

The influence of the base option's price format on tourists' upgrade intention: the moderating role of tourists' mindsets

Moderating
role of tourists'
mindsets

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Abstract

Three scenario-based experiments were conducted to explore the influence of the base option's price format (just-at vs just-below) on tourists' upgrade intention. The findings of this research indicated that tourists are more inclined to upgrade the option when the base option's price is presented in a just-at condition due to the mediating role of tourists' price perceptions of the upgrade option. This study discovered that the just-at (vs just-below) pricing strategy can lower tourists' price perceptions of the upgrade choice. This research further explored the moderating of tourists' mindsets. It was found the threshold-crossing effect will disappear for tourists with fixed mindsets. This study also provides practical implications for travel service providers to set up appropriate pricing strategies to attract tourists to make upgrade decisions.

Keywords Pricing strategy, Mindsets, Upgrade intention, Price perception, Price format

Paper type Research paper

Introduction

A review of existing literature indicated that price is one of the most significant factors impacting tourism and hospitality consumers' purchase decisions; therefore, pricing has been a hot research topic in tourism and hospitality literature over the past decade (Ali *et al.*, 2019; Han and Bai, 2022). The pricing strategy (Gibbs *et al.*, 2018) has often been adopted by tourism and hospitality managers for revenue management (Denzci Guillet and Mohammed, 2015). Just-below prices and round prices are the two most common pricing strategies in tourists' decision-making (Troll *et al.*, 2023). A "just-below price" refers to a pricing strategy in which the managers set the product or service's price slightly below a round number (Manning and Sprott, 2009). Tourism and hospitality consumers encounter the just-below price very often, such as one night of hotel stay for \$99 and one tourist attraction ticket for \$59. The reason for the popularity of the just-below pricing strategy adopted by managers has been provided by existing literature, such as lowering consumers' perceptions of price (Manning and Sprott, 2009; Snir *et al.*, 2017), generating demand (Gendall *et al.*, 1997) and increasing sales (Beracha and Seiler, 2014).



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However, some studies indicated that customers prefer round prices over just-below prices in some circumstances. First, as just-below prices enable to signal lower quality (Stiving, 2000), the just-below pricing strategy may discourage consumers from purchasing luxury items (Fracarro *et al.*, 2021). Second, the universality of the effectiveness of the just-below pricing strategy is challenged by Nguyen *et al.* (2007) who found that the companies who used the just-below pricing strategy can lead to non-western consumers' distrust. Third, compared to just-below prices, Lynn *et al.* (2013) found that consumers tend to prefer round prices when encountering a pay-what-you-want strategy due to the increased convenience.

According to the threshold-crossing effect proposed by Kim *et al.* (2022, p. 1099), "the round-ending prices serve as psychological thresholds, crossing of which influence price perceptions of an upgrade option." Therefore, this study proposed another situation in which customers prefer round prices compared to just-below prices, namely, when consumers have the opportunity to upgrade the option. Tourism and hospitality consumers have often been allowed to make upgrade decisions during their visits, such as whether to upgrade a hotel room and an airline ticket. The upgrade decisions mean that tourism and hospitality consumers need to make purchase decisions between the base option and the upgraded option. Based on the threshold-crossing effect, this research predicts that the tourism and hospitality consumers' upgrade intention will be higher when the just-at pricing strategy is used for the base option compared to the just-below pricing strategy. This study found that the relationship between the base option's price presentation format and upgrade intention is mediated by tourists' perceptions of the upgraded choice's price. In particular, when the just-at (vs just-below) pricing strategy is used for the base option, tourists tend to view the upgrade option as a less expensive option. One possible explanation for this effect is that the price of the upgrade option crosses a threshold. Moreover, this study suggests that tourists' mindsets would mitigate the predicted consequences. Three experiments were conducted to find support for the hypotheses.

The findings of this research add to the body of knowledge in three ways. First, this paper expands the role of the base option's price presentation format (just-at vs just-below) on the intention to upgrade in the tourism and hospitality research domain; therefore, it enhances researchers' understanding of price presentation and tourists' behaviors. Second, this study adds to the pricing literature by demonstrating the boomerang effect of just-below pricing in an upgrade condition. Third, this research proved that tourists' mindsets are boundary conditions in explaining their intention to upgrade, which fills the research gap. Overall, this research contributes to the existing pricing strategy literature in the context of tourism and hospitality. In addition to the theoretical contribution, this study also provides practical implications for travel service providers to set up appropriate pricing strategies. Specifically, this research not only provides useful suggestions for encouraging tourists to update the option by using pricing strategies but also provides practical implications based on different tourists' mindsets.

Literature review and hypotheses development

Just-below prices vs round prices

Just-below (Banerjee *et al.*, 2016; Kim *et al.*, 2022) and just-at-a-round number (Leib *et al.*, 2021; Wieseke *et al.*, 2016) are the most prevalent kinds of numerical expressions adopted by managers to present prices. Previous research found that the just-below pricing strategy can lower consumers' price perceptions (Strulov-Shlain, 2021), signal good value (Peev and Mayer, 2017) and increase sales (Hillen, 2021); therefore, an increasing number of managers are using the just-below pricing strategy to present the price. Lay associations and the left-

digit effect are two distinct driving mechanisms often used to explain the benefits of using the just-below pricing strategy. From the perspective of the lay association theory, consumers tend to believe that just-below prices are related to sales promotions (Schindler, 2006) and discounts (Stiving and Winer, 1997). Therefore, the just-below pricing strategy has been one of the most popular pricing strategies to present the price (Beracha and Seiler, 2014; Kumar and Pandey, 2017). However, as low prices are related to low quality in consumers' minds (Stiving, 2000), the just-below pricing strategy may not always increase sales (Baumgartner and Steiner, 2007; Manning and Sprott, 2009). In addition, managers have often used the just-at-a-round number pricing strategy to activate an inference of high quality (Fraccaro et al., 2021).

Another stream of research links the left-digit effect to the advantages of the just-below pricing strategy. Because consumers typically process price information from left to right, the left-digit effect predicts that they will perceive just-below prices as being much less expensive than just at a round number pricing (Bizer and Schindler, 2005). For example, consumers tend to evaluate \$199 as significantly lower than \$200. Thomas and Morwitz (2005) explained that consumers tend to weigh the left-most digit (i.e.1) more than the remaining digits.

A review of existing literature (Table 1) indicated that prior studies have mostly explored how the just-below pricing strategy can lower consumers' price perceptions of a target product (Thomas and Morwitz, 2005; Manning and Sprott, 2009). However, few studies have looked at how the just-below pricing strategy affects consumers' desire to upgrade (Kim et al., 2022). It is conceivable that just-below pricing may affect nontarget upgrade options. This is due to the fact that consumers need to take into account both the upgrade option and the base option when making upgrade decisions.

Tourists' upgrade decisions

Providing upgrade options has been regarded as an effective way to retain consumers and achieve higher margins (Mohammed, 2018). Therefore, Tourists frequently have to choose between a basic product or service (e.g. general package tour services and standard hotel room) and an upgrade option (e.g. luxury package tour services and superior standard hotel room). The tourists' upgrade decision is defined as a tourist decision "between a base

Independent variable	Dependent variables	Key findings
Just below prices vs just-at prices	Purchase decisions	Just below (vs just-at) prices generate more positive purchase decisions, such as increasing purchase intentions (Choi et al., 2014), increasing sales volume (Bray and Harris, 2006) and increasing consumer choice (Manning and Sprott, 2009)
Just below prices vs just-at prices	Price image	Just below (vs just-at) prices generate more positive price images, such as lowering the perception of a product's price (Thomas and Morwitz, 2005)
Just below prices vs just-at prices	Quality image	Just at (vs just-low) prices generate more positive quality images, such as indicating a higher quality of the product (Schindler and Kibarian, 2001)
Just below prices vs just-at prices	Underestimated recall	Just below (vs just-at) prices increase the likelihood of underestimated recall (Schindler and Wiman, 1989)

Source: Table by author

Table 1.
Summary of key findings in previous pricing effect research

product (or service) option and a higher-priced upgrade option(s) that is vertically superior in terms of quality, quantity or additional features” (Kim *et al.*, 2022, p. 1098). The pricing strategy was identified as an important factor influencing consumers’ upgrade intentions (Liu and Chou, 2021).

Partitioned pricing and all-inclusive pricing techniques are the two types of pricing strategies that are frequently used in marketing (Liu *et al.*, 2019). It was found that a partitioned pricing strategy is more likely to decrease consumers’ recall of the total cost and further increase immediate demand compared to an all-inclusive pricing strategy (Abraham and Hamilton, 2018). It was discovered that a partitioned pricing strategy, as opposed to an all-inclusive pricing strategy, is more likely to reduce consumers’ recollection of the whole cost and further raise instant demand. Liu and Chou (2021) further pointed out that a partitioned pricing strategy can lower consumers’ residual value perceptions of the existing product; therefore, a partitioned pricing strategy has often been adopted to increase consumers’ upgrade intentions. However, though just-below and round numbers have often been adopted by managers to present the prices, a comparison of the influence of just-below pricing and round number pricing strategies on tourists’ upgrade intentions has been largely ignored by existing literature (Santana *et al.*, 2020). This study seeks to provide an answer to this question from the standpoint of psychological thresholds.

Psychological thresholds

According to Laming (1986), a threshold refers to a point between a state of unconsciousness and consciousness in sensory experience which enables consumers to discriminate between what falls above and below the point. Mishra and Mishra (2010) discovered that when a tiny change as a stimulus reaches a threshold, consumers tend to view the change as bigger and more significant. For example, people believe that temperature variations between two days in different months are greater than those within the same month (Krueger and Clement, 1994). Though a city outside an individual’s state is closer than a city within the individual’s same state, people may have opposite feelings due to the psychological distance (Irmak *et al.*, 2011). Though any invisible category limit enables it to work as a psychological threshold (Dehaene and Mehler, 1992), Kim *et al.* (2022) pointed out that boundaries of natural categories are more likely to serve as a psychological threshold for consumers.

As round decile numbers (e.g. 10, 20, 30) and numbers that are powers of ten (e.g. 100, 1,000, 10,000) are often used in daily life, consumers tend to regard round numbers as salient psychological thresholds. For example, according to the top-ten effect proposed by Isaac and Schindler (2014), people tend to evaluate a company ranked 11th to be far behind a company ranked tenth; however, there is no significant difference between a company ranked ninth and a company ranked tenth in people’s mind. Shoham *et al.* (2018) found that consumers are more inclined to upgrade the software to a new version when it passes a round number that is regarded as a psychological threshold. The results mentioned above indicated that people tend to perceive the numeric differences as greater (objectively the same) when a round number crosses a psychological threshold (Kim *et al.*, 2022). Therefore, the following hypothesis is proposed:

- H1. Tourists are more inclined to upgrade when the just-at (vs just-below) pricing strategy is used for presenting the base option’s price due to the psychological thresholds.

According to the threshold-crossing effect proposed by Kim *et al.* (2022, p. 1099), “the round-ending prices serve as psychological thresholds, crossing of which influence price perceptions of an upgrade option.” Specifically, when a just-below pricing strategy is used

for a basic option, the price of the upgrade option will rise above a round number that is seen as a psychological threshold. Based on previous studies (Isaac and Schindler, 2014; Shoham *et al.*, 2018), consumers are more likely to perceive the upgrade option's price to be higher than the base option's price when the price of the upgrade option exceeds the psychological threshold. Therefore, the following hypothesis is proposed:

- H2. Tourists are likely to perceive the update option as less expensive and intend to upgrade when the just-at (vs just-below) pricing strategy is used for presenting the base option's price.

The moderating role of tourists' mindsets

Mindset refers to individuals' beliefs about the nature of human traits (Dweck and Leggett, 1988). Individuals' mindsets were divided into two types: a fixed or a growth mindset (Chi *et al.*, 2021; Murphy and Dweck, 2016). Individuals who have a fixed mindset take the view that some human characteristics (e.g. intelligence, character and values) are mostly fixed and cannot be changed (Bandyopadhyay *et al.*, 2021). In contrast, individuals with a growth mindset believe that human characteristics are changeable over time (Dweck and Leggett, 1988). Previous research found that tourists' mindsets play important roles in explaining variations in consumers' behaviors, such as proenvironmental behavior (Bandyopadhyay *et al.*, 2021), food consumption behavior (Rahnama and Popkowski Leszczyc, 2022) and luxury consumption behavior (Seo *et al.*, 2021). However, research on the role of mindsets on consumers' responses to price presentation has been largely ignored by existing literature. Specifically, no research was found to explore the moderating role of tourists' mindsets on the base option's price format (just-at vs just-below) on upgrade intention.

This research believes that tourists' mindsets will influence their response to a base option's price presentation (just-at vs just-below) and their intention to upgrade for two reasons. First, compared to consumers with a fixed mindset, consumers with a growth mindset are more inclined to purchase products for self-enhancement and to learn new things (Murphy and Dweck, 2016). The round number has often been adopted by companies for signaling high-quality products (Stiving, 2000) which are more likely to provide opportunities for self-enhancement and learning new things. Previous empirical research demonstrated that self-enhancement and learning are closely related to the upgrade decision (Raggiotto *et al.*, 2019). Specifically, Raggiotto *et al.* (2019) have identified consumers' desires for self-enhancement as an important driver of tourists to make the update decision. Therefore, tourists with a growth mindset are more willing to upgrade the option when using the just-at (vs just-below) round number pricing strategy. Second, previous research found that consumers' response to risk is shaped by their mindsets (Dweck, 2016; Rai and Lin, 2019). It was found that consumers with a fixed mindset tend to be prevention-focused (Rai and Lin, 2019); therefore, they are more likely to avoid risky options compared to consumers with a growth mindset. It was also found that consumers with a growth mindset tend to be promotion-focused (Rai and Lin, 2019); therefore, they are less sensitive to negative outcomes and more likely to make risky options, such as the selection of adventurous tourism activities (Japutra and Hossain, 2021). As consumers need to pay extra money for the upgrade option, selecting the upgrade option is a more risky choice for consumers.

In the context of this research, tourists with a fixed mindset are more inclined to select the base option instead of the upgrade option due to the high intention to avoid the risk. From this perspective, tourists' price perception of the upgrade option on their intention to upgrade is less important for tourists with a fixed mindset than for tourists with a growth mindset. It is possible to assume that the effect of the just-at (vs just-below) pricing strategy

of a base option on the intention to upgrade will reduce for tourists with a fixed mindset. On the basis of the argument presented above, the following hypothesis is made:

- H3. The mediation effect of tourists' perceptions of the upgrade option's price is moderated by tourists' mindsets. Specifically, the indirect effect will be reduced for tourists with a fixed mindset.

Overview of the studies

Figure 1 shows the conceptual framework which will be tested in this research. Three scenario-based experiments were conducted to provide empirical evidence of the above hypotheses. Study 1 was conducted to test the main effect (H1). Study 2 further examined the mediating role of tourists' price perceptions apart from confirming the findings of Study 1 (H2). Study 3 not only confirmed the results of Studies 1 and 2 but also further explored the moderating role of tourists' mindsets (H3).

Study 1

Study 1 seeks to offer preliminary evidence in support of the main effect. It is expected that tourists prefer to upgrade the option when the base option's price is presented in a just-at-a-round number, as against the just-below format.

Design, procedure and measures

A total of 250 participants were recruited from Credamo panels using a small monetary reward in exchange for participation. Credamo, as one of China's largest online data collection platforms, has been used by an increasing number of authors to publish high-quality journal articles (Li and Ma, 2023; Su and Li, 2023). The published journal articles demonstrated the credibility of data provided by participants recruited from the Credamo platform. To increase the reliability and credibility of the data quality, an attention check question (e.g. please indicate the number of tourism destinations you visited in the last three months in Chinese characters) was used to exclude the participants who failed to answer this question. A total of 25 participants were removed from the analysis due to putting irrelevant answers (e.g. amazing) or numbers (e.g. 2). Therefore, a total of 225 participants (58.2% female, $M_{age} = 30.34$) were retained for data analysis.

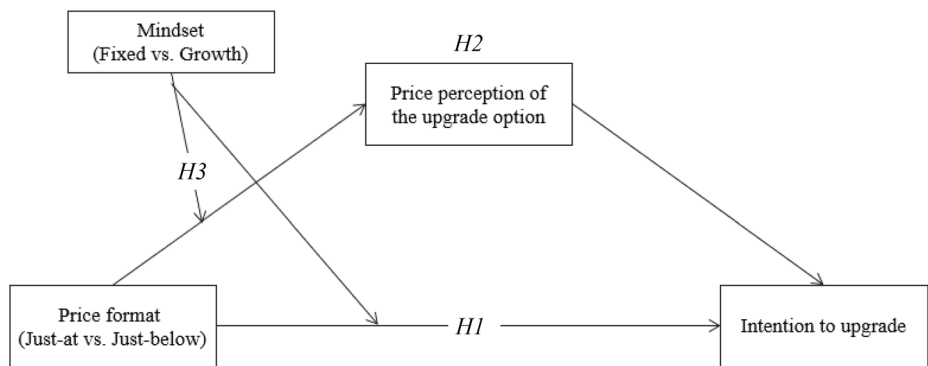


Figure 1. Conceptual framework of this research

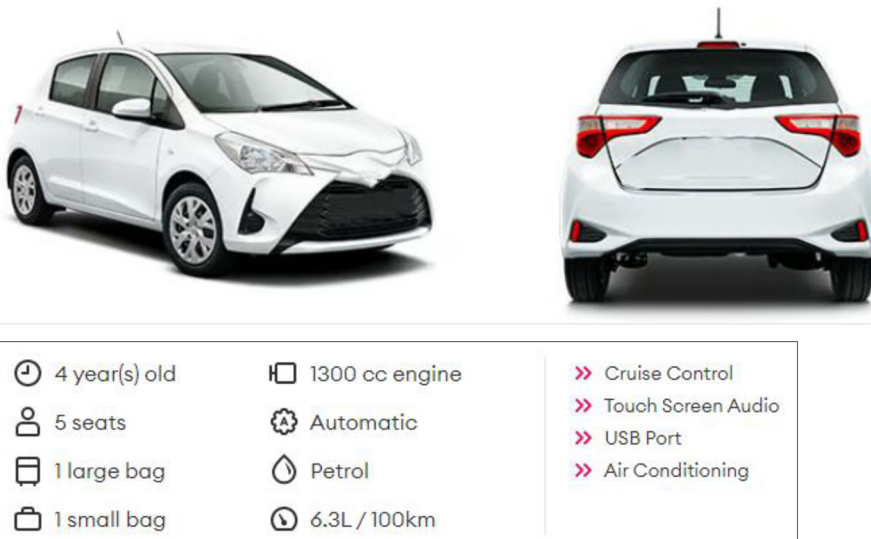
Source: Figure by author

Two base price format conditions (just-at vs just-below) were presented to the participants randomly. A total of 113 participants were assigned to the just-at group and a total of 112 participants were assigned to the just-below group. First, the participants were asked to imagine that they were planning to rent a car for the upcoming vacation. The base option of the car is priced at 200 Yuan per day in the just-at condition, while the base option of the car is priced at 199 Yuan per day in the just-below condition. The price and the attributes of the car are designed based on real car rental information provided by Shenzhou Car Rental Company which is one of the largest online car rental companies in China (Figure 2). After reading the description of the car rental information, The participants were asked to rate how likely they were to pay an extra 50 Yuan for a child seat and insurance on a scale of 1 to 7 (1 = definitely base option, 7 = definitely upgrade option). The upgrade option and price are also designed based on real car rental information provided by Shenzhou Car Rental Company which is one of the largest car rental companies in China.

Results and discussion

A one-way ANOVA test was conducted to test the main effect (*H1*). The base option's price format is set as the independent variable (0 = just-at, 1 = just-below) and the upgrade intention is set as the dependent variable. A significant main effect was discovered [$F(1, 223) = 2.844, p = 0.005$]. It demonstrates that compared to the just-below pricing strategy ($M_{\text{just-below}} = 5.50, SD = 1.45$), participants are more inclined to upgrade the option when the just-at pricing strategy ($M_{\text{just-at}} = 5.94, SD = 0.82$) is used for the base option. Therefore, *H1* is supported by this research.

One weakness of the study is that car rental may not be a common context for Chinese tourists. Therefore, the next study aimed to replicate the finding of the main effect in the hotel selection context which is one of the most common situations in that tourists need to



Source: Figure by author

Figure 2.
Stimuli material used
for Study 1

make upgrade decisions. Another important goal of Study 2 was to investigate the mediating role of tourists' perceptions of the base option's price on the main effect.

Study 2

Study 2 sought to investigate whether tourists tend to perceive the upgrade option to be less expensive, thereby increasing their upgrade intention when the base option is in a just-at (vs just-below) condition (*H2*).

Design, procedure and measures

A total of 250 participants were recruited from Credamo panels using a small monetary reward in exchange for participation. To increase the reliability and credibility of the data quality, an attention check question (e.g. please indicate the number of meals you had in the last 48 h in Chinese characters) was used to exclude the participants who failed to answer this question. A total of 24 participants were removed from the analysis due to putting irrelevant answers (e.g. noodle) or numbers (e.g. 5). Therefore, a total of 226 participants (61.9% female, $M_{\text{age}} = 29.79$) were retained for data analysis.

Two base price format conditions (just-at vs just-below) were presented to the participants randomly. A total of 114 participants were assigned to the just-at group and a total of 112 participants were assigned to the just-below group. First, the participants were instructed in a scenario that they were going to reserve a room at a three-star hotel for the upcoming vacation. The base option of the room is priced at 300 Yuan per day in the just-at condition, while the base option of the room is priced at 299 Yuan per day in the just-below condition. The upgrade option is to pay an extra 40 Yuan to upgrade the standard twin room to the superior twin room. The only difference between the standard twin room (garden view) and the superior twin room (ocean view) is the view provided. The price, the attributes of the hotel room and the upgrade option are designed based on a three-star hotel in Haikou which is one of the most popular tourism cities in China (Figure 3). After reading the description of the hotel room information, the participants were asked to rate two items: "The basic option is expensive" and "The upgrade option is expensive" on a scale of 1 to 7 (1 = very inexpensive, 7 = very expensive, Thomas and Morwitz, 2005). The participants were further asked to identify which choice they would be most likely to make on a scale of 1 to 7 (1 = definitely base option, 7 = definitely upgrade option).

Results

Upgrade intention. Consistent with the finding of Study 1, the difference between the just-at (vs just-below) pricing strategy for tourists' upgrade intention is significant in Study 2 [$F(1, 215) = 4.07, p < 0.001$]. Specifically, tourists are more inclined to update the room when the just-at pricing strategy ($M_{\text{just-at}} = 4.20, SD = 2.23$) is used for the base option than the just-below pricing strategy ($M_{\text{just-below}} = 3.01, SD = 1.99$).

Price perceptions. This research first examined how tourists perceived the price of the upgrade option when the base option was presented in different price formats. This study supported the threshold-crossing effect. Compared to the just-below pricing strategy ($M_{\text{just-below}} = 5.26, SD = 1.34$), this study found that the just-at pricing strategy for the base option can reduce tourists' perceptions of the upgrade option's price [$M_{\text{just-at}} = 4.56, SD = 1.70, F(1, 215) = -3.38, p = 0.001$]. Another possible explanation is that the difference is caused by tourists' perceptions of the base option's price. To test the alternative explanation, this research then examined tourists' perceptions of the base option's price. No significant difference in the base option's price perceptions when the base price is in the just-at condition ($M_{\text{just-at}} = 4.78, SD = 1.21$) and in the just-below condition [$M_{\text{just-below}} = 4.70,$

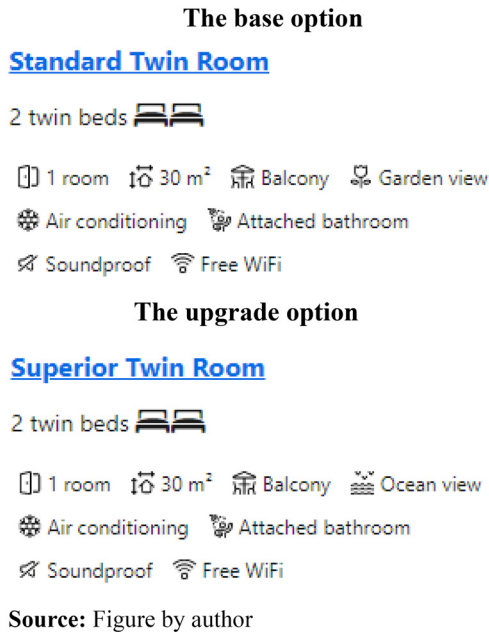


Figure 3.
Stimuli material used
for Studies 2 and 3

SD = 1.53, $F(1, 215) = 0.43, p = 0.668$]. Therefore, this research proved that the just-at-a-round number (vs just-below) pricing strategy can lower tourists' perceptions of the upgrade option's price. However, the just-at-a-round number (vs just-below) pricing strategy cannot lower tourists' perceptions of the base option's price.

Mediation analysis. This research further examined the mediating role of tourists' perceptions of the price of the upgrade option (The base option's price in just-at-a-round number condition will lead to a higher upgrade intention through lowering tourists' perceptions of the price of the upgrade option, $H2$) by using PROCESS (Model 4, 95% confidence intervals, 5,000 bootstrapped samples, Hayes, 2018). This study uses upgrade intention as the dependent variable, tourists' perceptions of the price of the upgrade option as the mediator and the base choice's pricing format (just-at = 0, just-below = 1) as the independent variable. The results demonstrated that the base option's price format had a significant positive influence on tourists' perceptions of the upgrade option's price ($\beta = 0.45$, SE = 0.21, CI_{95%}: 0.29, 1.11). Moreover, tourists' perceptions of the price of the upgrade option had a negative significant effect on the upgrade intention ($\beta = -0.76$, SE = 0.61, CI_{95%}: -1.20, -0.95). Finally, the indirect effect of the base option's price format on intention to upgrade via tourists' perceptions of the upgrade option's price was found to be significant ($\beta = -0.34$, SE = 0.19, CI_{95%}: -0.53, -0.15), supporting $H2$.

This study also examined whether the price perceptions of tourists mediate the relationship between the pricing structure of the base choice and their intention to upgrade. The findings demonstrated that the base option's price format's indirect effect on upgrade intention through base option price perceptions was not statistically significant ($\beta = -0.01$, SE = 0.28, CI_{95%}: -0.73, -0.41). Therefore, price perception of the base option was not identified as a mediator between the base option's price format and tourists' upgrade intention.

Discussion

This study not only reconfirmed the main effect (*H1*) but also examined the mediating effect of tourists' perceptions of the price of the upgrade option (*H2*). Both Studies 1 and 2 used the nine-ending price for the just-below pricing strategy; however, both eight-ending and seven-ending prices are also often used by managers in the real business context. Compared to the nine-ending price, eight-ending and seven-ending prices may lead to lower perceptions of the base option, in turn, increase their upgrade intention. To overcome the weaknesses of Study 2, Study 3 sought to replicate the results of Study 2 using a new price presentation structure. Study 3 further explored the moderating mechanism behind the effects.

Study 3

Study 3's objective was to examine the moderating impact of tourists' mindsets on the impact of the price format of the base choice (*H3*). [Nguyen et al. \(2007\)](#) found that cultural difference is an important factor influencing the universality of the effectiveness of the pricing strategy, therefore; Amazon Mechanical Turk (MTurk) was adopted by Study 3 to recruit samples from the USA. In addition, as the round number has often been used for signaling high-quality products ([Stiving, 2000](#)), consumers' perceptions of quality may be another explanation for *H2*. Therefore, this alternative explanation will also be tested in Study 3.

Design, procedure and measures

A 2 (base price format: just-at vs just below) \times 2 (mindset: fixed vs growth) between-subject experiment was conducted to explore the moderating role of tourists' mindsets.

A total of 200 participants were recruited from MTurk using a small monetary reward in exchange for participation. The participants were assigned to one of the four conditions mentioned above randomly. A total of 200 participants (65.5% female, $M_{\text{age}} = 27.92$) were retained for data analysis.

The participants were first asked to read a paragraph to stimulate their mindsets (fixed or growth mindset) before completing the survey. The paragraph used to stimulate the participants' mindsets was borrowed from the existing literature ([Seo et al., 2021](#); [Su and Li, 2022](#)). The following paragraph was used for the fixed mindset scenario: "In his talk at the American Psychological Association's annual convention held at Washington D.C. in August, Dr. George Medin argued that in most of us, by the age of ten, our character has set like plaster and will never soften again. He reported numerous large longitudinal studies showing that people age and develop, but they do so on the foundation of enduring dispositions. He also reported research findings showing that people's personality characteristics are fixed and cannot be changed." The following paragraph was used for the growth mindset scenario: "In his talk at the American Psychological Association's annual convention held at Washington D.C. in August, Dr. George Medin argued that no one's character is as 'hard as a rock' so that it cannot be changed. Only for some, greater effort and determination are needed to effect changes. He reported numerous large longitudinal studies showing that people can mature and change their character. He also reported research findings showing that people's personality characteristics can change, even in their late sixties." The participants were asked to rate eight items (e.g. "People can do things differently, but the important parts of who they are can't really be changed," [Levy et al., 1998](#)) for the manipulation check of mindsets (1 = strongly disagree, 7 = strongly agree, Cronbach's $\alpha = 0.924$).

The participants were then instructed in a scenario that they were going to book a hotel for the coming trip. The base option of the hotel is priced at 150\$ per day in the just-at condition,

while the base option of the insurance is priced at 148\$ per day in the just-below condition (see Figure 3). After reading the description of the hotel information, the participants were asked to rate two items: "The basic option is expensive" and "The upgrade option is expensive" on a scale of 1 to 7 (1 = very inexpensive, 7 = very expensive, Thomas and Morwitz, 2005). The participants were also asked to evaluate the quality of the hotel on a scale of 1 to 7 (1 = very poor, 7 = very good, Kim *et al.*, 2020). The participants were further asked to identify which choice they would be most likely to make on a scale of 1 to 7 (1 = definitely base option, 7 = definitely upgrade option).

Results

Manipulation check. The author first reversed the score of the reverse items related to mindset. Then, the author calculated the mean value of the eight mindset items. One-way ANOVA showed that participants in the fixed mindset scenario have a higher level of fixed mindset compared to participants in the growth mindset scenario. [$M_{\text{fixed}} = 5.21$, $M_{\text{growth}} = 4.02$, $F(1, 198) = -6.60$, $p < 0.001$]. Therefore, the manipulation of the mindset was successful.

Upgrade intention. This study verified the findings of Studies 1 and 2 and found that tourists are more likely to upgrade the insurance when using the just-at pricing strategy ($M_{\text{just-at}} = 4.33$, $SD = 2.37$) than the just-below pricing strategy for the base option ($M_{\text{just-below}} = 3.44$, $SD = 2.44$). The main effect (*H1*) is supported by Study 3 again [$F(1, 198) = -2.62$, $p = 0.010$].

Price perceptions. This research first examined how tourists perceive the upgrade option's price when presenting the base option in different price formats. This study demonstrated that the participants perceived the upgrade option as a cheap option when the base option is presented in the just-at format ($M_{\text{just-at}} = 4.31$, $SD = 1.38$) than in the just-below format ($M_{\text{just-below}} = 4.74$, $SD = 1.20$, $F(1, 198) = 2.332$, $p = 0.021$). This study supported the findings of Study 2.

As mentioned in Study 2, tourists' perceptions of the base option's price may also work as another important factor to explain the main effect. This research then examined tourists' perceptions of the base option's price. The base option's price format was not found to have a significant influence on tourists' perception perceptions of the base option [$M_{\text{just-at}} = 4.42$, $SD = 1.37$; $M_{\text{just-below}} = 4.15$, $SD = 1.35$; $F(1, 198) = -1.41$, $p = 0.161$]. Therefore, this research confirmed that the just-at-a-round number (vs just-below) pricing strategy can lower tourists' perceptions of the upgrade option's price. However, the just-at-a-round number (vs just-below) pricing strategy cannot lower tourists' perceptions of the base option's price.

In addition, the quality of the hotel may also work as an important factor to explain the main effect. This research then examined tourists' perceptions of the hotel quality. The base option's price format was not found to have a significant influence on tourists' perception perceptions of the quality of the hotel [$M_{\text{just-at}} = 5.30$, $SD = 0.99$; $M_{\text{just-below}} = 5.35$, $SD = 0.87$; $F(1, 198) = 0.38$, $p = 0.705$]. Therefore, the quality of the hotel is not a mediator in explaining the main effect of this research.

Mediation analysis. Furthermore, this research examined whether the base option's price in just-at-a-round number condition will lead to a higher upgrade intention through lowering tourists' perceptions of the price of the upgrade option (*H2*) by using PROCESS (Model 4, 95% confidence intervals, 5,000 bootstrapped samples, Hayes, 2018). This research uses upgrade intention as the dependent variable, tourists' perceptions of the price of the upgrade option as the mediator and the base option's pricing format (just-below = 1, just-at = 2) as the independent variable. The results demonstrated that the indirect effect of the base

option's price format on intention to upgrade via tourists' perceptions of the price of the upgrade option was found to be significant ($\beta = 0.09$, $SE = 0.45$, $CI_{95\%}: 0.14, 0.19$), supporting *H2* again. This study also examined whether the price perceptions of tourists mediate the relationship between the pricing structure of the base choice and their intention to upgrade. The findings demonstrated that the base option's price format's indirect effect on upgrade intention through base option price perceptions was not statistically significant ($\beta = 0.02$, $SE = 0.02$, $CI_{95\%}: -0.01, 0.07$). Therefore, the price perception of the base option was not identified as a mediator between the base option's price format and tourists' upgrade intention.

Moderator analysis. This research further conducted a moderator analysis to test the moderating role of tourists' mindsets on the relationship between price format and intention to upgrade using PROCESS (Model 1, 95% confidence intervals, 5,000 bootstrapped samples, Hayes, 2018). This research sets the base option's price format (just-below = 1, just-at = 2) as the independent variable, upgrade intention as the dependent variable and mindset as the moderator variable. A significant moderated effect was identified by this research ($MI = 0.02$, $SE = 0.47$, $CI_{95\%}: 0.00, 0.03$).

Moderated mediation analysis. This research further conducted a moderated mediation analysis to test the moderating role of tourists' mindsets using PROCESS (Model 8, 95% confidence intervals, 5,000 bootstrapped samples, Hayes, 2018). This research sets the base option's price format (just-below = 1, just-at = 2) as the independent variable, upgrade intention as the dependent variable, price perceptions of the upgrade option as the mediator variable and mindset (Growth mindset = 1, fixed mindset = 2) as the moderator variable. A significant moderated mediation effect was identified by this research ($MMI = 0.10$, $SE = 0.19$, $CI_{95\%}: 0.03, 0.14$), supporting *H3*.

This research further found that the indirect effect perception of the upgrade option's price was significant for tourists with a growth mindset ($\beta = 1.43$, $SE = 0.46$, $CI_{95\%}: 0.00, 0.54$), while the indirect effect of price perception of the upgrade option was not significant for tourists with a fixed mindset ($\beta = 0.08$, $SE = 0.46$, $CI_{95\%}: -0.97, 0.82$). Finally, this research found that the conditional direct effects were not significant regardless of tourists' mindset (fixed mindset tourists: $\beta = 0.21$, $SE = 0.14$, $CI_{95\%}: -0.06, 0.50$; growth mindset tourists: $\beta = 0.22$, $SE = 0.14$, $CI_{95\%}: -0.02, 0.53$), suggesting a full moderated mediation.

Discussion

This study not only reduplicated the findings of Study 1 (*H1*) and Study 2 (*H1* and *H2*) but also demonstrated the moderating of tourists' mindsets (*H3*). It indicated that the threshold-crossing effect (people are more likely to upgrade the option when the just-at pricing strategy is used for the base option) is strong for tourists with a growth mindset; however, the threshold-crossing effect will be reduced for tourists with a fixed mindset.

Conclusion

Summary of findings

This research explored the influence of the base option's price format (just-at vs just-below) on tourists' upgrade intention through three scenario-based experiments featuring a total of 652 participants. This research showed that tourists' upgrade intention is higher when the just-at (vs just-below) pricing strategy is used for the base option (Studies 1, 2 and 3). Consistent with the threshold-crossing effect, this research identified tourists' perceptions of the price of the upgrade option as the underlying causal mechanism that drives a higher upgrade intention (Studies 2 and 3). Specifically, the just-at-a-round number pricing strategy can lower tourists' perceptions of the upgrade option, which further results in higher

upgrade intention. This study further tested the influence of the base option's price format on tourists' upgrade intention by introducing a moderator: tourists' mindsets (Study 3). Specifically, the mediation effect of tourists' perceptions of the upgrade option is moderated by tourists' mindsets.

Theoretical contributions

The study provides some significant theoretical insights into the body of literature. First, though tourists often need to make upgrade decisions during their visits, such as airline ticket purchases, hotel booking and car rental, few studies have explored the factors influencing tourists to make upgrade decisions (Chark and King, 2022; Cheng *et al.*, 2022; Jin *et al.*, 2012). Various factors influencing tourists to make upgrade decisions were identified by the previous literature, such as service customization (Jin *et al.*, 2012), loss aversion (Chark and King, 2022) and prior spending (Cheng *et al.*, 2022), few studies explored tourists' intention to upgrade from the perspective of base option's price format. This research identifies the importance of the base option's price format (just-at vs just-below) on tourists to make upgrade decisions which provides a deeper insight into price presentation and tourists' behaviors.

Second, most previous studies focused on the positive effects of the just-below pricing strategy, such as lowering consumers' price perceptions (Snir *et al.*, 2017), signaling good value (Peev and Mayer, 2017), generating consumer demand (Gendall *et al.*, 1997) and increasing sales (Beracha and Seiler, 2014), this study demonstrated the boomerang effect of the just-below pricing strategy in the context of making an upgrade decision which is a new situation in which the just-below pricing has negative effects. This threshold-crossing effect is confirmed by this research to explain the boomerang effect of the just-below pricing strategy. This research found that the boomerang effect occurs because the just-at-a-round (vs just-below) number pricing strategy can lower tourists' perceptions of the upgrade option's price (mediating role), thereby increasing the upgrade intention. As previous research has mainly focused on exploring how the just-below pricing strategy influences consumers' perceptions of the base option's price (Manning and Sprott, 2009; Thomas and Morwitz, 2005), this research also examined the mediating role of tourists' perceptions of the base option's price. The findings indicated that tourists' perceptions of the base option's price did not play a mediating role in the relationship between the base price format (just-at vs just-below) and upgrade intention.

Third, this study adds to the body of literature by highlighting tourists' mindset as a novel boundary condition for understanding the intention to upgrade. This is the very first attempt to explore the moderating role of tourists' mindsets on the effect of the base option's price just-at (vs just-below) a round number on upgrade intention. Previous research found that the round number was often adopted to signal high quality (Stiving, 2000) and consumers with a growth mindset tend to purchase high-quality products for self-enhancement and learning new things (Murphy and Dweck, 2016). This study further pointed out that growth mindset tourists' upgrade intention is higher than fixed mindset tourists when the base option's price is in a just-at (vs just-below) condition. In addition, previous research found that consumers with a fixed mindset tend to be prevention-focused (Rai and Lin, 2019) and are more likely to avoid selecting risky options. Therefore, this research found that the price perception of the upgrade intention is not an important factor influencing fixed mindset tourists' intention to upgrade. From this perspective, this research provides a deeper insight into the threshold-crossing effect by identifying the moderating role of tourists' mindsets.

Practical implications

Pricing is one of the most significant factors affecting tourists' purchase decisions; therefore, it is imperative for companies to design the appropriate pricing strategy to maximize their profit. The findings of this research can provide some important implications for companies' pricing strategies. First, though the just-below pricing strategy has often been adopted by companies to generate demand, this study identified the boomerang effect of the just-below pricing strategy in an upgrade situation. This research found that the just-below (vs just-at) pricing strategy can increase tourists' perceptions of the upgrade option, which, in turn, decreases their upgrade intention. Therefore, this research suggested that managers can use the just-at pricing strategy instead of the just-below pricing strategy for the base option when providing upgrade options for tourists. For example, more tourists are likely to upgrade their hotel room when the base option's price is \$100 per night compared to \$99 per night when the hotel offers the upgrade option.

Second, this research also highlights the boundary condition of tourists' mindsets. Therefore, managers should adopt different pricing strategies for tourists with different mindsets. As the majority of bookings are made by apps or online travel agencies (OTAs) nowadays, it can ask some questions related to the measurement of customers' mindsets when they register the apps or OTAs. This research found that tourists with a growth mindset are more inclined to perceive the upgrade choice as a less expensive option, which, in turn, increases their intention to upgrade. From this perspective, managers can use the just-at-pricing strategy for the base option when providing upgrade options for tourists with a growth mindset. However, as the threshold-crossing effect will disappear for tourists with a fixed mindset, managers can use the just-below pricing strategy for the base option when providing upgrade options for tourists with a fixed mindset.

Limitations and directions for future research

This research still has a few shortcomings which indicate the directions for future research. First, three scenario-based experiments were conducted by this research to explore the influence of the base option's price format on tourists' upgrade intention. Though a scenario-based method is one of the most frequently used methods in tourism and hospitality literature (Kim *et al.*, 2020; Ma and Li, 2022), field studies and lab experiments can be adopted by future research to improve the reliability of the findings of this research. Second, budget as an important factor influencing tourists' purchase decisions has not been examined by this research. The positive effect of the just-at-pricing strategy on tourists' intention to upgrade may not be achieved when the upgrade option's price is over tourists' predetermined budget. Therefore, tourists' predetermined budget as an important external threshold should be considered in future research.

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