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Service customization: To upgrade or to downgrade? An investigation of how option framing affects tourists’ choice of package-tour services

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Package-tour operators often tailor trips to fit travelers’ personal requirements to create higher customer value. In practice, there are various options available for presenting an identical package tour to potential customers. This research investigates how option framing influences travelers’ decision making in a package-tour customization task. Based on a behavioral study and a logistic regression analysis, our results show that: (1) when both upgrading (i.e., starting from an economic package and customizing upwards) and downgrading (i.e., beginning with a luxury package and customizing downwards) methods are available, more consumers prefer upgrading to downgrading; (2) consumers customize their tour packages to a higher total price in the downgrading condition; (3) after separating peripheral service from core service attributes, our results further reveal that option framing affects peripheral services more than core services; and (4) consumers who are quality conscious and promotion-focused are more likely to choose a downgrading method for package-tour customization. Combined, these findings offer important managerial implications for travel companies.

1. Introduction

“When you have it your way, it just tastes better”—Burger King

Service customization is becoming an increasingly popular method of catering to the heterogeneous needs of consumers. Compared to standard offerings, customization allows consumers to specify the product or service characteristics that they desire. This has the effect of increasing the perception of value and consumer satisfaction (Benedict, Dellaert, & Stremersch, 2004), which in turn leads to improved consumer loyalty and higher purchase intentions (Franke, Schreier, & Kaiser, 2010; Kurniawan, Richard, & Tseng, 2006). Customization also provides firms with an effective weapon with which to differentiate themselves from their competition. For instance, Anderson, Fornell, and Rust (1997) and Fornell, Johnson, Anderson, Cha, and Bryant (1996) suggest that a service firm’s ability to customize its services to individual customers is more important than providing reliable but undifferentiated services, as consumer needs in most service industries vary from one context to another. Due to the higher perceived value of a differentiated product, customized services may even offer service providers with a bargaining advantage (Roth, Woratschek, & Pastowski, 2006).

The need for customization has also been well documented in the tourism arena. According to a member survey conducted by the United States Tour Operators Association, what people want most in tours and vacation packages is the ability to customize their trip, either to build their travel package to their personal requirements to create higher customer value or to delete those features from a “base” model (by adding options for airlines, hotels, rental cars, shows, etc.), or to delete those features from a “full
composite package (where all the features are included in the default option).

In practice, an alternative way of achieving travel customization is to allow consumers to upgrade or downgrade service levels within a set of pre-defined service features/attributes. For instance, consumers may upgrade their accommodation from a 4-star to a 5-star hotel, or extend their stay in a preferred destination offered as part of a given package tour. Similarly, service customization can also be achieved by allowing consumers to downgrade various service attributes. There are fundamental differences between the additive/subtractive methods (e.g., the Expedia and Travelocity cases mentioned above) and the upgrading/downgrading methods of service customization. In the first case, consumers are able to change the total number of service attributes by adding or subtracting attributes to suit their needs. In the second case, the total number of service attributes is fixed and consumers modify the quality, or vertical level, of given sets of service attributes.

Although service customization is critical for travel firms, there is surprisingly little research to be found in the tourism literature capable of providing either theoretical or practical guidance for tour operators. Our current research aims to close this salient gap. Meanwhile, previous studies that have focused on the framing effects of the additive/subtractive options have found that consumers tend to choose more options with a higher total option price when they use the subtractive versus the additive option (Levin, Lauriola, & Gaeth, 2002; Park, Jun, & Macinnis, 2000).

However, less is known about the influence of upgrading/downgrading methods on consumer choices. In particular, in previous research decision frames have usually been presented as pre-determined, with consumers making the corresponding consumption choices. In reality, however, consumers first have to determine the requisite decision frame before making consumption decisions. For instance, when upgrading and downgrading service customizations are both available, how does a consumer choose one method over the other? How does this first-step decision influence the consumer’s next customization task, and thus their evaluation of the overall customization experience? Probably of more importance to service providers is the question of which of the two frames (e.g., an economic package or a luxury one) leads to a more complete and expensive service customization, and is thus more lucrative to tour operators? All of these questions will be addressed in this study.

The current study contributes to the tourism literature in the following four ways. First, it addresses an important issue in tourism management. As Deimel (2006) points out, travel agents may lose out in the dynamic packaging battle if tour operators assert their traditional role as the industry's product packagers while failing to appreciate and manage service customization. Second, the study extends our understanding of the effects of option framing by introducing self-selected framing as a stage in a traveler’s decision making. Because many real situations lack a well-defined option frame, a greater understanding of the effects of self-selected framing on consumer choices has important managerial implications. Third, the emphasis on vertical (i.e., upgrading/downgrading) rather than horizontal (i.e., additive/subtractive) customization opens a new window for examining the effects of option framing in tour service customization applications. It is more efficient for package-tour service providers to manage service customization by adopting upgrading/downgrading rather than additive/subtractive methods. As each service attribute (i.e., transportation, accommodation, etc.) represents a relationship

3 Assuming the profit contribution of each dollar is the same—we thank one reviewer for pointing out this necessary assumption to strengthen our argument.

with a business partner (i.e., airlines, hotels), it is relatively easier to adjust the overall level of service than to maintain a number of less frequently interacting relationships. The latter is not only unavoidable with the additive method, but a customer may also request a particular service attribute that the majority forgoes. Fourth, whereas previous studies have examined the option-framing effects of tangible goods, such as automobiles (Park et al., 2000) and pizzas (Levin et al., 2002), the current study supplements our understanding of this area by focusing on service products such as package tours, which contain more intangible product features.

The paper is organized as follows. First, we review the existing research on option framing and self-selected framing and formulate our focal research hypotheses. Next, we present a detailed design of and procedures for a behavioral experiment, followed by a logistic regression analysis. Discussions and the relevant managerial implications of the study are presented at the end of the paper.

2. Literature review

Most current knowledge regarding option framing originates from the behavioral economics and decision-making literature. These are briefly reviewed below.

2.1. Option-framing effect

It is often possible to frame a given decision problem in more than one way. Framing effects occur when alternative frames for a given decision problem influence both the way information is processed and the nature of the ultimate decision (Tversky & Kahneman, 1981). For instance, ‘90% survival rate’ or ‘10% death rate’ are alternative statements that can be used to describe the performance of the same surgeon. Although the doctor’s performance remains identical, the two framing variants normally produce very different attitudes towards having surgery (Kahneman & Tversky, 1984). Various studies have found empirical evidence to support the effects of framing in psychology, behavioral economics, and consumer decision making (e.g., Donovan & Geoffrey, 1999; Levin, Jasper, & Forbes, 1998; Park et al., 2000; Puto, 1987; Sinha & Smith, 2000; Wilson, McMurrin, & Woods, 2001). For instance, in their examination of the effects of framing on consumer choice decisions in the purchase of automobiles, computers, and treadmills, Park et al. (2000) found that consumers tend to choose more options with a higher total option price when presented with a subtractive option frame, which supports the managerial attractiveness of the subtractive over the additive method. In a cross-cultural study of pizza customization, where customers were allowed to add or delete pizza components, Levin et al. (2002) reported similar effects of option framing on U.S. and Italian customers.

The traditional expected utility model states that consumers present similar patterns of rational choice behavior regardless of the decision frame (Von Neumann & Morgenstern, 1944). Given the observed differential effects of option framing, recent studies have attempted to explore the mechanism of option framing. Current research follows three major lines of argument. The first is that consumers usually make decisions and/or evaluations relative to some reference point, rather than in isolation (Kahneman & Tversky, 1979). Alternative presentations (e.g., the additive or subtractive models) of a given decision problem can trigger different reference points for different consumers. The second argument builds on the idea of loss aversion to further explain the outcomes relating to differences in reference points (Park et al., 2000). Loss aversion suggests that when an alternative is used as a reference state, losses from that state carry more influence than gains (Kahneman & Tversky, 1979; Thaler, 1985). With additive
framing, the base (i.e., the cheapest) model that consumers start with becomes the reference point, in relation to which their perception of monetary sacrifice (“losses”) in return for more options (“gains”) is relatively high. With subtractive framing, the full (i.e., the most expensive) model serves as the reference point, and consumers’ perception of the monetary “gain” from giving up some options is relatively low. Overall, consumers are less likely to reduce option items in the subtractive frame, which results in more options being chosen than in the additive method.

Third, the endowment effect suggests that people are reluctant to part from assets that they currently possess. When it is more painful to give up an asset than it is pleasurable to obtain it, buying options being chosen than in the additive method.

In typical self-framing tasks, people are often asked to form a frame based on how they perceive the situation. For instance, in Wang’s (2004) study of self-framing and choice decisions, respondents were instructed to complete sentences themselves with either a positive tone of life or a negative tone of death for the classic Asian disease problem (Tversky & Kahneman, 1981). In negotiation experiments conducted by Neale, Huber, and Northcraft (1987), a focal transaction was presented to the respondents. The study found that people who assumed the role of a seller tended to think about the focal transaction in terms of gaining resources, whereas those taking the role of a buyer viewed the same transaction in terms of losses.

Another way of designing self-framing tasks is to provide a few alternative frames and let respondents choose, based on their interpretation of the situation, from such frames. This approach is referred to as “self-selected framing” in the literature (Wang & Fischbeck, 2004). Similar to self-framing, the self-selected frame is also a subjective frame beyond the experimenter’s direct manipulation. Because a few exclusive (and sometimes exhaustive) frames are normally presented to decision makers, the self-selected framing approach succeeds in reducing people’s cognitive effort while retaining the freedom of self-determination.

Self-selected framing provides a better solution for our study in terms of customizing a tourism package. According to Prospect Theory, there are two stages in a decision problem. In the first stage, people code the outcomes as gains or losses relative to their reference points. In the second stage, they choose an alternative based on their risk attitude towards gains and losses. Thus, consumer decisions in the first stage become reference points for their subsequent behavior, which determines the final outcome.

Consumers use different reference points when working on upgrading/downgrading customization tasks. For an upgrading task, the package price and service level reference point is low, whereas it is relatively high for a downgrading task. Therefore, when a consumer chooses to upgrade his/her tour package, he/she implicitly selects a low reference point for the price and service level. The literature has indicated that people prefer positive frames to negative frames (e.g., Elliott & Archibald, 1989; van Schie & van der Pligt, 1990). With negative frames, consumers perceive a higher risk associated with a decision, which consequently engenders more negative emotions (Elliott & Archibald, 1989). According to Chernev (2009), the basic exercise of an upgrading task is to “add”, which is normally interpreted as utility gain. As a result, upgrading is perceived as a positive frame. In contrast, those who choose a downgrading method exhibit high reference points for price and service level and, because forgoing endowed benefits is perceived as a utility loss, downgrading is perceived as a negative frame.

In addition, it is found that consumers often encounter more negative experiences when performing giving-up tasks (Luce, 1998), because rejecting positive product options is likely to be more difficult than accepting them (Huber, Neale, & Northcraft, 1987). We anticipate that consumers will experience more negative emotions in the downgrading condition, as they have to give up product superiority in exchange for the economic utility of lower cost. As a result, they will be less likely to choose the downgrading than the upgrading method. In addition, when consumers have to forgo options they tend to make more comparisons among alternatives (Strahilevitz & Loewenstein, 1998), which requires more cognitive resources in completing the final decision task (Biswas & Grau, 2008). The decision complexity of customization by downgrading may therefore lead more consumers to choose an alternative customization method.

Based on the above arguments, we propose the following hypothesis:

Hypothesis 1. Consumers will customize their tour package to a higher total price in the downgrading than in the upgrading condition.

2.2. Self-selected framing

Previous research on framing effects has largely focused on how choice information framed by external sources (such as service firms) influences decision making (Wang, 2004). In many real-life situations, however, there are no well-defined frames available and consumers have to code, process, and articulate choice options on their own. This process is termed self-framing (Levin et al., 1998). When self-framing is elicited, the same situations may be comprehended differently in terms of the chances of winning or losing, positive or negative outcomes, and achievement or avoidance goals, which in turn affect people’s subsequent choice behavior. Requiring people to frame choice alternatives themselves creates a new angle for studying the effects of choice information on decision making under risk (Elliott & Archibald, 1989; Fischhoff, 1983; Wang & Fischbeck, 2004).
Hypothesis 2. When the self-selected framing option is available, more consumers will choose the upgrading method for service customization than the downgrading method.

2.3. Decision making: effects of psychological factors

2.3.1. Regulatory focus

Regulatory-focus theory (Higgins, 1997) suggests that there are two types of consumer with different motivational orientations: promotion-focused consumers and prevention-focused consumers. Promotion-focused consumers are motivated by achievements and are sensitive to potential hazards. A variety of findings indicate the existence of a basic matching principle in how target objects are evaluated under different regulatory foci (Higgins, 2002). For instance, attribute information seems to carry a greater weight for how the option is evaluated when the content of the information is compatible with the person’s regulatory focus than when it is incompatible (Chernev, 2004; Pham & Higgins, 2005). Specifically, it is found that attribute information that is related to hedonic and aspirational benefits (e.g., luxury, sensory gratification, aesthetic) carries a greater weight under promotion than prevention, whereas attribute information that is related to utilitarian and necessary features (e.g., safety, protection) carries a greater weight under prevention than promotion (Aaker & Lee, 2001; Higgins, 2002).

For a typical downgrading customization task, consumers start with a fully-loaded luxury package that contains positive outcomes and hedonic gains (i.e., more tourism attractions, superior hotels, more comfortable transportation, professional tourism guide, etc.). Moreover, such hedonic and luxury features of the service package are more salient in the downgrading condition. As a result, the full package is more attractive to promotion-focused consumers. In contrast, the basic package in an upgrading task contains more utilitarian and necessary service features. The lower package price implies little risk for overspending and thus makes the choice safe and attractive to prevention-focused consumers.

In line with the above arguments, we propose the following hypothesis:

Hypothesis 3. Promotion-focused consumers are more likely to choose the downgrading method, while prevention-focused consumers are more likely to choose the upgrading method when customizing their tour packages.

2.3.2. Price consciousness and quality consciousness

Price consciousness is defined as “the degree to which the consumer focuses exclusively on paying a low price” (Lichtenstein, Ridgway, & Netemeyer, 1993). Researchers have found that price consciousness is related to certain types of marketplace behavior, such as searching for low prices outside the store (Lichtenstein et al., 1993), having a narrow latitude of price acceptance (Lichtenstein, Bloch, & Black, 1988), being more likely to purchase low-priced “second tier” national brands (Sinha & Batra, 1999), and having a lower perception of the offer value of the deal (Alford & Biswas, 2002).

In contrast, quality consciousness is a characteristic that measures the degree to which a consumer searches carefully and systematically for the best quality products (Sproles & Kendall, 1986). Previous research has found that highly quality-conscious consumers will seek the best results (e.g., quality, performance) in their purchases (Ailawadi, Neslin, & Gedem, 2001; Sproles & Kendall, 1986).

In an upgrading customization task, consumers start with a basic package plan whose initial price is lower, and which is therefore price competitive. The downgrading method starts with a full package plan that offers higher service quality for each attribute. Therefore, it is anticipated that consumers with high price consciousness are more likely to choose the upgrading method, whereas those who are high quality conscious are more likely to choose the downgrading method. Thus:

Hypothesis 4a. Consumers with high price consciousness are more likely to choose the upgrading than the downgrading method when customizing their tour packages.

Hypothesis 4b. Consumers with high quality consciousness are more likely to choose the downgrading than the upgrading method when customizing their tour packages.

2.3.3. Self-confidence

Consumer self-confidence is defined as the extent to which an individual feels capable and secure with respect to his or her marketplace decisions and behavior. It reflects the individual’s perceived ability to make effective consumer decisions, including the ability to acquire and use information (Bearden, Hardesty, & Rose, 2001), and to generate positive experiences (Adelman, 1987). Confidence empowers the consumer to act on the basis of strongly held beliefs (Berger & Mitchell, 1989). Thus, consumer self-confidence is expected to moderate the relationship between the strength of consumers’ price-quality (PQ) schema and their choice of a higher-priced product (Dhar, 1997). That is, confidence should increase the likelihood of choosing the higher-priced product in a choice set when the PQ schema is strong and decrease the likelihood of choosing the higher-priced product when the PQ schema is weak (Bearden et al., 2001).

Rejecting or downgrading positive product options is likely to be more difficult than accepting or upgrading them, because consumers face utility loss decisions in the former case and encounter more conflicts. Extant research has shown that people tend to formulate decisions in terms of choosing rather than rejecting (Shafr, 1993), providing further evidence that consumers perceive the task of rejecting (upgrading) as more difficult than the choosing (downgrading) options (Park et al., 2000). Consumers with higher levels of self-confidence are able to balance costs and benefits well (Bearden et al., 2001) and possess greater skills in choosing among alternative options (Loibl, Cho, Diekmann, & Batte, 2009). Therefore, we propose the following hypothesis:

Hypothesis 5. Consumers with lower (higher) levels of self-confidence are more likely to choose the upgrading (downgrading) method for service customization.

2.3.4. Self-control

Self-control is the ability to overcome urges and temptations for the sake of achieving future goals (Ariely & Wertensbrough, 2002; Trope & Fishbach, 2000). Low self-control consumers give more weight to present benefits (desires) and seek immediate gratification at any cost (Hoch & Loewenstein, 1991). In contrast, high self-control consumers give more weight to cost and focus more on high-order goals related to long-term well-being, and are therefore able to overcome temptations that stand in the way of achieving future goals (Wertensbrough, 1998). With downgrading service customization, consumers are presented with luxury service packages that are configured with the highest service levels for each service attribute. When price is not considered, the fully-loaded luxury packages are what consumers want most. A certain amount of self-control is thus needed to resist the temptation of a luxury package, compared with the basic package in the upgrading condition. Based on the above arguments, we propose the following:
Hypothesis 6. Consumers with lower (higher) levels of self-control are more likely to choose the downgrading (upgrading) method for service customization.

2.3.5. Risk aversion

Hofstede and Bond (1984, p. 419) defined risk aversion as “the extent to which people feel threatened by ambiguous situations, and have created beliefs and institutions that try to avoid these”. Past research has indicated that risk aversion could affect consumers’ decision making in various ways. For instance, it is found that highly risk-averse consumers tend to search for more information regarding product quality during purchasing decisions (Shimp & Bearden, 1982). Highly risk-averse consumers will use shortcut strategies such as the use of price, brand, and store cues (e.g., Derbaix, 1983). This is likely to be more pronounced in tourism shortcut strategies such as the use of price, brand, and store cues (e.g., Derbaix, 1983). When options are important, consumers are likely to attend to control are more likely to choose the downgrading (upgrading) method for service customization.

Hypothesis 7. Consumers with higher (lower) levels of risk aversion are more likely to choose the upgrading (downgrading) method for service customization.

2.4. Augmented service offering: core versus peripheral

Service offerings usually consist of core attributes and peripheral attributes as suggested by the augmented service-offering model (Grönroos, 1990; Lovelock, 1983). Specifically, core service attributes relate to the basic customer benefits received or the primary customer reason for the service transaction. In contrast, peripheral services are facilitative or ancillary to the core services. Together, core and peripheral services combine to form the service package or bundle of customer benefits (Grönroos, 1990).

As implied in their names, core services are deemed to be the important components of a service product whereas peripheral services are perceived as the “little things” or “added bonuses” that support and complement the primary customer benefits (Kandampully, 2000). Research shows that consumers pay differential attention to important versus unimportant options, and this differential attention influences the impact of option framing. When options are important, consumers are likely to attend to them no matter how they are framed. However, when options are unimportant, they receive less attention and are therefore more susceptible to the effects of option framing (Park et al., 2000).

Based on the above arguments, we propose the following:

Hypothesis 8. The option-framing effect is more likely to occur with peripheral service attributes than with core service attributes.

3. Methodology

3.1. Experimental design

Based on product information from a real travel company, we designed two travel packages to Kunming (including Lijiang & Dali), a famous travel destination in south-west China, for the current study. One is specified as an “economic package” and the other a “luxury package”. Both packages include the same nine service attributes, such as transportation, accommodation, number of sightseeing visits, etc. The “economic” package is a 4-day trip, staying in 3-star hotel rooms and traveling by train, etc., at a cost of RMB2188. The “luxury” package costs RMB4218 for an 8-day trip, and consumers stay in 5-star hotels and travel by airplane. Detailed information about the two packages is given in Appendix 1. For the purpose of this study, we provided two customization tools, upgrading versus downgrading, for consumers to further tailor their tour package. Consumers who chose the economic package could update the service attributes to any level they desired. Similarly, those who chose the luxury package could change any of the service levels that they wished. Each respondent was told clearly that they could: (1) change all of the eight attribute options to a different level from the default values indicated by a particular tour package; (2) modify only some of the eight attribute levels; or (3) feel free to make no changes and to accept all of the eight default options, if that was what they thought most suitable for them. To upgrade (downgrade) one level for a specific service attribute, the total price of the package is increased (decreased). To ensure comparability, the two packages are designed in such a way that when an economic package is fully upgraded, it becomes a luxury package, and vice versa.

3.2. Participants and procedures

220 MBA students from an east coast university in China participated in the experiment. They were asked to respond to the questionnaire as if they were making an actual tour package purchasing decision. There were two main reasons for using a student sample in the study. First, the recruited MBA student participants were actual consumers of travel products and have all had vocational package purchasing experiences. This was further confirmed through their self-reported traveling experiences, such as “average traveling trips per year” and “average expenditure per trip”, etc. Second, extant literature has reported no significant difference between student samples and target samples in framing research. For instance, based on a meta-analysis of 136 studies, Küblerger (1998) found that although student samples dominate framing research, the behavior of student participants does not differ from that of non-student participants (also see Nelson, Clawson, & Oxley, 1997, pp. 570–571). One of the major concerns in a lab experiment lies in its non-natural setting; i.e., the participants act as decision makers in a simulated consumer scenario. To ensure decision quality in the current study, we adopted the incentive-aligned mechanism suggested by Ding, Grewal, and Liechty (2005). The participants were told that they would have the chance to purchase the package they customized. To start with, participants were first asked to determine a package type, either economic or luxury, and then to complete the customization task by evaluating each service attribute and changing (i.e., upgrading/downgrading/keeping) its service level accordingly.

Extant research has suggested that response time measurement could be used to indicate the decision difficulty (Levav, Heitmann, Herrmann, & Iyengar, 2010; Thomas & Morwitz, 2009). Following this suggestion, we measured how long each participant took to complete the upgrading/downgrading customization process. Specifically, when participants had finished reading the general instructions and background information about the customization task, we asked them to record the start time. Respondents were then instructed to configure their service package by selecting a desired service level for each attribute, which was presented on a separate page. Upon finishing the customization process,
respondents were again asked to note down the time. In this way, we were able to measure the total decision time for an upgrading task or a downgrading task. At the end of the experiment, we asked the participants to explain why they chose the economic (upgrading frame) or the luxury package (downgrading frame) at the initial stage. In addition, a few questions were administered to measure the participants’ decision process satisfaction and decision outcome satisfaction, together with a number of psychological variables (e.g., quality consciousness, risk aversion, self-confidence) and demographic questions.

3.3. Measurement of variables

The discriminant validity of process satisfaction and outcome satisfaction has been well supported in the literature (see Arnold & Price, 1993; Kurniawan et al., 2006; Oliver, 1997, for a review). In the current study, we adopted established scales to measure these two distinct satisfaction constructs (Kurniawan et al., 2006). Specifically, participants’ satisfaction with the decision process and the decision outcome was measured using a 5-point Likert scale (‘1’ = most disagree, ‘5’ = most agree). For instance, we used the following three items to measure decision process satisfaction: “I am very satisfied with the customization process”, “This customization task is an enjoyable experience to me”, and “I didn’t feel any discomfort during the customization process”. For decision outcome satisfaction, the following items were adopted: “I am very satisfied with my customized tour package”, “My customized tour package will best meet my travel needs”, and “My customized tour package is good value”. A detailed description of the measurement scales used is given in Appendix 2.

4. Results and analysis

Nineteen participants failed to follow the instructions or complete the whole questionnaire, thus the final sample size for this study was 201, with a male/female ratio of 42.3/57.7. Overall, 62% of participants reported having had a tourism service customization experience. On average, the participants were 29.8 years old, travelled twice a year, stayed 4.5 days and spent RMB2196 on each trip. Therefore, the price of RMB2188 for the economic package in our experiment is representative of consumers’ choices in real-life situations.

The Cronbach alphas for process satisfaction and outcome satisfaction were 0.875 and 0.882, which is higher than the normally acceptable value of 0.7, thus indicating the reliability of our measurement scale. We then ran a confirmatory factor analysis (CFA) to empirically test the discriminant validity between the two constructs. The results showed that the measurement scales loaded onto the specific construct as expected, and the two factors explained 74.15% of the total variance. In addition, the coefficient of determination ($r = 0.248$) between the two constructs was significantly less than 1 ($p < 0.001$). Taken together, this evidence suggests that the two constructs have good discriminant validity (Anderson & Gerbing, 1988).

Next, following common practice in the literature (Ko & Stewart, 2002; Sparks & Pan, 2009), we took the average of the respective items to proximate the underlying constructs (i.e., summed scales), and conducted further analyses based on these summated scales.

4.1. The effects of self-selected framing

In the experiment, 115 (57.2%) of the 201 participants chose the economic package and adopted the upgrading method for their customization task, whereas only 86 (42.8%) chose the downgrading method. This self-selected framing effect is significantly different from a random assignment, i.e., $50\% \left( \chi^2_{(df=1)} = 4.184, p < 0.05 \right)$. Therefore, this supports Hypothesis 2; that is, when the self-selected framing option is available, more consumers will choose the upgrading method for service customization than the downgrading method.

Participants reported a variety of explanations for choosing the economic versus the luxury package. To further understand consumer choice, we categorized these self-reported explanations and conducted a frequency analysis. From the highest to the lowest, the top four reasons reported by those who chose the upgrading method were: attractiveness of low price (49), feel more in control (41), decision ease (32), and basic needs satisfied (28). For those who chose the downgrading method, the top reasons were: quality assurance (31), first-sight attraction (24), and convenience (13).

4.2. Upgrading versus downgrading: what’s the difference?

To understand how self-selected framing at the early stage of the service customization decision affects consumers’ subsequent decision making, we separated participants into two groups (i.e., upgrading group versus downgrading group) based on their self-selected frame. We then compared the average number of adjustments, the total price of the customized tour package, satisfaction with the decision/customization process and outcome, time spent completing the customization task, etc. As illustrated in Fig. 1, our results show that on average, the upgrading group made 5.20 upgrading adjustments and the downgrading group made 4.41 downgrading adjustments. The difference is significant (i.e., $t = 2.934, p < 0.05$). In terms of the total price of the customized package, the upgrading group reported an average of RMB3101.30, which is significantly lower ($t = 5.974, p < 0.001$) than RMB3443.23 reported by the downgrading group.

To further explore the possible effects of option framing on core attributes versus peripheral attributes, we also analyzed the possible confounding factors of extremeness-avoidance and compromise effects. In particular, we were interested in whether there was a difference in consumers’ tendency to choose more extreme options (i.e., the highest/lowest service level), or the mid-position options. Our results show that there was no significant difference ($t = 0.030, p > 0.1$) between the frequency of extreme options chosen in the upgrading ($M_{up} = 2.25$) and downgrading ($M_{down} = 2.31$) conditions. Moreover, no significant difference ($t = 0.663, p > 0.1$) between compromise effects was found between the upgrading ($M_{up} = 1.29$) and downgrading ($M_{down} = 1.39$) conditions. These results exclude the possibility that option-framing effects, if any occurred, were due to a consumer tendency to choose the middle option and/or to avoid extreme choices.

A t-test analysis showed no significant difference between the upgrading group and the downgrading group for decision process satisfaction ($M_{up} = 3.81, M_{down} = 3.89, t = 0.098, p > 0.1$) and outcome satisfaction ($M_{up} = 3.67, M_{down} = 3.93, t = 1.427, p > 0.1$). In terms of decision time, it took the downgrading group an average of 97.67 s to complete the customization task, whereas the upgrading group took only 63.25 s. The decision time was significantly different ($t = 5.386, p < 0.001$), indicating the greater complexity of performing the downgrading task.

Footnote: The total number of participants who shared the same reason for their choices are given in parenthesis.
4.3. Psychological effects on customization choices

As our study shows, the downgrading method is of more benefit to service firms. A relevant question that follows from this is: what are the possible factors that influence consumer intentions towards choosing downgrading customization? To answer this question, we conducted an exploratory analysis by examining a set of psychological factors that may influence consumers’ decision making. Specifically, we built the following binary logit regression model:

$$\logit P = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \epsilon$$ (1)

where $P$ is the likelihood of consumers choosing downgrading customization, which is dependent on a group of behavioral and psychological variables, i.e., quality consciousness ($X_1$), self-control ($X_2$), regulatory focus ($X_3$), self-confidence ($X_4$), price consciousness ($X_5$), and risk aversion ($X_6$). The measurement scales for these variables were adopted from the relevant literature and the scales are available in Appendix 2. For the current study, we took the average of the corresponding indicators to approximate the underlying variables. In such a setting, all independent variables in model (1) are continuous, whereas the dependent variable is binary, i.e., $1 =$ choosing downgrading customization and $0 =$ not choosing downgrading customization.

The results of the logistic regression analysis based on model (1) are shown in Table 1. As suggested by our results, regulatory focus ($\beta = 0.431, p < 0.05$) has a positive and significant relationship with the dependent variable, which implies that promotion-focused consumers are more likely to choose a downgrading customization method than prevention-focused consumers. Therefore, Hypothesis 3 is supported. Meanwhile, our results show that consumers who are quality conscious are more likely to choose the downgrading method ($\beta = 0.532, p < 0.05$) for package-tour customization, supporting Hypothesis 4b. Based on these findings, travel firms may emphasize the attractiveness or superiority of a luxury tour package when communicating with their potential customers.

The influence of self-confidence (in decision making), though positive (i.e., Hypothesis 5), is not significant ($p = 0.085$) at the 0.05 level. To a certain extent, this finding is consistent with consumers’ self-reported explanations for favoring the upgrading method. As reported earlier, 32 out of 115 (27.8%) consumers who chose the upgrading method listed ease of decision making as one of the major reasons for their choices. Together, these results indicate that the ease of decision tasks and thus confidence in decision making affect consumers’ choices, though the effect is marginal. Such results provide an effective means of influencing consumer decision preferences by manipulating the ease of upgrading/downgrading customization tasks, which is further elaborated in the next section.

The hypothesized relationships between self-control (Hypothesis 6), price consciousness (Hypothesis 4a), risk aversion (Hypothesis 7), and the dependent variable are not supported based on our results, indicating that travel firms should not rely on these variables to segment their customer base for downgrading customization design.

### 4.4. Service attributes: core versus peripheral attributes

Following Randampully (2000) and Hume (2008), we categorize “number of trip days”, “number of tourist attractions to visit”, “transportation”, “accommodation”, and “meals” as core service attributes, and group the rest as peripheral service attributes. We then compare the number of customization adjustments and total cost of service customization in the upgrading and downgrading conditions, respectively. Our results show that on average, consumers adjusted the core attributes 2.94 times in the upgrading condition and 3.24 times in the downgrading condition. Such a difference is non-significant ($t = 1.676, p > 0.05$). In other words, consumers were equally likely to adjust a core attribute, regardless of whether an upgrading or a downgrading condition was primed. In contrast, there was a significant difference ($t = 3.166, p < 0.001$) in consumers’ adjusting behavior for peripheral service attributes in the upgrading ($M_{up} = 2.26$) and downgrading ($M_{down} = 1.16$) conditions.

A similar pattern can be observed in terms of the effect of upgrading/downgrading customization on total price. There was no significant difference ($t = 0.199, p > 0.1$) between the total prices of core service attributes in the upgrading ($M_{up} = RMB710.87$) and downgrading ($M_{down} = RMB700.58$) conditions. However, a significant difference ($t = 5.345, p < 0.001$) was observed for peripheral service attributes between upgrading ($M_{up} = RMB202.26$) and downgrading ($M_{down} = RMB112.79$). These results show that on average consumers spent an additional RMB202 on customizing the service package through upgrading peripheral service attributes, whereas they only saved RMB112 in customizing the service package through downgrading peripheral service attributes.

Together, our results support Hypothesis 8. That is, the option-framing effect is more likely to occur with peripheral service attributes than with core service attributes. The implication of this result is further discussed in the next section.

### 5. Discussion and conclusion

Increasingly, firms allow consumers to customize their products and gain advantages in customer satisfaction and loyalty (Dellaert & Stremersch, 2005). For service firms, customization is a critical weapon in differentiating their own business from that of competitors. Due to the heterogeneity of most services that are offered, service customization normally incurs a higher service...
Therefore, it is important for service firms to understand the effectiveness of and customer satisfaction with different customization practices. The current study investigates and compares the performance of two alternative methods for allowing consumers to customize their travel packages.

Our results show that when upgrading and downgrading methods are both available, the majority of consumers prefer the upgrading to the downgrading method because the upgrading method is perceived to be more price-attractive, has higher perceived control, and offers easier decision making. Although more consumers select the upgrading method at the initial stage of service customization, there is no significant difference in consumer satisfaction in relation to the decision process and decision outcomes. This finding indicates that travel agents should make both customization methods readily available to reduce the negative feelings resulting from presenting the downgrading method alone. The justification is that consumers perceive higher decision complexity and greater loss from downgrading customization (Park et al., 2000). When consumers have the option to choose downgrading themselves (rather than it being pre-determined by service firms), their dissatisfaction is alleviated and is independent of the customization method.

Our results also show that the traditional option-framing effect influences the second stage of service customization, no matter which method was chosen in the self-selected framing stage. That is, the total customization price for the upgrading method is significantly lower than for the downgrading method. In terms of the number of options customized, we observed that participants in the downgrading condition customized fewer attribute options than those who were in the upgrading condition. From the point of view of increasing revenue for firms, offering only the downgrading method of customization seems to be a better choice. However, the two-stage customization approach as proposed in the current study has two advantages. First, offering both upgrading and downgrading methods simultaneously helps to reduce perceived decision complexity and subsequent dissatisfaction towards the customization task, as illustrated by the above finding. Second, the current design helps firms to segment customers in terms of quality sensiti-
vity and regulatory-focus orientation. As found in our study, consumers choosing the downgrading method show higher concern for the hedonic features of the tour package and are willing to sacrifice money in pursuit of a superior service experience. Such consumer information can be further leveraged through cross-selling.

Separating peripheral services from core service attributes, our results further reveal that option framing affects peripheral, rather than core services. Specifically, there is no difference in either the number of core service attributes that are customized or the total cost of the core services as a result of customization using either the upgrading or the downgrading method. However, option framing differentially affects both the number of customized attributes and the total price of peripheral service attributes. This result indicates that there is less variation in consumers’ evaluation of core service attributes, compared with their attitude towards peripheral service attributes. For product diversification, therefore, service firms such as travel agents should design their products with a focus on peripheral attributes, while maintaining a competitive advantage on core attributes.

Finally, it is worth noting that we propose a new service customization paradigm by addressing the vertical direction in a customization task, which differs from the extant additive and subtractive methods. With additive/subtractive methods, consumers are able to change the total number of service attributes by adding or subtracting attributes to suit their needs. As a result, the final customization outcome may differ not only in total cost, but also in the number of service attributes that are selected. Additive/subtractive methods are thus referred to as horizontal customization (Bertini, Ofek, & Ariely, 2009). With upgrading/ downgrading methods, the total number of service attributes is fixed and consumers modify the quality or vertical level of a given set of service attributes. For most service firms, each service attribute (e.g., transportation, accommodation, etc.) represents a relationship with a business partner (i.e., airlines, hotels). It is relatively easier to adjust the overall level of service than to maintain a number of less frequently interacted relationships. Therefore, customization through upgrading/downgrading is more cost effective and operationally feasible than through additive/subtractive methods.

5.1. Managerial implications

The findings from the current study have important managerial implications for travel companies. First, they confirm the attractiveness to service firms of service customization through downgrading methods. As the above results demonstrate, consumers usually end up paying a higher total price for the service package, thus increasing sales revenue. Meanwhile, no significant difference was found in consumers’ decision satisfaction when using the downgrading customization method, which again adds credit to the downgrading customization application. However, travel firms need to be cautious in implementing downgrading methods. Intentionally loading a service package with all premium options to realize a higher purchase price, irrespective of the actual value delivered by such options, may result in decreased consumer satisfaction. When consumers become disappointed by the fact that only premium goods are available, they may decide to look elsewhere for goods/service variety. The success of any business depends on its customer value. Customers create value for firms only when they perceive value in what a firm offers (Capon, 2007). To maximize customer value in the long run, service firms need to evaluate the long-term effects of their business strategy, including downgrading customization.

Following the above arguments, an effective way of improving the attractiveness of the option-framing effect to both firms and consumers may be to provide a self-selected framing option; that is, to offer both upgrading and downgrading customization. First, consumers tend to be happier with two options rather than no choice at all. Second, firms still have an opportunity to attract potential customers to select managerially attractive customization methods by offering additional selection benefits, such as discounts, etc. Furthermore, because consumers who choose the downgrading method have a higher reference price for the brand, firms may formulate a premium-oriented position strategy based on the results of self-selected framing. With a good customer relationship management database, firms can actively target those who chose the downgrading method as prospects for future marketing.

Third, in light of the finding that option framing affects the customization of peripheral services more than core services, marketers may benefit from emphasizing these peripheral services while promoting the whole service package. In other words, travel firms may increase perceived utility loss by highlighting the hedonic features of the optional peripheral service attributes. For instance, a promotion might highlight uniqueness, such as the superiority of having a personal tour guide for one’s travel experience.

5.2. Limitations and future research

The current study also raises several important issues relevant to further research on option framing in the context of service
customization. First, subjects in this study were presented with two customization methods simultaneously. Therefore, the decision satisfaction related to the downgrading method may be mitigated due to the cognitive dissonance effect (Anderson, 1973). This possibility may also explain why there was no difference in reported satisfaction with the upgrading/downgrading methods in the current study. Satisfaction is an important mediation variable in determining customers’ purchase intentions/behavior. Future studies could further compare consumers’ evaluation of the downgrading method when it is presented simultaneously with the upgrading method, and when it is presented alone.

Second, when customizing a tour package it is possible that not only the number of tourism attractions, but also the quality of each attraction, influences customization choices. The current study investigated only the former case as it was limited by the laboratory setting. It would be helpful to further investigate attraction quality by conducting a field study.

Third, the current study examined the main effects of option framing on tourists’ choices of travel package. It will be interesting to further investigate possible demographic moderators that may strengthen or weaken the option-framing effects reported here. For instance, women are found to be more price conscious and risk averse than men (Croson & Gneezy, 2009), and thus may be more likely to choose service customization by upgrading, due to the attractiveness of the basic package in the upgrading task.

Finally, the customization of service attributes may be interdependent. In this case, the decision to customize one service attribute may depend on the result of a preceding service attribute. Such inter-relationships are most likely to occur with peripheral service attributes because there is more flexibility in customizing these attributes, compared with core attributes. The sequence of attribute presentation may also influence default framing, which is also worthy of further investigation.

Appendix
Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.tourman.2011.03.005.

References


