

Compensatory Consumption and Unplanned Purchases: The Moderating Role of the Decision Frame Effect

Jungkeun Kim

Department of Marketing, Auckland University of Technology
120 Mayoral Drive, Auckland, New Zealand
Phone: +64-9-921-9999, e-mail: jkkim@aut.ac.nz

Eunji Lee

Smart Tourism Education Platform (STEP), Kyung Hee University
Kyung Hee Dearo 26, Seoul, Republic of Korea
Phone: +82-2-961-2349, e-mail: edreamerj@khu.ac.kr

Suh-Young Irene Park

Department of Marketing, Auckland University of Technology
120 Mayoral Drive, Auckland, New Zealand
Phone: +64-9-921-9999, e-mail: peacefullake4us@gmail.com

Namho Chung

Smart Tourism Education Platform (STEP), Kyung Hee University
Kyung Hee Dearo 26, Seoul, Republic of Korea
Phone: +82-2-961-0800, e-mail: nhchung@khu.ac.kr

Chulmo Koo (Corresponding Author)

Smart Tourism Education Platform (STEP), Kyung Hee University
Kyung Hee Dearo 26, Seoul, Republic of Korea
Phone: +82-2-961-2349, e-mail: helmetgu@khu.ac.kr

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Abstract

This research aims to investigate the relationship between prior spending and unplanned purchases based on an understanding of decision framing effects and compensatory psychology. We argue that the impact of prior buying on unplanned purchases is moderated by the decision frame (separate vs. integrated). We conducted a series of four sequential scenario-based experimental studies to support our theoretical predictions. Consequently, our study revealed that travelers within a separate decision frame exhibited a stronger compensatory motive, leading to a higher unplanned purchase when prior spending was low. In practice, this research has managerial implications using compensatory consumption marketing strategies.

Keywords: Compensatory consumption; unplanned purchase; decision frame effect; choice architecture; psychological marketing strategy; reference price

1. Introduction

Travel decision-making typically involves dynamic processes, encompassing various decision tasks (Choi, Lee, & Choe, 2021). Travelers, despite relying on pre-travel plans, often encounter unforeseen situations, leading to unexpected behavior such that the exposure to new information and unanticipated constraints during a trip can prompt travelers to revise their original plans, resulting in unexpected behaviors (Stewart & Vogt, 1999). Therefore, in the tourism industry, *unexpected behaviors* are considered more acceptable than planned behaviors due to the pursuit of pleasure inherent in the travel process (Currie, 1997) and experiential consumption (Pine & Gilmore, 2011). In a similar vein, Rook and Hoch (1985) coined the term "*planned impulsiveness*," which supports that travelers typically make unpredictable and irrational decisions rather than rational ones during the decision-making process. Furthermore, revenue management of intangible tourism products or services has been a crucial issue that determines the success or failure of tourism management due to the irregular consumption in dynamic pricing (Abrate, Nicolau, & Viglia, 2019). This implies that strategic revenue management from a business perspective is possible by leading to unplanned consumption, complementing the perishability of tourism products (Guizzardi, Ballestra, & D'Innocenzo, 2022; Lv, Zhang, Su, & Yang, 2022).

In general, unplanned purchases during travel have received little attention compared to planned behaviors in tourism literature. Even though previous studies have explained the two aspects that lead to unplanned purchases, namely internal factors (e.g., personal characteristics) (Kim & Tanford, 2021) and external factors (e.g., product and situational factors) (Ho, Lam, & Lam, 2019; Hwang, Shin, & Kim, 2023; Kah & Lee, 2014; Morosan & DeFranco, 2019), It is still important to identify specific factors that stimulate unplanned purchases, understand their causes and mechanisms, and identify factors that moderate the preference for such purchases. This research seeks to bridge a gap in addressing these aspects by expanding upon the existing literature on price and unplanned buying decisions. Specifically, Cheng, Chuang, Huang, and Weng (2022) examined the influence of prior buying price on additional unplanned buying intention and found that those travelers who had spent more on booking a trip showed higher intention to make unplanned purchases during the trip. The authors underscore the importance of comprehending the psychological mechanisms for additional purchases by proposing its effect as

the illusion gap (or contrast effect) based on reference price concepts. In a similar context, when the psychological distance between the initial price and the upgrade price is perceived to be low, the probability of product upgrades increases, which can be attributed to the psychological threshold effect that occurs in consumer psychology (Kim, Malkoc, & Goodman, 2022). Fundamentally, applying consumer psychology to prompt unplanned purchases can be advantageous for both practitioners and consumers, fostering intrinsic motivation. Nevertheless, there is still a shortage of studies delving into the psychological mechanisms that instigate additional purchases.

In response to this call, our study aims to investigate the connection between previous spending and additional purchases, leveraging insights into the decision framing effect and the concept of *compensatory consumption*. The primary focus is exploring the boundary conditions associated with decision framing, as highlighted in Hsee, Lowenstein, Blount, and Bazerman's (1999) research. This research distinguishes between a joint evaluation, where multiple options are presented simultaneously, and a separate evaluation, where alternatives are presented one at a time and evaluated individually. We posit that in the integrated decision frame, unplanned purchasing intentions would increase with rising prior spending. However, due to the decision framing effect, we anticipate a reversal pattern between prior spending and unplanned purchasing intentions within the separate decision frame. In sum, considering the crucial influence of decision framing, we proposed that decision frames (integrated vs. separate; Kim, Kim, & Kim, 2018; Qualls & Puto, 1989) moderate the connection between prior travel spending and intentions for unplanned purchases.

Moreover, by incorporating the psychology of compensatory consumption (Kim & Jang, 2020; Koles, Wells, & Tadajewski, 2018; Mandel et al., 2017; Rucker & Galinsky, 2008), we propose that in situations where travelers were unable to opt for a higher-priced alternative in a previous decision, they may seek compensation in their subsequent choices. Specifically, when appealing additional purchases are presented at a low cost, travelers might exhibit a greater intention to buy them as a form of compensatory consumption for their prior selection. To substantiate this claim, we utilize a theoretical framework that outlines the generation of compensatory consumption (Koles, Wells, & Tadajewski, 2018). Notably, we underscore the significance of an imbalance between the ideal self and the actual self, which can give rise to

psychological discomfort, including emotional vulnerability, potentially leading to impulsive and unplanned purchases (Higgins, 1987; Lee & Yi, 2008).

Based on theoretical evidence, the purpose of our study is threefold. First, we aim to investigate the moderating effect of decision frames (integrated vs. separate) on the relationship between prior spending and additional purchases. We predict that unplanned purchase intention will be higher when prior travel spending is high in the integrated decision frame compared to the separate decision frame. Second, we intend to verify whether the high price gap between the two initial options will influence higher unplanned purchase intentions in the separate decision frame. Third, we assume that the relationship between the initial price gap and unplanned purchase intention will be mediated by emotional factors, namely compensatory consumption psychology. With the aim of achieving this research objective, we conducted four sequential scenario-based experimental studies.

This research holds significant theoretical and practical implications in contrast to the existing literature on unplanned behaviors. Firstly, this research adds to the body of literature on spontaneous behavior in tourism product purchases by examining it through the perspective of consumer psychology. Consequently, this contributes to the advancement of our comprehension of unplanned travel behaviors within the framework of behavioral decision theory (Li et al., 2022; Souza-Neto et al., 2023). Secondly, this research expands upon earlier literature by delving into the significance of decision frames, particularly in the context of integrated versus separate decisions, and the influence of prior spending decisions on subsequent choices. The discovery of decision framing moderating the impact of past spending on subsequent unplanned behaviors has broad implications across various fields such as psychology, marketing, and economics. Consequently, this research has the potential to enhance our overarching theory regarding the boundary conditions of unplanned consumptions and behaviors (Atalay & Meloy, 2011; Conner, 2004). Finally and practically, this study has direct implications for compensatory consumption marketing strategies. It offers specific guidance to practitioners on effectively managing decision framing at different price levels within their business. This guidance can aid practitioners in tailoring their marketing approaches to better address consumer behaviors and preferences, ultimately enhancing the effectiveness of compensatory consumption strategies (Kim & Jang, 2020; Koles, Wells, & Tadajewski, 2018).

2. Literature review

2.1 Unplanned purchase

In early research on consumer behavior, the term ‘unplanned purchase’ was considered an unexpected acquisition and was often used interchangeably with the term ‘impulse purchase’ (e.g., Kollat & Willett, 1967; Stern, 1962). These two terms technically deal with the same behavioral response, and impulse purchase has been considered a subset of unplanned purchase (Hausman, 2000). Some scholars have attempted to distinguish these terms based on the underlying mechanisms that drive the behavior. First, unplanned purchase is described as a situation where some level of rationality is involved in performing a planned task, while impulse purchase is characterized by a sudden desire to buy something immediately, often driven by a strong emotional response that is difficult to resist (Beatty & Ferrell, 1998). In summary, within the literature on consumer behavior, impulse purchases are a central topic, but it is not always the case that unplanned purchases are inherently impulsive. As such, for a more specific operational definition, Engel, Kollat, and Blackwell (1973) refer to unplanned purchase as “a buying action undertaken without a problem previously having been recognized or a buying intention formed prior to entering the store” (p. 483). In simple terms, an unplanned purchase refers to when a consumer recognizes the need for a purchase after being influenced by external factors, such as not knowing the store's layout or having an urgent need (Solomon, 2014), or when the need to make a purchase is not preplanned (Sohn & Ko, 2021).

In a post-purchase evaluation of unplanned purchases, two different outcomes can be observed in consumer behavior literature. Firstly, some studies emphasize negative emotions such as post-purchase regret (Park & Hill, 2018; Saleh, 2012). In contrast, Rook and Fisher (1995) argued that when the price value of an unplanned purchase is perceived as acceptable and affirmative, the consumer will evaluate the impulse purchase as a valuable transaction. Following this, customers feel their needs for joy and novelty being fulfilled (Peck & Childers, 2006), excitement (Lee & Yi, 2008), and satisfaction with their purchase (Handayani, Anshori, Usman, & Mudjanarko, 2018). From another perspective, it has been emphasized that the purchasing of hedonistic products (e.g., luxury goods or tourism shopping) occurs more frequently in an

unplanned manner because consumers prioritize the positive emotional impact over the need for functional products (Kim & Littrell, 1999).

In the tourism context, travel decision-making is a dynamic process representing a set of decision tasks (Choi, Lee, & Choe, 2021; Jeng & Fesenmaier, 2002). Although when in new places, travelers behave based on their pre-travel planning, at the same time, they often encounter something new in unpredictable and unplanned situations (Kwon & Lee, 2020; Tsaur, Yen, & Lin, 2022). With regard to this discrepancy between planned and actual behavior, Stewart and Vogt (1999) argue that unexpected behavior, which leads to revising original plans, is likely when travelers are exposed to new information, disparities between expectations and experience, and unanticipated constraints during a trip. Notably, such unplanned experiences provide the novelty of travel and induce additional consumption by travelers. Thus, unplanned behavior in tourism sectors is a crucial concept because it contributes significantly to economic transactions across various travel products or service categories and enhances memorable travel experiences (Bigne, Fuentes-Medina, & Morini-Marrero, 2020).

Regarding unplanned purchase in tourism context, Meng and Xu (2012) state different factors leading to unplanned purchases from three perspectives: (1) impulsivity as a result of personal traits (e.g., demographics, self-image); (2) product factors (e.g., product attributes, the presentation of the product); and (3) situational factors (e.g., environment, perceived time pressure, involvement of service provider). More recently, as shown in Table 1, empirical research related to unplanned purchases has been conducted in various contexts, such as hotels, casinos, destinations, and online purchases. Specifically, it has been emphasized that consumer unplanned purchases can be induced by external factors such as servicescape (Ho et al., 2019), technological or marketing tools (Kah & Lee, 2014; Morosan & DeFranco, 2019), product types (luxury good vs. luxury hotel) (Hwang et al., 2023), and discount information (Kim & Tanford, 2021). Additionally, it is explained that internal factors such as personal traits like impulsivity (Kim & Tanford, 2021) or customer reference prices (Cheung et al., 2022) influence additional purchasing behavior. Cheng et al. (2022) research is noteworthy: the authors confirmed the effect of travelers' prior additional purchasing and found that illusory price gaps (i.e., psychological difference) mediated the effect of prior spending on additional unplanned purchases.

Based on the literature on unplanned purchases in the context of tourism and hospitality, we emphasize the contextual differences that this study carries. This research takes a new approach not covered in existing literature, utilizing the decision frame from a consumer psychology perspective to propose methods for inducing unplanned purchases. Furthermore, the importance of consumers' compensatory consumption strategies as a psychological mechanism that leads to unplanned purchases is emphasized across various choice structures.

Table 1. Previous studies on unplanned purchase in tourism and hospitality sector

Source	Context	Affecting factors	Method	Key Findings
Cheng et al. (2022)	· Additional unplanned purchase in hotel room and travel package	· Prior spending · Illusory gap between the prior spending and unplanned purchasing	· Experiment	· Prior purchase prices increase tourists' unplanned buying intentions due to the contrast between prior and additional unplanned purchase prices; however, in situations where the illusory gap between the two prices is eliminated, the contrast effect disappears, resulting in the disappearance of the influence relationship between the prior price and unplanned purchasing.
Ho et al. (2019)	· Unplanned gaming behaviors in the casino servicescape	· Perceived internal control · Perceived external control	· Survey and multiple regression	· Customer servicescape evaluation is positively associated with their perceived internal and external control, and customers' perceived internal control mediates the relationship between the servicescape evaluation and unplanned gaming behavior.
Hwang et al. (2023)	· Unplanned Purchasing	· Escapism	· Experiment	· The unplanned purchase of luxury hotel

	behavior of luxury goods and hotel experiences	· Positive emotion · Price		experiences (compared to luxury goods) by customers increases positive emotions, and the underlying mechanism for this is escapism; additionally, the price of luxury experiences can enhance escapism.
Kah and Lee (2014)	Unplanned behavior through technology (i.e., navigation use) as a means of exploring information during travel	· Navigation use	· Survey and regression	· Travelers who use navigation during their travels tend to participate more in unplanned activities, resulting in an increase in unplanned travel expenditures.
Kim and Tanford (2021)	· Add-on purchases by implementing surprise discounts in cruise and online hotel bookings	· Discount · Impulse buying traits	· Experiment	· Consumers are induced to have additional spending intentions by surprise discounts and hedonic products, and consumers' impulse buying traits enhance their intent for unplanned purchases through surprise discounts.
Morosan and DeFranco (2019)	· Unplanned spending by interactive technologies in hotel	· Perception of co-creation · Marketing factors	· Survey and SEM	· Consumer unplanned spending is influenced by the extent of value co-creation in which consumers engage and the level of perception on marketing factors.
This study	· Unplanned purchase of a package tour and hotel room upgrade	· Prior buying spending · Decision frame	· Experiment	· Within the separate decision frame, when consumers face a low prior buying spending and choose a lower initial price between initial options, their unplanned purchase intention is heightened; the

2.2 Decision frame effect

The framing effect refers to differences in decision-making resulting from the way in which a problem or situation is formulated or described (Kahneman & Tversky, 2013). In tourism literature, research investigating the framing effect has shown that travelers frequently make incongruous irrational decisions, thus not conforming to notions of rational choice (e.g., Zhang, Zhang, Gursoy, & Fu, 2018). These studies suggested that the same problem or option can be presented to consumers differently, leading them to select one particular formulation. In this study, we focus on the decision framing effect as it applies to separate and integrated information presentation.

Intriguingly, Hsee et al. (1999) emphasized that there are significant differences between situations in which multiple options are presented simultaneously (i.e., joint evaluation) and situations where alternatives are presented one at a time and evaluated individually (i.e., separate evaluation). Specifically, the authors suggested that "difficult to evaluate attributes (e.g., qualitative information)" have little impact in differentiating the evaluations of target options. Thus, "easy-to-evaluate attributes (e.g., quantitative information)" can be the determinants of the joint evaluation situation. In other words, when evaluating an object, individuals rely on easy-to-evaluate attributes when comparing alternatives, suggesting that decision-making can be completely reversed.

Similarly, investigating consumer behavior, Mittelman, Andrade, Chattopadhyay, and Brendl (2014) verified the phenomenon called the "offer-frame effect," which means that people have higher levels of variety-seeking when they are asked to make two single choices sequentially (i.e., single offering) than when they are asked to choose from a combined offering (i.e., bundled offering). This phenomenon also suggests that an alternative or another choice affects an individual's decision-making rather than the individual's focus on each choice. For example, in situations where participants selected two soft drinks (i.e., Coke or Sprite) sequentially, participants were found to make different brand choices ("Coke and Sprite" or

"Sprite and Coke"). However, in situations where participants chose from bundled items in a single decision-making event, they were found to make choices consisting of their preferred brand ("Coke and Coke" or "Sprite and Sprite").

As such, diversity-seeking behavior can be seen as a kind of preemptive response to the uncertainty of consumer preference and resulting future preferences that are not clearly defined (Chernev, 2003). Also, even with the most preferred products, participants become over-aware of the boredom they will experience after repeated purchase, so they pursue non-preferred products with other attributes, rather than repeatedly selecting their preferred products (McAlister, 1982). However, Kim, Kim, and Kim (2018) proposed the reverse effect to that observed in Mittelman et al.'s (2014) results in the travel setting. Specifically, the authors argued that travelers with combined options are more engaged in variety-seeking than those with separate options because each travel service/product option is independent and different.

Taking into account the contextual nature of decision frames, this study aims to investigate the moderating effect of decision frames (integrated vs. separate) on the relationship between prior travel spending and unplanned purchase intentions. The psychological mechanism we focus on as a theoretical foundation is the concept of "compensatory consumption motivation".

2.3 Compensatory consumption

Due to situational or personal reasons, people may not be able to satisfy their needs and wants perfectly. In such cases, people show 'compensatory behavior' especially in their subsequent actions or decision-making. In consumption domains, *compensatory consumption* can be defined as "consumer intentions and behavioural responses triggered by perceived deficits, needs and desires that cannot be fulfilled directly", (Koles et al., 2018, p. 98).

Mandel et al. (2017) suggest that consumers adopt compensatory consumption strategies by consuming products that offer functional, symbolic, and hedonic benefits: direct resolution, symbolic self-completion, dissociation, escapism, and fluid compensation. Specifically, the five distinct compensatory consumption strategies can be defined as follows (Mandel et al., 2017, p. 138): "*Direct resolution* refers to behavior that resolves the source of the self-discrepancy, and *symbolic self-completion* means behavior that signals mastery in the domain of self-discrepancy.

Dissociation is characterized by behavior that separates oneself from products or services related to self-discrepancy, while *escapism* involves behavior that distracts oneself from thinking about self-discrepancy. Finally, *fluid compensation* can be defined as behavior that reinforces another aspect of one's identity distinct from the self-discrepancy.” In essence, compensatory consumption strategies can be understood as causing consumers to engage in unplanned purchases in various ways as they ultimately respond to the emotional vulnerability of self-discrepancy.

Previous studies have investigated various aspects influencing compensatory consumption in response to self-discrepancy: social exclusion (Echo Wen, Jing, & Ying, 2014); perceived powerlessness (Rucker & Galinsky, 2008; Wong, Lalwani, & Wang, 2022); group status (Mazzocco, Rucker, Galinsky, & Anderson, 2012); emotional states such as guilt (Allard & White, 2015); and self-threat (Dalton, 2009). For instance, participants who felt guilt (as opposed to those who did not) showed a higher intention of using self-improvement products such as fitness-tracking applications or products with self-improvement appeal. Rucker and Galinsky (2008) also provided empirical evidence that a temporary status of powerless (vs. power or control) increased the preference for products associated with high statuses, such as executive pens or silk ties, but did not change the preference for low-status products such as ballpoint pens or dryers. Wong et al. (2022) also investigated the impact of power perception on preferences for different sizes of brand logos. They found that when people perceived themselves as powerless (vs. powerful), they preferred relatively large-sized logos. The final example is Echo et al.’s (2014) study investigating the effect of social exclusion on preference for popular options in vacation spots. They found that when people were temporarily primed to be socially excluded (vs. not), they preferred less popular or distinctive options (e.g., vacation spots preferred by 19% of the target market) compared to the popular option (e.g., vacation spots preferred by 81% of the target market).

To summarize, the current literature suggests that people temporarily primed to experience an unsatisfactory situation or status sought to move away from the uncomfortable situation or status when given the opportunity in a subsequent task (see Koles et al., 2018 for review). We also infer that the compensatory consumption strategy is not about direct satisfaction of a deficit status but about finding relatively small and easy ways to satisfy related needs and

wants. For example, gaining power is closely related to the acquisition of expensive luxury options, but most of the compensatory consumption literature suggests that people who are powerless prefer products offering a simple approach related to status, such as a larger logo size (Wong et al., 2022) or the relatively affordable luxury of an executive pen (Rucker & Galinsky, 2008) or a \$100 pen with status-related advertising (Rucker & Galinsky, 2009). In addition, even though compensatory consumption occurs with pre-existing traits (e.g., Rucker & Galinsky, 2009), the majority of the literature suggested stronger effects with temporary priming, such as writing tasks or recalling tasks, on the subsequent task.

In the field of travel research, compensatory consumption has been investigated with reference to the influence of the COVID-19 pandemic, in that the experience of restrictions or limitations during the pandemic results in stronger motivation for travel itself as a source of compensatory consumption. For example, Kim, Seo, and Choi (2021) provided empirical evidence of a relationship between the motivation to escape and a higher desire to travel internationally, resulting in a high level of compensatory travel intention. In other research in hospitality settings, Kim and Jang (2020) suggested the importance of status discrepancy to explain impulsive compensatory consumption. Finally, Marder, Archer-Brown, Colliander, and Lambert (2019) validated that in the context of vicariously consuming ideal vacation posts on Facebook, an individual's travel-related self-discrepancies may become activated, leading to a negative feeling and initiating the five compensatory consumption behaviors proposed by Mandel et al. (2017) (i.e., direct resolution, symbolic self-completion, dissociation, escapism, fluid compensation).

In this context, we aim to examine whether unplanned purchases can be utilized as a compensatory consumption strategy in the pattern of *direct resolution*. Specifically, within the context of purchasing tourism products, consumers are faced with various options when selecting a specific choice. When consumers perceive that there is a better option than the one they have chosen, they may recognize self-discrepancy in the process of purchasing the product. Subsequently, as a compensatory consumption strategy, the introduction of a new option in an unplanned manner can induce compensatory purchasing behavior. Building on this, we aim to further develop and validate the effectiveness of the previously discussed “decision framing” as a psychological choice architecture for enabling compensatory consumption strategies for tourists

facing various options. Specifically, we seek to examine the differences in the effectiveness of unplanned purchases based on the application of this decision framing in the context of tourists with diverse choices.

3. Theoretical framework and main prediction

We expect that travelers who display high (vs. low) prior buying prices show higher purchase intentions for unplanned travel products or services. Put differently, this effect will occur when the previous decision and the current decision occur in a single or integrated decision framework.

However, when decisions regarding the trip are introduced one by one, we might expect different predictions. When the initial decision of selecting an expensive or inexpensive option is made salient by conducting a choice task, the decision itself will influence the psychological status of decision-makers, regardless of the decision outcome. For example, the ideal self will promote a preference for the expensive option, whereas the actual self is forced to choose the cheaper option. This discrepancy itself will generate an uncomfortable status for decision-making and may generate feelings of dejection (Marder et al, 2019). We expect that this discrepancy will be stronger only for decision-makers forced to choose the cheap option. Consequently, decision-makers will seek compensatory consumption in subsequent actions or consumption in order to remove the negative emotional response caused by the initial discrepancy. In this situation, when a decision-maker is offered a small unplanned purchase, she will take the offer in order to improve her negative emotional status (Koles et al., 2018).

Therefore, in this study, we suggest boundary conditions for the original proposal by Cheng et al. (2022). When the decision frame is integrated for the previous spending and the current decision, we expect to replicate the findings of Cheng et al. (2022), in that travelers' unplanned purchase intentions will be high when they opt for a relatively high (vs. low) prior buying price (i.e., H1a). On the other hand, when the initial decision of choosing one out of two options is salient, the outcome of the decision may trigger a feeling of discrepancy, resulting in a higher compensatory consumption motivation. Therefore, we expect that travelers' unplanned purchase intentions will be high when they choose a cheaper option instead of an expensive option in the initial decision (i.e., H1b). The formal hypothesis is:

***H1:** The decision frame (integrated vs. separate) will moderate the impact of prior travel spending on unplanned purchases during travel. Specifically, in the integrated decision frame, unplanned purchase intention will be higher when the prior travel spending is high versus low [H1a]. In the separate decision frame, unplanned purchase intention will be lower when the prior travel spending is high versus low [H1b].*

We further suggest boundary conditions for the activation of compensatory consumption strategy from the initial decision. In this study, we focus on the price gap between two initial decisions. Specifically, when the price gap for the initial decision is large (e.g., \$300 vs. \$800), travelers who cannot choose the expensive option will feel a significant discrepancy due to their incapacity to opt for the more expensive or higher-priced option in response to price sensitivity (Stangl, Prayag, & Polster, 2020).

In the initial decision, when the price difference is small (e.g., \$300 vs. \$350), the decision maker's discrepancy is expected to be minimal because both options fall within the budget range, leading to the selection of the more expensive option (Kim et al., 2020a). Put differently, since people do not categorize the \$350 version as a luxury option, they will not feel any significant discrepancy as a result of not choosing the \$350 option. To bolster this argument, Kim et al. (2020a) provided the empirical evidence that travelers are inclined to select the more expensive option when the perceived difference between two options is small, as opposed to when it is large. In addition, Higgins (1987) proposed that the extent of self-discrepancy is primarily determined by the gap between the actual and ideal self-images. Consequently, we anticipate that the motivation for compensatory consumption under conditions of a small price gap will be minimal, leading to a lesser increase in unplanned purchases in subsequent decisions.

In summary, based on the literature on price difference and the motivation of compensatory consumption (Friese, 2001; Higgins, 1987; Kim et al., 2020a; Stangl, Prayag, & Polster, 2020), we expect the impact of the price gap between two initial options will influence unplanned purchase intention, especially in the separate decision frame. When the price gap between two initial options is small, we don't expect significant compensatory consumption from those who chose the cheaper option. The hypothesis is thus:

H2: *The price gap between two initial options will influence higher unplanned purchase intentions in the separate decision frame. When the price differences between two initial options are large, unplanned purchase intention will be higher when the prior travel spending is low versus high [H2a]. When the price differences between two initial options are small, unplanned purchase intentions will be lower than when the prices of the two initial options differ significantly [H2b].*

Finally, we posit that the rationale behind the aforementioned prediction lies in a compensatory consumption strategy associated with a substantial discrepancy in the initial decision. Our focus is specifically on the emotional aspect of compensatory consumption, stemming from the unmet desire to choose the more expensive option (e.g., Belk, Ger, & Askegaard, 2003; Gupta & Srivastav, 2016). This motivation, driven by emotional states, highlights the essential role of maintaining positive emotions within such a strategy (Koles et al., 2018; Marder et al., 2019; Rucker & Galinsky, 2008). Specifically, we assess the perceived emotional changes linked to unplanned purchases. The formal hypothesis is:

H3: *H2a and H2b will be mediated by the compensatory consumption strategy. Specifically, the compensatory consumption strategy will mediate higher unplanned purchase intentions under low (vs. high) prior spending, only when the price differences between the two initial options are large.*

4. Overall framework and empirical plans

The theoretical framework, including H1-H3 and the overall empirical studies (i.e., Studies 1, 2, 3 and 4) is illustrated in Figure 1. In studies 1 and 2, we verified the relationship between prior spending and additional purchase intention, and the moderating effect of two decision frames (i.e., integrated vs. separate decision frames). In study 3, in the context of the separate decision frame, we investigate the boundary conditions for compensatory consumption strategy (i.e., price gap between two initial options) and provide empirical evidence of mediation by measuring the perceived positive emotional changes associated with the unplanned purchase. Finally, in Study 4, we test the boundary conditions of the separate decision of the importance of choice action in

the initial task. We find that the compensatory consumption effect is still powerful regardless of the choice action.

We used a US online panel from Amazon MTurk. Online participants could join only one study. Sample size was determined using G*Power3 (Faul, Erdfelder, Lang, & Buchner, 2007) with the estimated effect size as in the previous literature. The requirement sample size was 30 per cell, based on the specific assumptions (i.e., with $\alpha = .05$, effect size of with medium t-test $= .65$ & power $(1-\beta) = .80$). Therefore, we recruited at least 30 samples per cell in all experimental studies.

[Insert Figure 1 about here]

5. Study 1

This study aimed to provide initial evidence of the moderating effect of decision frames, in terms of integrated versus separate decisions.

5.1 Method: Participants, design, and procedure

Participants in this study were 171 US adults recruited from Amazon MTurk ($M_{age} = 41.13$, $SD = 12.90$, 50.3% females). They were randomly assigned to one of 3 (decision frame: integrated I vs. integrated II vs. separate decision frame) between-subjects experimental conditions.

The integrated I and II conditions were exactly the same as the experimental conditions in Study 1 by Cheng et al. (2022), as shown in Figure 2. Specifically, participants in this study were asked to engage in a travel scenario of prior spending of \$1,500 (high prior buying price in integrated I) or \$200 (low prior buying price in integrated II). Then, they were asked to imagine that the hotel receptionist offered them a \$30 upgrade for a suite with an ocean view. Participants in the separate decision frame conditions were asked to imagine that they were leaving for a trip and searching for a package tour. Then, they were asked to choose one option from two package tour alternatives (i.e., \$1,500 vs. \$200 including transportation and accommodation).

After that, they were asked to further imagine that they took the trip and the hotel receptionist offered them a \$30 upgrade for a suite with an ocean view. After that, all participants were asked to indicate their upgrade intention using 3 items (e.g., I accept the price for the

upgraded hotel suite) on a 5-point scale (1= strongly disagree, 5 = strongly agree, Cronbach's $\alpha = .917$), as used by Cheng et al. (2022). To have similar sample sizes, we doubled the separate decision frame condition in that each condition (i.e., high versus low prior buying price in the integrated condition, and high versus low prior buying price in the separate condition) had similar cell sizes. Finally, participants were asked to rate their travel frequency using a 7-point scale (1 = not at all, 7 = much much) and to provide their demographic information, including their age and gender.

[Insert Figure 2 about here]

5.2 Results and discussion

First, of the 87 participants in the separate decision frame condition, 31 participants (35.6%) choose the high prior buying price of \$1,500, whereas 56 participants (64.4%) chose the low prior buying price of \$200. based on this number, we conducted a 2 (level of prior buying price: high prior buying price of \$1,500 vs. Low prior buying price of \$200) X 2 (decision frame: integrated vs. separate decision) ANOVA on the purchase intention for the unplanned upgrade.

The results confirmed our expectations. First, we found a significant interaction effect of two experimental factors on the unplanned purchase intention ($F(1, 167) = 7.08, p = .009, \eta^2 = .041$), supporting H1. The further planned contrast analysis supported our prediction, as shown in Figure 3. In the integrated condition, participants' unplanned purchase intention was higher when they spent \$1,500 ($M_{\$1,500} = 4.12, SD = .99$) than when they spent \$200 ($M_{\$200} = 3.67, SD = 1.29$, contrast $F(1, 167) = 4.00, p = .047, \eta^2 = .023$), supporting H1a. In contrast, in the separate condition, participants' unplanned purchase intention was lower when they spent \$1,500 ($M_{\$1,500} = 3.86, SD = .91$) rather than \$200 ($M_{\$200} = 4.27, SD = .90$, contrast $F(1, 167) = 3.12, p = .079, \eta^2 = .018$), supporting H1b.

We conducted further analysis using a different approach. If the compensatory consumption strategy was the key underlying mechanism in the above significant findings, the unplanned purchase intention following a low prior buying price of \$200 should increase when the decision frame was separate (or when participants felt regret for not choosing the more expensive option) compared to when the decision frame was integrated (when participants did not

have an opportunity for comparison). The planned contrast confirmed this prediction. For participants in the high prior buying price, spending \$1,500, their unplanned purchase intention was the same across the two conditions ($M_{integrated} = 4.12$ vs. $M_{separate} = 3.86$, contrast $F(1, 167) = 1.12, p = .293, \eta^2 = .007$). More importantly, for participants in the low prior buying price, spending \$200, their unplanned purchase intention was higher in the separate (vs. integrated) conditions ($M_{integrated} = 3.67$ vs. $M_{separate} = 4.27$, contrast $F(1, 167) = 8.06, p = .005, \eta^2 = .046$).

[Insert Figure 3 about here]

Finally, when we included travel frequency and gender as covariate variables, the results were still significant for the interaction effect ($F(1, 165) = 7.22, p = .008, \eta^2 = .042$) and the planned contrast pattern (i.e., Integrated conditions: $M_{\$1,500} = 4.13$ vs. $M_{\$200} = 3.86$, contrast $F(1, 165) = 4.23, p = .041, \eta^2 = .025$ & Separate conditions: $M_{\$1,500} = 3.86$ vs. $M_{\$200} = 4.25$, contrast $F(1, 165) = 3.07, p = .082, \eta^2 = .018$; high prior buying price conditions: $M_{integrated} = 4.13$ vs. $M_{separate} = 3.86$, contrast $F(1, 165) = 1.23, p = .269, \eta^2 = .007$ & low prior buying price conditions: $M_{integrated} = 3.68$ vs. $M_{separate} = 4.25$, contrast $F(1, 165) = 7.92, p = .005, \eta^2 = .046$).

6. Study 2

In this study, we tested the moderating effect of decision frames using integrated versus separate decisions in a different product category for prior spending and unplanned purchase. We expected that the unplanned purchase intention in a different category would be higher when the prior travel spending was high versus low, and that this pattern would be reversed in the separate decision frame.

6.1 Method: Participants, design, and procedure

Participants were 193 US adults recruited from Amazon MTurk ($M_{age} = 40.15, SD = 11.97, 46.6\%$ females). They were randomly assigned to one of 3 (decision frame: integrated I vs. integrated II vs. separate decision frame) between-subjects experimental conditions.

The integrated I and II conditions were exactly same as those in Study 2, as shown in Figure 3. Specifically, participants in this study were asked to engage in a travel scenario with

prior spending of \$1,500 (high prior buying price in integrated I) or \$200 (low prior buying price in integrated II). Then, they were asked to imagine that they had the opportunity to buy a \$30 watch during check-in. In contrast, participants in the separate decision frame conditions were asked to imagine the same scenarios, with a choice between two package tour alternatives (i.e., \$1,500 vs. \$200 including transportation and accommodation), similar to the separate condition in our Study 1. They were then asked to further imagine the scenario of buying a \$30 watch. All participants were asked to indicate their unplanned purchase intentions using 3 items (e.g., I accept the price of the watch) on a 5-point scale (1 = strongly disagree, 5 = strongly agree, Cronbach's $\alpha = .765$) (Cheng et al., 2022).

To have a similar sample size, we doubled the sample size for the separate decision frame condition so that each condition (i.e., high versus low prior buying price in the integrated condition and high versus low prior buying price in the separate condition) had similar cell sizes. Finally, participants were asked to rate their travel frequency using a 7-point scale (1 = not at all, 7 = much much) and to provide their demographic information, including their age and gender.

[Insert Figure 4 about here]

6.2 Results and discussion

First, of 96 participants in separate decision frame condition, 37 participants (38.5%) choose the high prior buying price of \$1,500, while 59 participants (61.5%) chose the low prior buying price of \$200. Based on this number, we conducted a 2 (level of prior buying price: high [\$1,500] vs. low [\$200]) X 2 (decision frame: integrated vs. separate decision) ANOVA on the unplanned purchase intention for the watch.

The results confirmed our expectations. First, we found a significant interaction effect of the two experimental factors on the unplanned purchase intention ($F(1, 189) = 6.44, p = .012, \eta^2 = .033$), supporting H1. The further planned contrast analysis supported our prediction, as shown in Figure 5. In the integrated condition, participants' unplanned purchase intention was higher when they spent \$1,500 ($M_{\$1,500} = 4.01, SD = .74$) than when they spent \$200 ($M_{\$200} = 3.57, SD = .93$, contrast $F(1, 189) = 6.50, p = .012, \eta^2 = .033$), supporting H1a. In contrast, in the separate condition, participants' unplanned purchase intention showed a lower pattern when they spent

\$1,500 ($M_{\$1,500} = 3.71$, $SD = .86$) rather than \$200 ($M_{\$200} = 3.90$, $SD = .82$, contrast $F(1, 189) = 1.30$, $p = .289$, $\eta^2 = .006$), statistically supporting H1b.

We also conducted a different analysis, similar to that of study 1. If the compensatory consumption strategy was the key underlying mechanism in the above significant interaction findings, the unplanned purchase intention for the watch in the low prior buying price of spending \$200 should have increased when the decision frame was separate (vs. integrated). The planned contrast analysis confirmed this prediction. For participants in the high prior buying price spending \$1,500, their unplanned purchase intention for the watch was the same across the two conditions ($M_{integrated} = 4.01$ vs. $M_{separate} = 3.71$, contrast $F(1, 189) = 2.66$, $p = .105$, $\eta^2 = .014$). More importantly, for participants in the low prior buying price, spending \$200, their unplanned purchase intention for the watch was higher in the separate (vs. integrated) conditions ($M_{integrated} = 3.57$ vs. $M_{separate} = 3.90$, contrast $F(1, 189) = 3.91$, $p = .049$, $\eta^2 = .020$).

[Insert Figure 5 about here]

Finally, when we included travel frequency and gender as covariate variables, the results were still significant for the interaction effect ($F(1, 187) = 11.52$, $p < .001$, $\eta^2 = .058$) as well the planned contrast pattern (i.e., Integrated conditions: $M_{\$1,500} = 4.06$ vs. $M_{\$200} = 3.53$, contrast $F(1, 187) = 10.50$, $p = .001$, $\eta^2 = .053$ & Separate conditions: $M_{\$1,500} = 3.65$ vs. $M_{\$200} = 3.92$, contrast $F(1, 187) = 2.57$, $p = .110$, $\eta^2 = .014$; High prior buying price conditions: $M_{integrated} = 4.06$ vs. $M_{separate} = 3.65$, contrast $F(1, 187) = 5.50$, $p = .020$, $\eta^2 = .029$ & Low prior buying price conditions: $M_{integrated} = 3.53$ vs. $M_{separate} = 3.92$, contrast $F(1, 187) = 6.21$, $p = .014$, $\eta^2 = .032$).

7. Study 3

In this study, we focused on the separate decision frame condition in the scenario of Study 1 with some additional measures. Specifically, since the previous literature suggested that compensatory consumption in unplanned buying is conceptually related to the emotional response (see Koles et al., 2018, p. 111; Rucker & Galinsky, 2008), we measured the emotional response to the upgrade offer. We also expected that the compensatory motivation would be higher when travelers needed to choose the cheaper option from direct comparison between an extremely expensive option and

a cheap option (e.g., \$1,500 vs. \$200). When travelers make a decision between a slightly more expensive option and a slightly cheaper option (e.g., \$250 vs. \$200), their compensatory motivation is likely to be weak since the expensive option of \$250 does not activate feelings of discrepancy between ideal and actual conditions. Therefore, we expected that unplanned purchase intention for the upgrade would be higher with a large price gap between the initial choice options.

7.1 Method: Participants, design, and procedure

Participants in this study were 202 US adults recruited from Amazon MTurk ($M_{age} = 42.22$, $SD = 12.90$, 61.9% females). They were randomly assigned to one of 2 (price gap between two initial options: large [\$1,500 vs. \$200] vs. small [\$250 vs. \$200]) between-subjects experimental conditions.

Participants in this study were first asked to imagine that they were leaving for a trip and searching for a package tour. Then, they were asked to choose one option from two package tour alternatives based on experimental conditions (i.e., \$1,500 vs. \$200 for the large price gap condition, and \$250 vs. \$200 for the small price gap condition), as shown in Figure 6. Then, they were asked to further imagine that they took the trip and the hotel receptionist offered them a \$30 upgrade for a suite with an ocean view. All participants were then asked to indicate their upgrade intention using the same scale as that used in our Study 1 (Cronbach's $\alpha = .927$). Participants were then asked to rate their perceived positive emotional change due to the upgrade offer, to measure the theoretical concept of compensatory consumption with 2 items (i.e., To what extent would this upgrade make you feel happy? / To what extent would this upgrade make you feel joyful?) on a 5-point scale (1= not at all, 5 = extremely, modified from Rucker & Galinsky, 2008, correlation $r = .93$, $p < .001$).

[Insert Figure 6 about here]

7.2 Results and discussion

For the choice results of the initial decision, of the 100 participants in the large price gap condition, 64 participants (64%) chose the low prior buying price of \$200, whereas of the 102

participants in the small price gap condition, 92 participants (90.2%) chose the low prior buying price of \$200.

In the main analysis, we made two comparisons: (i) participants who chose the \$1,500 versus the \$200 travel option for the large price gap condition and (ii) participants who chose the \$200 travel option in the small versus large price gap conditions. To reiterate, we expected that (i) the unplanned purchase intention for the room upgrade would be higher for those choosing the \$200 option (vs. \$1,500) in the large price gap condition [H2a] and (ii) the unplanned purchase intention for the room upgrade would be higher for those choosing \$200 from the large (vs. small) price gap conditions [H2b]. We further expected that the same pattern would apply for the perceived positive emotional change. Finally, we expected a significant mediation role for the perceived positive emotional change in the relationship above [H3].

First, we conducted a simple ANOVA test to compare participants choosing the \$1,500 versus the \$200 travel option for the large price gap condition. The unplanned purchase intention for the \$30 upgrade was much higher when participants previously chose the low prior buying price of \$200 ($M_{\$200} = 4.24$, $SD = .94$, $n = 64$) versus the high prior buying price of \$1,500 ($M_{\$1,500} = 3.82$, $SD = 1.06$, $n = 36$; $F(1, 98) = 4.11$, $p = .045$, $\eta^2 = .040$), supporting H2a. The perceived positive emotional change due to the room upgrade was also higher when participants previously chose the low prior buying price of \$200 ($M_{\$200} = 4.48$, $SD = .89$) versus the high prior buying price of \$1,500 ($M_{\$1,500} = 3.93$, $SD = .92$, $F(1, 98) = 5.61$, $p = .020$, $\eta^2 = .05$).

We further used Hayes' macro method of mediation analysis (with model 4 with 5,000 bootstrapping: (independent variable [price gap: high prior buying price [1] vs. low prior buying price [2]] → mediator [perceived positive emotional change] → dependent variable [unplanned purchase intention])). The results confirmed our expectation in that the indirect effect was significant (effect [$a * b$] = .402, $se = .169$, 95% Confidence Interval [CI] = [.072, .738]), whereas the direct effect was insignificant (effect [b] = .014, $se = .119$, 95% CI = [-.222, .249])¹, supporting H3 (See Figure 7 for detailed results).

¹ We also conducted reverse mediation (i.e., independent variable → dependent variable → mediator) based on Lee, Cui, Kim, Seo, and Chon (2021). The results of the reverse mediation indicated that the indirect effect was not significant (effect = .315, $se = .159$, 95% CI = [-.008, .626]). Therefore, the significant mediation results from the main study were not artificially driven by the measurement order effect.

[Insert Figure 7 & 8 about here]

We also conducted an ANOVA test to compare participants choosing the \$200 travel option from the large (vs. small) price gap conditions. The unplanned purchase intention for the \$30 upgrade was much higher when participants chose from the large price gap condition ($M_{large\ gap} = 4.24$, $SD = .94$, $n = 64$) compared to the small price gap condition ($M_{small\ gap} = 3.88$, $SD = 1.16$, $n = 92$; $F(1, 154) = 4.20$, $p = .042$, $\eta^2 = .027$), supporting H2b. The perceived positive emotional change due to the upgrade was also higher when participants chose from the large price gap condition ($M_{large\ gap} = 4.38$, $SD = .89$) versus the small price gap condition ($M_{small\ gap} = 3.98$, $SD = 1.18$; $F(1, 154) = 5.20$, $p = .024$, $\eta^2 = .033$).

We further conducted Hayes (2017)' macro method of mediation analysis (with model #4 with 5,000 bootstrapping: (independent variable [previous choice: small gap [1] vs. large [2]] → mediator [perceived positive emotional change] → dependent variable [unplanned purchase intention])). The results confirmed our expectation, in that the indirect effect was significant (effect [a * b] = .351, se = .146, 95% CI = [.074, .647]), whereas the direct effect was insignificant (effect [b] = .008, se = .086, 95% CI = [-.161, .177])², supporting H3 (See Figure 8 for detailed results).

[Insert Figure 9 & 10 about here]

8. Study 4

In the previous studies, we found higher compensatory motivation for participants who chose the low-priced option in the initial decision, especially in the separate decision frame condition. In this study, we examined the boundary conditions of the initial decision. There were two possibilities. The first possibility was that the compensatory strategy would work only with the choice action required in the initial decision. The second was that the compensatory strategy would work with the salience of the initial decision, regardless of the actual choice action. Put differently, even under an imagined choice situation, the effect could still work. In order to test

² We also conducted reverse mediation (i.e., independent variable → dependent variable → mediator). The results of the reverse mediation indicated that the indirect effect was still significant (effect = .313, se = .150, 95% CI = [.019, .608], but smaller than the original mediation results. Therefore, the empirical data supported the original model rather than alternative model.

the two alternative explanations, we conducted an experiment with the manipulation of choice action in the initial decision scenario.

8.1 Method: Participants, design, and procedure

Participants in this study were 159 US adults recruited from Amazon MTurk ($M_{age} = 41.09$, $SD = 12.49$, 54.1% females). They were randomly assigned to one of 2 (actual choice: required vs. imagined) X 2 (selected option: high prior buying price of \$1,500 vs. low prior buying price of \$200) between-subjects experimental conditions.

Participants in this study were asked to imagine the same scenario (i.e., with a hotel upgrade decision) used in the separate decision frames of our Study 1. Participants in the required choice condition were asked to carry out exactly the same task as in Study 1: they were first asked to choose one option between \$1,500 and \$200. In contrast, participants in the imagined choice conditions were asked to imagine a similar scenario in which they were exposed to two options. Then, they were asked to further imagine that they chose either the \$1,500 or \$200 option. Therefore, the selected option in the initial decision was determined by the participants in the required choice condition, whereas the selected option was randomly assigned by us in the imagined choice condition.

All participants were then asked to rate their upgrade intention using the same scale used in Study 1 (Cronbach's $\alpha = .865$) and the mediator (i.e., perceived positive emotional change) using the same scale used in Study 3 ($r = .87$, $p < .001$).

8.2 Results and discussion

For the choice results of the initial decision in the actual choice condition ($n = 80$), 46 participants (57.5%) chose the low prior buying price of \$200, and 34 participants (42.5%) chose the high prior buying price of \$1,500.

First, we conducted a 2X2 ANOVA for upgrade purchase intention. The main effect of actual choice actor ($F(1, 155) = .72$, $p = .396$, $\eta^2 = .005$) and interaction effect ($F(1, 155) = .04$, $p = .851$, $\eta^2 < .001$) was not significant. However, the main effect of the selected option was significant in that unplanned intention was higher when the previous selected option was the low

(vs. high) prior buying price ($M_{\$1,500} = 3.93$, $SD = .91$ vs. $M_{\$200} = 4.30$, $SD = .92$; $F(1, 155) = 5.95$, $p = .016$, $\eta^2 = .037$). The detailed results are presented in Figure 9.

We found similar results for the mediator. The main effect of actual choice actor ($F(1, 155) = .01$, $p = .927$, $\eta^2 < .001$) and interaction effect ($F(1, 155) = .15$, $p = .704$, $\eta^2 = .001$) on perceived emotional change was not significant. However, the main effect of the selected option was significant in that the perceived emotional change was higher when the previous selected option was the low (vs. high) prior buying price ($M_{\$1,500} = 3.98$, $SD = .85$ vs. $M_{\$200} = 4.28$, $SD = 1.04$; $F(1, 155) = 3.90$, $p = .050$, $\eta^2 = .025$). The detailed results are presented in Figure 9.

Finally, we conducted a mediation analysis using Hayes model 4 with 5,000 bootstrapping: (independent variable [selected option: high prior buying price of \$1,500 [1] vs. low prior buying price of \$200 [2]] → mediator [perceived positive emotional change] → dependent variable [unplanned purchase intention]). The results confirmed our expectation in that the indirect effect was significant (effect [$a * b$] = .226, $se = .113$, 95% CI = [.011, .458]), whereas the direct effect became insignificant (effect [b] = .146, $se = .094$, 95% CI = [-.039, .331]), supporting H3.

In summary, we found that compensatory consumption occurred regardless of the actional choice action in the initial decision. We also found significant mediation effects.

[Insert Figure 11 about here]

9. General discussion

9.1 Empirical summary

This study verified all three proposed hypotheses through four experiments: First, studies 1 and 2 confirmed that the unplanned purchase intention improves as the prior buying price increases in an integrated decision frame (H1a). In contrast, we verified that the relationship between prior buying price and unplanned purchase intention within a separate decision frame was reversed (H1b). These findings demonstrate that participants had high unplanned purchase intentions due to strong compensatory motivation when choosing a lower prior buying price from two different options. Based on these results, we focused on the separate decision frame for an in-depth understanding of boundary conditions.

The results of study 3 showed that when the price difference between two initial options was large, those who chose the lower prior buying price had a higher unplanned purchase intention (H2a). Also, we found that those who selected the lower prior buying price had higher unplanned purchase intentions in large price gap conditions than in small price gap conditions (H2b). Further, we confirmed the mediating effect of perceived positive emotional change as suggested in H2. That is, those who chose low prior buying price under conditions with large price gaps demonstrated a strong influence on behavior due to the perception of an imbalance between the ideal self (i.e., craving for high travel spending) and the actual self (i.e., choosing low travel spending). Lastly, in study 4, we confirmed the importance of previous information in the initial decision process; it generated compensation consumption motivation. Specifically, study 4 established consistency in the research findings on the effect of lower prior buying price on positive emotional change and unplanned behavior in two different situations (i.e., actual selection versus imagined selection conditions).

9.2 Theoretical implications

Our research makes several theoretical contributions. First, this study contributes to the literature on unplanned purchases in the context of tourism by examining the impact of prior spending on subsequent unplanned behaviors from a consumer psychological perspective. While unplanned purchases before and after travel are common phenomena, much of the research in the tourism field has focused on planned behaviors (Li, Wang, Lv, & Li, 2021). Studies exploring factors that induce unplanned purchases within tourism have identified individual characteristics (e.g., impulsive traits; Kim & Tanford, 2021), and situational factors (e.g., technological tools such as navigation, Kah & Lee, 2014; servicescape, Ho et al., 2019). These studies emphasize that unplanned purchases in tourism can be an important purchasing method that complements the perishable nature of tourism products. In contrast, our research focuses on the psychological mechanisms of consumers responding to various choice options. Specifically, this study examines how decision framing for various options that tourists may encounter triggers compensatory consumption strategies in an unplanned manner. By addressing existing research gaps and contributing to an understanding of multi-options of tourism products, it is considered to have expanded the tourism literature.

Second, this study contributes to the literature on decision framing by empirically identifying differences in choice architecture (i.e., decision frame). Previous literature has explored the influence of decision framing in various domains (Cvelbar, Grün, & Dolnicar, 2021; Kim et al., 2020b). However, unlike them, we suggest that unplanned purchases for tourism products may vary depending on separate or integrated decision frames. Through a series of sequential experimental studies, we provided strong empirical evidence for compensatory consumption strategies. Moreover, in Study 2, this research verified that when there is a significant price difference between the two initial options and prior travel spending is low, there is a heightened level of unplanned purchase intention. Furthermore, it empirically demonstrated that in cases where the price difference between the two initial options is small, unplanned purchase intentions decrease compared to situations where there is a significant difference in the prices of the two initial options. This can be understood in the context of existing marketing literature, where compensatory behavior is seen as a response to a discrepancy or incongruence between an individual's ideal self and actual self (Gould, 1993). Moreover, our findings emphasize the significance of consumer compensatory consumption strategies, particularly the one suggested by Mander et al. (2017) known as ‘direct resolution’ (i.e., unplanned purchases can be understood as a form of direct resolution). In summary, this study is considered to have provided meaningful insights into compensatory consumption strategies based on decision framing.

Third, this study goes beyond existing literature by investigating the importance of decision frames, specifically in the realm of integrated versus separate decisions, and the effects of previous spending decisions on subsequent choices (Hsee et al., 1999; Kim, Kim, & Kim, 2018). The identification of decision framing as a moderator for the influence of past spending on subsequent unplanned behaviors carries wide-ranging implications in fields like psychology, marketing, and economics. As a result, this research holds the promise of advancing our overarching understanding of the limits and circumstances surrounding unplanned consumption and behaviors (Atalay & Meloy, 2011; Conner, 2004).

Finally, the study 4, by verifying that there is no difference in subsequent unplanned purchase intentions between actual choices and imagined choices in compensatory consumption at the initial decision stage, secures high validity for the research design and results. The results

suggest that the magnitude of compensatory consumption could be relatively high in that it occurs without elaborated choice action but with some information on the alternatives during the initial decision. The finding of similar results for imagined and actual choice effects on the subsequent effect differed from some of the existing literature (e.g., Plassmann, O'doherty, Shiv, & Rangel, 2008; Shiv, Carmon, & Ariely, 2005) showing the unique role of actual choice action, but were similar to other studies (e.g., Morewedge, Huh & Vosgerau, 2010) that showed the same effect from imagined (vs. actual) choice action. Future studies need to elaborate on this issue in more depth.

9.3 Managerial implications

This research offers several managerial implications for tourism sectors from a new perspective. First, travel marketers should develop a marketing strategy considering individual clients' propensity to consume tourism products. Specifically, marketers or service developers need to devise pricing for additional services and the composition of tourism products or services using reservation data from hotels or tourism agencies. Based on the proven relationship that high prior buying price leads to high unplanned purchase intention, we propose that marketers recommend more diverse additional tourism services to potential travelers with purchasing power.

Second, marketers may consider establishing a psychological pricing strategy using a suitable decision frame for gathering potential travelers' emotional responses. In particular, in the online market, a marketer can intentionally show an ideal alternative tourism product to induce travelers' sensitivity through comparison pricing information. Afterward, travelers' compensation consumption may be induced by proposing suitable additional purchase products that can positively convert their negative emotions. Zheng et al. (2018) also stated that the "possession gap" (i.e., the difference between what one person has and what other people have) is a crucial motivator of conspicuous consumption; thus, they suggest inducing social comparison incidentally.

In addition, a marketing technique that stimulates compensatory consumption motivation needs to be applied to potential travelers with low prior buying price. Specifically, practitioners should seek attractive additional services with a commercial marketing message suggesting that

unplanned additional purchases represent compensatory symbols to reduce the salience of the discrepancy. In this way, we predict that travelers can obtain emotional benefits and justification of their purchase. This marketing may be applicable to various tourism and hospitality companies. For instance, an airline can leverage compensatory psychology to encourage potential travelers who cannot afford business class to opt for intermediate upgrades, such as emergency exit row seats or premium economy class, as the optimal alternative to economy class. Developing marketing strategies by understanding the psychology of potential travelers in this manner can yield higher profits for companies while offering meaningful experiences to travelers.

9.4 Limitations and future study

This study also has several limitations that suggest future study directions. First, this study collected online panel data using scenario-based stimuli. Although this approach has been frequently used in the tourism and hospitality literature, additional studies are required to ensure external validity. Specifically, future research should consider different methods such as field survey data or secondary data (e.g., hotel reservation data) to investigate actual tourist perceptions and behaviors (Kim & Yang, 2021). Second, this study mainly discusses the effects of decision frame and price gaps between initial options on emotional responses and unplanned behavior. Further study needs to consider differential moderators such as individual traits, the propensity to consume, and the purpose of travel (Badu-Baiden, Kim, & Wong, 2023; Shin & Jeong, 2022). In addition, considering that unplanned purchases can occur both before and during travel, it would be helpful to compare the decision frame effects in the two different processes or in online versus offline environments. Finally, even though we provided empirical evidence of the mediating role of the compensatory consumption strategy in Study 3, further studies need to furnish detailed evidence of our underlying mechanisms by measuring additional and related constructs.

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