

The present research examines how the inclusion of consolation or token prizes influences consumers' valuation of a promotional lottery. Results from four experiments show that consolation prizes lower consumers' expectations of winning the big prize, their valuations of the lottery, and their intentions to participate in the lottery. Because of the high likelihood of attaining the consolation prizes, consumers shift their focus from the value of a big prize to the probability of attaining it. This shift increases the weight given to the probability dimension and results in lowered valuations of the lottery. The first two experiments demonstrate the effect in hypothetical and real choices. In Experiment 3, the authors propose and show a boundary condition for the effect. In Experiment 4, they conduct an exploratory test of the process. They conclude with a discussion of the theoretical and managerial implications.

Keywords: promotional lottery, consolation, less is more, shift in weight

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Killing Hope with Good Intentions: The Effects of Consolation Prizes on Preference for Lottery Promotions

Retailers often offer small gifts to consumers who buy certain products or spend certain amounts of money in their stores. Sometimes, retail promotions occur in the form of lotteries in which, with some uncertainty, consumers can win prizes of greater value. In many marketing promotions, consumers entering such lotteries expect to either win a valuable prize (e.g., a car) or get nothing. In other promotions, in addition to prizes of high value, marketers also include many small token or consolation prizes (e.g., a \$2 coupon). Consumers entering such lotteries will have a very high likelihood of winning one of these small prizes. At times, these small prizes are even guaranteed such that everyone entering the lottery gets something.

In the real world, there are several examples of this form of promotion. For example, M&M's once offered a lucky draw promotion in which the big prize was a Fiat 500 car. Moreover, in addition to this grand prize, there were thousands of small prizes in the form of coupons for free M&M's candies. In one of Wendy's fast-food restaurant promotions, consumers could win \$10,000 or other large prizes. If they did not win these big prizes, they would receive a \$1 coupon for a Twisted Frosty. In the same vein, American Airlines once offered a similar deal: consumers who watched the firm's new commercials and answered a few questions would have a chance to enter in a lucky draw in which they could either win the grand prize (200,000 AAdvantage miles) or a guaranteed reward of 100 AAdvantage miles.

Little research has been conducted on the effect of reward structure in promotional lotteries on consumer valuation of these promotions, despite its clear theoretical and managerial importance. Our research investigates whether and how including a small token prize affects consumers' perception and valuation of the lottery and, subsequently, their intention to participate in the promotion.

The economic theories of consumer choices under risk would predict that given a choice between two lottery

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designs, consumers are more likely to participate in one with token prizes because it offers greater expected value. Contrary to this prediction, we argue that the token or consolation prize actually lowers consumers' perceived likelihood of winning the big or "grand" prize, resulting in reduced intention to participate in and willingness to pay (WTP) for lotteries. As we outline in the next section, we posit that the addition of a consolation prize shifts the focus from the value of the big prize to the probability of winning a small prize, leading to a reduced valuation of the lottery.

CONCEPTUAL BACKGROUND

Theories of choice under risk such as the subjective expected utility theory (Savage 1954; Von Neumann and Morgenstern 1947) posit that the two dimensions of risky options—payoff and probability—jointly determine an agent's preference for those options. In this class of theories, preferences are believed to satisfy first-order stochastic dominance. Assume that there are two lotteries, A and B, such that for all values of x , the probability of winning x or more in Lottery A is greater than or equal to the probability of winning x or more in Lottery B. Under this condition, we conclude that A stochastically dominates B, and therefore, people will not prefer B over A (Birnbau 2008; Hadar and Russell 1969; Lopes 1995). Research in prospect theory identifying violations of several axioms of the subjective expected utility theory has recognized that, at times, people's choices may violate the first-order stochastic dominance principle (Kahneman and Tversky 1979). However, such research has proposed that the dominated options would be screened out at the "editing" stage unless the dominance structure is masked (Tversky and Kahneman 1986). Even the nonlinear utility models that relax certain axioms (e.g., the independence axiom) of the expected utility theory nonetheless retain the principle of first-order stochastic dominance (Fishburn 1989; Levy 1992; Machina 1982). Thus, a Lottery B offering a positive outcome of x with a probability of p (and nothing with $1 - p$) should not be valued more highly than another Lottery A offering x with a probability p and an additional small certain (or highly probable) positive outcome y . However, we claim that this nonintuitive pattern of preference (valuing B more than A) can occur under certain conditions.

A possible explanation for this pattern of preference is that although the experimenter considers y a positive outcome, participants have a repulsive feeling toward y and thus assign lesser value to the lottery that includes y . In such contexts, it is reasonable to expect that the overall value of the lottery becomes diluted by the "inferior" outcome. If this indeed were the explanation, our effect would be considered merely a replication of the value dilution effect reported by several researchers (Anderson 1981; Hsee 1998; Nisbett, Zukier, and Lemley 1981). However, in the present research, we consider only instances in which consumers have positive utility for the token prizes. Therefore, value dilution is not the appropriate explanation. Instead, our explanation stresses shift in attention and increase in the weight accorded to the probability dimension in consumer evaluations.

We propose that when the lottery contains big prizes only, consumers tend to focus on the value of the big prize. However, the addition of a consolation prize makes the high probability of winning the smaller prize—and, in contrast,

the low probability of winning the bigger prize—more salient, leading to greater weight accorded to the dimension of probability. Let us consider explanations for consumers' responses when consolation prizes are included versus excluded.

In lotteries without consolation prizes, the big prize itself contains the most vivid and salient information, which receives disproportionate weight in the valuation of the promotion (Taylor and Fiske 1978). Moreover, even if people pay sufficient attention to the small probability of winning, they are less likely to directly rely on it because of its low evaluability (Hsee 1996). Instead, they often utilize dimensions that they can readily assess. In the lottery context, the value of the prize meets this criterion and therefore receives a greater weight. Thus, when the lottery contains big prizes only, people will be more focused on the value of these big prizes. Furthermore, we propose that focusing on the high value of big prizes leads to optimistic estimates of winning odds. This overestimation could be due to innate optimism under uncertainty (Goldsmith and Amir 2010), wishful thinking (Krizan and Windschitl 2007), or mental simulation of the desirable outcome (Carroll 1978; Gregory, Cialdini, and Carpenter 1982).

When consolation prizes with either certainty or very high likelihood are added, consumers receive probability information for the two prizes simultaneously. Compared with that of the big prize, the probability of attaining the small, token prize is typically higher. Such contexts increase the evaluability of the low probability pertaining to the big prize (Hsee 1996). However, although evaluability is a necessary condition, it is not sufficient to shift attention from the value of the focal prize to the probability of attaining it. For this shift to occur, the difference between the two prizes in terms of probability should be sufficiently high. In other words, the small prize should be either guaranteed or offered with a high likelihood.

Provision of information about a highly probable outcome causes consumers to construct standards of comparison around this information. That is, the large probability of winning the small prize serves as a standard against which the small probability of winning the big or grand prize is compared. As the difference between the two prizes in terms of the probability of attainment becomes large, the small probability of winning the big prize (or the extremely high probability of winning a small token) becomes transparent, and the salience of the probability dimension increases. Therefore, a shift in attention toward the attribute of probability occurs. Consequently, people attach a greater weight to this attribute in the lottery valuation.

Furthermore, if the standard possesses extreme values on an attribute of comparison, there will be adequate potential for contrast effects to occur (Biernat 2005; Schwarz and Bless 1992). A low probability associated with the attainment of the big prize could seem strikingly low when contrasted with a very high probability of receiving the consolation prize. The same low probability of winning the big prize may not seem particularly low when the probability of attaining the small prize is not very high (although it may still be better than that of the big prize). Such a contrast will moderate the expectations of winning and also dampen consumers' optimistic tendencies. Thus, in many ways, the addition of a token prize with a high likelihood (1) causes a shift in attention from the value of the big prize to the proba-

bility of attaining it, (2) increases the weight accorded to the probability dimension in the valuation of lottery promotions, and (3) leads to a lower overall valuation of the lottery.

Do these assumptions mean that adding a consolation prize will have no effect on the perceived value of the big prize? It is possible that the consolation prize will dilute the value of the big prize. As we mentioned previously, we control for this possibility by considering only those situations in which consumers attach some positive value to the consolation prize. Furthermore, it is plausible that the lesser focus on the value of the big prize, rather than the increased attention toward probability, causes the decrease in valuation. We do not make any predictions about this alternative account but test for it in one of our experiments.

In summary, the basic premise of this research is that adding a small prize shifts attention toward and thereby increases weight accorded to the probability of winning the big prize. This increased weight on the probability aspect reduces both consumers' expectations of winning the big prize and their valuation of the lottery. This effect occurs only when the probability of winning the small prize is high. Thus:

- H_{1a}: Consumers' valuations of and intentions to participate in a lottery-based promotion are greater when the lottery excludes (vs. includes) consolation prizes.
- H_{1b}: Consumers' perceived likelihood of winning the big prize is higher when a lottery excludes (vs. includes) consolation prizes.
- H₂: The effects proposed in H_{1a} and H_{1b} occur only when the probability of winning the consolation prize is high.
- H₃: The addition of high-probability consolation prizes increases the weight accorded to probability information pertaining to the big prize.

THE PRESENT RESEARCH

After establishing the basic effect in a pilot study (see the Web Appendix), we tested our predictions and obtained evidence in support of our proposed effect in four experiments. Experiment 1 offers preliminary support for our proposition by showing that the addition of consolation prizes indeed decreases participants' willingness to participate in the promotion (H_{1a}) and their perceived likelihood of winning a bigger prize (H_{1b}). In Experiment 2, we generalize these results using a real choice task. In Experiment 3, we examine whether the probability of attaining the token prize moderates the effect obtained in Experiments 1 and 2 (H₂). In Experiment 4, we test for the weight shift versus value focus mechanisms and obtain support for H₃.

Our findings have important implications for decision theory and marketing. Research has not yet demonstrated the violation of stochastic dominance resulting from a third dimension of the lottery: reward structure. Scholars of decision theory may need to propose a generalized model to accommodate this dimension and the violation of first-order stochastic dominance it suggests. For marketers, offering a lottery without a consolation prize would be cheaper and probably more effective if the promotional objective is to attract more consumers to participate in the lottery.

EXPERIMENT 1: THE EFFECT OF CONSOLATION PRIZES

In Experiment 1, we investigate the effects of consolation prize on consumers' intention to participate in the lottery and perceived likelihood of winning the grand prize. We detail our method and results in the following subsections.

Method

Design and participants. We used a two-cell (consolation vs. no consolation) between-subjects design. Ninety-one Hong Kong undergraduate students (47 women; average age = 20 years) participated in this study and were randomly assigned to one of two experimental conditions.

Stimulus development. We developed the stimuli for this experiment with the following considerations. First, although the word "consolation" is commonly used in many real lottery promotions, we thought that this word could make the concept of "losing" more salient. From a communication norm perspective, offering a consolation prize may emphasize to participants that the attractive reward is unlikely to be theirs. To control for this possibility, in all four experiments, we presented the prize information without mentioning the word "consolation." Second, participants in the consolation prize condition may infer that more consumers would participate in the lottery if a consolation prize were guaranteed. Consequently, those in the control conditions might reason that the objective probability of winning the big prize would be lower. To control for this possibility, we kept the objective probability constant and explicit across all conditions of the four experiments. In all the experiments, we quoted the value of the prizes in the local currency (Hong Kong dollars; US\$1 = HK\$7.8).

Procedure. Participants in both conditions were told that the purpose of the study was to understand consumers' response to marketing activities. They were then given the following scenario:

A local shopping mall is planning to launch a promotion program in which customers who spend more than HK\$500 in a day will be entitled to enter a lucky draw for every HK\$500 they spend. Three lucky customers out of 1,000 will win a cash prize of HK\$10,000.

In the consolation condition, participants were also told that the remaining 997 customers would each receive HK\$5 cash. After reading the description, participants indicated the likelihood of their participating in this promotion and the perceived likelihood of their winning the \$10,000 prize on seven-point scales anchored by 1 ("very unlikely") and 7 ("very likely").

Results

Participation intention. The results of a single-factor analysis of variance (ANOVA) revealed a main effect of the consolation prize ($F(1, 89) = 7.63, p < .01$). As we predicted, participants in the no-consolation condition ($M = 4.02, SD = 1.66$) indicated greater intent to enter the lucky draw than their counterparts in the consolation condition ($M = 3.02, SD = 1.79$).

Likelihood of winning the big prize. Similarly, in line with our prediction, participants in the no-consolation condition ($M = 2.56, SD = 1.40$) perceived greater likelihood of winning the big prize than those in the consolation condition ($M = 1.94, SD = 1.08; F(1, 89) = 5.66, p < .05$). Furthermore, we found that the prize expectation mediated the effect of the consolation prize on participation intention (for details of the mediation analysis, see the Web Appendix).

Discussion

Experiment 1 thus supports H_{1a} and H_{1b}. However, an alternative explanation could be raised: in the small prize condition, participants might have accessed a heuristic

belief that gambles promising small token prizes may be manipulated (i.e., no one actually wins the big prize). To examine this alternative account, we conducted a follow-up study using the same design and procedure as in Experiment 1. Recruited from Amazon.com's Mechanical Turk, 60 participants were randomly assigned to either the consolation or no-consolation condition. After reading the same cover story used in Experiment 1, they were asked to indicate the extent to which they agree or disagree with the following statement: "I believe that someone is going to win the big prize" (1 = "strongly disagree," and 7 = "strongly agree"). The results indicated no difference between the consolation ($M_{\text{consolation}} = 4.38$, $SD = 2.08$) and no-consolation conditions ($M_{\text{no consolation}} = 4.21$, $SD = 2.33$; $F(1, 58) < 1$, $p > .75$), ruling out the alternative explanation.

EXPERIMENT 2: THE EFFECT IN REAL CHOICES

The objective of Experiment 2 is to test whether the findings obtained in Experiment 1 replicate for real choices. We detail our method and results in the following subsections.

Method

Experiment 2 employed a two-cell between-subjects design. One hundred twenty-seven Hong Kong undergraduate students were randomly assigned to either a consolation or no-consolation condition. All participants were told that around the exam period, the researcher was planning to conduct a large-scale, long survey that would need 1,000 respondents. Participants in the no-consolation condition were told that as a reward, two survey participants would be selected by a lucky draw to receive a free iPhone. Those in the consolation condition were told that apart from the two who received the iPhone, all other participants would receive a bottle of drinking water. All participants were asked to indicate whether they were willing to participate in this survey (a binary choice), and the proportion who agreed to participate in the survey served as the dependent measure.

Results and Discussion

As we anticipated, participants in the no-consolation condition (consent rate = 42/66 or 64%) exhibited greater willingness to participate in the study than those in the consolation condition (consent rate = 26/61 or 43%; $\chi^2(1) = 5.63$, $p < .05$). Often, hypothetical and real choices may not follow the same pattern. For our findings to be useful to marketers, it is essential that we replicate them in a real choice. Experiment 2 achieved this replication.

The suggestion that consumers may violate the economic theory is built on the premise that the consolation prizes carry at least some positive value. To validate this premise, we conducted a poststudy with 56 undergraduate students (31 women; average age = 24 years). They were provided information about two studies with lottery-based rewards. The lottery in one study offered two big prizes only, whereas the lottery in the other study offered two big prizes as well as several consolation prizes. The descriptions of these two studies were exactly the same as those in Experiment 2. Participants were asked to indicate in which of the two studies they were more likely to participate. Note that the task now becomes a binary choice, and the first-order stochastic dominance is highly transparent. We found that all participants in this study chose the option with the consolation prize, implying that participants indeed placed some positive value on the small prize (i.e., bottled water).

EXPERIMENT 3: A BOUNDARY CONDITION

Experiment 3 has three objectives. First, we examine a boundary condition for our findings. We propose that to shift attention from value of the big prize to its probability, consumers must compare the higher likelihood of the token prize with the smaller likelihood of the big or grand prize. Therefore, the effect occurs only for consolation prizes with a large likelihood but not for those with a small likelihood (H_2). For this purpose, we include four conditions in this study: (1) no consolation, (2) consolation with small probability (50 out of 10,000), (3) consolation with a high probability (8,000 out of 10,000), and (4) guaranteed consolation. In line with our reasoning, we predict little difference between the no-consolation and the consolation with small probability conditions because a low probability of winning a small prize is not sufficient for either greater attention or subsequent contrast to operate. Similarly, we predict no difference between the high-probability consolation and the guaranteed consolation conditions because the probability of receiving a small prize is large enough to shift focus and to contrast with the small odds of winning the big prize in both conditions. By including a high-probability consolation condition in which the small prize is not guaranteed, this study had the additional objective of generalizing our effects to contexts in which the consolation prizes are offered but with some uncertainty. A real-world example that reflects this condition is McDonald's Monopoly game: customers who get a game card are very likely to receive a small prize (e.g., a free order of fries), but this consolation prize is not certain.

Second, this experimental design enables us to rule out an important alternative explanation from our theory perspective. We mentioned previously that possible value dilution in the consolation condition may be considered an alternative explanation. One may argue that in our experiments' no-consolation condition, the few grand prizes are all highly attractive; however, in the consolation prize condition, the presence of a consolation prize dilutes the overall attractiveness. If the value dilution hypothesis were true, compared with the no-consolation condition, lottery preference would be significantly lower in the other three conditions, with minimal differences between them.

Third, we intended to generalize the findings with a different dependent variable as lottery valuation. Instead of measuring intention and likelihood perception using standard Likert scales, we asked participants to state the amount they would be willing to spend to gain eligibility to enter the lucky draw (i.e., WTP). The pricing paradigm is a conservative test of our hypothesis because literature on compatibility has suggested that participants will focus more on the value of the big prize in all the conditions (Tversky, Sattath, and Slovic 1988). However, we predict that the WTP in the no-consolation and the low-probability consolation conditions will be greater than that in the other two conditions.

Method

Participants were 275 undergraduates randomly assigned to one of the four groups. All participants were given information about the following lottery: for every 10,000 tickets, there will be three grand prizes of HK\$10,000 each. In the consolation conditions, participants were told that, in addition, there would be 50 (low-probability consolation), 8,000 (high-probability consolation), or 9,997 (guaranteed consolation) second prizes (HK\$5 each). All participants were

asked to state (1) how much they would be willing to pay to enter this lottery and (2) the perceived likelihood of winning the large prize if they participated (0%–100%).

Results and Discussion

Because participants' WTP was collected in an open-ended format, we excluded data from 23 participants whose responses were three standard deviations from the mean scores in either direction. Data from the remaining 252 participants (152 women; average age = 20 years) were used for further analyses.

Perceived likelihood of winning the big prize. Results of a one-way ANOVA on the perceived likelihood of winning the big prize revealed a marginally significant main effect ($F(3, 248) = 2.41, p < .07$). Follow-up planned contrasts supported our hypotheses (see Figure 1). First, participants in the no-consolation condition ($M = 10.66, SD = 16.01$) expected a greater likelihood of winning than those in the consolation condition ($M = 5.64, SD = 10.68; t(248) = 2.02, p < .05$). Second, perceived likelihood to win the big prize was marginally lower in the high-probability consolation condition ($M = 6.34, SD = 8.92$) than in the no-consolation condition ($t(248) = 1.73, p = .08$). Moreover, the pattern in the low-probability consolation condition supports our argument that the mere presence of a small prize is not sufficient to cause a shift in focus. The perceived likelihood of winning the big prize in this condition ($M = 10.71, SD = 18.33$) did not vary from that in the no-consolation condition ($t(248) < 1, p > .90$).

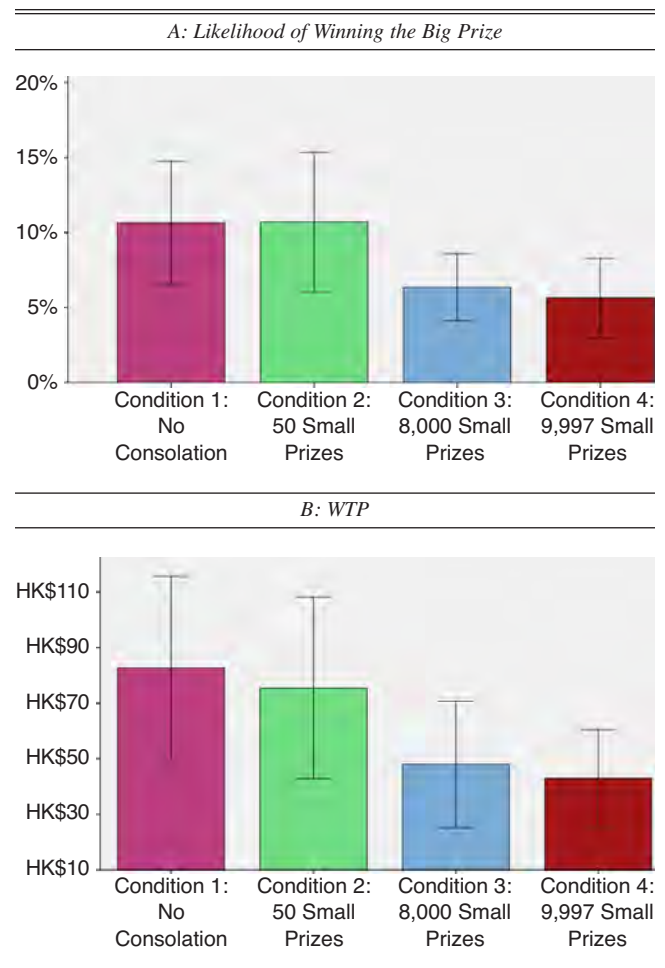
WTP. A single-factor ANOVA uncovered a marginally significant effect on participants' WTP ($F(3, 248) = 2.14, p < .10$). Follow-up tests supported our predictions. First, participants in the no-consolation condition ($M = \$82.69, SD = 128.85$) were willing to pay more than those in the guaranteed consolation condition ($M = \$42.95, SD = 70.74; t(248) = 2.08, p < .05$). Second, the WTP in the high-probability consolation condition was marginally lower ($M = \$48.02, SD = 91.13$) than that in the no-consolation condition ($t(248) = 1.81, p = .07$). Third, the WTP in the low-probability consolation condition ($M = \$75.59, SD = 128.54$) was not significantly different from that in the no-consolation condition ($t(248) < 1, p > .70$). These results substantiate our argument that the effects we observed in Experiments 1 and 2 are not due to value dilution.

Experiment 3 replicated the findings of Experiment 1 with another dependent measure (WTP) that is more commonly used as a preference measure in the decision theory literature. We identified the probability of winning the consolation prizes as a moderator of the effect of consolation prize on lottery valuation. In addition, this experiment ruled out the value dilution hypothesis. Finally, we generalized the effect to small prizes that are uncertain (but can be attained with high probability).

EXPERIMENT 4: FURTHER TEST OF THE PROCESS

Experiments 1–3 provide adequate support to H_{1a} , H_{1b} , and H_2 . Recall that H_3 states the fundamental premise of this article: we propose that adding a consolation prize shifts attention toward and thus increases weight accorded to the dimension of probability. This increased weight on the probability reduces the subjective likelihood of winning the big prize and the valuation of the lottery. We designed Experiment 4 to test H_3 . In addition, we wanted to explore

Figure 1
RESULTS OF EXPERIMENT 3



Notes: Error bars indicate 95% confidence intervals.

whether a focus on the value of the big prize plays a role in the effects of consolation prizes on the lottery valuation.

To this end, we manipulated three factors, each at two levels and all between-subjects. Specifically, in addition to consolation, we also varied the probability of winning the big prize (5 vs. 50 winners out of 10,000) and the value of the big prize (HK\$10,000 vs. HK\$100,000). We used cash (HK\$1) as the token prize in the consolation conditions. We argue that the presence of the consolation prize shifts attention toward the probability of winning the big prize. If this is indeed the case, compared with the no-consolation condition, the effect of the probability of winning the big prize should be greater in the consolation condition. Thus, we predict a consolation \times probability of the big prize interaction. We expect the simple effect of probability to be significant in the consolation condition but not in the no-consolation condition.

In addition, if the focus on value in the no-consolation condition also accounts for the effect, we should find a significant interaction of big prize value \times consolation. Specifically, the effect of value (HK\$10,000 vs. HK\$100,000) should be greater in the no-consolation condition than in the consolation condition. Finally, if the focus on value in the no-consolation condition is the sole driver of the effect (an alternative to our focal explanation), the value \times consolation interaction should be significant, but the probability \times consolation interaction should not be significant.

Method

Participants were 275 Hong Kong undergraduate students (167 women; average age = 20 years) who earned extra course credit for participating in a study session. The present study was the first among all the studies conducted during that session. Participants were randomly assigned to the conditions according to a 2 (consolation vs. no-consolation) \times 2 (value of the big prize: high vs. low) \times 2 (probability of winning the big prize: high vs. low) between-subjects design. All participants were told that a soft drink company was considering using a lucky draw as promotion. Depending on conditions, participants were told that in this promotion, consumers who buy a 24-can pack would have a chance to win \$10,000 (\$100,000) cash, and there would be 5 (50) big prize winners for every 10,000 consumers. In the consolation conditions, participants were told that all other consumers would receive HK\$1 each. After reading the scenario, participants indicated their intention to participate in this promotion on a seven-point scale.

Results

The main effect of consolation on the participation intention was marginally significant ($M_{\text{no consolation}} = 3.32$, $SD = 1.81$ vs. $M_{\text{consolation}} = 2.99$, $SD = 1.69$; $F(1, 267) = 3.20$, $p < .07$). The main effects of the value of the big prize ($M_{\$100,000} = 3.42$, $SD = 1.84$ vs. $M_{\$10,000} = 2.90$, $SD = 1.63$; $F(1, 267) = 5.79$, $p < .05$) and the probability of winning the big prize ($M_{\text{high probability}} = 3.38$, $SD = 1.82$ vs. $M_{\text{low probability}} = 2.92$, $SD = 1.66$; $F(1, 267) = 5.29$, $p < .05$) were both significant.

More importantly from our theory perspective, we observed a significant consolation \times probability interaction ($F(1, 267) = 5.02$, $p < .05$). Follow-up contrasts revealed that, as we predicted, when the consolation prize was present, the probability manipulation had a significant influence on the participation intention ($M_{\text{low probability}} = 2.48$, $SD = 1.46$ vs. $M_{\text{high probability}} = 3.43$, $SD = 1.76$; $t(267) = 3.18$, $p < .01$). In contrast, when the consolation prize was absent, the probability of winning the big prize had no impact on the participation intention ($M_{\text{low probability}} = 3.31$, $SD = 1.74$ vs. $M_{\text{high probability}} = 3.33$, $SD = 1.89$; $t < 1$, $p > .90$).

However, neither the value of prize \times consolation interaction nor the three-way interaction reached significance ($ps > .50$). Collectively, these results support our prediction that the presence of a consolation prize increases participants' attention to the probability dimension, and therefore, the probability of winning the big prize receives greater weight in the valuation of lottery promotions. We found no difference between the consolation and no-consolation conditions in terms of the focus on the value of the big prize. Thus, a greater focus on the probability dimension is likely the mechanism accounting for the effect.

GENERAL DISCUSSION

This research examines the effects of adding consolation prizes in promotional lotteries on consumer valuations of these lotteries. Specifically, we found that consolation prizes reduce both consumers' expectations about winning the big prize and their intention to participate in these lotteries (Experiment 1). This effect occurs not only in hypothetical choices but in real choices as well (Experiment 2); moreover, it holds even when the attainment of the token prizes involves some uncertainty (Experiment 3). However, the negative effect of consolation prizes on the lottery valuation does not occur if the uncertainty associated with the consolation prize

is too high (Experiment 3). Experiment 4 establishes that adding token prizes shifts attention toward the probability of winning the big prize and increases the weight assigned to the probability dimension in the lottery valuation.

Kalra and Shi's (2010) model suggests a strategy for maximizing the value of promotions for the segment of consumers who are risk neutral with respect to gain but risk averse in the domain of losses (perhaps a sizeable segment of consumers who participate in promotion lotteries). The prescribed reward structure for this segment is to have a single grand prize and several small prizes (Kalra and Shi 2010). Our findings suggest the opposite. Although our focus is not on the individual differences in terms of risk aversion, it is reasonable to expect that our finding will be applicable across several segments.

Recent research on uncertainty has examined whether consumers prefer uncertain rewards over certain rewards (Gneezy, List, and Wu 2006; Goldsmith and Amir 2010; Lee and Qiu 2009). Gneezy, List, and Wu (2006) identify a notable phenomenon labeled the "uncertainty effect." The uncertainty effect occurs when people value risky prospects less than the worst possible outcome. For example, in a study by Gneezy, List, and Wu (2006), participants were willing to pay \$38 to obtain a guaranteed \$50 gift certificate with some restrictions. However, they were willing to pay only \$28 for a lottery that offered a \$50 gift certificate and a \$100 gift certificate with equal probability and the same restrictions. These findings are an indirect demonstration of a violation of first-order stochastic dominance caused solely by discounting uncertainty.

Our research instead compares two equally uncertain outcomes and identifies an important element in the reward structure—the token prize—that affects the valuation of uncertainty. Specifically, we show that the probability of one outcome influences perceived probability of a more important outcome. In addition, uncertainty is weighted more heavily in one context than in the other, leading to a lower valuation of the lottery. Our findings suggest that hope, which is the foundation of lotteries in marketing promotions, could be killed in a subtle manner without marketers' awareness and contrary to their intentions.

Although the specifics are different, at a general level, our findings are consistent with the statements of some of the "configural weight" models (Birnbbaum 2008). In these models, the weight of a stimulus (or a branch in the decision) depends on the relationship between the stimulus and others in the same set. In our research, the weight given to the probability of attainment of the grand prize depends on the presence of a guaranteed or highly probable token prize.

In a general sense, our findings are consistent with the "more is less" or "less is better" paradigm of research (Hsee 1998; List 2002), even though our investigation is in the context of uncertain choices and our proposed mechanism is different. In one of his studies, Hsee (1998) finds that consumers assigned greater WTP for a dinnerware set that had 24 pieces than the one that had 40 pieces but had some defective items. Clearly, value dilution explains this effect. In their research on consumer evaluations of product combinations, Brough and Chernev (2012) find that consumers' WTP for bundles that contain an expensive item and a cheaper item that still had positive utility was lower than that of the more expensive item considered alone. The authors attribute this effect to the categorical nature of consumer judgments, implying that value dilution occurs in the

bundle condition (Brough and Chernev 2012). Our effect is due not to value dilution but to shift in weight.

In a follow-up study we reported in this article, we found that when information about the consolation and the no-consolation lotteries is available side by side in a binary choice, consumers invariably choose the lottery with a consolation prize. That is, when the first-order stochastic dominance is highly transparent, this principle is not violated. This result shows that the effect we uncovered is indeed nonintuitive. The different pattern of results in separate versus joint evaluations is consistent with findings from the stream of research on preference reversals that occur as a result of violations of procedural invariance (Slovic and Lichtenstein 1968; Tversky, Sattath, and Slovic 1988). In the real world, often consumers may need to evaluate the promotion lotteries separately because their decision centers on whether to participate.

Our findings have important theoretical and managerial implications. First, we demonstrate a violation of first-order stochastic dominance in separate evaluations of the gambles. To the best of our knowledge, our research is the first to demonstrate this nonintuitive effect resulting from lottery reward structure. Thus, we make important contributions to research on the psychology of risky decision making. In addition, we have provided a parsimonious explanation for this effect and obtained evidence in support of our explanation. Because we found this effect to be quite robust, a possible extension is to propose a generalized utility model that will address this anomaly. Second, our findings have important marketing implications. Promotion lotteries with no consolation prizes are clearly less expensive than those with consolation prizes. Furthermore, consumers may value the no-consolation lotteries more highly and may be more inclined to participate in such lotteries. Therefore, our main finding is highly relevant for marketers from both the efficacy of promotions and cost perspectives.

Our findings may have implications beyond marketing promotions. Specifically, decisions under uncertainty involve choices between options that vary in terms of the dimensions of payoffs and probabilities. We introduce a third dimension: reward structure. It may be possible that some managerial decisions vary in terms of these three characteristics because even very complex decisions could be represented as choices in simple lotteries (Goodwin and Wright 2004). In some of these decisions, attainment of a very highly valued reward may involve low probabilities. In such contexts, our findings suggest that it would be better to exclude small rewards with high probability of attainment if the objective is to encourage risk taking.

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