

THE EFFECTS OF REWARD TYPE ON EVALUATIONS OF AN ONLINE LUCKY DRAW

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ABSTRACT

This study proposes to fill a research gap by testing the moderating effect that two factors (type of effort requirement and belief in personal good luck) can have on the relationships between reward type and evaluations of an online lucky draw. The study design is a 3 (the type of reward: hedonic vs. utilitarian vs. mystery) \times 2 (the type of effort requirement: interesting vs. boring) \times 2 (belief in personal good luck: high vs. low) between-subjects design, where belief in personal good luck is a measured chronic personality trait. Evaluation of an online lucky draw campaign is regarded as a dependent variable. The results show that when respondents comply with a boring requirement or have a lesser belief in personal good luck, the provision of hedonic rewards will lead to a more positive evaluation of an online lucky draw than will the provision of utilitarian or mystery rewards. In contrast, when respondents comply with an interesting requirement or have a higher belief in personal good luck, the provision of a mystery reward will lead to a more positive evaluation of an online lucky draw than would be the case for known rewards (i.e., hedonic and utilitarian). With an understanding of how online shoppers evaluate their participation in an online lucky draw campaign, marketers in e-commerce can better understand not only when to use this promotional tactic more effectively, but also how to better allocate their budget for online sales promotions.

Keywords: Types of reward; Types of effort requirement; Belief in personal good luck; Online lucky draws; E-commerce

1. Introduction

The number of online sales is increasing dramatically, and every minute, countless online-advertising messages compete for online shoppers' attention. For this reason, online retailers face tough challenges in attracting target customers, especially when they have opted to use online sales promotions to increase visibility and to enhance competitiveness. In the field of communication tactics, several studies have demonstrated the increasing popularity exhibited by online sales promotions that influence consumers' decision making [e.g., Buil *et al.* 2013; Christou 2011; Crespo-Almendros & Del Barrio-García 2014; Prendergast *et al.* 2013; Xu & Huang 2014].

In general, online sales promotions include monetary tools, such as e-coupons and discounts, and non-monetary tools, such as contests, sweepstakes, and lucky draws [Chandon *et al.* 2000]. This study focuses on non-monetary-based tools, especially in the case of online lucky draw promotional tactics. This focus reflects the fact that online lucky draws have to comply with effort requirements and rely on chance; indeed, mere participation in such games is in itself sometimes considered by online shoppers to be enjoyable beyond any price savings that may be offered [Chandon *et al.* 2000]. Moreover, marketers have realized that lucky draws provide high value but use a limited amount of the promotional budget to reward customers [Palazón & Delgado-Ballester 2009], and such games can also easily be administered online and can be effective at driving traffic to online retailers' websites [Smith 2009], ultimately increasing brand equity [Buil *et al.* 2013]. To date, however, only limited academic e-commerce research has been devoted to the strategy of offering online lucky draws.

An effective promotional program has to consider two factors: campaign characteristics and individual traits. Some promotional programs, such as online lucky draws, share a common underlying structure whereby customers need to comply with effort requirements to have the chance of earning rewards [Kivetz 2003]. Effort requirements and the earning of possible rewards are the two main characteristics in online lucky draw campaigns. For example, in one case online shoppers are told that they may receive a specific reward for participating in an online lucky draw campaign (e.g., "Complete this survey today and you may win a notebook"). In another case, online shoppers are told that they may receive a mystery reward for participating in an online lucky draw campaign (e.g., "Play this game today and you may win a mystery gift").

For online shoppers, the chance of winning a mystery gift would be comparably more uncertain than the chance of winning a notebook possessing an explicit value. Prior studies have divided products or, more specifically, known rewards into two types: hedonic and utilitarian [e.g., Botti & McGill 2011; Palazón & Delgado-Ballester 2013]. The present study places online lucky draw campaigns' rewards into at least one of three categories: hedonic, utilitarian, and mystery. It is quite surprising that no research attention has been given to the three kinds of rewards offered as an incentive in online lucky draw campaigns while, in today's e-commerce, online shoppers are being offered a wide variety of incentives. Thus, a fundamental question in this research is which types of rewards will enhance evaluations of online lucky draws. An understanding of how the various rewards enhance or undermine evaluations of online lucky draws is critical for differentiating between online sales promotions.

Prior studies have classified effort requirements as either small or large and as either interesting or boring [Kivetz 2003; Kivetz & Simonson 2002; Soman 1998]. Such effort requirements have a predictable effect on reward preferences [Kivetz 2003], while customers also use effort requirements to justify choosing a luxury reward over a utilitarian reward [Kivetz & Simonson 2002]. Clearly, playing a game is likely to be more interesting than completing a survey; thus, the present study has classified effort requirements as either interesting or boring. Different effort requirements could induce intrinsic or extrinsic motivations in people and then affect the people's subsequent behaviors [Deci & Ryan 1985; Lepper 1981]. A rigorous understanding of how possible rewards are effectively matched with effort requirement type to attract online shoppers in e-commerce is very important.

Belief in personal good luck has been considered an appropriate individual trait variable that is associated with selecting a lucky draw over other sales-promotion options [Prendergast & Thompson 2008]. Because "winning" a lucky draw is determined by chance, it is reasonable to assume that belief in personal good luck will influence an individual's interest in such draws. Researchers in e-commerce marketing have paid increasing attention to two important issues: customers' chronic beliefs about luck and customers' perception of how lucky they feel at the point they make a decision [McDaniel 2002]. Clustering groups according to individual traits may also indicate distinct market segments in which specific promotional strategies can be implemented.

Given all of the above, the current study examines the effects that two relevant boundary conditions (i.e., the type of effort requirement and belief in personal good luck) can have on the relationships between reward type on evaluations of an online lucky draw. With a reasonably rigorous understanding of how customers evaluate their participation in an online lucky draw campaign, marketers in e-commerce can better understand both when to use a specific promotional tactic more effectively and, in turn, how to better allocate their budget for online sales promotions.

The remainder of this paper is organized as follows. Section 2 provides a theoretical background and develops research hypotheses according to self-determination theory (SDT) and trait theory. The research methods are presented in Section 3, while Section 4 provides the results of the analysis, and the closing section summarizes the findings, the implications, the limitations, and directions for future research.

2. Literature Review and Hypotheses

2.1. Online Sales Promotion

In an online shopping environment, online sales promotions can lead to substantially greater increases in profits than can the given current practices [Zhang & Krishnamurthi 2004]. There are many advantages to using online sales promotions in e-commerce. First, using an online sales promotion can facilitate a reduction in advertising and marketing costs [Blundo *et al.* 2005; Sonal & Preeta 2005]. Second, the promotional offer is a form of strategic communication to tempt potential buyers to try a product, to reward existing loyal customers, to encourage switching among customers, and to help create brand awareness by rewarding them for online participation and purchase [Ali & Maryam 2012; Crespo-Almendros & Del Barrio-García 2014; Odunlami & Ogunsiji 2011; Sonal & Preeta 2005; Suki 2013]. Third, e-marketers are increasingly implementing promotional campaigns that will effectively trigger impulse-buying behavior among consumers [Xu & Huang 2014; Zhang *et al.* 2006].

Some studies have distinguished promotion tactics as either monetary or non-monetary, depending on whether or not a price-saving opportunity has been offered [Chandon *et al.* 2000; Lichtenstein *et al.* 1995]. On the one hand, monetary promotions, such as price reductions, coupons, and rebates, are immediate reward actions that enable the consumer to purchase a product at a price lower than usual [Chandon *et al.* 2000; Lichtenstein *et al.* 1995]. Chandon *et al.* [2000] have characterized this price-lowering outcome as a utilitarian benefit that has an instrumental, functional, and cognitive nature. Monetary promotions help consumers to increase the acquisition utility of their purchase and enhance the efficiency of their shopping experience. In transactions where value for money is paramount, monetary-based promotional strategies have been proven effective, especially in the case of purely utilitarian products [Chandon

et al. 2000]. However, for some products, monetary-based promotional strategies have the disadvantage of detracting from brand image, and they have also been shown to be associated with negative perceptions of cheapness [Ashworth *et al.* 2005] and the identification of products with low socioeconomic status buyer groups [Dhar & Hoch 1996; Green 1995].

On the other hand, non-monetary promotions, such as contests, sweepstakes, or lucky draws, embrace a vast variety of delayed reward actions where the incentive is not directly evidenced in a lower purchase price [Chandon *et al.* 2000; Lichtenstein *et al.* 1995]. Chandon *et al.* [2000] have characterized non-monetary promotions as hedonic benefits with a non-instrumental, experiential, and affective nature, because they are intrinsically rewarding and are related to experiential emotions, pleasure, and self-esteem. Non-monetary-based promotional tactics are effective for increasing awareness and short-term purchase intentions [Prendergast *et al.* 2013], brand equity [Buil *et al.* 2013], and online impulse buying [Xu & Huang 2014].

Lucky draws constitute a non-monetary-based strategy that offers customers an uncertain, hedonic, and pleasurable experience, rather than a straightforward, certain, and functional benefit [Chandon *et al.* 2000; Lichtenstein *et al.* 1995]. There is evidence that lucky draws are regarded as more enjoyable and participative than price-based promotional devices such as coupons [Lee 2002]. Promotional strategies that underpin hedonic sales can circumvent the potential problems of utilitarian, monetary-based strategies either by offering definite additional free products having a generally smaller value than the promoted product or, alternatively, by offering the comparatively remote possibility of obtaining additional products or cash that have a higher value than the promoted product.

2.2. Self-Determination Theory

Self-determination theory (SDT) has received empirical support in a variety of service contexts related to physical education, sports, and exercise [e.g., Standage *et al.* 2005; Wang & Li 2014]. SDT is rooted in motivation theory, which treats humans as individuals actively searching for optimal challenges and new experiences to master and integrate [Deci & Ryan 1991]. According to SDT predicts positive motivational outcomes including customer loyalty [Ntoumanis 2005]. Motivation refers to the desire to engage in a goal-oriented behavior, such as participation in an online lucky draw. SDT suggests that the nature of the reward and the activity itself determine whether motivation is intrinsic or extrinsic [Deci & Ryan 1985; Deci *et al.* 1999; Gagné & Deci, 2005]. DeCharms [1968] suggested that behaviors can be attributed to an external perceived locus of causality, with external goals and demands being the motivators, or to an internal perceived locus of causality, with interests and desires serving as motivational forces.

Extrinsic motivation centers on behaviors that one performs for instrumental values, such as monetary rewards, or for goals (i.e., outcomes) that are separable from the behavior [Deci & Ryan 1987, Deci *et al.* 1991]. That is, extrinsic motivation, which involves goal-driven reasons, is not inherent in the corresponding behavior itself and is heavily dependent on the external environment. Extrinsic motivation is particularly important in a work environment and is particularly effective in the short term [Lazear 1988]. Extrinsic incentives besides monetary rewards include praise, relationship building, and career progression [Morris & Empson 1998].

Extrinsic motivation pertains to a wide variety of behaviors performed for reasons beyond those inherent in the activity itself. Extrinsically motivated behaviors are thus instrumental and are performed not out of internal interests but out of external instrumental values [Deci & Ryan 1985]. Individuals can be viewed as extrinsically motivated when their behaviors, whether performed in pursuit of a prize or a salary increase, are based on reasons that can be separated from the activity itself. With external rewards, an instrumentality forms so that the activity becomes a means to an end rather than an end in itself [Deci & Ryan 1987]. In other words, the behavior is no longer performed because it is interesting or fun; rather, it is carried out in pursuit of external rewards [Deci 1975]. Some examples of extrinsically motivated behaviors are working for money, driving a car toward a destination, and reading textbooks for an upcoming examination [Powell *et al.* 2005].

Conversely, intrinsic motivation refers to performing a behavior for its own sake—out of interest or for the pleasure and inherent satisfaction derived from the experience [Deci & Ryan 1985; Deci & Ryan 1987; Deci *et al.* 1999]. According to this definition, intrinsic motivation emphasizes experience-driven reasons, stems inherently from the activity, and is closely tied with individual interests. Intrinsic motivation usually manifests itself in the form of positive emotions that individuals have experienced previously when engaged in the same or similar activities [Csikszentmihalyi 1975]. People performing activities for external reward are often less intrinsically motivated than are those who do it without the extra incentive [Greene & Lepper 1974]. Besides pleasure, some examples of intrinsic motivators are arousal, excitement, and enjoyment [Holbrook *et al.* 1984]. Many behaviors are intrinsically motivated, such as listening to music and watching television shows. Participating in such activities mostly fails to

yield external rewards but rather confers positive, rewarding psychological states. Empirical evidence shows that extrinsic rewards can undermine motivation and behaviors, but intrinsic benefits tend to have a positive effect [Deci et al. 1999]. For these variously stated reasons, the current study promotes the assertion that SDT satisfactorily explains how effort requirements moderate the relationships between reward types and evaluations of online lucky draws. This moderating effect takes place because the types of effort will determine whether motivation is intrinsic or extrinsic.

2.3. The Types of Rewards

Prior studies have distinguished between the two basic types of rewards that people pursue: certain rewards and uncertain rewards [Goldsmith & Amir 2010; Shen et al. 2015]. In line with prior research, the present study first classifies rewards as mystery rewards and known rewards. The rewards in an online lucky draw campaign may be uncertain, but the level of uncertainty in respect of a mystery reward is higher than a known reward because online shoppers do not know what gift they will receive if they win the game. In addition, previous studies have divided the known rewards into two types: hedonic rewards and utilitarian rewards [Botti & McGill 2011; Palazón & Delgado-Ballester 2013; Sun & Spears 2012]. Thus, this study classifies online lucky draw rewards into three categories: hedonic, utilitarian, and mystery rewards.

Hedonic rewards are generally selected for their symbolic and emotional value (sunglasses are a typical hedonic reward), whereas utilitarian rewards are generally understood to be those that are functional and useful (a thermos is a representative utilitarian reward) [Botti & McGill 2011; Dhar & Wertenbroch 2000; Okada 2005; Sela et al. 2009]. The provision of mystery gifts (e.g., the chance to win either a valuable reward or an inferior reward) is a more recent means of rewarding customers than is any common promotion offering known rewards (i.e., hedonic or utilitarian). Customers do not know what gift they will receive if they are lucky and win the draw. Thus, the degree of uncertainty surrounding a mystery reward is higher than any uncertainty surrounding a known hedonic or utilitarian reward. The effectiveness of promotions involving mystery gifts can be limited; more specifically, a mystery incentive is likely to be less effective if this outcome is unknown than if its best possible outcome is known [e.g., Goldsmith & Amir 2010; Laran & Tsiros 2013]. The current study rests partly on the assumption that the types of effort requirement in an online lucky draw campaign and belief in personal good luck will moderate the relationships between the types of rewards and evaluations of an online lucky draw.

2.4. The Moderating Role of the Types of Effort Requirement

A substantial body of research has acknowledged the importance of effort requirement in determining motivation changes [e.g., Kim & Labroo 2011; Kivetz et al. 2006; Kruger et al. 2004; Lepper 1981; Zhang et al. 2011]. When customers engage in some form of a promotional program, they have to comply with effort requirements to earn future possible rewards [Kivetz 2003], such as in an online lucky draw campaign. An effort requirement is defined here as any inconvenience inherent in complying with a campaign's requirements. In practice, it is evident that online retailers will design several activities for different purposes. For example, online retailers could either request that online shoppers complete a questionnaire about their post-shopping satisfaction or design an amusing game to entertain their customers and build brand equity. In this case, playing a game should be more interesting than completing a survey. Prior studies have classified effort requirements as either small or large, or interesting or boring [Kivetz 2003; Kivetz & Simonson 2002; Soman 1998]. Thus, the current study classifies such effort requirements in an online lucky draw campaign as either interesting or boring.

In line with SDT, people who see themselves as intrinsically motivated to engage in an interesting activity (1) are less likely than people who engage in a boring activity to acknowledge that they are engaging in the activity only to obtain some extrinsic incentive or reward, and (2) are more likely than people who engage in a boring activity to attribute their participation to enjoyment or interest inherent in the activity [Deci & Ryan 1985; Lepper 1981]. In other words, participants will regard an interesting requirement in an online lucky draw campaign as an intrinsic part of a game's value. Because their behavior is driven by intrinsic motivation, the intrinsic motivation is likely to diminish their expectations of the likely reward. A lower expectation of the reward will lead to a higher preference for uncertainty, such as a mystery reward. The more influence that people's emotional state has on their decision-making, the more open they may grow to the prospect of being surprised—with the outcome that they will generally appreciate mystery incentives in a given purchase process [Laran & Tsiros 2013]. That is, when an interesting requirement induces participants' positive emotions, the participants are more likely to regard a mystery reward as attractive than to regard a known reward as attractive; likewise, the participants are more likely to experience both surprise and a sense of imagination in the presence of a mystery reward than in the presence of a known reward. Thus, when individuals face an interesting requirement in an online lucky draw campaign, they will form higher

evaluations of the campaign offering a mystery reward than of the campaign offering a known reward, regardless of whether it is hedonic or utilitarian.

In contrast, people who engage in a boring activity (1) are more likely than people who engage in an exciting activity to acknowledge that they are engaging in the activity simply to obtain some extrinsic incentive and (2) are less likely than people who engage in an exciting activity to attribute their participation to enjoyment or interest inherent in the activity [Deci et al. 1999; Lepper 1981]. That is, people who participate in a boring activity are driven by extrinsic motivation (i.e., rewards). Prior research has indicated that, when customers act on the basis of extrinsic motivation, requiring customers to invest a stream of effort in the opportunity to acquire a reward is likely to raise the customers' expectations regarding the fair or appropriate size of the reward [Kivetz 2003]. Drawing on these findings, the current study argues that, in the context of online lucky draws, the types of effort requirement that online shoppers must undertake are likely to reinforce their expectations about which type of reward they will receive—particularly when the effort requirement for a lucky draw campaign is boring.

This study asserts that when a potential reward's boring requirement raises online shoppers' expectation for the reward, the online shoppers will have a greater preference for a hedonic reward than for a utilitarian or mystery reward. This idea can be stated in slightly more precise terms: when individuals are required to complete a boring task, they will express a more positive evaluation of an online lucky draw campaign offering hedonic rewards than of an identical campaign offering utilitarian or mystery rewards. The reason for this difference is that a boring requirement may serve as a compelling justification for obtaining guilt-free luxuries, and most luxuries are associated with hedonic experiences [Kivetz & Simonson 2002]. The pain of paying is likely to be more pronounced for luxuries or hedonic items, which are often difficult to justify and, by definition, are not essential [Shafir et al. 1993]. Also, purchasing and consuming hedonic luxuries can evoke guilt [e.g., Strahilevitz & Myers 1998; Thaler 1980]. However, a utilitarian item rarely needs justification because it is classed as essential, so it is reasonable to buy a utilitarian item without having to participate in an online lucky draw campaign. Thus, this study posits that a boring requirement may reduce the guilt that accompanies one's acquisition of a hedonic reward and may provide a good reason for choosing and consuming a hedonic luxury. Accordingly, this study proposes the following interaction hypotheses:

***H1:** When the effort requirement is boring, individuals are likely to report a more positive evaluation of an online lucky draw that offers a hedonic reward than of an online lucky draw that offers a utilitarian or mystery reward.*

***H2:** When the effort requirement is interesting, individuals are likely to report a more positive evaluation of an online lucky draw that offers a mystery reward than of an online lucky draw that offers a known reward, regardless of whether it is hedonic or utilitarian.*

2.5. Trait Theory

As described in psychology literature, trait theory stipulates that certain traits or dispositions help to characterize differences among individuals. Such individual dispositions are commonly viewed as being relatively stable across situational contingencies and are generally regarded as consequential drivers of behavior [Allport 1961; Cattell 1980]. Trait theory assumes that there is variance in these dispositions and that the dimensions are continuous insofar as they measure the "degree" to which a person possesses the trait. The intensity can fall anywhere on the continuum from very low to very high, but traits are nonetheless an inherent characteristic of all individuals [Allport 1961; Buss 1989]. Fundamental traits, such as personality dimensions, provide a general way of predicting outcomes in a wide array of situations, including e-auction behaviors [Angst et al. 2008]. In attempting to explain an online lucky draw evaluation, an individual trait variable is likely to provide the best predictive power. A review of the literature reveals that a belief in personal good luck is a key individual trait related to participation in lucky draws [Prendergast & Thompson 2008].

2.6. The Moderating Role of Belief in Personal Good Luck

Luck can be viewed as a personality trait, with some individuals believing themselves to be possessed of good luck while others consider themselves possessed of bad luck [André 2006]; thus, belief in luck is perceived as uncontrollable, having little influence on future expectations [Darke & Freedman 1997b]. Evidence from a factor analysis of the Belief in Good Luck Scale (BGLS) suggests that a general belief in luck and a belief in personal good luck are not necessarily related, insofar as the analysis found them to be uncorrelated [Darke & Freedman 1997a]. A belief in being personally lucky predicts a preference for a lucky draw promotion over a coupon or a price discount, but this prediction does not exist in the case of a more general belief in luck [Prendergast & Thompson 2008].

Belief in personal good luck engenders feelings of optimism, which in turn, lead to greater psychological well-

being [Day & Maltby 2003]. Individuals with a higher belief in personal good luck will experience a positive illusion about the likelihood of winning, and this leads to feelings of confidence, control, and optimism [Darke & Freedman 1997a, 1997b]. Furthermore, if people feel lucky, they are likely to estimate a higher likelihood of winning a lottery and will have a greater willingness to participate in such a lottery [Jiang et al. 2009]. Moreover, innate optimism can lead people to interpret uncertainty positively [Bar-Hillel & Budescu 1995; Krizan & Windschitl 2007]. Thus, the current study argues that, because of their optimism, individuals with a high belief in personal good luck are likelier to express low (extrinsic) reward expectations than are people with a low belief in personal good luck. Likewise, individuals with a high belief in personal good luck tend to express a more positive evaluation of an online lucky draw campaign offering a mystery reward (which, by definition, possesses a high level of uncertainty) than of a similar campaign offering known rewards, be they hedonic or utilitarian.

It is important to note that individuals with a low belief in personal good luck are usually unwilling to participate in such online lucky draw campaigns and dislike uncertain and risky events owing to their feelings of pessimism and bad luck [Prendergast & Thompson 2008]. Thus, these individuals' behavior is almost always driven by extrinsic motivation (i.e., rewards) rather than by a campaign itself. In this case, they are more likely to be attracted to a known reward (particularly a hedonic reward, which has a certain value) than to a mystery reward (which necessarily involves a high degree of uncertainty). This different degree of attraction reflects the fact that, quite unlike utilitarian rewards, hedonic rewards are inherently linked to fantasy, fun, and luxuries, which are often difficult to justify and, by definition, are not essential [Shafir et al. 1993]. Prior research has also indicated that a hedonic reward is usually considered to be better than a utilitarian reward as compensation for investing effort in a promotional program [Kivetz & Simonson 2002]. Thus, the present study argues that individuals with a relatively low belief in personal good luck are more likely to express a positive evaluation of an online lucky draw campaign offering hedonic rewards than of a similar campaign offering either utilitarian rewards or mystery rewards. Accordingly, this study proposes the following interaction hypotheses:

H3: *Individuals with a low belief in personal good luck are more likely to positively evaluate an online lucky draw offering a hedonic reward than an online lucky draw offering either a utilitarian or mystery reward.*

H4: *Individuals with a high belief in personal good luck are more likely to positively evaluate an online lucky draw offering a mystery reward than an online lucky draw offering known rewards, regardless of whether it is hedonic or utilitarian.*

Based on the aforementioned literature, Figure 1 illustrates the proposed theoretical framework, which is drawn from SDT and trait theory.

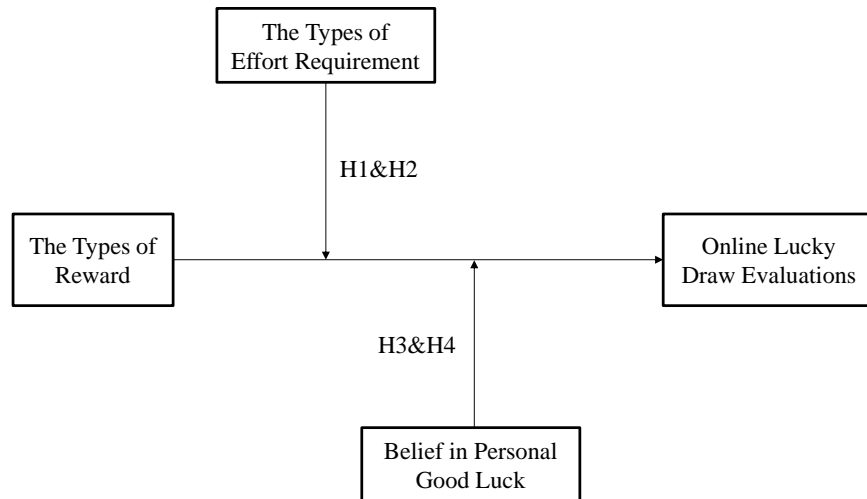


Figure 1: Proposed Research Model

3. Research Methods

3.1. Design and Participants

The study design is a 3 (the type of reward: hedonic vs. utilitarian vs. mystery) \times 2 (the type of effort requirement: interesting vs. boring) \times 2 (belief in personal good luck: high vs. low) between-subjects design, where belief in personal good luck is a measured chronic personality trait. Moreover, this study treats the degree of effort requirement as a confounding variable because the degree of effort requirement has been regarded as an important determinant of reward preference [Kivetz 2003; Kivetz & Simonson 2002; Soman 1998].

The respondents of the current study's survey consisted of college students who were majoring in marketing at a central Taiwanese university and who participated in the experiment in exchange for course credit. The decision to use college students reflects two important facts: the college students can make up a representative sample of Taiwan's e-commerce shopper population [Ozok & Wei 2010], and the college students are quite likely to be familiar with e-commerce and online shopping.

The final sample consisted of 291 participants (median age=20 years, female=68.04%). In the sample, 26 participants were just on the median (i.e., 4.6) of the measure of a belief in personal good luck, so they were excluded from the original sample (n=317) because they did not express a clear tendency for or against a belief in personal good luck.

3.2. Pre-manipulation measures

This study measured participants' level of belief in personal good luck as a chronic personality trait with five statements on a seven-point Likert scale (1=strongly disagree; 7=strongly agree) [Prendergast & Thompson 2008]. The following five items were used (Cronbach's Alpha=.87): "I consider myself to be a lucky person," "I often feel like it's my lucky day," "I consistently have good luck," "Luck works in my favor," and "Even the things in life I can't control tend to go my way because I'm lucky." Reliability was satisfactory and responses to the items were averaged.

3.3. Post-manipulation measures

The respondents were required to evaluate the online lucky draw campaign using three items and a seven-point scale anchored at 1 and 7 ('unattractive'-'attractive', 'definitely would not participate'-'definitely would participate', 'definitely would not recommend to others'-'definitely would recommend to others'; Cronbach's Alpha=.84). The scale had been adapted and modified from Chen and Teng [2013].

To assess the manipulation effectiveness attributable to the types of effort requirement involved in participating in an online lucky draw, this study used one item and a seven-point scale anchored at 1 (boring) and 7 (interesting) [Kivetz 2003]. Participants were also required to indicate whether the rewards in online lucky draws tend to be 1 (hedonic) or 7 (utilitarian) or somewhere in between [Botti & McGill 2011; Kivetz & Simonson 2002]. Furthermore, participants were required to express feelings about their mental imagery (Cronbach's Alpha=.88), and the following three statements served as the manipulation-check items: "I imagined what it would be like to use the reward" (on a 7-point Likert scale, with 1=strongly disagree and 7=strongly agree), "While thinking about the reward, to what extent did images come to mind?" (on a 7-point Likert scale, with 1=to a very small extent and 7=to a very large extent), and "how vividly they were able to picture images of the rewards" (on 7-point semantic differential scale, with 1=purely abstract and 7=purely concrete) [Lee & Qiu 2009]. To eliminate any confounding variable, this study measured the degree of effort requirement by using one item and a seven-point scale anchored at 1 (relatively low) and 7 (relatively high) [Kivetz 2003; Kivetz & Simonson 2002; Soman 1998].

3.4. Procedure

The experiment was conducted by an online survey website to simulate an authentic online promotion campaign in e-commerce. There were between 45 and 52 people in each treatment group. Before participants were asked to read the information about an online lucky draw campaign, their level of belief in personal good luck was measured. Next, the participants were randomly assigned to one of six scenarios (see Appendix B) and were told that the purpose of the study was to understand target audiences' evaluations of an online lucky draw campaign for an online travel store. An online travel store was used as the target business holding an online lucky draw campaign. This choice was made because the profits of online travel agents totaled US\$554 million for the year (i.e., 48.9% of the market share) in Taiwan's business-to-consumer (B2C) market in 2010 [MIC 2011]. The statistic means that online travel stores in Taiwan, having faced tough challenges in attracting target audiences, are good candidates for online sales promotions, which can increase the stores' competitiveness. Moreover, travel is a popular product or service sold on the Internet [Kim *et al.* 2007].

After reading a scenario about an online lucky draw campaign on a website, the participants clicked the "Continue" button and completed a questionnaire containing the dependent variable (i.e., evaluations of an online lucky draw), manipulation-check items, and demographics (i.e., gender and age). All measurement items are provided in

Appendix A. The server detected the completeness of the questions and allowed respondents to click the “Submit” button. After submission, the participants were debriefed according to a common debriefing procedure [Fitzsimons & Shiv 2001], and were informed about the true purpose of the experiment. Special attention was given to ensuring that no participants would attempt to seek out the fictitious campaign at an online travel store.

4. Analysis of Findings

4.1. Manipulation check

A t-test revealed that playing a game was deemed to be more interesting (Mean (M) = 4.37, Standard Deviation (SD) = 1.89) than completing a questionnaire (M = 3.81, SD = 1.72; t = 2.64, p < .001), but there were equal degrees of effort requirements (t = .64, p = .52). A one-way ANOVA revealed a significant effect of the types of rewards on the manipulation-check item (i.e., product characteristics) (F (2, 288) = 102.46, p < .001). An adjustment with the Scheffé method for multiple comparisons revealed that participants perceived the travel package (M = 1.96, SD = 1.27) to be more hedonic than the notebook (M = 5.57, SD = 1.82; t = 13.80, p < .001) and the mystery gift (M = 4.73, SD = 2.26; t = 10.37, p < .001). In contrast, they also perceived that the notebook (M = 5.57, SD = 1.82) was more utilitarian than the travel package (M = 1.96, SD = 1.27; t = 13.80, p < .001) and the mystery gift (M = 4.73, SD = 2.26; t = 3.25, p = .0056).

A one-way ANOVA revealed a significant effect of the types of rewards on mental imagery (F (2, 288) = 31.86, p < .001). An adjustment with the Scheffé method for multiple comparisons revealed that, according to participants, the travel package (M = 4.99, SD = 1.64) was more concrete than the mystery gift (M = 3.46, SD = 1.69; t = 6.38, p < .001). They also perceived that the notebook (M = 5.19, SD = 1.63) was more concrete than the mystery gift (t = 7.37, p < .001). However, the mean difference between the travel package and the notebook in the index of mental imagery was insignificant (t = .83, p = .71). Thus, the results indicate that the manipulation of both the types of effort requirement and the types of rewards was successful.

4.2. Categorization of Belief in Personal Good Luck

The median score of belief in personal good luck was 4.60, and those samples that were just on the median were omitted (n = 26). If the median score was higher than 4.60, the respondents were categorized in the group with a “high level of belief in personal good luck” (n = 151; female = 74.83%). Conversely, if the median score was lower than 4.60, the respondents were assigned to the group with a “low level of belief in personal good luck” (n = 140; female = 60.71%). A t-test revealed that the group with a “high level of belief in personal good luck” did indeed hold a higher level of belief in personal good luck (M = 5.65, SD = .77) than did the group with a “low level of belief in personal good luck” (M = 3.57, SD = .71; t = 23.82, p < .001).

4.3 Hypotheses Testing

A three-way ANOVA was performed in relation to three independent variables: the type of reward, the type of effort requirement, and belief in personal good luck. The evaluation of an online lucky draw was regarded as a dependent variable. The results reveal a two-way interaction involving the type of reward and the type of effort requirement (F (2, 279) = 23.53, p < .01, η^2 = .13), and a two-way interaction involving the type of reward and belief in personal good luck (F (2, 279) = 5.52, p < .01, η^2 = .03). Table 1 shows the results.

A simple main-effect test revealed that when participants engaged in a boring task, their evaluation of an online lucky draw involving a hedonic reward (M = 4.84, SD = 1.55) was likely to be more positive than their evaluation of an online lucky draw involving either a utilitarian reward (M = 3.37, SD = 1.32; F (1, 144) = 25.76, p < .001, η^2 = .07) or a mystery reward (M = 3.42, SD = 1.54; F (1, 144) = 23.89, p < .001, η^2 = .07). These results support H1. Consistent with H2, the results reveal that when participants engaged in an interesting task, their evaluations of an online lucky draw tended to be more positive in response to a mystery reward (M = 4.31, SD = 1.43) than in response to either a hedonic reward (M = 2.95, SD = 1.30; F (1, 141) = 21.03, p < .001, η^2 = .06) or a utilitarian reward (M = 3.31, SD = 1.37; F (1, 141) = 12.00, p < .001, η^2 = .03). It bears noting that all of the significant findings were associated with small effect sizes. The means of each cell, presented in Table 2 and Figure 2, illustrate the results.

Table 1: Effects on the Evaluation of an Online Lucky Draw

Sources of Variation	F Value	d.f.	η^2
the type of effort requirement	4.61**	(1, 279)	.01
the type of reward	4.84***	(2, 279)	.03
belief in personal good luck	6.26***	(1, 279)	.02
reward \times effort requirement	23.53***	(2, 279)	.13
effort requirement \times belief in personal good luck	.85	(1, 279)	.00
reward \times belief in personal good luck	5.52***	(2, 279)	.03
effort requirement \times reward \times belief in personal good luck	1.53	(2, 279)	.01
Total	7.68***	(11, 279)	.23

Note: * $p \leq .10$; ** $p \leq .05$; *** $p \leq .01$.

Table 2: The type of reward on the Evaluation of an Online Lucky Draw by the type of effort requirement

Variables	The Type of Effort Requirement	
	Interesting	Boring
Hedonic Reward	2.95 (1.30) n=47	4.84 (1.55) n=46
Utilitarian Reward	3.31 (1.37) n=52	3.37 (1.32) n=51
Mystery Reward	4.31 (1.43) n=45	3.42 (1.54) n=50

Note: Standard deviations are in parentheses.

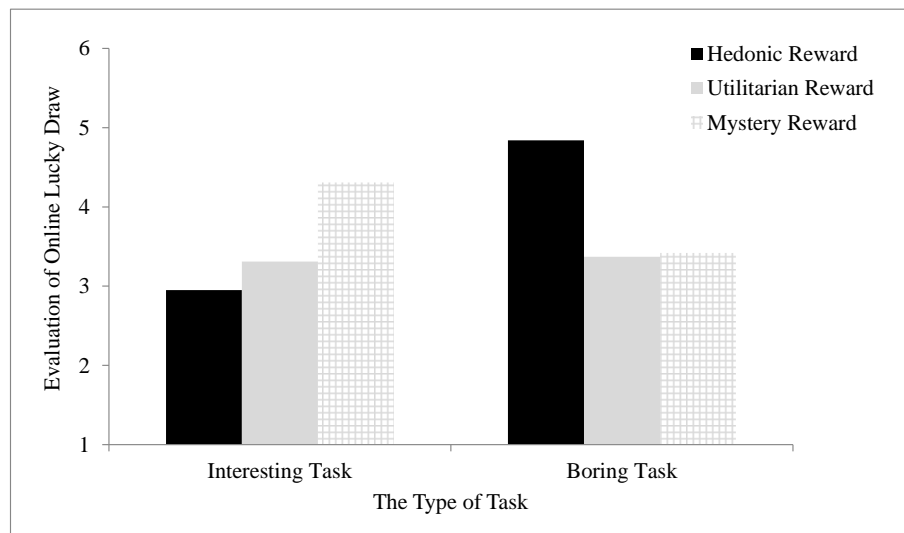


Figure 2: The Types of Reward on an Online Lucky Draw Promotion by the Type of Effort Requirement

The findings also support H3 and H4. Participants with a low belief in personal good luck were likely to express a more positive evaluation of an online lucky draw in response to a hedonic reward ($M = 4.07, SD = 1.82$) than in response to either a utilitarian reward ($M = 3.02, SD = 1.35; F(1, 137) = 11.53, p < .001, \eta^2 = .04$) or a mystery reward ($M = 3.29, SD = 1.29; F(1, 137) = 6.10, p = .01, \eta^2 = .02$). In contrast, participants with a high belief in personal good luck were likely to express a more positive evaluation of an online lucky draw in response to a mystery reward ($M = 4.34, SD = 1.60$) than in response to either a hedonic reward ($M = 3.71, SD = 1.60; F(1, 148) = 4.29, p = .04, \eta^2 = .01$) or a utilitarian reward ($M = 3.63, SD = 1.27; F(1, 148) = 5.83, p = .02, \eta^2 = .02$). Once again, the significant findings were associated with small effect sizes. The means of each cell, presented in Table 3 and Figure 3, illustrate

the results.

Table 3: The type of reward on the Evaluation of an Online Lucky Draw by the level of belief in personal good luck

Variables	Belief in Personal Good Luck	
	High	Low
Hedonic Reward	3.71 (1.60) n=47	4.07 (1.82) n=46
Utilitarian Reward	3.63 (1.27) n=54	3.02 (1.35) n=49
Mystery Reward	4.34 (1.60) n=50	3.29 (1.29) n=45

Note: Standard deviations are in parentheses.

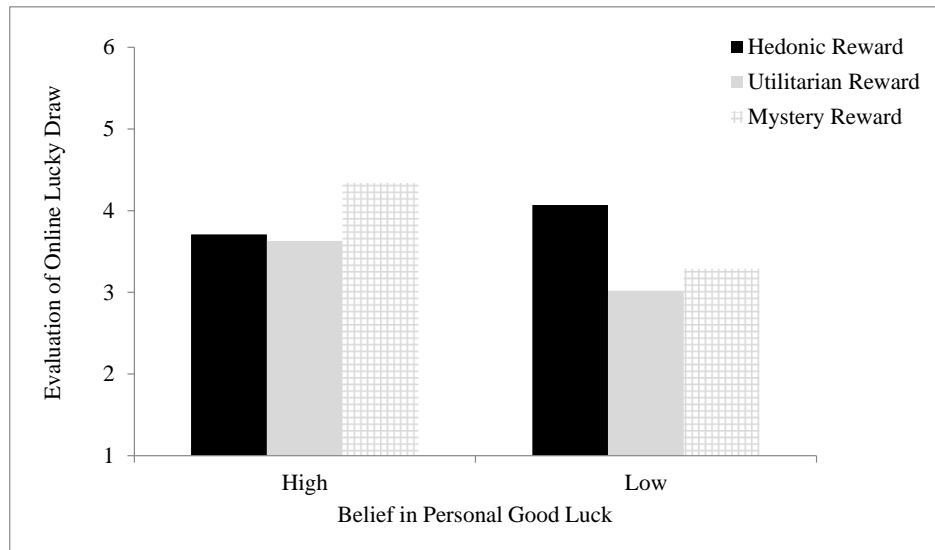


Figure 3: The Types of Reward on an Online Lucky Draw Promotion by the Level of Belief in Personal Good Luck

5. Conclusions and General Discussion

5.1. Theoretical Contributions

The theoretical contributions of the current study go beyond those of previous research in three important ways. First, practitioners and researchers have made significant use of SDT to learn about users’ perceptions of educational services [e.g., Standage *et al.* 2005], but SDT’s application to online shoppers’ perceptions of marketing strategies in e-commerce is still a poorly understood subject that warrants much more attention. This study transplants the application of SDT from a specifically educational service to e-commerce in general and contributes to the literature by integrating SDT with trait theory (i.e., belief in personal good luck). Second, this study takes a small step toward extending the findings from Prendergast and Thompson [2008] insofar as the evidence in the present study reveals that individuals with a low belief in personal good luck may tend to positively evaluate online lucky draw campaigns as long as the campaigns’ marketers offer hedonic rewards.

Third, people tend to be risk averse [Gneezy *et al.* 2006; Kahneman & Tversky 1979], and in general, adding uncertainty to a benefit makes it comparatively less attractive [Kimball 1993]. However, there is ample evidence of such promotions being used in the marketplace, and a few works on uncertainty demonstrate that consumers can develop notably optimistic interpretations of promotions whose benefits are uncertain [Goldsmith & Amir 2010; Laran & Tsiros 2013]. For example, prior research has explored the idea that people’s positive affective state may strengthen their receptiveness to pleasant surprises [Laran & Tsiros 2013]. Other research has shown the effects of effort requirements and intrinsic motivation on higher-risk choices [Kivetz 2003], and it is evident that significant effort requirements increase the positive effect of (or sensitivity to) large (sure) rewards. The present study extends these previous findings by treating both effort-requirement types and individual traits (i.e., belief in personal good

luck) as two boundaries of the relationships between reward types and evaluations of online lucky draws. No research has yet explored the topic of how online shoppers evaluate online lucky draws in e-commerce when the rewards have been classified into three types that are widely offered as incentives.

5.2. Practical Implications

Consumers are frequently exposed to online sales promotions involving uncertainty, such as an online lucky draw campaign. Typically, such online promotions offer consumers the possibility of a reward in exchange for their patronage or in exchange for their personal information. Moreover, from a motivation perspective, an online lucky draw campaign can increase interaction owing to the associated effort requirements. From an economic perspective, online lucky draw campaigns can be less expensive than other types of sales-promotion campaigns because, as demonstrated by prior research, an uncertain reward can be more motivating than a certain reward, even if it has a higher expected value [Shen *et al.* 2015]. From a hedonic perspective, online lucky draw campaigns can be a source of positive experience and hence can increase consumer enjoyment and satisfaction because an online lucky draw campaign feels like a game, making online shopping more entertaining and engaging.

The findings in this study offer compelling insights and practical implications for e-marketers. One of the main findings is that e-marketers who execute online lucky draw campaigns can simultaneously reduce promotion costs and maintain potential customers' interest in a product or service. Online retailers who want to employ cost-effective promotions would like to establish a match between the types of reward and the types of effort requirement. That is, positive responses to online lucky draw campaigns are strengthened when marketers provide rewards that satisfactorily compensate for the campaigns' associated types of effort requirement. For example, online retailers who require their customers to complete a "post-shopping satisfaction" questionnaire should provide the customers a hedonic reward that acts as an incentive strengthening their participation intention. In contrast, if—in a bid to build brand equity—an online lucky draw campaign offers online shoppers an opportunity to play an amusing online game, the campaign's e-marketers should provide the shoppers a mystery gift that (as in the previous scenario) acts as an incentive strengthening their participation intention.

Another practical implication of the current study's research findings is that e-marketers should consider conducting their own preliminary research to determine the extent to which particular market segments strongly believe in personal good luck. Having made these determinations, e-marketers could try to personalize or tailor campaigns to such segments. It is not practical to measure an online shopper's individual differences prior to executing a promotion program. Therefore, from the perspective of e-marketers, using individual differences to segment a market might be more difficult than simply using demographic variables to achieve the same outcome. However, this difficulty does not diminish the importance of clarifying how belief in personal good luck affects evaluations of online lucky draw campaigns. Indeed, some limited studies have shown that beliefs about personal luck differ according to education, sex [Wong & So 2003], and age [André 2006]. Moreover, priming participants subliminally with luck-related stimuli (e.g., numbers or colors) can make the participants feel luckier [Block & Kramer 2009; Hamerman & Johar 2013; Jiang *et al.* 2009]. For example, e-marketers who offer online shoppers a mystery gift as a campaign incentive could use the color red on the campaign web page to strengthen the shoppers' sense of personal luck, ultimately increasing their evaluations of the given online lucky draw campaign.

5.3. Limitations and Directions for Future Research

This study's limitations leave several areas open for future research. First, this study focuses only on attitudinal tendency and ignores psychological states, such as mental imagery, which are normally associated with uncertainty. An imageability-based framework, proposed by Lee and Qiu [2009], explains how consumers facing uncertainty that is associated with a positive event (e.g., winning a lucky draw but not knowing the exact prize won) can experience greater, longer-lasting positive feelings than would be the case with consumers facing certainty associated with a similarly positive event. Along similar lines, the present study asserts that online shoppers' generation of mental-imagery processing (e.g., the shoppers' visualization of possible prizes and of the uses to which the prizes could be put) may give the shoppers a virtual winning experience that substitutes for actual winning, in turn strengthening the likelihood that they will positively evaluate the given promotional campaign. Thus, the current study is probably not yet sufficiently comprehensive and, if it is to be properly modified, must undergo further examination.

A second limitation of the present study is the absence of any rigorous consideration of personal risk. Calvo and Castillo [2001] predicted that attitudes toward personal risk can influence the effectiveness of uncertainty rewards. In light of this prediction, future research would do well to control the effect of risk attitudes on lucky draws. A third limitation of the study is that the research was based on a single lucky draw campaign scenario, thus significantly minimizing the extent to which the findings can be generalized to other product categories. For this reason, research on diverse scenarios would strengthen its findings' generalizability. Fourth, in the context of promotion campaigns,

beliefs about personal good luck may vary not simply between individuals, but also systematically within individuals—depending on such circumstances as the promoted product and the purchase situation [Jiang *et al.* 2009]. Future research could replicate the present study by priming luck-related stimuli (e.g., numbers or colors) to make participants feel luckier. Finally, this study has used a student sample to represent the main body of online-shopping target audiences, but this rather narrow population segment has decreased the external validity of the current findings and does not constitute a demographically diverse group. Future research would likely strengthen its findings' generalizability by recruiting respondents from an authentic environment. In brief, researchers in this field could improve upon the current study's findings by exploring how to overcome its limitations.

5.4. Conclusions

Using SDT and trait theory, this study offers an additional viewpoint from which to address how various rewards, effort requirements, and individual traits (i.e., belief in personal good luck) may have different effects on evaluations of online lucky draws. This study explores the conditions under which promotions involving mystery rewards (e.g., the chance to win either a valuable reward or an inferior reward) may be more effective than promotions offering known rewards. The results have revealed several interesting patterns that can emerge in the context of an online promotion campaign: an interesting promotional task requirement for online shoppers can increase their positive response to the reward if it is a “mystery” reward whereas a boring task requirement can bolster the shoppers' positive response to rewards that are known, in particular to hedonic rewards. Moreover, this study finds that online shoppers' belief in personal good luck can play an important moderating role in their perception of online lucky draw campaigns. However, these significant findings should be viewed with caution, as small effect sizes were reported. Further research is now required to generate evidence either verifying or refuting the present study's findings that online shoppers' evaluation of online lucky draws can be influenced by a combination of reward types, effort requirements, and belief in personal good luck.

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Appendix A

The measurement items used in this study

Variables	Measurement Items	Sources
Evaluations of lucky draw campaign	<ul style="list-style-type: none"> ● unattractive – attractive ● definitely would not participate – definitely would participate ● definitely would not recommend to others – definitely would recommend to others (a seven-point scale anchored at 1 and 7)	Chen and Teng [2013]
The types of rewards	a seven-point scale anchored at 1 (hedonic) and 7 (utilitarian)	Botti and McGill [2011]; Kivetz and Simonson [2002]
The feelings of mental imagery	<ul style="list-style-type: none"> ● I imagined what it would be like to use the reward (1 = strongly disagree to 7 = strongly agree) ● While thinking about the reward, to what extent did images come to mind? (1 = to a very small extent to 7 = to a very large extent) ● how vividly they were able to picture images of the rewards (a seven-point semantic differential scales anchored at 1 (abstract) and 7 (concrete)) 	Lee and Qiu [2009]
The types of effort requirement	a seven-point scale anchored at 1 (boring) and 7 (interesting)	Kivetz [2003]
Belief in personal good luck	<ul style="list-style-type: none"> ● I consider myself to be a lucky person ● I often feel like it's my lucky day ● I consistently have good luck ● Luck works in my favor ● Even the things in life I can't control tend to go my way because I'm lucky (1=strongly disagree; 7=strongly agree)	Prendergast & Thompson [2008]
The degree of effort requirement	a seven-point scale anchored at 1 (relatively low) and 7 (relatively high)	Soman [1998], Kivetz and Simonson [2002], Kivetz [2003]

Appendix B

Manipulations of the types of rewards and the types of effort requirement.

Situations	Scenario
Interesting requirement / Hedonic	An online travel store held an online lucky draw campaign and [<i>invited you to play a game</i>] on their website (lasting approximately 20 minutes). If you completed the requirements, you would qualify to participate in an online lucky draw. The online travel store provided one [<i>travel package</i>] as a reward (the value is US\$100).
Interesting requirement / Utilitarian	An online travel store held an online lucky draw campaign and [<i>invited you to play a game</i>] on their website (lasting approximately 20 minutes). If you completed the requirements, you would qualify to participate in an online lucky draw. The online travel store provided one [<i>notebook</i>] as a reward (the value is US\$100).
Interesting requirement / Mystery	An online travel store held an online lucky draw campaign and [<i>invited you to play a game</i>] on their website (lasting approximately 20 minutes). If you completed the requirements, you would qualify to participate in an online lucky draw. The online travel store provided one [<i>mystery gift</i>] as a reward (the value is US\$100).
Boring requirement / Hedonic	An online travel store held an online lucky draw campaign and [<i>invited you to complete a survey</i>] on their website (lasting approximately 20 minutes). If you completed the requirements, you would qualify to participate in an online lucky draw. The online travel store provided one [<i>travel package</i>] as a reward (the value is US\$100).
Boring requirement / Utilitarian	An online travel store held an online lucky draw campaign and [<i>invited you to complete a survey</i>] on their website (lasting approximately 20 minutes). If you completed the requirements, you would qualify to participate in an online lucky draw. The online travel store provided one [<i>notebook</i>] as a reward (the value is US\$100).
Boring requirement / Mystery	An online travel store held an online lucky draw campaign and [<i>invited you to complete a survey</i>] on their website (lasting approximately 20 minutes). If you completed the requirements, you would qualify to participate in an online lucky draw. The online travel store provided one [<i>mystery gift</i>] as a reward (the value is US\$100).