

**Hotel Online Booking Decisions Based on Price Complexity, Alternative  
Attractiveness, and Confusion**

by

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## **ABSTRACT**

### **HOTEL ONLINE BOOKING DECISIONS BASED ON PRICE COMPLEXITY, ALTERNATIVE ATTRACTIVENESS, AND CONFUSION**

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The goal of this research is to investigate customer confusion and its antecedents, specifically price complexity and alternative attractiveness, and to validate a link between confusion and postponing decisions about booking a hotel online. Price complexity and alternative attractiveness cause three types of confusion: overload confusion, similarity confusion, and ambiguity confusion. Moreover, these three types of confusion cause customers to defer purchase decisions. An online survey was used to collect data from customers who booked hotels online during the past six months in both the United States and Canada.

**Keywords:** Online travel agency; Online hotel booking; Price complexity; Alternative attractiveness; Confusion; Decision postponement; Purchase intention

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## TABLE OF CONTENTS

ABSTRACT .....	ii
ACKNOWLEDGEMENT .....	iii
TABLE OF CONTENTS .....	v
LIST OF TABLES AND FIGURES .....	vii
CHAPTER 1: INTRODUCTION .....	1
CHAPTER 2: LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT .....	6
2.1. Price complexity .....	6
2.2. Confusion .....	7
2.2.1. Overload confusion.....	9
2.2.2. Similarity confusion .....	9
2.2.3. Ambiguity confusion .....	10
2.2.4. Price complexity and confusion.....	11
2.3. Alternative attractiveness .....	13
2.3.1. Alternative attractiveness and confusion .....	14
2.4. Decision postponement and purchase intention .....	16
2.4.1. Confusion and related outcomes.....	17
CHAPTER 3: METHODOLOGY .....	20
3.1. Study population and sample.....	20
3.2. Sample size.....	20
3.3. Data collection .....	21
3.4. Measurement scales .....	22
CHAPTER 4: RESULTS .....	24
4.1. Demographic profile of the sample.....	24
4.2. Confirmatory factor analysis.....	26
4.3. Structural model analysis .....	30
CHAPTER 5: DISCUSSION .....	33

CHAPTER 6: IMPLICATIONS .....	38
6.1. Theoretical implications .....	38
6.2. Practical implications.....	40
CHAPTER 7: LIMITATIONS AND FUTURE STUDIES.....	45
CHAPTER 8: CONCLUSION .....	48
REFERENCES .....	49
APPENDICES .....	60
Appendix 1: Questionnaire .....	60
Appendix 2: Research Ethics Boards Approval.....	66

**LIST OF TABLES AND FIGURES**

Table 1. Respondents profile (n=453) .....	25
Table 2. Results of CFA (n=453).....	26
Table 3. Correlation matrix.....	29
Table 4. Results for structural model (n=453).....	31
Figure 1. Proposed conceptual model.....	19
Figure 2. Structural Model.....	31

## CHAPTER 1: INTRODUCTION

Computer reservation and global distribution systems arrived in the late 1980s and early 1990s (Gretzel & Fesenmaier, 2009) and have provided a link between the suppliers and customers using new distribution channels (Buhalis, 1998; Law, Leung, & Wong, 2004; Morrison, Jing, O’Leary, & Cai, 2001). As online travel agencies (OTAs) like Expedia.com engaged in online marketing during the second half of the 1990s (Amaro & Duarte, 2013), travelers used the Internet to search for information and plan travel using online booking channels (Litvin, Goldsmith, & Pan, 2008). Global digital travel sales on the Internet generated more than 560 billion United States dollars (USD) in 2016, and worldwide online travel sales should reach 817.54 billion USD in 2020 (Statista, 2016).

With so many distribution channels other than their own websites to sell rooms, hotels now compete with the OTAs and thus work both competitively and cooperatively. OTAs become a double-edged sword for hotels. Hotels pay commissions to OTAs to sell their rooms, but hotels also compete for customers on their own. The commission fees range from 18-36% of the cost of each room sold (Clampet, 2016). Moreover, OTAs offer slightly lower prices than what hotels post on their own websites for the same hotel rooms. Compared to direct booking with hotel websites, hotels show lower profits when customers use OTAs channels. Attracting customers to their own sites is difficult for hotels. Using available hotel room options based on individual search criteria, OTAs provide some advantages to customers: reduced search costs and easy comparisons among options (Scheibehenne, Greifeneder, & Todd, 2010). Although customers enjoy more choices using OTAs for comparisons, their search criteria contribute to a complex



price structure. Additionally, OTAs offer membership programs very similar to hotel loyalty programs as a way to retain customers. Customers have many more booking site options for similar hotel and room types, often with better benefits and price. However, more online booking choices may create confusion for customers than if fewer choices are available.

Confusion may be one side effect so many online distribution channels (Lu, Gursoy, & Lu, 2016). Customers search through hotel official websites, OTAs, Airbnb, and other distribution sites for trip accommodations. Most published information systems research investigated the decision process under varying information loads and focused on how manipulating changes in the number of available choices affected that process, but the number of attributes from which to choose did not (Tan, Teo, & Benbasat, 2010).

To better understand customer confusion, it is important to investigate both alternative-based and attribute-based evaluation approaches. Excessive information from distribution channels may affect customer decisions, especially considering how massive amounts of information cause confusion (Mai, Hoffmann, Schwarz, Niemand, & Seidel, 2014). Price may be the primary determinant of purchase intention and an important attribute of the product or service, so complexity in pricing may cause confusion. More comparable options may also lead to more confusion. Customers make decisions using their evaluations of many booking sites. Such overall evaluations reflect alternative attractiveness, which measures the number of attractive options. Even though attribute-based evaluation (or price) may lead to more indecision and uncertainty about preferences than alternative-based evaluations (Dhar, 1996), customers

generally do not make decisions based on single attribute when it comes to booking hotel rooms online. Previous studies do suggest that more choice is better (Benartzi & Thaler, 2001).

However, from a different perspective, people become less satisfied with their decisions once the number of alternatives reaches a certain level (Iyengar & Lepper, 2000; Scheibehenne et al., 2009). Customers might be confused among all available online channels to find accommodation that optimally meets their needs. Room price is the most frequently used criterion for hotel room choices. Among all available booking options, customers will compare the prices from different booking sites, and some online distribution channels allow customers to easily compare prices among vendors and find the best offers. If price is perceived as reasonable, customers may have higher purchase intentions (Grewal, Krishnan, Baker, & Borin, 1998; Guillet, Liu, & Law, 2014; Ramanathan & Ramanathan, 2011). Hotel customers, however, usually face complex prices because they frequently must calculate additional fees or other extras beyond the room rate. The cognitive effort involved in evaluating prices among various booking sites affects the final choice (Estelami, 2003; Herrmann & Wricke, 1998; Kim & Kramer, 2006). Thus, price complexity makes it harder for customers to decide on a hotel room, especially when they have overloaded choice sets, which may lead to negative outcomes (Dellaert & Stremersch, 2005; Scheibehenne et al., 2010).

Examining the effects of abundant booking choices and complex prices should allow the industry to better understand customer confusion. Academics have heavily researched the unfavorable consequences of customer confusion: decision postponement, negative word-of-

mouth, dissatisfaction, dissonance, shopping fatigue, decreased brand loyalty, decreased trust, product misuse, and reduced self-confidence (Foxman, Berger, & Cote, 1992; Foxman, Muehling, & Berger, 1990; Jacoby & Morrin, 1998; Matzler & Waiguny, 2005; Mitchell & Papavassiliou, 1997; 1999; Shiu, 2017; Walsh, Henning-Thurau, & Mitchell, 2007; Turnbull, Leek, & Ying, 2000). Among these, decision postponement is among the most damaging outcomes because it directly affects business profitability (Hallowell, 1996). In addition, many customers who postpone their decisions report insufficient time to search and compare options (Walsh et al., 2007) and, as a result, have no time to wait for better options. Confused customers use different strategies in responding to confusion (Shukla, Banerjee, & Adidam, 2010). Instead of postponing their decisions, some confused customers adopt habitual purchasing behaviors to reduce time spent processing the volume and diversity of information (Shiu, 2017).

This study seeks to provide insight into customer confusion stemming from so many available hotel booking sites and prices. To the authors' best knowledge, no research has examined the relationships among alternative booking options, price complexity, and customer confusion. Moreover, few studies have investigated customer confusion in the hotel online booking environment (Matzler & Waiguny, 2005). Therefore, to further investigate these existing research gaps and customer confusion in online hotel booking, this study seeks to answer the following key research questions:

1. Are customers confused by the variety of hotel booking sites and prices?
2. How do abundant attractive booking options affect customer choices?
3. How do complex prices affect online hotel booking?

To fill the gaps in research on the relationships among online booking site alternatives, price complexity, and customer confusion and to explore the process by which customer use evaluation in attribute and alternative approaches, the purpose of this study is to investigate price complexity and alternative attractiveness as two antecedents of confusion and to validate the link between confusion and decision postponement in online hotel booking. Based on this conceptualization, a structured model is proposed: 1) price complexity and alternative attractiveness lead to three types of customer confusion; and 2) the three types of confusion motivate customers to defer their purchase decisions and repurchase decisions.

## **CHAPTER 2: LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **2.1. Price complexity**

Traditionally, price complexity is viewed by its degree of price partition (Xia, Monroe, & Cox, 2004). Customers must calculate the total price of a particular offer based on the total number of price elements; the package price comprises different components with different charges. Two additional drivers of price complexity correspond to two facets of heterogeneity (Homburg, Totzek, & Krämer, 2014). The first aspect of heterogeneity is the variety of number format (even versus odd number), while the second aspect is the difficulty in calculating the total price of a choice. These three distinct causes of price complexity (degree of price partition, variety of number format, and calculation difficulty) are in line with system theory (Luhmann, 1996), and the number of components within the system, as well as the interrelationships of these components, compose the system structure. Organizational theory also suggests that both the number of elements in the decision and the heterogeneity of each element determine the organizational decision complexity (Homburg et al., 2014). Moreover, Layer, Feurer, and Jochem (2017) have provided empirical evidence of antecedents of perceived price complexity using the perspective of price framing in the context of energy. Tariff type, price ending of consumption, dependent price components, and discount presentation format influence, to a high degree, perceived price complexity. Specifically, various dynamic tariff types require customers to devote cognitive effort to calculating the final payment. When examining the price ending format effect, prior studies have found that a format of even price endings are easier for customers to use in making purchase decisions instead of odd price endings (Choi, Rangan, Chatterjee, & Singh, 2014). The discount format, as Estelami (2003) states, is more difficult if

customers must multiply (or divide) instead of adding (or subtracting), making an evaluation of the outcome of an offer more difficult for customers.

In online hotel booking, the total price consists of basic price, tax, and fees, as well as currency exchange for international travelers. These price components result in a high degree of price partitioning. Broadly speaking, different star-ratings or brands of hotels have a wide range of prices. Online booking channels use different ways, or formats, of representing discounts to attract customers. For instance, some websites prefer to present discounts in a format stated as dollars off while other websites prefer to use a percentage. Such different pricing formats account for the first facet of heterogeneity. As hoteliers implement dynamic pricing, listed room prices will change in response to supply and demand in the market. Hotels may, for example, increase prices during the high season and decrease prices during the off season to maximize occupancy rates and RevPAR. Moreover, strict policies (e.g., fencing condition, cancellation policy, promotion, and refund policy) provide additional pieces of price-related information, so customers can compute their final payment. Inconsistency and variability in the hotel room price show the difficulty in calculating that final price and causes additional price complexity.

## **2.2. Confusion**

Perceived confusion is customer “failure to develop a correct interpretation of various facets of a product/service, during the information processing procedure. As a result, this creates misunderstanding or misinterpretation of the market” (Turnbull et al., 2000, p.145). The asymmetry between the product/service information and customer interpretation disorients

customers, making them feel unable to make a purchase decision. Research on confusion has examined overchoice (Fasolo, McClelland, & Todd, 2007; Scheibehenne et al., 2009; Gourville & Soman, 2005; Mogilner, Rudnick, & Iyengar, 2008), misleading information (Golodner, 1993), or brand confusion (Morrin & Jacoby, 2000; Mitchell & Kearney, 2002). Customer confusion could be viewed as a separate construct based on three distinct antecedents: “too similar, too many or unclear stimuli” (Mitchell, Walsh, & Yamin, 2005, p.143). Six stimuli of customer confusion have been identified in the shopping environment: stimuli variety, stimuli novelty, stimuli complexity, stimuli conflict, stimuli comfort, and stimuli reliability (Schweizer, Kotouc, & Wagner, 2006). The first four stimuli (variety, novelty, complexity, and conflict) are recognized in psychological studies. Stimuli variety reflects the number of choices, which causes uncertainty about the trade off between option and individual needs. Stimuli novelty refers to not recognizing cognitive patterns when presented with unknown stimuli (Schweizer et al., 2006). Stimuli complexity arises from unclear perceptions of a product or service, where not only quantity but also quality of the objects enhances the subjective perception of complexity. Stimuli conflict refers to “two or more similar distinct stimuli” (Schweizer et al., 2006, p.186). For instance, both the listed price and discount are related to monetary value. Customers could infer the final payment based on these two price elements. However, listed price might affect customer perception directly, where discount has indirect influence through calculations. The last two stimuli (comfort and reliability) are subsumed from respondent ratings in the qualitative analyses. Stimuli comfort is strongly relevant to shopping environment (e.g., waiting time). On the other hand, stimuli reliability corresponds to customer trustworthiness. Price change or vague information might arouse suspicions among sensitive customers.

### **2.2.1. Overload confusion**

Overload confusion is “difficulty when confronted with more product information and alternatives than customers can process in order to get to know, to compare and to comprehend alternatives” (Walsh et al., 2007, p.704). Confusion is related to bounded-rationality, which indicates individual cognitive capacity is not infinitely expandable (Simon, 1962). Individuals are more likely to retain decision-relevant information, which can increase decision accuracy, but choices are not usually based on only one characteristic. The more characteristics evaluated, the more difficult the decision will be (Shugan, 1980). Customers also experience information anxiety when confronted with sufficiently abundant information (Wurman, 1990). These negative emotions may make customers feel less confident of their decisions (Allan, Chieh, & Dogan, 2015). In online hotel booking, overload confusion could occur just from the exponential growth of online websites, the many brands displayed on OTAs, and the large number of online advertisements. Even website design can affect customers; OTA websites often put too much information into a small space (i.e., hotel names, price, and amenities). Such designs also cause overload confusion (Walsh, Mitchell, & Frenze, 2004).

### **2.2.2. Similarity confusion**

Similarity confusion refers to not understanding a choice or an incorrect brand evaluation resulting from perceived physical similarity of products or services (Mitchell et al., 2005, p.143). Similarity confusion can come from either the marketer domain or customer domain (Walsh et al., 2007). Marketers create similar shopping environments, similar packaging of products, or similar advertisements even as competitors. All marketing, however, causes confusion among



customers, who feel perplexed by the similarities among similarly marketed brands. Confusion is also created during interpersonal communication. The salesperson introduces a product or service to the customer. If the salesperson fails to explicitly explain product attributes, customers could suffer similarity confusion. The necessary precondition for similarity confusion is two or more products. Without a reference product, comparisons are impossible. Moreover, sub-branding pushes customers to incorrectly perceive a brand difference. Customers who are familiar with Best Western Inn, may not be familiar with Best Western Premier or Best Western Plus. In this situation, customers could infer that the price or quality of an affiliated brand is the same as the parent brand. In fact, these brands share a reputation but operate separately. Customers are likely to consider these two similar brands the same, leading to confusion.

### **2.2.3. Ambiguity confusion**

Ambiguity confusion is “a lack of understanding during which customers are forced to re-evaluate and revise current beliefs or assumptions about products or the purchasing environment” (Mitchell et al., 2005, p.143). Ambiguity confusion is caused by uncertainty about “unclear, incongruent, or misleading information” (Wang & Shukla, 2013, p.296) and usually happens when information contradicts existing knowledge (Gursoy, 2003). Lack of credibility or unreliable information are the main causes of ambiguity confusion (Wiedmann, Walsh, & Klee, 2001). Customers with ambiguity confusion may infer that perceived product characteristics will differ from actual product characteristics (Walsh et al., 2007). As with similarity confusion, ambiguity confusion also happens in both the marketer and customer domains. Marketers use stimuli with a stronger influence because marketers often offer information “inconsistent with the customer’s prior beliefs and knowledge” (Walsh et al, 2007, p.705). When customers search

for hotels in OTAs, they usually notice “sold out soon” warnings. Customers cannot then clearly identify how many rooms are available. Hence, ambiguity confusion is triggered.

#### **2.2.4. Price complexity and confusion**

Past research indicates price complexity affects buyer confusion, because customers find price differences and price levels interfere with making decisions (Kalayci, 2015). The number of price elements is one cause of price complexity (Homburg et al., 2014). More price components lead to more price complexity. Overload confusion can also be attributed to increasing numbers of price elements involved in a particular offer. Even though more price information can make the price frame more comprehensive for customers, excessive price information may also negatively affect customer decision-making (Decrop & Snelders, 2005). Hotel rates are determined by the base price, tax, promotion, type of room, and other price related factors. However, the number of price components varies depending on customer needs. Generally, customers must clearly define their budget prior to searching for information. For example, amenities and facilities can enhance customer satisfaction during hotel stays. Each individual amenity or facility service is listed on the final statement, even if those services are free. Thus, more categories lead to more overload confusion because customers see so many additional charges beyond base price.

Because confusion is influenced by the price complexity, customers may differentiate the degree of complexity from actual complexity. That means, customers could find themselves confused even if the number of stimuli is small (Huffman & Kahn, 1998). Therefore, price

complexity may lead to similarity confusion. Similarity confusion is another consequence of too much price-related information. Customers may also be confused by inadequate differentiation of product or service (O'Connor, 2002). When customers make online hotel reservations, they may acquire two or more similar base price options from different information channels. Notably, OTAs may provide the exact same price as hotel official websites because hotels have paid commissions to OTAs to help resell rooms. This makes evaluation more difficult for customers because similar prices contribute to price complexity and cause similarity confusion.

Price complexity may also affect ambiguity confusion. Ambiguity confusion is more likely with increasing choices (Lloyd & Jankowski, 1999) because each dimension of confusion is interrelated with other dimensions (Walsh et al., 2007). When price information becomes more complex, customers may confront ambiguity confusion. Thus, although amenity charges are one type of price element, some hotels fail to inform customers about extra charges for amenities, while some hotels simply say “additional charges may apply”. Customers may think an amenity is included in the purchase price or think additional, unknown charges will accrue depending on what they use during their stay at a hotel (Burman, Albinsson, & Hyatt, 2016). For example, 34% of hotel guests in Las Vegas are unaware that resort fees in addition to the room rate will be applied (Roe & Repetti, 2014). Unclear price information leads to price complexity, which, in turn, leads to ambiguity confusion.

Based on the literature, the following hypotheses are proposed;

- Hypothesis 1 a: Price complexity has a significant positive relationship with overload confusion.*
- Hypothesis 1 b: Price complexity has a significant positive relationship with similarity confusion.*
- Hypothesis 1 c: Price complexity has a significant positive relationship with ambiguity confusion.*

### **2.3. Alternative attractiveness**

Alternative attractiveness is conceptualized as customer evaluation of likely satisfaction from another provider (Jones, Motherbaugh, & Beatty, 2002; Patterson & Smith, 2003; Ping, 1993; Rusbult, 1980). Alternative attractiveness is one of three switching barriers (in addition to switching cost and relationship investment) (Colgate & Lang, 2001; Jones et al., 2000).

Marketing research on offline marketing suggests that alternative attractiveness is influenced by the “existence of alternatives, heterogeneity among alternatives, and high switching costs between alternatives” (Ghazali, Nguyen, Mutum, & Mohd-Any, 2016) and represents customer assessment of the ratio between acquired and sacrificed benefits. If the relative merits of an alternative outweigh the sacrifice, customers are more likely to choose the alternative. For example, better prices, diverse choices, and high-quality service contribute to strengthening customer perception of alternative attractiveness (Goode & Harris, 2007).

The literature in hospitality and retailing offers two views of alternative attractiveness. One considers alternative attractiveness as a unidimensional construct (Chuah, Marimuthu, Kandampully, & Bilgihan, 2017; Kim, Ok, & Canter, 2010; Shukla, Banerjee, & Singh, 2016; Temerak, 2016), and in the other, researchers view alternative attractiveness as multi-dimensional with retailer indifference, alternative awareness, and alternative preference as the dimensions (Balabanis, Reynolds, & Simintiras, 2006; Li, Browne, & Chau, 2006; Rusbult, Martz, & Agnew, 1998). This study uses the unidimensional approach of alternative attractiveness because, first, the multidimensional approach includes switching cost, and this study focuses on the number of hotel options, not the switching costs. Second, many brands can

be easily researched on the internet. Thus, the indifference of a retailer may not be significant in online hotel bookings. Third, both alternative awareness and alternative preferences are part of alternative attractiveness because customers are aware of the choices and choose the retailer that most satisfies them.

### **2.3.1. Alternative attractiveness and confusion**

Alternative attractiveness could affect all three types of confusion. Alternative attractiveness can cause overload confusion. As the number of attractive hotel choices increases, customers are more likely to hesitate in making their choices. In addition to room price, customers must use other criteria in deciding on online hotel reservations: service quality, review, website quality, method of payment, convenience, and safety (Liu & Zhang, 2014). All these factors affect the overall customer evaluation of each alternative. In destination tourism, travelers who choose their destinations from large choice-sets are more confused than those who choose from small choice-sets (Thai & Yuksel, 2017). As an alternative booking channel, OTAs display many hotel options while hotels focus only on their own brand. This means customers should be more confused when choosing hotels from OTAs than hotel websites. Thus, more attractive alternatives lead to more overload confusion.

Alternative attractiveness can also cause similarity confusion. Similarities among attractive options increase as choice size grows (Sela, Berger, & Liu, 2009). Attractive alternatives often share similar overall evaluations. OTAs increase choice size for customers, so similar attractive options are more likely to appear on their websites. For instance, business travelers may be

attracted by location because they prefer quiet and convenient locations for business meetings, but leisure travelers favor lower prices. Thus, location will be the key determinant for hotel selection among business travelers, and other factors may have less effect on their overall evaluations of hotels. Therefore, business travelers would suffer similarity confusion from hotel options all located in the same area. On the other hand, leisure travelers will also suffer similarity confusion for hotel options that quote lower prices. To sum up, more attractive alternatives will result in more similarity confusion.

Alternative attractiveness may also cause ambiguity confusion. Ambiguity confusion occurs either in an uncertain purchase environment or because of individual interpretation of information. As with lowest price guarantees, customers often make bookings motivated by “sold out soon” warnings. High-pressure sales mislead customers by giving them a false sense of urgency. Thus, customers may book a room because they are afraid of losing reservations. However, customers cannot know exactly how many rooms are available to book. Because of this, high-pressure sales tactics mistakenly lead customers to false perceptions of alternative attractiveness, which, in turn, triggers ambiguity confusion.

Based on the literature, the following hypotheses are proposed:

*Hypothesis 2 a: Alternative attractiveness has a significant positive relationship with overload confusion.*

*Hypothesis 2 b: Alternative attractiveness has a significant positive relationship with similarity confusion.*

*Hypothesis 2 c: Alternative attractiveness has a significant positive relationship with ambiguity confusion.*

## **2.4. Decision postponement and purchase intention**

Decision postponement refers to “a delay to better deal with confusing circumstances surrounding the purchase” (Allan et al., 2015, p.1331). This concept, also called choice deferral, originated from conflict research in psychology (Tversky & Shafir, 1992). When customers are aware of high conflict in a choice, they may opt to delay a decision (Walsh et al., 2007). In the conceptual framework of customer confusion (Mitchell et al., 2005), six coping strategies can reduce confusion: clarify buying goals, seek additional information, narrow down the set of alternatives, share or delegate the purchase, do nothing, postpone purchase. Only the last four strategies are relevant to all three types of confusion. Most importantly, decision postponement may also involve deploying other confusion reduction strategies (Allan et al., 2015). Therefore, decision postponement may be a behavioral consequence of customer confusion, which is a point of view accepted in this study.

Besides decision postponement, customers may make repeat purchases relying on previous experience (Huang & Hsu, 2009). Customers consciously continue a buying behavior to avoid choice conflict even though they see that the decision may not necessarily be the best (Barnes, Gartland, & Stack, 2004). However, the essential assumption of this particular repurchase behavior is that brands or products familiar to customers must be in the searched choice set. If they are not, confused customers might struggle to make purchase decisions. In this study, purchase intention represents immediate decisions within an initial searched choice set.

### **2.4.1. Confusion and related outcomes**

Other studies have indicated that the three types of confusion are related to decision postponement (Shiu, 2017; Walsh et al., 2007). Overloaded choices or information make decisions harder because confused customers cannot process information satisfactorily (Shanka, Cherrier, & Canniford, 2006). Moreover, although more alternatives would seem to increase customer freedom of choice (Reibstein, Youngblood, & Fromkin, 1975), the options customers do not choose may be more attractive in a larger set of choices, which may lead to customer regret over lost benefits (Scheibehenne et al., 2010). Such dissatisfaction or regret caused by excessive information decreases customer confidence in choosing an option, which can result in postponing a decision (Chernev, 2003). During the information communication process, confused customers might delay their decision if they receive suggestions not congruent with what they think, so customers with overload confusion will not make a purchase decision until they feel confident even though a decision heuristic might be triggered by information overload or overloaded alternatives (Loudon & Della Bitta, 1993).

Decision postponement can be an option for customers who have similarity confusion. When customers are confused by two equally desirable options, they may delay the decision to avoid choice conflicts (Tversky & Shafir, 1992). The similarity may be in functionality, symbolic value, or monetary value. Therefore, customers often view similar brands or products as substitutable. In our study, similarity confusion should create decision postponement. First, OTAs are reselling rooms identical to the ones on hotel websites. The rooms have no functional differences. Second, symbolic value does not change across channels from brand name perspective. Thus, confused customers will delay their decisions to clarify any differences



between channels and evaluate which options can provide more benefits. When the decision situation provides many equally attractive options and none are easily seen as best, customers experience similarity confusion, which leads to a reluctance to act (Scholnick & Wing, 1988). Such non-commitment would have a direct negative effect on customer purchase decisions (Shukla et al., 2010). Therefore, confused customers will be less likely to make decisions until differences among similar options are identified.

Ambiguity confusion could also contribute to decision postponement. Dhar (1997) explains that customers with ambiguity confusion postpone decisions because the options cannot be compared. Because ambiguity confusion originates in unfamiliarity or lack of clarity, confused customers cannot see the benefits of the offered options. Seeking additional information helps confused customers better understand the purchase environment. This appears to indicate that more thought or more comparisons may cause decision postponement (Dhar, 1997). Customers who are prone to ambiguity confusion want to confirm reliable and credible information, and “lowest price guarantee” or “sold out soon” are sources of ambiguous information. Customers may delay their purchases to keep searching for confirmation that the current price is the lowest or exactly how many rooms are available and must continue searching and delaying the purchase until their confusion is reduced to a tolerable level. If all information is ambiguous and uncertain, customers will be even less likely to make a purchase immediately.

Based on the literature, the following hypotheses are proposed:

*Hypothesis 3 a: Overload confusion has a significant positive relationship with decision postponement.*

*Hypothesis 3 b: Similarity confusion has a significant positive relationship with decision postponement.*

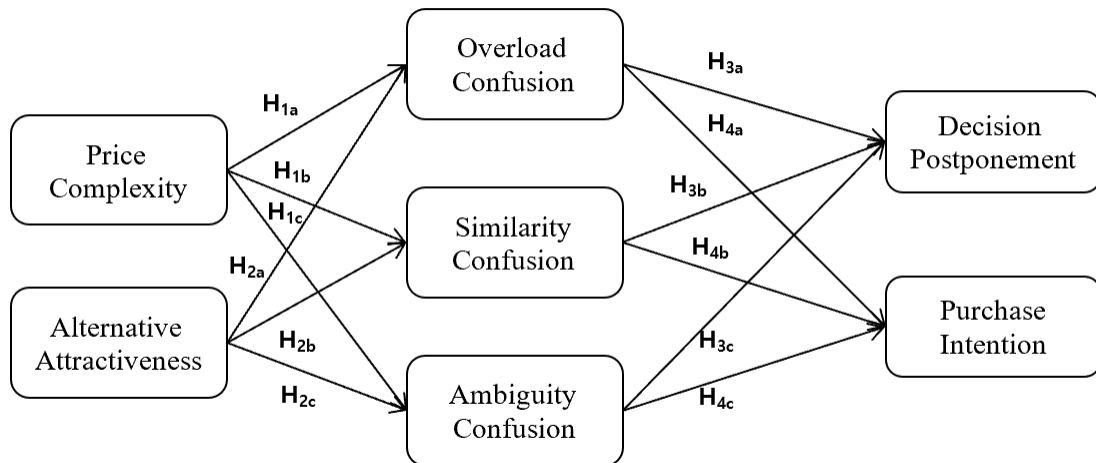
*Hypothesis 3 c: Ambiguity confusion has a significant positive relationship with decision postponement.*

*Hypothesis 4 a: Overload confusion has a significant positive relationship with purchase intention.*

*Hypothesis 4 b: Similarity confusion has a significant positive relationship with purchase intention.*

*Hypothesis 4 c: Ambiguity confusion has a significant positive relationship with purchase intention.*

Figure 1 illustrates the proposed model for this research based on these hypotheses.



**Figure 1. Proposed conceptual model**

## CHAPTER 3: METHODOLOGY

### 3.1. Study population and sample

The target population of this study was current residents in Canada and the United States. All respondents must have booked hotel through either hotel official websites or OTAs within the past 6 months and must have been older than 18 years. These criteria helped screen out unqualified respondents. Convenience sampling using online panel data was adopted to collect data. An online survey company, Qualtrics, recruited qualified respondents and conducted the survey. Specifically, this company shared the survey link to potential participants interested in this research. An incentive was given to respondents who completed the survey; they received points for their membership account.

### 3.2. Sample size

As suggested by previous studies, the confidence interval approach was used to determine the sample size (Burns & Brush, 1995); the formula (Krejcie & Morgan, 1970) is as follows:

$$\text{Sample size} = \frac{Z^2 * p * (1-p)}{E^2}$$

where Z = z-value for desired confidence level 95%;

P = estimated population proportion of 50%;

E = the degree of accuracy expressed as a proportion of  $\pm 5\%$ .

The confidence interval was 95%, representing a z-value of 1.96. The estimated population of 50% was selected to generate the maximum sample size to adapt to a worst-case scenario. Also, this equation generated a  $\pm 5\%$  margin of error as recommended for a survey (Krejcie & Morgan, 1970). Thus, the estimated sample size was 385. On the other hand, a larger sample size would allow better generalization of the study results to the population of interest (Biau, Kernéis, & Porcher, 2008). Also, Kline (2011) suggests a large sample size reduces the possibility of statistical issues (e.g., inaccurate margin of error, high level of uncertainty, low power, and small effect size). Taking these suggestions into consideration, a minimum target sample of 400 was chosen.

### **3.3. Data collection**

This study used a self-administrated online survey to collect data through a quantitative approach. Qualtrics helped develop and publish the online survey. The data was collected from online panels owned by Qualtrics. The targeted panels were Canadian and American residents exclusively. Screening questions were posted at the beginning of the survey to screen out unqualified respondents. Specifically, the screening questions were consent form, respondent age, country of residence, and the question “How many times have you booked hotel rooms online in the last 6 months?” Demographic profile questions were included at the end of survey.

After two weeks of survey distribution, 1236 panels participated in this project with a response rate of 42.2%. Therefore, 521 respondents fully completed the online survey after

filtering out unqualified respondents by screening questions. After data cleaning, 453 usable surveys were retained for analysis.

### **3.4. Measurement scales**

A thorough literature review was conducted to gain a better understanding of constructs used in this study. All measurement items were adopted and modified from previous empirical studies. The adopted measurement item was modified as needed to fit the current study setting and to avoid double-barreled questions. A pre-test was conducted with 10 graduate students; some potential issues with wording, layout, order, and ambiguous questions were improved. The survey was then distributed online to the panels.

In the structural model, the seven variables are price complexity, alternative attractiveness, overload confusion, similarity confusion, ambiguity confusion, decision postponement, and purchase intention. All measurement items used a 7-point Likert scale allowing respondents to rate each statement from 1 = “Strongly disagree” to 7 = “Strongly agree”.

Price complexity was measured using Homburg et al.’s (2014) study and included 11 items in total. To measure alternative attractiveness, three items were adapted from Kim et al.’s (2010) study. The confusion construct was built using Walsh et al.’s (2007) study. A three-dimensional approach was adapted to measure confusion: overload confusion, similarity confusion, and ambiguity confusion. Overload confusion was measured by four items, similarity confusion by three items, and ambiguity confusion by five items. Decision postponement was also adopted

from Walsh et al.'s (2007) study using four items for measurement. Purchase intention's five measurement items were taken from Lin and Lekhawipat's (2015) study. The full list of refined measurement items is in Appendix 1.

## **CHAPTER 4: RESULTS**

This chapter provides the results of the data analysis and how the results related to the hypotheses. The first section shows the demographic profiles of the sample using frequency analysis. The second section shows the results of confirmatory factor analysis (CFA) to evaluate the validity and reliability of each measurement item. The third section provides the results of structural equation modelling (SEM) testing the relationships between variables and the fit of the proposed model.

### **4.1. Demographic profiles of the sample**

Table 1 shows the demographic profile information of qualified respondents collected from the online panels. More than two-thirds of the respondents were between 19 and 49. Female respondents numbered approximately twice as many as male respondents. The ratio between married respondents and single respondents was around 50/50, and both groups account for 83.20% of all respondents. Canadian respondents numbered 234, slightly more than American respondents. Almost two-thirds of the participants have high school diplomas or 4-year degrees. Respondents were requested to choose Canadian dollars or U.S dollars for annual household income. More than a third of the Canadians had an annual household income of less than \$79,999. Approximately a third of the American respondents reported a similar income. Most participants were white Caucasians, and two-thirds of the respondents had booked hotel rooms online one or two times in the past six months. As expected, three-fourths of the respondents booked their rooms for leisure travel.

**Table 1. Respondents profile (n=453)**

Demographic characteristics	Frequency	%	Demographic characteristics	Frequency	%
<b>Age</b>			<b>Gender</b>		
19-29 years	127	28.00	Male	139	30.70
30-39 years	93	20.50	Female	314	69.30
40-49 years	88	19.40	<b>Annual household income</b>		
50-59 years	66	14.60	Below \$20,000 USD	33	7.30
60 years or older	79	17.40	\$20,000 – 49,999 USD	81	17.90
<b>Country of current residence</b>			\$50,000 – 79,999 USD	52	11.50
United States	219	48.30	\$80,000 – 99,999 USD	23	5.10
Canada	234	51.70	\$100,000 – 149,999 USD	15	3.30
<b>Education</b>			Over \$150,000 USD	7	1.50
Less than high school	8	1.80	Below \$20,000 CAD	20	4.40
High school graduate/diploma	142	31.30	\$20,000 – 49,999 CAD	49	10.80
2-year degree	87	19.20	\$50,000 – 79,999 CAD	68	15.00
4-year degree	143	31.60	\$80,000 – 99,999 CAD	34	7.50
Graduate school	61	13.50	\$100,000 – 149,999 CAD	33	7.30
Prefer not to answer	12	2.60	Over \$150,000 CAD	13	2.90
<b>Ethnicity</b>			Prefer not to answer	25	5.50
Asian/ Pacific Islander	63	13.90	<b>Booking frequency in the past six months</b>		
Black or African	38	8.40	1 – 2	303	66.90
White Caucasians	313	69.10	3 – 5	106	23.40
Hispanic or Latino	21	4.60	6 – 8	26	5.70
Native American/Aboriginal	3	0.70	9 or more	18	4.00
Other	15	3.30	<b>Purpose of stays</b>		
<b>Marital status</b>			Business trips	19	4.20
Married	189	41.7	Leisure trips	342	75.50
Single	188	41.5	Business & leisure combined	71	15.70
Domestic partners	45	9.9	Other	21	4.60
Other	25	5.5			
Prefer not to answer	6	1.3			



## 4.2. Confirmatory factor analysis

CFA was performed to examine the relationships between observed variables and latent constructs in the measurement model, which would then be used in an SEM analysis. Anderson and Gerbing (1988) suggest theory testing and assessment of construct validity from different estimations provides more information for analysis. Therefore, a two-step procedure was used to analyze the measurement model: construct validity and model fit.

Table 2 provides the standardized factor loadings and construct reliability from convergent validity (Hair, Anderson, Tatham, & Black, 1998). The value of standardized factor loadings should be more than 0.60 (Hair et al., 2006). A total of 34 measurement items were used in the measurement model, but two had factor loadings less than 0.60. Specifically, one alternative attractiveness item was removed for low standardized factor loadings (0.09), but the standardized factor loadings of one decision postponement item was 0.52. Even though that is less than 0.60, Chen and Tsai (2007) argue that a cut-off point of 0.50 is acceptable for factor loadings in tourism. Thus, this particular item was retained. The t-values for all retained factor loadings were significant ( $p < 0.001$ ).

**Table 2. Results of CFA (n=453)**

	Factor Loading	CR
<b><i>Price Complexity</i></b>		0.93
With many prices available among hotel booking websites, I usually have a hard time understanding all the prices.	0.69	
I often feel I need to know more to fully understand all the prices among booking websites.	0.72	

The prices presented among booking websites often look complicated to me.	0.78
It is usually difficult for me to obtain an overview of all the prices among booking websites.	0.79
I usually find it challenging to calculate the final price for my reservation.	0.78
It is usually difficult for me to understand the charges and fees listed for my reservation.	0.85
I usually have to do multiple calculations for my reservation.	0.76
It is usually difficult to determine the final price for my reservation without a calculator.	0.67
It is usually difficult to figure out if it's a reasonable price for my reservation.	0.76
I usually have to put some effort in my evaluation of the overall reservation price.	0.67
It usually takes a lot of time for me to figure out which online website is offering the best price for my reservation.	0.64
<b><i>Alternative Attractiveness</i></b>	<b>0.78</b>
There is a variety of hotel booking websites that I can choose from.	0.74
I would be happy to use a different booking website than the one I used last time.	0.75
Other booking websites are probably just as good or better than the last website I used.	0.72
<b><i>Overload Confusion</i></b>	<b>0.87</b>
I do not always know which booking website meets my booking needs the best.	0.79
There are so many booking websites to choose from that I sometimes feel confused.	0.85
Due to the different design of booking websites, it is sometimes difficult to decide where to make my reservation.	0.76
Most booking websites are very similar and are therefore hard to distinguish.	0.75
<b><i>Similarity Confusion</i></b>	<b>0.79</b>
Due to the great similarity of many booking websites, it is often difficult to distinguish between them.	0.82
Some booking websites look so similar that they might be managed by the same company.	0.65
Sometimes, I am not clear on the different features from similar booking websites.	0.76
<b><i>Ambiguity Confusion</i></b>	<b>0.84</b>
Different booking websites often have so many features that a comparison among them is impossible.	0.72
The information for room reservations provided on booking websites is often vague.	0.66
I rarely feel sufficiently informed about my reservation by the booking websites.	0.63
I sometimes feel uncertain about whether websites' offers are particularly important for me.	0.74
I usually need more information to understand the differences among all hotel booking websites.	0.78
<b><i>Decision Postponement</i></b>	<b>0.83</b>
Sometimes, it is difficult to make the final decision when making a hotel reservation.	0.83
Sometimes, I delay the decision when making a hotel reservation.	0.81
Sometimes, I postpone a planned hotel reservation.	0.52
Sometimes, the choice is so large that making a hotel reservation takes longer than expected.	0.79
<b><i>Purchase Intention</i></b>	<b>0.85</b>
I usually make my hotel reservation during my first search.	0.71
I usually intend to complete my hotel reservation during my first search for a hotel.	0.88
I usually like to complete my hotel reservation during my first search for a property.	0.84

**Note:** Model fit:  $\chi^2=1002.79$ ,  $p<0.001$ ,  $d.f.=460$ ,  $\chi^2/d.f.=2.18$ , GFI=0.88, AGFI=0.86, NFI=0.90, TLI=0.93, CFI=0.94, RMSEA=0.05, CR=composite reliability.

For the goodness-fit indices for the measurement model, Kline (2005) recommends using more than one index to evaluate model fit. Therefore, the key indices examined (Hu & Bentler, 1999) were Chi-square ( $\chi^2$ ), the Chi-square to degrees of freedom ( $\chi^2/ d.f.$ ), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). Chi-square to degrees of freedom, which was between one and three, indicated a satisfactory adjustment of sensitivity for Chi-square to a large sample size (Bentler, 1995). The values for GFI and AGFI, which were higher than 0.80, were an acceptable fit (Forza & Filippine, 1998; Greenspoon & Saklofske, 1998). The cut-off value for NFI is 0.90 (Awang, 2012; Bentler & Bonett, 1980). The values for TLI and CFI should be higher than 0.90 (Awang, 2012; Forza & Filippini, 1998; Hair et al., 2010; Hu & Bentler, 1999). An RMSEA value of 0.08 or less indicates an acceptable fit (Awang, 2012; Hair et al., 1998). The CFA result indicated that the measurement model has adequate fit:  $\chi^2=1002.79$ ,  $d.f.=460$ ,  $p<0.001$ ,  $\chi^2/ d.f.=2.18$ , GFI=0.88, AGFI=0.86, NFI=0.90, TLI=0.93, CFI=0.94, RMSEA=0.05.

Table 3 shows the results of correlation, average variance extracted (AVE), mean value ( $\bar{x}$ ) and standard deviation (SD) among the seven constructs. Convergent validity measures whether measurement items of each construct share a high degree of variance (Hair et al., 2010). To ensure the convergent validity of the measurement model, composite reliability and AVE were also calculated and evaluated. The AVEs were higher than the threshold value of 0.50 (Fornell & Larcker, 1981; Hair et al., 2010), ranging from 0.50 to 0.66. Composite reliability reflects the internal consistency of the constructs. A composite reliability value of 0.70 or higher suggests

good reliability (Churchill, 1979). The composite reliability for all seven latent constructs ranged from 0.78 to 0.93, which exceeds the minimum requirement of 0.70.

**Table 3. Correlation matrix**

Constructs	PC	AA	OC	SC	AC	DP	PI	AVE	$\bar{x}$	SD
PC	<b>0.74</b>							0.55	3.71	1.27
AA	0.01	<b>0.74</b>						0.54	5.32	0.93
OC	0.69	0.23	<b>0.79</b>					0.62	4.59	1.16
SC	0.64	0.27	0.84	<b>0.75</b>				0.56	4.41	1.28
AC	0.78	0.14	0.87	0.77	<b>0.71</b>			0.50	4.27	1.13
DP	0.67	0.22	0.78	0.63	0.84	<b>0.75</b>		0.56	4.45	1.30
PI	-0.01	0.01	-0.08	-0.02	0.01	-0.20	<b>0.81</b>	0.66	3.77	1.36

**Note:** AVE=average variance extracted,  $\bar{x}$ =mean value, SD=standard deviation, PC=price complexity, AA=alternative attractiveness, OC=overload confusion, SC=similarity confusion, AC=ambiguity confusion, DP=decision postponement, PI=purchase intention.

The descriptive analysis shows the frequency results for the seven constructs. Alternative attractiveness has the highest mean value ( $\bar{x}$ =5.32, SD=0.93), followed by overload confusion ( $\bar{x}$ =4.59, SD=1.16), decision postponement ( $\bar{x}$ =4.45, SD=1.30), similarity confusion ( $\bar{x}$ =4.41, SD=1.28), and ambiguity confusion ( $\bar{x}$ =4.27, SD=1.13). The variables of purchase intention ( $\bar{x}$ =3.77, SD=1.36) and price complexity ( $\bar{x}$ =3.71, SD=1.27) have relatively lower mean values.

Besides convergent validity, discriminant validity is also used to evaluate construct validity. Discriminant validity is the degree to which each construct actually differs from other constructs. (Hair et al., 2010). To achieve discriminant validity, the squared root of AVE of each construct should be higher than the inter-correlation between other constructs (Fornell & Larcker, 1981). Because similarity confusion, overload confusion, and ambiguity confusion are the three dimensions of the confusion construct, it is reasonable for them to share relatively high

correlations. However, the high correlations among price complexity, ambiguity confusion, and decision postponement statistically indicate multicollinearity. Thus, the linear regression analysis was performed. The results showed that values of all variance inflation factors (VIF) were below 10, ranging from 1.07 to 2.99. Thus, these constructs do not have multicollinearity issues even though they share high correlations (Stevens, 2002).

### **4.3. Structural model analysis**

SEM was performed to examine proposed hypotheses via SPSS AMOS 24. The analysis indicated that the proposed model achieved a reasonably acceptable overall fit to the data:  $\chi^2=1081.3$ ,  $d.f.=460$ ,  $p<0.001$ ,  $\chi^2/d.f.=2.35$ , GFI=0.87, AGFI=0.84, NFI=0.89, TLI=0.92, CFI=0.93, RMSEA=0.06. All indices achieved the threshold suggested by previous literature other than NFI. The value of NFI is slightly below the cut-off value of 0.90. Because NFI is sensitive to sample size, the value of NFI increases as sample size becomes larger. In addition, the proposed model was simple, so NNFI would be more appropriate to evaluate model fit (Hooper, Coughlan, & Mullen, 2008).

Figure 2 and Table 4 show the results of path analysis based on multiple coefficient of determination ( $R^2$ ), path coefficient ( $\beta$ ), and t-value. Multiple coefficients of determination in the proportion of variance in the endogenous constructs can be explained by exogenous constructs. The results showed that both price complexity and alternative attractiveness explained 70% of the variance in overload confusion, 65% of the variance in similarity confusion, and 78% of the variance in ambiguity confusion. Furthermore, the three dimensions of confusion explained 72% variance of decision postponement and 3% of the variance in purchase intention.

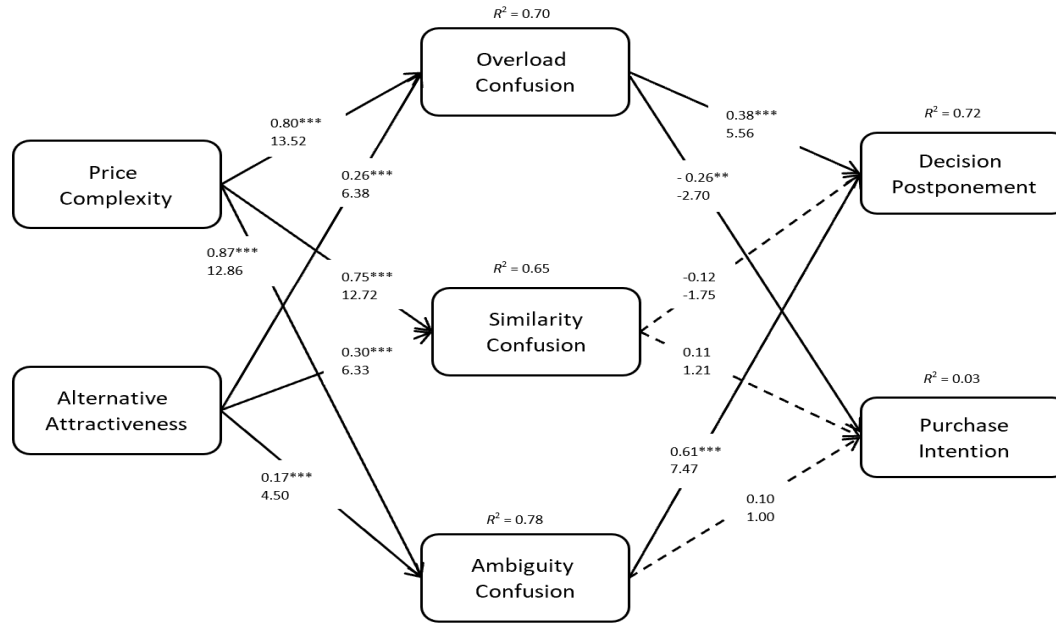


Figure 2. Structural Model

Note: \*\*\*statistically significant at  $p < 0.001$ , \*\*statistically significant at  $p < 0.01$ ,  $R^2$ =multiple coefficient of determination, numbers on top=standardized coefficient, numbers on bottom=t-value.

Table 4. Results for structural model (n=453)

Hypothesized path	Path coefficients	t-value	Result
H1a: PC→OC	0.80***	13.52	Supported
H1b: PC→SC	0.75***	12.72	Supported
H1c: PC→AC	0.87***	12.86	Supported
H2a: AA→OC	0.26***	6.38	Supported
H2b: AA→SC	0.30***	6.33	Supported
H2c: AA→AC	0.17***	4.50	Supported
H3a: OC→DP	0.38***	5.56	Supported
H3b: OC→PI	-0.26**	-2.70	Supported
H4a: SC→DP	-0.12	-1.75	Not supported
H4b: SC→PI	0.11	1.21	Not supported
H5a: AC→DP	0.61***	7.47	Supported
H5b: AC→PI	0.10	1.00	Not supported

Note: PC=price complexity, AA=alternative attractiveness, OC=overload confusion, SC=similarity confusion, AC=ambiguity confusion, DP=decision postponement, PI=purchase intention. \*\*\*statistically significant at  $p < 0.001$ . \*\* statistically significant at  $p < 0.01$ .

The path coefficient indicates how strong the direct causal effect of one variable is on another variable. The results show that all hypotheses are supported except H4<sub>a</sub>, H4<sub>b</sub>, and H5<sub>b</sub>. As expected, positive path coefficients are significant between two antecedents (price complexity and alternative attractiveness) of confusion and three dimensions of confusion (overload confusion, similarity confusion and ambiguity confusion), including H1<sub>a</sub>: PC→OC ( $\beta=0.80$ ,  $t=13.52$ ,  $p < 0.001$ ), H1<sub>b</sub>: PC→SC ( $\beta=0.75$ ,  $t=12.72$ ,  $p < 0.001$ ), H1<sub>c</sub>: PC→AC ( $\beta=0.87$ ,  $t=12.86$ ,  $p < 0.001$ ), H2<sub>a</sub>: PC→OC ( $\beta=0.26$ ,  $t=6.38$ ,  $p < 0.001$ ), H2<sub>b</sub>: AA→SC ( $\beta=0.30$ ,  $t=6.33$ ,  $p < 0.001$ ), H2<sub>c</sub>: AA→AC ( $\beta=0.17$ ,  $t=4.50$ ,  $p < 0.001$ ). Specifically, price complexity has the strongest effect on ambiguity confusion, and alternative attractiveness has the strongest effect on similarity confusion. However, the results demonstrated only overload confusion has significant effect on both decision postponement ( $\beta=0.38$ ,  $t=5.56$ ,  $p < 0.001$ ) and purchase intention ( $\beta=-0.26$ ,  $t=-2.70$ ,  $p < 0.01$ ), indicating H3<sub>a</sub> and H3<sub>b</sub> are supported. The relationship between similarity confusion and decision postponement ( $\beta=-0.12$ ,  $t=-1.75$ ,  $p > 0.05$ ) and purchase intention ( $\beta=0.11$ ,  $t=1.21$ ,  $p > 0.05$ ) are not significant, indicating that hypotheses 4<sub>a</sub> and 4<sub>b</sub> are not supported. Ambiguity confusion has a significant effect only on decision postponement ( $\beta=0.61$ ,  $t=7.47$ ,  $p < 0.001$ ), while the relationship between ambiguity confusion and purchase intention is not significant ( $\beta=0.10$ ,  $t=1.00$ ,  $p > 0.01$ ). Thus, H5<sub>a</sub> is supported, and H5<sub>b</sub> is not supported.

## CHAPTER 5: DISCUSSION

This study investigated potential antecedents and behavioral outcomes of three-dimensional confusion in the context of online hotel booking. More specifically, the proposed model and relationships among seven constructs are tested, including price complexity, alternative attractiveness, overload confusion, similarity confusion, ambiguity confusion, decision postponement, and purchase intention.

According to the test results, the findings demonstrate that both price complexity and alternative attractiveness are two significant causes of three different types of confusion. That is, customers are more likely to become confused when they face complex prices and abundant hotel choices. Generally, price complexity has a stronger effect on the three types of confusion than alternative attractiveness. This indicates that attribute-based evaluations could cause more indecision than alternative-based evaluations (Dhar, 1996). Decision heuristics, however, help customers solve such complex problems by focusing on the most important aspects across alternatives. Customer mental shortcuts can compensate for overwhelming attribute information.

Price complexity has the strongest influence on ambiguity confusion. The complexity in price causes confusion through ambiguous or unclear information. If a more complex price structure is presented, customers perceive more ambiguous information, leading to more confusion. During online searches for hotels, customers may see unclear information provided by distribution channels, which causes difficulty in evaluating prices; they thus become confused. Ambiguity confusion is followed by overload confusion as the second most important



consequence of price complexity. Because the number of price elements is the primary determinant of price complexity, confusion occurs while reviewing too many prices. For a particular quoted price, customers must consider taxes, promotions, and other price related factors, not just the basic room rate. Bounded-rationality suggests that individual cognitive capacity is finite, so customers cannot thoroughly assess every observed price component. If the amount of price information exceeds customer cognitive capacity, overload confusion could be triggered by the increased mental effort required to evaluate price. Unlike in ambiguity confusion and overload confusion, price complexity does not affect similarity confusion as much. If customers frequently see similar prices while searching, they may treat these similar prices as a reference price. Decision confidence increases if the price information is reliable, leading to less similarity confusion.

From the perspective of alternative-based evaluation, alternative attractiveness measures the number of choices in the customer decision-making process. This study found the strongest relationship between alternative attractiveness and similarity confusion. Hotel guests are more likely to be confused by similar options when they see increasing numbers of other options across channels. Because of the intrinsic nature of alternative attractiveness, the focal option should share a high degree of similarity with other attractive options. For example, customers may capture exactly same hotel room sold on two different venues (an official hotel website and an OTA). Slight differences may exist, among them promotion or membership benefits. As a result, similar choices would cause problems for customers in making decisions when many other choices are appealing. As with price complexity, overload confusion is the second most influential consequence of alternative attractiveness. Customers may feel more confused while

considering so many choices. In addition to the single attribute of a hotel offer, other factors are also subtle influences on the final decision. Thus, customers must perform a vertical analysis to evaluate attractive offers by comparing each component in detail (e.g., brand, location, or service quality). Finally, alternative attractiveness has the weakest effect on ambiguity confusion. When they face many attractive options, customers will experience confusion caused by ambiguous information. Because customers may not be familiar with the purchase environment, they may be misled by high-pressure sales. Customers may also find it harder to perceive the inventory in an online shopping environment than traditional retailing environment. For example, customers can easily infer an inventory count by noting the number of products on shelves in grocery stores. However, some hotel online booking websites use “sold out soon” to push customers into making reservations quickly. In addition, the website may inform a customer how many other customers are viewing this hotel offer now, but this does not mean that other viewers will accept this hotel offer. Therefore, customers remain uncertain about the exact number of hotel rooms left and are misled by high-pressure tactics. Ambiguity confusion is then triggered by misleading information about appealing hotel offers.

In behavioral consequences, decision postponement and purchase intentions measure purchase decisions but are distinguished by temporal distance. Indeed, these two constructs explain the same logic in two different ways. Because the survey does not ask respondents actual past experience, the measurement items of these two constructs aim to reflect customers’ propensity to make instant purchases or to delay their decisions. As hypothesized, the results suggest that overload confusion has a significant positive effect on propensity of decision postponement (Shiu, 2017; Walsh et al., 2007) and a significant negative effect on propensity of

purchase intention. If customers are confused by too much price information or too many attractive hotel options, they will be more prone to delay any decisions and be less willing to decide immediately. Decision postponement can be interpreted as an attempt to obtain additional processing time by delaying the decision (Walsh et al., 2007). When customers perceive they do not have sufficient time, they may make lower-quality decisions that not meet their needs. Customers do not make purchase decisions immediately if they suffer from overload confusion.

Interestingly, similarity confusion is not related to these two behavioral outcomes in this study. This lack of a relationship between similarity confusion and propensity of decision postponement suggests that while delaying purchase decisions provides sufficient processing time, it may not be an effective strategy to reduce similarity confusion. Also, there is no evidence for a significant relationship between similarity confusion and propensity of purchase intention. Instant purchase decisions may not help customers confused by too much similar information. In conclusion, similarity confusion may not be a significant influence on customers booking hotels online. One explanation for this is customers prone to similarity confusion discard similar hotel offers and seek unique options within their choice set. Moreover, the relationships between similarity confusion and propensity of decision postponement in this study is not same as hypothesized. If the relationships were significant, customers would more likely purchase instantly rather than delay purchases. The significant negative relationship between similarity confusion and propensity of decision postponement has been mentioned in the literature (Walsh et al., 2007). Conceivably, the habit of purchasing familiar or trusted brands is important when customers must choose from similar options. As explained earlier, a frequently observed similar

price can be adopted as a reference price. This phenomenon increases customer confidence, and hence additional time is unnecessary.

Ambiguity confusion more strongly influences customers' propensity of decision postponement than overload confusion. This significant and positive relationship indicates that customers who suffer from ambiguity confusion cannot clarify products or services using varied distribution channels. Even though this finding contradicts prior studies (Shiu, 2017; Walsh et al, 2007), it is reasonable to assume that the online shopping environment differs from the traditional shopping environment, so customers can easily search for sufficient information to clarify products or services. Another explanation could be customer motivation to make rational decisions. Once conflicting or ambiguous information is processed, customers should be more confident of their final decisions. Moreover, the proposed model does not include the effect of ambiguity confusion on purchase intention, indicating that making an instance purchase is not an option for customers experiencing ambiguity confusion, possibly because customers with ambiguity confusion may become frustrated and stop shopping. As a result, shopping fatigue causes customers to abandon purchase decisions.

## CHAPTER 6: IMPLICATIONS

### 6.1. Theoretical implications

This study shows the importance of an integrated understanding of customer confusion. Customer confusion is an important issue in the consumer behavior literature, but it is a new construct, and few studies have examined it using a comprehensive model (Shiu, 2017). The need for an adequate foundation for research into customer confusion further limits researchers exploring the effects of confusion. Building on the previous literature on customer confusion (Matzler & Waiguny, 2005; Walsh & Mitchell, 2010; Walsh et al, 2007), this study proposed an integrated model of customer confusion that includes a comprehensive look at the antecedents and consequences of customer confusion. The study results provide evidence that three dimensions of confusion are significantly influenced by price complexity and alternative attractiveness. Shiu (2017) identified the determinants of confusion in retailing: inefficient stimuli (e.g., promotion activities, store environment, and interpersonal communication) and insufficient store knowledge (e.g., prior consumption experience). Present study findings extended the antecedents of confusion to price complexity and alternative attractiveness. In addition, this study tested the effect of confusion in the online hotel booking environment. To the author's best knowledge, only one other study examined customer confusion in online hotel booking, emphasizing four confusion reduction strategies (Matzler & Waiguny, 2005). Customer confusion, however, has different effects on customer behavioral intentions in online shopping environments than in traditional retailing shopping environments.

Another theoretical contribution is finding the effects of confusion through an integrated approach probing customer information processing. Most researchers have examined the direct effect of attribute factors and alternative factors on behavioral consequences to explain customer decision-making (Jang & Yoon, 2016; Murali & Pons, 2009), but some essential psychological reactions or decision-making styles remain unresearched. Customer decision-making is a complex process that includes many psychological stages. To fill the gap between finding information and final behavioral choices, this study highlights confusion as an important intermedium during information processing. Therefore, the information processing literature is enriched with this deeper understanding of confusion. Furthermore, a few studies have investigated the customer evaluation process focusing on both attributes and alternatives (Dhar, 1996; Jang & Yoon, 2016; Pizzi, Scarpi, & Marzocchi, 2014). This study used price and attractive options as the most important attributes of hotel choice. According to the study findings, price complexity reflects attribute-based evaluation, and alternative attractiveness reflects alternative-based evaluation. Attributes had a stronger effect on hotel online booking.

This study also used two behavioral outcomes of customer confusion. Although decision postponement and purchase decisions have been examined in past studies (Shiu, 2017; Walsh et al., 2007), inertia and brand loyalty are slightly different from instance purchase used in this study. More specifically, both inertia and brand loyalty focus mainly on repeated purchase of a brand or familiar products or services. Decision postponement and purchase intention in this study measured the same choice, but they are distinguished by the time perspective. According to the general perception of these two behavioral outcomes, the three dimensions of confusion should have antithetical effects on decision postponement and purchase intention. Simply stated,

confused customers should be more prone to delay decisions, not make decisions immediately. Surprisingly, the three types of confusion have asymmetric effects on decision postponement and purchase intention. Such findings suggest that customers will use different strategies to deal with confusion.

## **6.2. Practical implication**

This study also has several managerial implications for practitioners. The study results suggest that price complexity and alternative attractiveness are two determinants of the three types of confusion (overload confusion, similarity confusion, and ambiguity confusion). Based on the findings, price presentation and number of choices change customer perceptions and affect the level of confusion. In particular, hotels should avoid making prices more complex than they must be and focus on uniqueness when collaborating with OTAs.

The results first imply that understanding price complexity is important for hotel practitioners as they plan price presentation tactics. Following accounting logic, hotel room price comprises variable costs and fixed costs. Variable costs include basic rate, discounts, cancellation fees, and consumed amenities during stays, while fixed costs include federal and provincial taxes and value added tax resort fees. These fixed costs cannot be changed because they are a fixed percentage of room price. Thus, to reduce customer perceptions of price complexity, hotel practitioners could focus on price presentation and customer interactivity. First, booking websites must simplify price presentation instead of including too many rates. Specifically, official hotel websites (e.g., Hilton) can distinguish rates using membership

discounts while OTAs (e.g., Hotel.com) can set different rates based on cancellation fees. The hotel industry could learn something from the unbundling strategies of the airline industry. Unbundling gives customers more flexibility to customize their reservations based on their own needs. In the airline industry, the ticket price varies depending on pre-selected seats, how much luggage is checked, and so on. Hotel booking websites can provide the basic rack rate. If customers have memberships or wish to use certain cancellation policies, they can learn the various prices after selecting these criteria. Secondly, hotel practitioners can optimize usage of customer communication. Most hotel booking websites encourage customers to leave online reviews or feedback, but none of them allow customers to leave comments on other customer reviews. One strategy for reducing confusion is sharing or delegating the purchase, so customers may seek help from their friends, family, or other acquaintances. Because of the perceived risks in online shopping, hotel customers may trust someone they know or other customers, especially those with more purchase experience, more than hotels. Therefore, website designers could offer a communication function, similar to a blog or other social media, to help confused customers find additional information from other customers. To increase the effectiveness of this function, booking websites may give incentives or rewards to customers who can explicitly explain price related terms and policy.

To overcome the challenges of attractive alternatives, hotel managers could rethink their cooperation with OTAs. OTAs are paid by hotels to boost sales, but this cooperation may not be worthwhile for hotels offer their rooms across different distribution avenues, thus requiring more effort on the part of customers to evaluate repeated information. Instead, hotel practitioners must put more emphasis on their uniqueness. Marketing differentiated products or services could offer



an opportunity for hotels to achieve a larger market share. Clearly presenting attractive selling points (e.g., service quality, unique facility) can help hotels distinguish themselves from competitors.

Overload confusion leading to decision postponement and less propensity to purchase instantly implies that booking websites should recognize customer needs and provide help in decision making. Most booking websites have filter functions to help customers narrow down their choice size. With help of big data, both official hotel and OTA websites can store choices that interest customers, if only for membership customers. First time users, however, must still invest more time and effort to search again. Thus, website designers could use big data for all online customers. If booking websites can collect privacy information with customer permission, hotels can encourage purchases based on customer searching frequency. Therefore, hotels can not only become better acquainted with customer preferences but also prevent delayed purchases by recommending the best alternative.

The effect of ambiguity confusion yields another managerial implication for delayed purchases. Many researchers have concluded that customer purchase intention is determined by perceived quality of provided information (Bai, Law, & Wen, 2008; Liu, Arnett, & Litecky, 2000). With a fixed amount of information, perceived quality of information could increase the propensity of customers to make effective decisions (Chen, Shang, & Kao, 2009). Besides avoiding misleading words, terms, and descriptions in content, hotels should also provide important links to direct customers to other information needed for purchase decisions. For

example, full explanations could be placed on pop-up pages using these links. However, hotel websites should also improve their designs so frequently asked questions can be found easily. Instead of putting too much information in the limited space on websites, sorting and combining similar or related information is more efficient in achieving simplicity and further reducing ambiguity confusion. Modifying a website should leave customers less confused, spending less time clarifying ambiguous information needed for purchase decisions.

Finally, of the effect of similarity confusion suggests some managerial implications even though it has little to no effect on either decision postponement or purchase intention. As explained earlier, customers rely on familiar or trusted products or services, purchasing out of habit or voluntarily inferring frequently used reference prices under conditions of similarity confusion. Price parity across distribution avenues is important in any highly competitive marketing segment. Many OTAs claim price guarantees, offering lower prices than direct booking with hotels. If hotels can match prices as well, customers may be more willing to choose hotel official websites because they might be able to get more benefits like free upgrades or extra points toward their loyalty programs (Thompson, 2018).

To sum up, hotel practitioners must identify sources of confusion before they cause customer confusion if the hotels want to gain competitive advantages. This study proposes that hotel practitioners should first investigate how customers perceive complexity in price presentation and overwhelming numbers of attractive alternatives that could cause overload confusion, similarity confusion, and ambiguity confusion. Furthermore, confusion related

consequences discussed in this study could serve as a guide for hotel practitioners to develop more effective and efficient marketing strategies, eventually motivating faster purchases from accurately targeted segments.

## **CHAPTER 7: LIMITATIONS AND FUTURE STUDIES**

As with other studies, this study has several limitations. First, generalization of the study results may be limited due to the sample. The study used only residents living in North America, specifically Canada and the U.S. Most respondents had booked hotel rooms online one or two times in the past six months. Evidence from such data could apply to other developed countries. However, the proposed model may produce different results if it is applied to developing countries like China or other cultures (e.g., eastern culture). For example, Chinese hotel guests may perceive less confusion because all prices in China include tax. This price policy requires less calculation efforts for Chinese hotel guests to determine the final payment. Therefore, future studies should collect data from different countries to examine the concept of customer confusion. Alternatively, a comparison between western culture and eastern culture may provide further information on sources of confusion. On the other hand, majority of American (72.3%) and Canadian (66.3%) online travel booking users are between 18 and 44 (Statista, 2018; Statista, 2019). According to Statista data (2018; 2019), male online travel booking users are slightly more than female online travel booking users in both America and Canada. However, female respondents are almost twice more than male respondents in current study. Future study may include more male customers to balance gender difference and to better represent American and Canadian online hotel booking customers.

Second, construct instruments were adopted and modified from previous empirical studies. Specifically, price complexity was borrowed from energy literature measuring dynamic tariffs (Layer et al., 2017). To the author's best knowledge, this construct's measurement scale has not

been used in hospitality and tourism before although confusion measurement has been empirically validated in hospitality and tourism literature. The high statistical correlation between price complexity and ambiguity confusion found in this study indicates these two constructs are very similar. Thus, future studies should develop and validate a scale of price complexity to better fit online hospitality and tourism service environment.

Third, the constructs of price complexity and alternative attractiveness in this study are operationalized using a unidimensional approach. Indeed, both of them can be interpreted as second-order construct. For example, price complexity includes price load, calculation effort, and evaluation effort (Homburg et al., 2014); alternative attractiveness contains retail indifference, alternative awareness, and alternative preference (Balabains et al., 2006; Li et al., 2006). This study examined different effects of three types of confusion instead of price complexity or alternative attractiveness. Moreover, price complexity reflects the intrinsic complexity in hotel prices while alternative attractiveness mainly addresses the number of attractive hotel options. Future studies should shift the research focus to investigating the effects of confusion determinants using a multidimensional approach with these two constructs.

Lastly, the present study focused on examining direct relationships among seven constructs. Mitchell et al. (2005) suggested some potential moderators (e.g., age, education, gender, tolerance for ambiguity confusion, cognitive style, learning style, decision-making style, field dependence, equivalence range, and shopping environment) and mediators (e.g., time, social environment, mood, expectation, experience, task definition, and involvement) that could also

influence customer confusion. Future studies may shed light on the indirect effects of these variables on customer confusion.

## CHAPTER 8: CONCLUSION

This research investigated customer confusion and its antecedents, specifically price complexity and alternative attractiveness, and validated a link between confusion and postponing decisions on booking a hotel online. An online survey was used to collect data from customers who booked hotels online during the past six months in both the United States and Canada. Price complexity and alternative attractiveness do have positive effects on three types of confusion: overload confusion, similarity confusion, and ambiguity confusion. Decision postponement is significantly affected only by overload confusion and ambiguity confusion. Notably, similarity confusion has no effect on either decision postponement or purchase intention.

The study results generated several managerial implications: improving interactivity and responsiveness between service agents and customers; effectively using big data to better understand customer preferences and position hotels themselves in a highly competitive market; enhancing membership program benefits to retain existing loyal customers and attract potential loyal customers.

Confusion is a relatively new construct. The idea of confusion has been reported as a problem in many markets, such as telecommunication (Turnbull et al., 2000); life, health, and travel insurance (Roberts, 1995); and retailing (Shiu, 2017). Because of the uncertainty of purchasing environment and the intangibility of the service product, confusion may become increasingly important to researchers. More empirical studies on confusion are necessary to enrich the literature.

## REFERENCES

- Abernethy, A. M., & Franke, G. R. (1996). The information content of advertising: A meta-analysis. *Journal of Advertising*, 25(2), 1-17.
- Allan, C., Chieh, L., & Dogan, G. (2015). A conceptual model of consumers' online tourism confusion. *International Journal of Contemporary Hospitality Management*, 27(6), 1320-1342.
- Amaro, S., & Duarte, P. (2013). Online travel purchasing: a literature review. *Journal of Travel & Tourism Marketing*, 30(8), 755-785.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Awang, Z.H. (2012). *A Handbook on SEM: Structural Equation Modeling (4th ed.)*. Kuala Lumpur: Centre For Graduate Studies, University Teknologi MARA Kelantan.
- Ba, S., & Pavlou, P. A. (2002). Evidence of the effect of trust building technology in electronic markets: Price premiums and buyer behaviour. *MIS Quarterly*, 26(3), 243-268.
- Bai, B., Law, R., & Wen, I. (2008). The impact of website quality on customer satisfaction and purchase intentions: evidence from Chinese online visitors. *International Journal of Hospitality Management*, 27(3), 391-402.
- Balabanis, G., Reynolds, N., & Simintiras, A. (2006). Bases of e-store loyalty: perceived switching barriers and satisfaction. *Journal of Business Research*, 59(2), 214-224.
- Barnes, W., Gartland, M., & Stack, M. (2004). Old habits die hard: Path dependency and behavioral lock-in. *Journal of Economic Issues*, 38(2), 371-377.
- Belonax, J.J. & Mittelstaedt, R. A. (1978). Evoked Set Size as a Function of Number of Choice Criteria and Information Variability. *Advances in Consumer Research*, 5(1), 48-51.
- Ben Zur, H., & Breznitz, S. J. (1981). The effect of time pressure on risky choice behavior. *Acta Psychologica*, 47(2), 89-104.
- Benartzi, S., & Thaler, R. H. (2001). Naive diversification strategies in defined contribution saving plans. *American Economic Review*, 91(1), 79-98.
- Bentler, P. M. (1995). *EQS structural equations program manual*. Los Angeles, CA: Multivariate Software.
- Bentler, P.M., & Bonett. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.



- Biau, D., Kernéis, S., & Porcher, R. (2008). Statistics in brief: The importance of sample size in the planning and interpretation of medical research. *Clinical Orthopaedics and Related Research*, 466(9), 2282-2288.
- Biswas, D., & Grau, S. L. (2008). Consumer choices under product option framing: Loss aversion principles or sensitivity to price differentials? *Psychology and Marketing*, 25(5), 399-415.
- Buhalis, D. (1998). Strategic use of information technologies in the tourism industry. *Tourism Management*, 19(5), 409-421.
- Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the internet-the state of eTourism research. *Tourism Management*, 29(4), 609-623.
- Burman, B., Albinsson, P. A., & Hyatt, E. (2016). One night or many? effects of amenity charge transparency on consumer reaction. *Journal of Hospitality Marketing & Management*, 25(8), 1010-1033.
- Carroll, B., & Sigauw, J. (2003). The evolution of electronic distribution: Effects on hotels and intermediaries. *Cornell Hotel and Restaurant Administration Quarterly*, 44(4), 38–50.
- Chen, C. F., & Tsai, D. (2007). How destination image and evaluative factors affect behavioral intentions?. *Tourism Management*, 28(4), 1115-1122.
- Chernev, A. (2003). When More Is Less and Less Is More: The Role of Ideal Point Availability and Assortment in Consumer Choice. *Journal of Consumer Research*, 30(2), 170-183.
- Choi, J., Li, Y., Rangan, P., Chatterjee, P., & Singh, S. (2014). The odd-ending price justification effect: The influence of price-endings on hedonic and utilitarian consumption. *Journal of the Academy of Marketing Science*, 42(5), 545-557.
- Chuah, S. H., Marimuthu, M., Kandampully, J., & Bilgihan, A. (2017). What drives gen Y loyalty? understanding the mediated moderating roles of switching costs and alternative attractiveness in the value-satisfaction-loyalty chain. *Journal of Retailing and Consumer Services*, 36, 124-136.
- Clampet, J. (2016). *Everything You Wanted to Know About the Hotel Industry's Gripes Against OTAs*. Retrieved from <https://skift.com/2016/04/25/everything-you-ever-wanted-to-know-about-hotel-industrys-complaints-against-otas/>.
- Colgate, M., & Lang, B. (2001). Switching barriers in consumer markets: An investigation of the financial services industry. *Journal of Consumer Marketing*, 18(4), 332–347.
- Crosby, F., & Crosby, F. (1976). A model of egoistical relative deprivation. *Psychological Review*, 83(2), 85-113.

- Decrop, A. & Snelders, D. (2005). A Grounded Typology of Vacation Decision-Making. *Tourism Management*, 26(2), 121-132.
- Dellaert, B., & Stremersch, S. (2005). Marketing Mass-Customized Products: Striking a Balance between Utility and Complexity. *Journal of Marketing Research*, 42(2), 219-227.
- Denton, F. (1994). The dynamism of personal timestyle: How we do more in less time. *Advances in Consumer Research*, 21, 132-137.
- Dhar, R. (1996). The effect of decision strategy on deciding to defer choice. *Journal of Behavioral Decision Making*, 9(4), 256-281.
- Dhar, R. (1997). Consumer Preference for a No-Choice Option. *Journal of Consumer Research*, 24(2), 215-231.
- Dortyol, I. T., Varinli, I., & Kitapci, O. (2014). How do international tourists perceive hotel quality? *International Journal of Contemporary Hospitality Management*, 26(3), 470-495.
- Ermeç Sertoğlu, A., & Kavak, B. (2017). A more comprehensive view of consumer confusion: Scale development. *Journal of International Consumer Marketing*, 29(4), 265-276.
- Estelami, H. (2003). The effect of price presentation tactics on consumer evaluation effort of multi-dimensional prices. *Journal of Marketing Theory and Practice*, 11(2), 1-16.
- Fasolo, B., McClelland, G., & Todd, P. (2007). Escaping the tyranny of choice: When fewer attributes make choice easier. *Marketing Theory*, 7(1), 13-26.
- Fornell, C., & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Forza, C., & Filippini, R. (1998). TQM impact on quality conformance and customer satisfaction: A causal model. *International Journal of Production Economics*, 55(1998), 1-20.
- Foxman, E. R., Berger, P. W., & Cote, J. A. (1992). Consumer brand confusion: A conceptual framework. *Psychology and Marketing*, 9(2), 123-141.
- Foxman, E. R., Muehling, D. D., & Berger, P. W. (1990). An investigation of factors contributing to consumer brand confusion. *The Journal of Consumer Affairs*, 24(1), 170.
- Ghazali, E., Nguyen, B., Mutum, D., & Mohd-Any, A. (2016). Constructing online switching barriers: Examining the effects of switching costs and alternative attractiveness on e-store loyalty in online pure-play retailers. *Electronic Markets*, 26(2), 157-171.
- Golodner, L. (1993). Healthy Confusion for Consumers. *Journal of Public Policy & Marketing*, 12(1), 130-132.
- Goode, M. & Harris, L.C. (2007). Online behavioral intentions: an empirical investigation of antecedents and moderators. *European Journal of Marketing*, 41(5), 512-536.

- Gourville, J. T., & Soman, D. (2005). Overchoice and assortment type: When and why variety backfires. *Marketing Science*, 24(3), 382-395.
- Greenspoon, P.J., & Saklofske, D.H. (1998). Confirmatory factor analysis of the multidimensional Students' Life Satisfaction Scale. *Personality and Individual Differences*, 25(1998), 965-971.
- Gretzel, U., & Fesenmaier, D. R. (2009). Information technology: shaping the past, present, and future of tourism. In T. Jamal, & M. Robinson (Eds.), *The SAGE handbook of tourism studies* (pp. 558-580). London: Sage.
- Grewal, D., Krishnan, R., Beaker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluation and purchase intentions. *Journal of Retailing*, 74(3), 331-352.
- Guillet, B. D., Liu, W., & Law, R. (2014). Can setting hotel rate restrictions help balance the interest of hotels and customers? *International Journal of Contemporary Hospitality Management*, 26(6), 948-973.
- Gursoy, D. (2003). Prior product knowledge and its influence on the traveler's information search behavior. *Journal of Hospitality & Leisure Marketing*, 10(3-4), 113-131.
- Hair, J., Anderson, R., Tatham, R., & Black, W. (1998), *Multivariate data analysis (5th ed.)*. Upper Saddle River, NJ: Prentice Hall.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis (7th ed.)*. Upper Saddle River, NY: Prentice Hall.
- Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study. *International Journal of Service Industry Management*, 7(4), 27-42.
- Herrmann, A., & Wricke, M. (1998). Evaluating multidimensional prices. *Journal of Product & Brand management*, 7(2), 161-169.
- Holbrook, M., & Hirschman, E. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of Consumer Research*, 9(2), 132-140.
- Homburg, C., Totzek, D., & Krämer, M., (2014). How price complexity takes its toll: the neglected role of a simplicity bias and fairness in price evaluations. *Journal of Business Research*. 67(6), 1114–1122.
- Hooper, D., Coughlan, J., Mullen, M. R. (2008). Structural equation modeling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60.

- Hu, L.T., & Bentler, P.M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
- Huang, S., & Hsu, C. H. C. (2009). Effects of travel motivation, past experience, perceived constraint, and attitude on revisit intention. *Journal of Travel Research*, 48(1), 29-44.
- Huffman, C., & Kahn, B. E. (1998). Variety for sale: Mass customization or mass confusion? *Journal of Retailing*, 74(4), 491-513.
- Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology*, 79(6), 995-1006.
- Jacoby, J., & Morrin, M. (1998). "Not manufactured or authorized by ...": Recent federal cases involving trademark disclaimers. *Journal of Public Policy & Marketing*, 17(1), 97-107.
- Jang, J., & Yoon, S. (2016). The effect of attribute-based and alternative-based processing on consumer choice in context. *Marketing Letters*, 27(3), 511-524.
- Jones, M. A., Mothersbaugh, D. L., & Beatty, S. E. (2000). Switching barriers and repurchase intentions in services. *Journal of Retailing*, 76(2), 259-274.
- Jones, M. A., Mothersbaugh, D. L., & Beatty, S. E. (2002). Why customers stay: measuring the underlying dimensions of services switching costs and managing their differential strategic outcomes. *Journal of Business Research*, 55(6), 441-450.
- Kahneman, D., & Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist*, 58(9), 697-720.
- Kalayci, K. (2015). Price complexity and buyer confusion in markets. *Journal of Economic Behavior and Organization*, 111, 154-168.
- Kim, H. M., & Kramer, T. (2006). The moderating effects of need for cognition and cognitive effort on responses to multi-dimensional prices. *Marketing Letters*, 17(3), 193-203.
- Kim, W., Ok, C., & Canter, D. D. (2010). Contingency variables for customer share of visits to full-service restaurant. *International Journal of Hospitality Management*, 29(1), 136-147.
- Kim, H., Xu, Y., & Gupta, S. (2012). Which is more important in internet shopping, perceived price or trust? *Electronic Commerce Research and Applications*, 11(3), 241-252.
- Kline, R.B. (2011). *Principles and practice of structural equation modelling (2nd ed.)*. New York: The Guilford Press.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Krishna, A., Briesch, R., Lehmann, D. R., & Yuan, H. (2002). A meta-analysis of the impact of price presentation on perceived savings. *Journal of Retailing*, 78(2), 101-118.

- Konuş, U., Verhoef, P. C., & Neslin, S. A. (2008). Multichannel shopper segments and their covariates. *Journal of Retailing*, 84(4), 398-413
- Layer, P., Feurer, S., & Jochem, P. (2017). Perceived price complexity of dynamic energy tariffs: An investigation of antecedents and consequences. *Energy Policy*, 106, 244-254.
- Landman, J. (1987). Regret and elation following action and inaction: Affective responses to positive versus negative outcomes. *Personality and Social Psychology Bulletin*, 13(4), 524-536.
- Langer, E.J., & Rodin, J. (1976). The effects of choice and enhanced personal responsibility for the aged: a field experiment in an institutional setting. *Journal of Personality and Social Psychology*, 34(2), 191-198.
- Law, R., Leung, K., & Wong, J. (2004). The impact of the internet on travel agencies. *International Journal of Contemporary Hospitality Management*, 16(2), 100-107.
- Li, D., Browne, G. J., & Chau, P. Y. K. (2006). An empirical investigation of web site use using a commitment-based model. *Decision Sciences*, 37(3), 427-444.
- Lloyd, K. B., & Jankowski, D. J. (1999). A cognitive information processing and information theory approach to diagram clarity: A synthesis and experimental investigation. *Journal of Systems and Software*, 45(3), 203-214.
- Lin, C., & Lekhawipat, W. (2014). Factors affecting online repurchase intention. *Industrial Management & Data Systems*, 114(4), 597-611.
- Liu, C., Arnett, K.P., & Litecky, C. (2000). Design quality of websites for electronic commerce: fortune 1000 webmasters' evaluations. *Electronic Markets*, 10(2), 120-129.
- Litvin, S., Goldsmith, R., & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism Management*, 29(3), 458-468.
- Liu, J. N. K., & Zhang, E. Y. (2014). An investigation of factors affecting customer selection of online hotel booking channels. *International Journal of Hospitality Management*, 39, 71-83.
- Loker-Murphy, L. (1997). Backpackers in Australia: *Journal of Travel & Tourism Marketing*, 5(4), 23-45.
- Loker-Murphy, L., & Perdue, R. (1992). A benefit-based segmentation of a nonresident summer travel market. *Journal of Travel Research*, 31(2), 30-35.
- Loudon, D. L., & Della Bitta, A. J. (1993). *Consumer Behavior*, 4th Edition. New York: McGraw-Hill.

- Lu, A. C. C., Gursoy, D., & Lu, C. Y. R. (2016). Antecedents and outcomes of consumers' confusion in the online tourism domain. *Annals of Tourism Research*, 57(Complete), 76-93.
- Luhmann, N. (1996). *Social systems*. Stanford, CA: Stanford University Press.
- Maheswaran, D., & Sternthal, B. (1990). The effects of knowledge, motivation, and type of message on ad processing and product judgments. *Journal of Consumer Research*, 17(1), 66-73.
- Mai, R., Hoffmann, S., Schwarz, U., Niemand, T., & Seidel, J. (2014). The shifting range of optimal web site complexity. *Journal of Interactive Marketing*, 28(2), 101-116.
- Mansfeld, Y. (1992). From motivation to actual travel. *Annals of Tourism Research*, 19(3), 399-419.
- Matzler, K., & Waiguny, M. (2005). Consequences of customer confusion in online hotel booking. *Information and Communication Technologies in Tourism*, 10, 306-317.
- Medvec, V. H., Madey, S. F., & Gilovich, T. (1995). When less is more: counterfactual thinking and satisfaction among Olympic medalists. *Journal of Personality and Social Psychology*, 69(4), 603-610.
- Miller, G.A. (1956). The magical number seven, plus or minus two: some limits on our capacity for processing information. *Psychological Review*, 63(2), 81-97.
- Mitchell, V., & Kearney, Í. (2002). A critique of legal measures of brand confusion. *Journal of Product & Brand Management*, 11(6), 357-379.
- Mitchell, V., & Papavassiliou, V. (1997). Exploring the concept of consumer confusion. *Market Intelligence & Planning*, 15(4), 164-169.
- Mitchell, V., & Papavassiliou, V. (1999). Marketing causes and implications of consumer confusion. *Journal of Product and Brand Management*, 8(4), 319-342.
- Mitchell, V., Walsh, G., & Yamin, M. (2005). Towards a conceptual model of consumer confusion. *Advances In Consumer Research*, 32, 143-150.
- Mogilner, C., Rudnick, T., & Iyengar, S.S. (2008). The mere categorization effect: how the presence of categories increases choosers' perceptions of assortment variety and outcome satisfaction. *Journal of Consumer Research*, 35(2), 202-215.
- Morrin, M., & Jacoby, J. (2000). Trademark Dilution: Empirical Measures for an Elusive Concept. *Journal of Public Policy & Marketing*, 19(2), 265-276.
- Morrison, A. M., Jing, S., O'Leary, J. T., & Cai, L. A. (2001). Predicting usage of the internet for travel bookings: an exploratory study. *Information Technology & Tourism*, 4(1), 15-30.

- Money, R. B., & Crotts, J. C. (2003). The effect of uncertainty avoidance on information search, planning, and purchases of international travel vacations. *Tourism Management*, 24(2), 191-202.
- Mourali, M., & Pons, F. (2009). Regulatory fit from attribute-based versus alternative-based processing in decision making. *Journal of Consumer Psychology*, 19(4), 643-651.
- Moutinho, L. (1987). Consumer behavior in tourism. *European Journal of Marketing*, 21(10), 3-44.
- Nicolau, J.L., & Mas, F.J. (2008). Sequential choice behavior: going on vacation and type of destination. *Tourism Management*, 29(5), 1023-1034.
- O'Connor, P. (2002). An empirical analysis of hotel chain online pricing strategies, Cognizant Communication Corporation. *Information Technology and Tourism*, 5(2), 65-72.
- O'Connor, P., & Murphy, J. (2004). Research on information technology in the hospitality industry. *International Journal of Hospitality Management*, 23(5), 473-484.
- Oppewal, H., & Koelemeijer, K. (2005). More choice is better: effects of assortment size and composition on assortment evaluation. *International Journal of Research in Marketing*, 22(1), 45-60.
- Park, D.B., & Yoon, Y.S. (2009). Segmentation by motivation in rural tourism: a Korean case study. *Tourism Management*, 30(1), 99-108.
- Patterson, P.G., & Smith, T., (2003). A cross cultural study of switching barriers and propensity to stay with service providers. *Journal of Retailing*, 7 (2), 107-120.
- Ping Jr., R.A., (1993). The effects of satisfaction and structural constraints on retailer exiting, voice, loyalty, opportunism, and neglect. *Journal of Retailing*, 69(3), 321-349.
- Pizzi, G., Scarpi, D., & Marzocchi, G. L. (2014). Showing a tree to sell the forest: The impact of attribute- and alternative-based information presentation on consumers' choices. *Journal of Economic Psychology*, 42, 41-51.
- Polites, G., & Karahanna, E. (2012). Shackled to the Status Quo: The Inhibiting Effects of Incumbent System Habit, Switching Costs, and Inertia on New System Acceptance. *MIS Quarterly*, 36(1), 21-42.
- Ramanathan, U., & Ramanathan, R. (2011). Guests' perceptions on factors influencing customer loyalty. *International Journal of Contemporary Hospitality Management*, 23(1), 7-25.
- Reibstein, D. J., Youngblood, S. A., & Fromkin, H. L. (1975). Number of choices and perceived decision freedom as a determinant of satisfaction and consumer behavior. *Journal of Applied Psychology*, 60(4), 434-437.

- Richins, M. (1997). Measuring Emotions in the Consumption Experience. *Journal of Consumer Research*, 24(2), 127-146.
- Roberts. L. (1995). *OFT to probe policies 'confusion*. The Independent. 20 May.
- Roe, S. J., & Repetti, T. (2014). Consumer perceptions of resort fees and their impact on hotel selection. *Journal of Hospitality Marketing & Management*, 23(5), 564–578.
- Rohlfs, K. V., & Kimes, S. E. (2007). Customers' perceptions of best available hotel rates. *Cornell Hotel and Restaurant Administration Quarterly*, 48(2), 151–162.
- Rusbult, C.E., (1980). Commitment and satisfaction in romantic associations: a test of the investment model. *Journal of Experimental and Social Psychology*, 16(2), 172–186.
- Rusbult, C. E., Martz, J. M., & Agnew, C. R. (1998). The investment model scale: measuring commitment level, satisfaction level, quality of alternatives, and investment size. *Personal Relationships*, 5(4), 357–387.
- Scheibehenne, B., Greifeneder, R., & Todd, P. M. (2009). What moderates the too-much-choice effect? *Psychology and Marketing*, 26(3), 229-253.
- Scheibehenne, B., Greifeneder, R., & Todd, P. (2010). Can there ever be too many options? A meta-analytic review of choice overload. *Journal of Consumer Research*, 37(3), 409-425.
- Scholnick, E. K., & Wing, C. S. (1988). Knowing when you Don't know: Developmental and situational considerations. *Developmental Psychology*, 24(2), 190-196.
- Schweizer, M., Kotouc, A. J., & Wagner, T. (2006). Scale development for consumer confusion. *Advances in Consumer Research*, 33 (1). 184-190.
- Sela, A., Berger, J., & Liu, W. (2009). Variety, vice, and virtue: How assortment size influences option choice. *Journal of Consumer Research*, 35(6), 941-951.
- Shankar, A., Cherrier, H., & Canniford, R. (2006). Consumer empowerment: A Foucauldian interpretation. *European Journal of Marketing*, 40(9/10), 1013-1030.
- Shugan, S. (1980). The cost of thinking. *Journal of Consumer Research*, 7(2), 99-111.
- Shukla, P., Banerjee, M., & Adidam, P. T. (2010). Antecedents and consequences of consumer confusion: Analysis of the financial services industry. *Advances In Consumer Research*, 37, 292-297.
- Shukla, P., Banerjee, M., & Singh, J. (2016). Customer commitment to luxury brands: Antecedents and consequences. *Journal of Business Research*, 69(1), 323-331.
- Shiu, J. Y. (2017). Investigating consumer confusion in the retailing context: The causes and outcomes. *Total Quality Management & Business Excellence*, 28(7-8), 746-764.



- Simon, H. (1962). The architecture of complexity. *Proceedings of the American Philosophical Society*, 106(6), 467-482.
- Statista. (2016). *Global digital travel sales 2014-2020*. Retrieved from <https://www.statista.com/statistics/499694/forecast-of-online-travel-sales-worldwide/>.
- Statista. (2018). *Online Travel Booking Canada*. Retrieved from <https://www.statista.com/outlook/262/108/online-travel-booking/canada#market-globalRevenue>.
- Statista. (2019). *eTravel Report 2019*. Retrieved from <https://www.statista.com/study/49302/etravel-report/>.
- Stevens, J. (2002). *Applied multivariate statistics for the social sciences*. Mahwah, NJ: Lawrence Erlbaum.
- Svenson, O., & Edland, A. (1987). Change of preferences under time pressure: Choices and judgements. *Scandinavian Journal of Psychology*, 28(4), 322-330.
- Tan, C., Teo, H., & Benbasat, I. (2010). Assessing Screening and Evaluation Decision Support Systems: A Resource-Matching Approach. *Information Systems Research*, 21(2), 305-326.
- Temerak, M. S. (2016). Examining the impact of the attractiveness of alternatives on customers' perceptions of price tolerance: Moderation and mediation analyses. *Journal of Financial Services Marketing*, 21(4), 284-297.
- Thai, N. T., & Yuksel, U. (2017). Choice overload in holiday destination choices. *International Journal of Culture, Tourism and Hospitality Research*, 11(1), 53-66.
- Thompson, C. (2018). *What you should know about 3rd party hotel booking websites*. Retrieved from <https://komonews.com/news/consumer/what-you-should-know-about-3rd-party-hotel-booking-websites>.
- Turnbull, P. W., Leek, S., & Ying, G. (2000). Customer confusion: The mobile phone market. *Journal of Marketing Management*, 16(1-3), 143-163.
- Tversky, A., & Shafir, E. (1992). Choice under conflict: The dynamics of deferred decision. *Psychological Science*, 3(6), 358-361.
- Walsh, G., Hennig-Thurau, T., & Mitchell, V. (2007). Consumer confusion proneness: Scale development, validation, and application. *Journal of Marketing Management*, 23(7-8), 697-721.
- Walsh, G., Mitchell, V. W., & Frenze, T. (2004). Consumer e-confusion on the Internet. *Thesis-Fachzeitschrift für Marketing*, 21(4), 17-22.

- Wang, Q., & Shukla, P. (2013). Linking sources of consumer confusion to decision satisfaction: The role of choice goals. *Psychology & Marketing*, 30(4), 295-304.
- Wiedmann, K., Walsh, G., & Klee, A. (2001). Consumer confusion: Construct and marketing policy implications. *Journal of Research and Management*, 23(2), 83-99.
- Wurman, R. S. (1990). *Information anxiety: What to do when information doesn't tell you what you need to know*. New York: Bantam.
- Xia, L., Monroe, K. B., & Cox, J. L. (2004). The price is unfair! A conceptual framework of price fairness perceptions. *The Journal of Marketing*, 68(4), 1-15

# APPENDICES

## Appendix 1: Questionnaire

Dear participants,

The purpose of this study is to better understand customers' online hotel booking decisions. The findings will provide hotel industry operators with an in-depth understanding of the factors affecting customers' online hotel booking decisions.

The survey will take approximately 20 minutes to complete. Your response is very important to this study. Your participation is strictly voluntary, and you can withdraw from the study at any time without consequence. This is an anonymous survey; no individual information will be reported, and only aggregated results will be presented.

Thank you for your participation.

Sincerely,

WooMi Jo  
Principal Investigator

Pengsongze Xue  
Student Investigator

University of Guelph

## Screening Questions

### Age

1. Under 18
2. 19-29
3. 30-39
4. 40-49
5. 50-59
6. 60 or older

### How many times have you booked hotel rooms online in the last 6 months?

1. 1-2
2. 3-5
3. 6-8
4. 9 or more
5. None of the Above (panelist is not qualified, and they are forced to leave the survey)

**Please enter the name of either the hotel website or hotel booking website that you used most frequently in the last 6 months. (Examples: hotels.com, Hilton.com)**

Please specify in the box below \_\_\_\_\_

### Country of current residence

1. United States
2. Canada
3. Other

**Based on your experience making online hotel reservations, please indicate the extent to which you agree or disagree with the following statements. (1= Strong Disagree; 2= Disagree; 3= Somewhat Disagree; 4=Neither Agree nor Disagree; 5= Somewhat Agree; 6= Agree; 7= Strongly Agree)**

<b>Price complexity</b>							
1. With many prices available among hotel booking websites, I usually have a hard time understanding all the prices.	1	2	3	4	5	6	7
2. I often feel I need to know more to fully understand all the prices among booking websites.	1	2	3	4	5	6	7
3. The prices presented among booking websites often look complicated to me.	1	2	3	4	5	6	7
4. It is usually difficult for me to obtain an overview of all the prices among booking websites.	1	2	3	4	5	6	7
5. I usually find it challenging to calculate the final price for my reservation.	1	2	3	4	5	6	7
6. It is usually difficult for me to understand the charges and fees listed for my reservation.	1	2	3	4	5	6	7
7. I usually have to do multiple calculations for my reservation.	1	2	3	4	5	6	7
8. It is usually difficult to determine the final price for my reservation without a calculator.	1	2	3	4	5	6	7
9. It is usually difficult to figure out if it's a reasonable price for my reservation.	1	2	3	4	5	6	7
10. I usually have to put some effort in my evaluation of the overall reservation price.	1	2	3	4	5	6	7
11. It usually takes a lot of time a long time for me to figure out which online website is offering the best price for my reservation.	1	2	3	4	5	6	7

<b>Alternative attractiveness</b>							
1. There is a variety of hotel booking websites that I can choose from.	1	2	3	4	5	6	7
2. I would be happy to use a different booking website than the one I used last time.	1	2	3	4	5	6	7
3. Other booking websites are probably just as good or better than the last website I used.	1	2	3	4	5	6	7
4. Compared to the booking website I used the last time, there are not many other booking websites with which I can be satisfied. (Reverse code)	1	2	3	4	5	6	7

<b>Similarity confusion</b>							
1. Due to the great similarity of many booking websites, it is often difficult to distinguish between them.	1	2	3	4	5	6	7
2. Some booking websites look so similar that they might be managed by the same company.	1	2	3	4	5	6	7
3. Sometimes, I am not clear on the different features from similar booking websites.	1	2	3	4	5	6	7
<b>Overload confusion</b>							
1. I do not always know which booking website meets my booking needs the best.	1	2	3	4	5	6	7
2. There are so many booking websites to choose from that I sometimes feel confused.	1	2	3	4	5	6	7
3. Due to the different design of booking websites, it is sometimes difficult to decide where to make my reservation.	1	2	3	4	5	6	7
4. Most booking websites are very similar and are therefore hard to distinguish.	1	2	3	4	5	6	7
<b>Ambiguity confusion</b>							
1. Different booking websites often have so many features that a comparison among them is impossible.	1	2	3	4	5	6	7
2. The information for room reservations provided on booking websites is often vague.	1	2	3	4	5	6	7
3. I rarely feel sufficiently informed about my reservation by the booking websites.	1	2	3	4	5	6	7
4. I sometimes feel uncertain about whether websites' offers are particularly important for me.	1	2	3	4	5	6	7
5. I usually need more information to understand the differences among all hotel booking websites.	1	2	3	4	5	6	7

<b>Decision postponement</b>							
1. Sometimes, it is difficult to make the final decision when making a hotel reservation.	1	2	3	4	5	6	7
2. Sometimes, I delay the decision when making a hotel reservation.	1	2	3	4	5	6	7
3. Sometimes, I postpone a planned hotel reservation.	1	2	3	4	5	6	7
4. Sometimes, the choice is so large that making a hotel reservation takes longer than expected.	1	2	3	4	5	6	7

<b>Purchase intention</b>							
1. I usually make my hotel reservation during my first search.	1	2	3	4	5	6	7
2. I usually intend to complete my hotel reservation during my first search for a hotel.	1	2	3	4	5	6	7
3. I usually like to complete my hotel reservation during my first search for a property.	1	2	3	4	5	6	7

## **Demographic information**

### **Gender**

1. Male
2. Female

### **Marital status**

1. Married
2. Single
3. Domestic partners
4. Other
5. Prefer not to answer

### **Education**

1. Less than high school
2. High school graduate/diploma
3. 2-year degree
4. 4-year degree
5. Graduate school
6. Prefer not to answer

### **Annual household income**

1. Below \$20,000 USD (CAD)
2. \$20,000 - 49,999 USD (CAD)
3. \$50,000 - 79,999 USD (CAD)
4. \$80,000 - 99,999 USD (CAD)
5. \$100,000 - 149,999 USD (CAD)
6. Over \$150,000 USD (CAD)
7. Prefer not to answer

### **Ethnicity**

1. Asian/ Pacific Islander
2. Black or African
3. White Caucasians
4. Hispanic or Latino
5. Native American/ Aboriginal peoples
6. Other

### **What is the main purpose of your hotel stays in the last 6 months?**

1. Business trips
2. Leisure trips
3. Business and leisure combined
4. Other



## Appendix 2: Research Ethics Boards Approval



**RESEARCH ETHICS BOARDS**  
*Certification of Ethical Acceptability of Research  
Involving Human Participants*

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**APPROVAL PERIOD:** November 30, 2018  
**EXPIRY DATE:** November 29, 2019  
**REB:** G  
**REB NUMBER:** 18-11-015  
**TYPE OF REVIEW:** Delegated  
**PRINCIPAL INVESTIGATOR:** Jo, WooMi (woomi@uoguelph.ca)  
**DEPARTMENT:** School of Hospitality & Tourism Management  
**SPONSOR(S):** N / A  
**TITLE OF PROJECT:** Choose now or later? An examination of decision postponement and repurchase intention based on price complexity, alternative attractiveness, and confusion in hotel online booking

The members of the University of Guelph Research Ethics Board have examined the protocol which describes the participation of the human participants in the above-named research project and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement, 2<sup>nd</sup> Edition.

The REB requires that researchers:

- Adhere to the protocol as last reviewed and **approved** by the REB.
- Receive approval from the REB for any **modifications** before they can be implemented.
- Report any **change in the source of funding**.
- Report **unexpected events or incidental findings** to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants, and the continuation of the protocol.
- Are responsible for **ascertaining and complying with all applicable legal and regulatory requirements** with respect to consent and the protection of privacy of participants in the jurisdiction of the research project.

The Principal Investigator must:

- Ensure that the ethical guidelines and approvals of facilities or institutions involved in the research are obtained and filed with the REB prior to the initiation of any research protocols.
- Submit an **Annual Renewal** to the REB upon completion of the project. If the research is a multi-year project, a status report must be submitted annually prior to the expiry date. Failure to submit an annual status report will lead to your study being suspended and potentially terminated.

The approval for this protocol terminates on the **EXPIRY DATE** , or the term of your appointment or employment at the University of Guelph whichever comes first.

Signature:

Date: November 30, 2018

Stephen P. Lewis  
Chair, Research Ethics Board-General