa selection dimension (Kucukusta et al., 2013), the results of this study revealed that price was the least important attribute of the four analysed. The respondents were reluctant to choose a spa with poor therapist and product quality even if the price was low. These respondents avoided trade-offs between therapist and product quality for price and preferred to choose the spa that provided the most skilled therapists and the best spa products and types of treatments. This is likely because most of the spa-goers were visiting a spa to receive good treatments and have positive experiences, and they were largely willing to pay for such experiences; thus, they cared less about price. Consequently, to attract more foreign tourists, Thai spa operators should pay more attention to improving therapists’ skills and the quality of the products used in spas.

### **6.1. Nationality**

The Thai, American, European, and Asia-Pacific spa-goers selected therapist quality as the most important attribute, followed by product quality, ambience quality, and price. However, the Chinese spa-goers selected product quality as the most important attribute, followed by therapist quality, ambience quality and price. In Thai spas, the two most important attributes are clearly therapist quality and product quality. This is likely because Thai spas are famous for their therapists' unique skills and their exotic herbal products and treatments. Most foreign tourists visit Thai spas to experience these skilful therapists and exotic herbal products. The massage styles practiced by the therapists in Thailand's spas are well-known and unique. These therapists skilfully use their hands, fists, feet, elbows, and knees to manipulate customers' bodies to relieve pain and soreness, helping customers feel relaxed and relieved (Tangtrongchitr, 2007). Massage styles as Wat Pho massage, Chaleoisuk massage, and Tok-Sen massage are fascinating to foreign tourists. The notion that therapists in Thai spas possess better skills than those in other countries in the Association of Southeast Asian Nations (ASEAN) is well-accepted (Thai Spa Association, 2014). Thus, when American, European and Asia-Pacific spa-goers visit Thai spas, they expect to receive these types of massage treatments from skilful and certified therapists.

Apart from the unique massage styles and treatments performed by professional and well-trained therapists, Thai spas also offer exotic herbal products. Thus, product quality is inevitably one of the most important attributes for foreign tourists who visit Thai spas. The products used in Thai spas are produced according to high standards and primarily from traditional Thai herbs. These products are also exported to many countries: in 2015, Thailand exported 34.8 billion baht in herbal products, which represented a growth of over 10% from the previous year (Euromonitor, 2015). The results of the current study revealed that product quality was the second most important attribute for the respondents overall, and the Chinese spa-goers considered product quality the most important attribute. The Chinese people have been using herbal medicines and herbal products for generations; thus, they appreciate the quality of the products used in spas. In addition, China and the USA are among the top importers of Thai herbal cosmetics and represent two relatively new markets with strong potential for growth (Kongrer, 2013). The Chinese respondents considered therapist quality less important than product quality, perhaps because most of the unique Thai massage techniques and treatments performed by Thai therapists are of Chinese origin. Thus, the skills of the therapists in Thai spas are not novel to Chinese spa-goers and are therefore less interesting, as these consumers can find therapists with similar skills in Chinese spas. In their study of hotel spa choice in Hong Kong, Kucukusta and Guillet (2014) found that Chinese customers selected therapist quality as the most important attribute of their decision to visit a spa, which contrasts with the findings of the current research. This may be because Chinese spas and Thai spas emphasize different features. Chinese spa treatments focus primarily on acupuncture, which requires highly skilled practitioners of traditional Chinese medicine, which might explain why the participants in the Hong Kong study considered therapist quality to be the most important attribute when selecting a spa in China. However, Thai spas focus mainly on the use of exotic products and treatments by skilled therapists or masseuses, and Chinese spa-goers may visit Thai spas primarily to experience these exotic products.

In terms of ambience quality, the respondents from all the countries analysed considered ambience quality to be less important than therapist quality or product quality. Although the traditional Thai style of decoration is one of the most important attributes that attracts customers to a Thai spa, the respondents considered it less important than product quality and therapist quality. This may be because ambience quality does not directly influence spa-goers' utilitarian experience, unlike product and therapist quality. That is, ambience quality does not benefit spa-goers directly, whereas products and therapists do.

Price is a common selection attribute for many service industries, including spas (Kucukusta & Guillet, 2014). Although price has been shown to be one of the most important attributes in spa selection (Kucukusta et al., 2013), the results of this study revealed that price was the least important attribute. A large majority of the spa-goers from each of the countries of origin did not trade off therapist quality,

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product quality, or ambience quality for price. It is likely that price was the least important attribute because Thai spas are well-known for being inexpensive and a value for consumers' money in comparison to similar spas in other ASEAN countries (Thai Spa Association, 2014). Consequently, the respondents from all the countries – including the USA, Europe, Thailand, China, Taiwan and other countries in the Asia-Pacific region – were less price-sensitive because they knew that Thai spa prices were reasonable and perhaps even cheap. However, in a country in which spa services are expensive, spa-goers are likely to be more price-sensitive. For example, Kucukusta and Guillet (2014) investigated spa-goers at hotel spas in Hong Kong, and respondents from the Asia-Pacific region, Europe, and North America indicated that price was the most important attribute in the choice of a hotel spa in Hong Kong. This is likely because hotel day spa services in Hong Kong are expensive, and the spas in hotels are often more expensive than other types of spas (Tabacchi, 2010; Kucukusta et al., 2013).

## **6.2. Gender**

In terms of gender differences, both the male and female respondents considered therapist quality to be the most important attribute, followed by product quality, ambience quality and price. An examination of therapist quality and product quality according to gender showed that the male respondents placed much greater emphasis on therapist quality than on product quality, whereas the female respondents placed a similar level of emphasis on both of these attributes. This is perhaps because women care more about their own beauty than men, so they are more concerned than men about the products that are used in spas. Elorod et al. (2015) noted that women are concerned about their skin because they want to look younger; thus, it is not surprising that beauty and rejuvenation is one of the strong motivating factors for most spa-goers (Chen & Prebensen, 2009; Dimitrovski and Todorovic, 2015; Koh et al., 2010; Mak et al., 2009). A 2014 survey by the Thai Spa Association found that women used spa services primarily for beauty and skin nourishment, such as facial and body treatments and body scrub and slimming treatments, whereas men used spa services mainly for medical massage and relaxation. The male and female respondents in the current study revealed more or less the same level of preference in terms of ambience quality. However, although both the male and female respondents considered price the least important attribute of the four analysed, the female respondents appeared to be more price sensitive than the men. This is perhaps because it is the nature of women to be more careful than men about how much money they spend. In short, spa operators should consider gender when designing and selecting therapists and products for their spas. Kucukusta et al. (2013) also mentioned that beauty themes and décor are more appealing to women.

## **6.3. Age and income**

Similarly, the results of this research revealed that most of the respondents in all the age and income groups selected therapist quality as the most important choice attribute, followed by product quality, ambience quality, and price. The respondents in the oldest age group valued therapist quality more than the respondents in the younger age groups. This is likely because older people may have health problems, and they often visit spas to receive massages to relieve muscular pains and soreness; thus, they consider therapist quality as the most important attribute of their decision. Mak et al. (2009) also found that a large proportion of the younger respondents in their study were more inclined to seek a spa experience that focused on health consciousness. In this study, with respect to income, the higher a respondent's income level, the less price-sensitive he or she was. The respondents with the highest income level placed the greatest importance on product quality followed by therapist quality, ambience quality and price. This is likely because the high-income respondents led a more luxurious life and cared more about the products used in a spa. They may have expected a spa to use high-quality products that would help improve their health and beauty. Elrod et al. (2015) confirmed that higher income customers are likely to concern themselves with the long-term benefits of using spa products that can help make them look younger.

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#### 6.4. Implications

Therapist quality is clearly the most important spa choice attribute, followed by product quality, ambience quality and price. Thus, spa operators should offer regular trainings for their staff members and therapists to improve knowledge and skills. Service sequence, techniques for special treatments, and product characteristics and functions should be included in these trainings. Spa products can directly affect the physical and psychological effectiveness of treatments, and the use of herbal and branded spa products might aid in guaranteeing product quality. Ambience quality is also important, and well-designed rooms may greatly affect customers' overall spa experience. Themes such as Thai local architecture may help to attract foreign visitors to spas. Treatment prices should be set according to a spa's target customers because price is one of the indicators of product and service quality. From the perspective of foreign visitors, Thai spas are inexpensive and a value for the money, but spas might be expensive for Thai spa-goers. Thus, spa operators should consider their target customers as one of the determining factors when setting prices. In addition, spa managers should implement promotional campaigns to boost sales and retain repeat customers.

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## Appendices

### Appendix A: Body treatment prices from the sampled day spas. (1 U.S. dollar ≈ 35 THB \*\*\*)

No.	Name of day spa	Spa body treatment	Price (THB) per 60 minutes
1	Dahra Beauty and Spa	Aromatherapy Massage	1,400
		Swedish massage	1,700
2	Green Leaf Spa	Royal Thai massage	1,000
		Reflexology massage	900
3	Sooksabai Health Massage	Thai recipe body scrub	1,050
		Nourishing mineral white mud body wrap	1,050
4	The Oasis Spa	Thai coffee, honey & yogurt scrub	1,200
		Thai herbal clay body wrap	1,200
5	Nara Spa	Aromatherapy massage	1,200
		Tension relief massage	790
6	Let's Relax Spa	Thai herbal steam sauna and massage	1,200
		Thai herbal steam sauna and floral bath	1,200
7	Chantrara Spa	Swedish massage	1,090
		Aroma massage	1,090
8	Lavana Bangkok Spa	100% pure oil massage	850
		Aroma oil massage	950
9	Urban Retreat Spa	Sweet almond oil massage	850
		Thai massage	500
10	Heathland Spa	Aromatherapy body massage	950
		Body polish	850
<b>Average price</b>			<b>1,051 THB \$30</b>

\*\*\* Approximate exchange rate

**Appendix B: Definition of quality level and associated star ratings.**

Level Attributes	Poor ★☆☆☆☆	Average ★★★☆☆	Good ★★★★★
<b>Spa product &amp; treatment</b>	Generic product and standard treatments	Non-branded Thai herbal products and local Thai treatments	Branded Thai herbal products and well-known exotic Thai spa techniques and treatments
<b>Therapist</b>	Non-certified therapist with basic skills; friendly but without sufficient advice.	Certified therapist with good skills; friendly with somewhat sufficient advice.	Certified therapist with excellent skills; friendly, empathy and able to diagnose and make recommendations on appropriate treatments
<b>Ambience</b>	Casual ambience with simple decorations; no privacy	Thai local design with basic decorations; quiet and private atmosphere	Elegant Thai local design with luxurious ambience; quiet with high level of privacy

Quality definitions adopted from Jung *et al.* (2015) and Kucukusta and Guillet (2014)**Appendix C:** A choice set as it was presented to the respondents. The respondents were asked to compare the two options and choose the option they preferred. The thirteen choice sets were presented in random order for all the respondents to ensure that exposure to an earlier choice set did not affect the consumers’ responses to later questions in a systematic manner. (Adopted from Jung *et al.*, 2015)

Which spa would you choose? (Please tick box below)

Attributes	Spa A	Spa B
Spa product & treatment	Average ★★★☆☆	Good ★★★★★
Therapist	Average ★★★☆☆	Good ★★★★★
Ambience	Average ★★★☆☆	Good ★★★★★
Price of body treatment	1,000 THB	1,500 THB
	<input type="radio"/>	<input type="radio"/>
	(Please select one)	