Why and under which Conditions are Price Lotteries Effective at Promoting Products?

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In recent years, retailers have developed numerous innovative promotion instruments to attract their customers. One of these instruments is the use of price lotteries. When applying a price lottery, a predetermined portion of the retailer’s customers receives the promoted product or even the entire contents of their shopping basket for free. We address the questions of why and under which conditions price lotteries affect the purchase intentions and choice shares, and we compare the effectiveness of this instrument with the effectiveness of price discounts. In our first study, we focused on the question of why price lotteries affect consumer’s purchase intentions. A mediation analysis reveals that price lotteries can elicit feelings of thrill and hope that spill over positively to purchase intentions. Moreover, price lotteries are more complex and thus are more difficult to understand what reduces their effectiveness. The second experiment in which respondents had to choose between a promoted and a non-promoted product was designed to test conditions under which consumers tend to choose a product promoted by a price lottery. Our results show that the attractiveness of products promoted by price lotteries depends on the product’s potential to deliver luxury benefits.

1. Introduction

Price discounts are the most predominantly used promotional activity of retailers. They typically increase the number of customers coming to a store who buy not only the promoted products but often also buy products that are offered at regular prices. In recent years, price lotteries have been offered as an alternative option to price discounts. This activity is an innovative tool that helps reducing the interchangeability of competing retailers which often is described as a problem (e.g., Zentes/Swobada 1999, p. 81). For instance, in 2010, Media Markt, a major German retailer of electronic products, launched the campaign “1 in 10 customers will obtain her/his whole purchase for free.” Technically, the following procedure was applied in this case: Each customer’s receipt was serially numbered; after each day’s store closing time, customers could find a random number between 0 and 9 on the company’s homepage or learn about it via a telephone hotline; if this digit was the final digit of their receipt number, they received their money back. Media Markt repeated this price lottery in 2012 in its online shop (each 33rd customer obtained her/his purchase for free). This promotional activity has also been applied by furniture retailers, grocery retailers (e.g., real), and drug-store chains (e.g., Rossmann) in Germany.

In addition to retailers, manufacturers are often interested in implementing promotional activities to boost sales of their products sold via retailers. In such cases, they make arrangements with the retailers to promote their brands and frequently use price discounts (e.g., “this brand is 20 % off this week”). However, similar to the price lotteries for the customer’s whole shopping basket described above, price lotteries could also be applied at the product or brand level. For instance, instead of promoting a brand on the shelf with “this product is 20 % off,” the promotion could be alternatively accomplished with “one in five customers gets this product for free.” At the cash register, the promoted product’s price would turn out to be zero if the last digit of the customer’s receipt number matches certain numbers that are announced at the shelf. For retailers and manufacturers, this promotional activity could be an interesting alternative as it will attract the attention of customers more strongly than the well-known instrument of price discounts [1]. Moreover, possible negative spillover effects of discounts could be avoided. These spillover effects exist if customers use price information to infer quality. Especially in the case of price discounts for technical goods, customers could think that the reason for offering a price
discount for the current product version may be that the product’s features are outdated, meaning that a new model will be launched soon.

In our study, we analyze the effects of money savings, comparing low but sure savings with high but risky savings. In our first experiment, we analyze the psychological processes that underlie the effect of price lotteries on purchase intentions, and we investigate the role of the feelings of thrill and hope. A review of the literature revealed that these feelings are important drivers for gambling behavior (e.g., McDaniel 2002; Morewedge et al. 2007; Ward/Hill 1991). Participating in price lotteries is a type of gambling, whereas taking advantage of a price discount is not. Thus, we expect that price lotteries are associated with feelings that are not elicited by price discounts. However, more cognitive effort has to be spent to understand the outcomes of risky choices compared to counts. However, more cognitive effort has to be spent to understand the outcomes of risky choices compared to the outcomes of riskless choices (Gonzalez et al. 2005). Thereby, the attractiveness of participating in price lotteries might be reduced. Hence, we posit that the feelings of hope and thrill and the cognitive effort necessary to understand the offer mediate the relation between the type of savings (risky vs. riskless) and purchase intentions. In our second experiment, we investigate a variable that may moderate the impact of the type of savings on choice shares. We presume that people are especially prone to participating in lotteries if winning allows them to enjoy luxury benefits. In this way, we hypothesize that perceptions of luxury benefits moderate the relation between the type of savings and intentions.

2. Prior research

There are several streams of research on individuals’ responses to risk and uncertainty. One of the most influential streams is based on work of Kahneman/Tversky (1979). These authors asked people to imagine that they can choose between a certain and a risky gain. For instance, in one of the experiments, they asked students to report whether they would prefer the riskless option to win 3,000 New Israeli Shekel or to take part in a lottery (i.e., a risky option); in this hypothetical lottery, they would win 4,000 NIS with a probability of .80 and 0 NIS with a probability of .20. The authors found that 80 % of the test participants reported to prefer the riskless option, although its expected value was lower. Kühberger/Schulte-Mecklenbeck/Perner (1999) conducted a meta-analysis of a huge amount of these types of studies and found that the findings are mainly in line with the effect found by Kahneman/Tversky (1979) which indicates risk aversion.

However, in other fields, the presence of risk does not cause negative effects. For instance, Goldsmith/Amir (2010) compared the effect of an attractive gift that could be received with certainty (e.g., a package of Godiva Truffles) to the effect of a risky, overall less attractive gift (either two Hershey Kisses or a package of Godiva Truffles selected per random) on customer’s intent to buy a six-pack of a promoted soft drink brand. They found that both promotional activities were equally effective indicating that risk had no harmful effect. Lee/Qiu (2009) asked people to spin the wheel of fortune; all people were informed that they were winners. Then, they were requested to imagine the prize. In one condition, they received the information that they had won a certain electronic good worth $30 (no risk regarding the kind of prize). In other conditions, they received the information that they had won a technical good worth $30 but were not informed about the kind of product (uncertainty regarding the kind of prize). The authors found that the extent to which the test participants reported positive feelings (i.e., cheerful, delighted, happy, interested, good) was higher in the conditions where uncertainty about the kind of the prize was present. The authors explain their findings with the presence of positive fantasies the consumers can develop when there is a certain degree of uncertainty.

We conclude that there is neither a generalizable tendency in consumers to approach risk or uncertainty nor to avoid risk or uncertainty. Thus, we looked for special research on the effectiveness of price promotions involving risk or uncertainty.

First, there is research on consumer responses to tensile vs. precise price claims; a tensile price claim exists when the discount information is presented in the form of a range (e.g., “60-70 % off” or “You can save up to 20 %”). The findings from this research are heterogeneous as well (e.g., Biswas/Burton 1994; Choi/Ge/Mesinger 2010; Dhar/Gonzalez-Vallejo/Soman 1999; Mobley/Bearden/Teel 1988; Tan/Chua 2004).

Second, there is an experiment of Dhar/Gonzalez-Vallejo/Soman (1995) who compared the effect of a riskless price discount to the effect of a risky price discount. In an on-campus store, numerous candy bars were offered. Among these candy bars, Snickers had a long-range unit share of 6.02 %. During a certain time span, the store informed its customers that Snickers candy bars are 20 % off; the unit share increased to 14.71 %. During a second time period, the store announced that 80 % of the customers of Snickers will get a discount of 25 %. The unit share of Snickers increased to 12.59 %. Furthermore, during a third time period, the customers got the information that 25 % of the Snickers candy bars “have 80 % off;” this promotional activity increased the unit share of Snickers to 13.36 %. Hence, the authors found that both types of price promotions were equally effective in increasing the unit share of the promoted product. However, these scenarios do not include a lottery where a customer could win a product, i.e., could obtain it for the price of zero with a predetermined probability. This condition might cause different effects as the consumer does not have to pay for the product.

Third, participating in “scratch and save” promotions involves risk. There are studies that compared the effec-
tiveness of this type of promotions to tensile price claims (Choi/Ge/Messinger 2010) and studies that tested moderating variables of its effectiveness (Choi/Kim 2007) or special aspects of this activity (Choi/Stanyer/Kim 2010; Kamleitner/Mandel/Dhami 2011). However, this research did not compare the effect of risky to riskless options.

To sum it up, the store test conducted by Dhar/González-Vallejo/Soman (1995) provides the first evidence that price discounts combined with risk affect consumer behavior. We add to this research by systematically investigating the case of a lottery where consumers can actually win a product, i.e., where the price can be indeed zero.

3. Theoretical considerations

3.1. Overview

We consider the effect of two promotional instruments (price discount or lottery) on the likelihood of purchasing the promoted product and include three mediating variables and one moderating variable. The resulting model is shown in Fig. 1 and is explained in the subsequent sections.

Note, that we do not postulate that price lotteries and price discounts are the only instruments that can be used to promote a product. Coupons, free samples, sweepstakes, etc. are promotional tools as well. However, as we compare the lottery to the discount, we focus on these two options. The mediators consist of affective responses (thrill and hope) and a cognitive response variable (comprehensibility) that we were able to derive from literature.

3.2. The mediating role of thrill, hope, and comprehensibility

Gambling is considered to have outcome-related benefits but also process-related benefits such as the experience of emotions (Le Menestrel 2001). In the case of a price lottery, the propensity to take part may be high if these emotions are positive. As a consequence, a high intention to buy the promoted product will result. Numerous authors report that participating in gambling leads to process-related, hedonic benefits such as thrill, which is usually defined as a sensation of excitement (e.g., Anderson/Brown 1984; Coventry/Brown 1993; Coventry/Norman 1997; McDaniel 2002; Morewedge et al. 2007, p. 701; Ward/Hill 1991) and is associated with physiological arousal and pleasure (Wakefield/Baker 1998). Fang/Mowen (2009) even found that excitement is among the most important motives for gambling. In the case of a price lottery, choosing the promoted option is associated with the suspenseful aspiration to obtain the product for free. Because this emotional state is perceived as pleasant, the attractiveness of the promoted option is likely to be enhanced. Hope is another emotion associated with risky or uncertain outcomes (De Mello/MacInnis/Stewart 2007; Raghavendra/Bharucha 2009, p. 54). It is commonly defined as the feeling that what is wanted can be had. MacInnis/De Mello (2005, p. 2) characterize hope as “positively valenced emotion evoked in response to an uncertain but possible goal-congruent outcome.” If people decide to choose the promoted option in the case of a price lottery, they are likely to experience the pleasant state of hope. This feeling is also expected to spill over onto the desirability of the product and purchase intentions.

However, as a negative aspect of price lotteries, the cognitive effort necessary to understand and evaluate the offer has to be considered, i.e. the aspect of comprehensibility (Ratneshwar/Chaiken 1991). Research has shown that more cognitive effort is required for evaluating choice alternatives associated with risk compared with riskless options (Gonzalez et al. 2005). In the case of price discounts, the choice situation is rather simple, and people are highly familiar with this type of information. In contrast, in the case of price lotteries, people have less experience with the rules and outcomes of the game. Although this game offers only advantageous outcomes, it takes cognitive effort to gain insight into this fact.

It is highly obvious that price discounts cannot elicit thrill and hope and are easily understood. Compared to these characteristics of price discounts, we expect the following:

H1: Participating in price lotteries elicits thrill, which increases purchase intent.
H2: Participating in price lotteries elicits hope, which increases purchase intent.

H3: Participating in price lotteries requires cognitive effort to understand the rules, which decreases purchase intent.

3.3. The moderating role of luxury benefits

We are looking for a moderating variable that can be used to indicate whether a price lottery (state of uncertainty) or a price discount (state of certainty) is more effective. We derive two requirements for conditions in which uncertainty is expected to be desirable. The first requirement is a purchase decision which is affective in its nature and the second is a high size of the gain. Then, we argue that goods associated with luxury benefits meet these requirements.

Affective purchase decisions

Laran/Tsiros (2013) argue that prior research on the effects of uncertainty either was focused on negative consequences (e.g., consumer anxiety, doubts, and insecurity) or on positive consequences (e.g., pleasant feelings in the process of uncertainty resolution) and demand researchers to pay attention to the moderating variables that indicate whether consumers prefer approaching or avoiding the state of uncertainty. Their basic hypothesis consists in the notion that consumers who make affective purchase decisions prefer the state of uncertainty while consumers who make cognitive decisions avoid uncertainty. Purchase decisions are denoted as affective when intense (positive) feelings are present. As examples of affective decisions, they refer to cases where the consumer feels happy, where the product itself is associated with feelings (for instance, renting a sports car for a weekend enables hedonic benefits), and where the marketer’s communication evokes positive feelings. Purchase decisions are characterized as cognitive when the decision process focuses on getting information. As examples of cognitive decisions, they describe cases where the product is positioned utilitarian and where the marketer’s communication fosters cognitive cognitions. In the cognitive purchase condition, people are likely to experience uncertainty as a lack of information (i.e., as a negative aspect). In the affective purchase condition, people are likely to strive for a surprise “because it matches a decision that involves feelings” (p. 114). If people like to be surprised, they are expected to value uncertainty.

As a theoretical foundation, Laran/Tsiros (2013) refer to compatibility principles which for instance have been suggested by Slovic/Griffin/Tversky (1990) and Tversky/Sattah/Slovic (1988). This stream of research argues that stimuli which are consistent with the mode of the decision-making process (e.g., affective-oriented or cognitive-oriented) are appreciated.

These fundamental thoughts can be used for predicting the effectiveness of price lotteries versus discounts. As price lotteries imply uncertainty, they are likely to be more effective under conditions of affective decision processes while discounts which imply certainty are likely to be more effective under conditions of cognitive decision processes. Laran/Tsiros (2013) hypothesize that the state of uncertainty is liked in any conditions of affective purchases and disliked in any conditions of cognitive purchases.

Size of the gain

We question whether this general view can be applied to the issue discussed here (uncertainty about the outcome of gambling such as participating in a price lottery). As explained above, we consider thrill and hope to be motivators to participate in gambling. Morewedge et al. (2007, p. 701) posit that the gain has to be remarkable to a certain extent; otherwise, the gain is regarded as “peanuts,” and the gambling is not expected to elicit thrill. A similar relationship is likely to exist for hope. MacInnis/De Mello (2005, p. 2) argue that “hope is not viewed as an appropriate emotion when the outcome is trivial.” Hence, we are looking for a moderator that conforms to the affective/cognitive distinction and takes into account that winning a gain is associated with feelings only if the gain is substantially high.

Luxury benefits

We consider the presence of luxury benefits of the promoted product as a moderator that meets both requirements. When a luxury good is bought, strong feelings are likely to accompany the purchase decision process because the consumer may anticipate the luxury benefits s/he will experience. As luxury goods are expensive, at least in the perception of the consumers, getting them for free can be interpreted as remarkable gain.

Kivetz/Simonson (2002) provide an additional argument why uncertainty is valued when luxury benefits (i.e., indulgences) are involved. They argue that people simultaneously like and dislike luxury and thus have an ambivalent attitude towards luxury. On the one hand, consuming luxury goods enables them to experience fun and pleasure. On the other hand, luxury is associated with negative components; according to the economics of the self (Schelling 1984), people are likely to restrict themselves at the present in order to be better off in the future. In other words: Consumers “use self-control to avoid hedonic temptations” (Kivetz/Simonson 2002, p. 199). The authors argue that people could solve this conflict by choosing a lottery where they could win a good that delivers luxury benefits. By externalizing the responsibility for the acquisition of the luxury good to good luck, they can justify own behavior and overcome the negative feelings associated with indulgence.

Relying on the compatibility principle mentioned above, we can provide an additional argument of why we link luxury benefits and lotteries together: We presume that

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people have learned from experience or through media that winning lotteries, such as the national lottery, enables luxurious gains, such as expensive holidays or premium cars people otherwise would not afford. Moreover, people typically do not take part in lotteries to afford necessities (e.g., a TV set or a mobile phone, *per se*). Hence, we hypothesize the existence of a heuristic rule consisting of beliefs that goods won in lotteries or financed by lottery gains are not necessary but are nice to have. Lotteries may evoke connotations such as “I can afford something special.” The same heuristic rule applies for luxury benefits of goods. These benefits exist if a good has properties that “are not necessary but nice to have.” In this way, the concept of lotteries and the concept of luxury benefits of goods have commonalities to a high extent and, thus, are linked together in the minds of individuals. In this way, people are more likely to respond positively to price lotteries when luxury benefits can be achieved.

People are expected to allocate higher cognitive resources to purchase decisions of products when the product can deliver luxury benefits. When acquiring necessity products, consumers are unlikely to allocate high amounts of cognitive effort to purchase decisions (*Garbarino*/Edell 1997). As a consequence, we expect that people are more willing to invest a high amount of cognitive resource when something special is to be acquired, which facilitates the understanding of the price lottery rules. Thereby, comprehensibility of the price lottery is expected to be higher when products with luxury benefits are promoted.

We conceptualize goods associated with luxury benefits as items that are perceived to be luxurious in the eyes of the consumers and do not restrict this approach to certain brands or certain product categories. We test the following:

**H4a:** When the promoted product is associated with luxury benefits, price lotteries increase purchase intent to a higher extent than price discounts.

**H4b:** When the product is not associated with luxury benefits, price discounts increase purchase intent to a higher extent than price lotteries.

### 4. Experiment 1

In our first experiment, we test H1, H2, and H3, addressing the role of the mediating variables.

**Pretest:** Because we expected that thrill and hope are especially relevant when the promoted product is associated with luxury benefits and we intended to use student samples in this experiment, we began by identifying a product that may be purchased by students and elicits thoughts about luxury. Prior research on luxurious consumption is extensive and shows that there are different motivators for consumers to choose options associated with luxury benefits (e.g., *Wiedmann*/Hennigs/Siebel 2009). This research also indicates that several ways exist for how consumers could reach these benefits. For instance, purchasing products from special product categories may be associated with luxury (*Bearden*/Etzel 1982; *Chaudhuri* 1998). Purchasing luxury brands is another means; however, we did not choose a product from a category that is associated with luxury (e.g., sailing yachts) because it does not target students. We also refrained from using luxury brands such as Rolex or Gucci; although some students might be able to afford these brands, price promotions for these types of brands are unusual. In this experiment, we focus on whether a product elicits perceptions of luxury and consider it to be luxurious if these perceptions exist to a considerable extent.

We chose a premium-looking wristwatch as a test object, created an advertisement that promoted this watch, and tested for perceptions of luxury benefits in a pretest. The depicted product had a titanium case and sophisticated product features. The advertisement contained a picture of the product, its brand name, product information, and information about its regular price. We used an unknown brand name. We asked 28 students to indicate their agreement to the statement “This watch is associated with luxury” on a scale ranging from 1 = strongly disagree to 7 = strongly agree. The mean value of 4.93 (SD = 1.46) exceeds the scale center of 4 (t[27] = 3.257, *p* < .001), indicating that the chosen test stimulus is in fact associated with perceptions of luxury.

**Experimental design:** We created two versions of an advertisement for the wristwatch that differed regarding the price promotion activity. In one version, a price discount was offered (“20% off”), and in the other version, a price lottery was announced (“1 in 5 customers receive it for free”). Thus, we have two experimental conditions that differ regarding the promotional activity which represents our independent variable (type of promotion: lottery vs. discount).

**Procedure, sample, and measures:** In total, 120 students (52.5% female, *M* = 24.52 years) participated in face-to-face interviews. Each participant was assigned to one of the two experimental conditions per random. The sample size per condition was 60 people. The participants had to indicate purchase intent (“It is desirable to purchase the product” and “I would like to purchase the product”), whether the ad created the feeling of thrill (“This offer brings excitement to my day;” see *Fang*/Mowen 2009) and the feeling of hope (“I am confident I will win the product”; see *De Mello*/MacInnis/Stewart 2007), and whether the promotion is comprehensible (“The offer is easy to understand” and “The offer is comprehensible”) on seven-point scales.

**Multiple-mediator model:** In our model, we use the promotional activity as a binary independent variable (1 = price lottery, 0 = price discount), the feeling of thrill, the feeling of hope, and comprehensibility as the mediating
variables, and purchase intent as the dependent variable. To estimate the coefficients of this model, we followed an approach to mediation analysis advocated by recent research (Rucker et al. 2011; Zhao/Lynch/Chen 2010) and applied the bootstrapping procedure developed by Preacher/Hayes (2008). The results are shown in Fig. 2.

Hypothesis H1 postulated that price lotteries are associated with thrill, which spills over positively onto the purchase intent. Feelings of thrill were higher in the lottery condition than in the discount condition ($\beta_{\text{Lottery} \rightarrow \text{Thrill}} = .88$ ($p < .001$) and $\beta_{\text{Thrill} \rightarrow \text{PI}} = .22$ ($p < .001$) are positive and highly significant, H1 is supported. In H2, we expected that price lotteries elicit feelings of hope, which transfers positively to the purchase intent. Feelings of hope were higher in the lottery condition than in the discount condition ($\beta_{\text{Lottery} \rightarrow \text{Hope}} = 1.38$ ($p < .001$) and $\beta_{\text{Hope} \rightarrow \text{PI}} = .17$ ($p < .05$) are positive and significant, H2 could be supported as well. Finally, H3 indicated that price lotteries are less comprehensible which contributes negatively to purchase intentions. We found lower perceptions of comprehensibility in the lottery condition ($\beta_{\text{Lottery} \rightarrow \text{Compr}} = -1.58$ ($p < .001$) and $\beta_{\text{Compr} \rightarrow \text{PI}} = .17$ ($p < .01$) is positive and both coefficients are significant, the findings are also in line with H3.

The residual direct effect in our model (see Fig. 2) that cannot be explained by the included mediating variables is $\beta_{\text{Lottery} \rightarrow \text{PI}} = -.30$ ($p > .10$). The non-significance of this coefficient indicates a full mediation. The model explained 28% of the dependent variable’s variance.

Stability of the results: As we included three mediators into our multiple-mediator model that are elicited by the same independent factor (i.e., the same source), correlations between the mediators cannot be fully avoided ($r_{\text{Thrill, Hope}} = .574$, $r_{\text{Thrill, Compr}} = -.126$, $r_{\text{Hope, Compr}} = -.454$). According to Preacher/Hayes (2008, p. 887), this problem does not prevent a meaningful mediation analysis as long as the mediators are conceptually different what is the case in our model. Moreover, these authors argue that the estimates are not expected to be strongly biased when the correlations between the mediators are low to moderate. To prove the stability of the estimates, we additionally conducted a single-mediator analysis for each of the three mediators separately (first model: “lottery $\rightarrow$ thrill $\rightarrow$ purchase intent”, $\beta_{\text{Lottery} \rightarrow \text{PI}} = .30$, $p < .001$; second model: “lottery $\rightarrow$ hope $\rightarrow$ purchase intent”, $\beta_{\text{Hope} \rightarrow \text{PI}} = .30$, $p < .001$; third model: “lottery $\rightarrow$ comprehensibility $\rightarrow$ purchase intent”, $\beta_{\text{Compr} \rightarrow \text{PI}} = .19$, $p < .01$). Note, that the coefficients $\beta_{\text{Lottery} \rightarrow \text{Mediator}}$ in the single-mediator models are the same as in the multiple-mediator model. To sum up, all mediation results in the multiple-mediator model also hold in the single-mediator models indicating stability of the effects.

5. Experiment 2

Our second experiment was designed to test H4, which posits that the effectiveness of price lotteries compared to price discounts depends on the presence of luxury benefits. Basically there are two alternatives to investigate this hypothesis. One option would be presenting price lottery offers (vs. discounts) for products containing or not containing luxury benefits and assessing purchase intent in terms of a metric variable. The other option consists of presenting pairs of products A and B one of which is promoted by price promotions (lottery, discount) and does or does not contain a product that elicits luxury benefits. In these scenarios, the product with the higher purchase intent could be identified, when choice shares are compared across the experimental conditions. We chose the latter alternative because it seems more realistic in the retailing environment.

To give an overview of the logic of the experiment, we briefly explain our design before elaborating on the study’s details. Firstly, in a control condition, we compare the consumer responses to two options consisting of a low-luxury-benefit and a high-luxury-benefit option without any promotions and ask respondents to denote the product they would buy which signals higher purchase intent for the chosen product. Secondly, in several experimental conditions that differ regarding the information about which product is on promotion, we again assess choice shares of the options; thereby we learn about difference in purchase intentions as well. Thirdly, we compare the choice shares observed in the control condition to the choice shares measured in the experimental conditions. When there are differences regarding choice shares across the conditions, the only reason could be that purchase intentions regarding the options are different due to the promotions.

Pretest: We start our investigations by looking for products that are either associated with high luxury benefits
or are not and we conceptualize luxury benefits as a perceptual construct. As noted above, luxury can result from different sources such as purchasing a luxury brand or items from typical luxury categories. However, for our purpose, it is only relevant that luxury perceptions are or are not elicited but not why this happens. We assumed that high-price products from high-price categories can elicit perceptions of luxury. For instance, people may dream of possessing a high-end laptop computer but not of possessing a laptop computer per se because it is a necessity good. However, they are unlikely to judge expensive options from the low-price categories such as batteries or orange juice to be highly luxurious. We chose a sample of three low-price and five high-price product categories. From the low-price categories, we selected the product categories of rechargeable batteries, mouthwash, and orange juice. From the high-price categories, we selected the product categories of cameras, tablet computers, laptop computers, TV sets, and MP3 players. We created ad versions for two products (A and B) from each of these eight categories. The ad versions contained information about the product’s regular price and quality information (e.g., a Consumer Reports rating). The price of option A was approximately the current average price of the products from the respective category (e.g., € 689 for laptop computer A), and the price of option B was approximately 40% higher than the average price to ensure that possessing and using option B could be perceived as a type of luxury in the case of high-price categories (e.g., € 965 for laptop computer B). For the purpose of illustration, we show the ad versions for the average-price computer with a standard processor and an average quality rating and for the high-price laptop computer with a high-end processor and a more favorable quality rating in Fig. 3.

We exposed a sample of 28 people (50% students) to the ad pairs and asked them to assess whether the product “is associated with luxury” on a seven-point scale for both products (A and B) from each product category. Tab. 1 indicates that the high-price options of the high-price product categories were associated with luxury benefits to a considerable extent (see last column of this table). Based on these findings, we consider the expensive options from the selected high-price product categories to be associated with higher luxury benefits. Moreover, neither option A from the high-price product categories nor any option from the low-price product categories (i.e., neither A nor B) was associated with luxury benefits to a considerable extent (see the other columns of the table).

**Experimental design:** We asked people to indicate which of two product options (either A or B) they would prefer to purchase and calculated the choice shares of the options. Basically, the experimental factors were combined in a 2 (price level of the product category: low vs. high) × 5 (promotion activity) factorial between-subjects de-
Control condition
(None of the options is promoted)

Experimental condition 1
(A is 20% off)

Experimental condition 2
(B is 20% off)

Experimental condition 3
(20% receive A for free)

Experimental condition 4
(20% receive B for free)

Option A: average regular price/average quality; Option B: high regular price/high quality.

Figure 4: An example of the test stimuli used in Experiment 2
a price lottery increases purchase intent more than promoting them with a price discount. Our data (see the last column of Tab. 2) indicate a choice share of 55% in the no-promotion condition. Due to a price lottery, this share increased to 70%, and due to a price discount, it increased to 85%. As the price discount turned out to be more effective (70% < 85%, $\chi^2 = 20.515, p < .001$) this hypothesis could not be confirmed.

In H4b, we focused on products that are not associated with luxury benefits. In this case, we expected that price discounts are more effective in increasing purchase intent compared to price lotteries. Our data (see the first three columns of Tab. 2) that contain choice shares indicate choice shares of 55% (option A/low-price), 45% (option B/low-price), and 45% (option A/high-price).

By the means of a price discount, these figures increased to 74%, 59%, and 63%, respectively (all differences to the no-promotion conditions are significant, $p$'s < .05). By the means of a price lottery, these figures increased to 56%, 46%, and 48%, respectively, which do not differ significantly from the results obtained in the no-promotion condition. As discounts increase choice shares whereas lotteries do not, H4b is supported.

Additional findings: However, when we focus on a comparison of the price-lottery condition to the no-promotion condition, the use of a price lottery increased choice shares only when applied to products that elicit perceptions of luxury benefits (70% > 55%, $\chi^2 = 15.631, p < .001$). On the contrary, choice shares were not affected when the price lottery was offered to promote a product that is not suitable to elicit perceptions of luxury benefits to a considerable extent.

In addition, we analyzed the reported reasons that the test participants denoted as important when deciding among the options. Frequently, they reported that possessing or consuming a high-price option from a high-price category is a type of luxury they would afford if they had the opportunity to obtain this product for free. Combining the pretest results with these reasons reported in written form, we conclude that the promoted product’s suitability to deliver luxury benefits is a determinant for the effectiveness of price lotteries. Moreover, our findings indicate that the effectiveness of price lotteries does not merely depend on the product’s absolute price level, i.e., the amount of money that can be saved. For instance, in our study, price lotteries increased both the choice share of the expensive MP3 player and the choice share of the expensive TV set, but they did not increase the choice share of the cheaper TV set although its price exceeded the price of the expensive MP3 player.

**Table 2: Choice shares depending on the promotion activity and the price level of the category**

<table>
<thead>
<tr>
<th>Low-price product categories</th>
<th>Option A (low luxury benefits)</th>
<th>Option B (low luxury benefits)</th>
<th>High-price product categories</th>
<th>Option A (low luxury benefits)</th>
<th>Option B (high luxury benefits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No promotions</td>
<td>55%</td>
<td>45%</td>
<td>No promotions</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>A is 20% off</td>
<td>74%</td>
<td>26%</td>
<td>A is 20% off</td>
<td>43%</td>
<td>37%</td>
</tr>
<tr>
<td>B is 20% off</td>
<td>41%</td>
<td>59%</td>
<td>B is 20% off</td>
<td>15%</td>
<td>85%</td>
</tr>
<tr>
<td>20% receive A for free</td>
<td>56%</td>
<td>44%</td>
<td>20% receive A for free</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>20% receive B for free</td>
<td>54%</td>
<td>46%</td>
<td>20% receive B for free</td>
<td>30%</td>
<td>70%</td>
</tr>
</tbody>
</table>

Option A: average regular price/average quality; Option B: high regular price/high quality.
The marked choice shares exceed the respective no-promotions choice share (first data line) at the .01 level.

6. Conclusions

Summary of the findings: Our findings indicate that promoting a product with a price lottery is an effective activity for increasing purchase intentions or choice shares of products in conditions where the promoted product is associated with perceptions of luxury. Moreover, we showed that price lotteries evoke pleasant emotions of thrill and hope in consumers that affect the willingness to participate in price promotions and, consequently, increase the likelihood to choose the promoted product. However, the cognitive effort necessary to comprehend the rules of the lottery reduces the propensity to take part in the price lottery, thereby decreasing the likelihood to purchase the promoted options.

Implications for theory about positive responses to uncertainty and risk: Until now, there is few research on the conditions under which people might be risk-seeking. Laran/Tsiros (2013) found that people who are involved in affective decisions prefer risk and uncertainty while people involved in cognitive decisions avoid risk and uncertainty. Lee/Qiu (2009) showed that situations with uncertain but favorable outcomes can foster people’s fantasies and imaginations about what the outcome will be. Therefore, individuals could deliberately approach risk and uncertainty if they enjoy developing fantasies and imaginations; otherwise, they are likely to avoid risk and uncertainty. We contributed to this research by referring to a third source that triggers risk-seeking tendencies: the presence of process-related benefits while acquiring a product consisting of the feelings of hope and thrill. Moreover, as a limitation, we found that these feelings are only intense enough to foster the preference for the risky option when luxury benefits are involved.

Implications for practice: For retailers and manufacturers, we recommend considering price lotteries as a promotional activity at the product level when the product is associated with perceptions of luxury. These perceptions typically exist when the promoted product belongs to a high-price category and when its regular price is comparatively high within this category. Because thrill and hope
are pleasant emotions elicited by price lotteries, the effectiveness of this activity could be even higher if its announcement is accompanied by statements such as “That’s one luxury that I should allow myself,” “Experience the excitement,” or “Why should I not be the lucky one?” Thereby, the consumers’ need for gambling would be enhanced. Additionally, presenting clear instructions about how the lottery works may be beneficial in increasing the effectiveness of this promotional activity. Unfortunately, we did not find a product category in our experiment where the effect of the price lottery (although positive) outperformed the effect of the price discount on purchase intentions or choice shares. However, we expect that measures that accompany the price lottery as indicated above could amplify their effectiveness. Moreover, retailers should take measures to prevent themselves from consumers who intend to abuse the instrument of price lotteries. The Media Markt campaign in 2010, which announced that 10% of the customers would receive their whole purchase for free, suffered from the fact that the retailer additionally promised to take back all purchased goods within 14 days and refund the money. Thus, some consumers approached getting products for free with certainty by purchasing the same products at different times and returning those purchase baskets they had to in fact pay for. Thus, this instrument may only be beneficial for retailers if they can avoid such behaviors, for example, by restricting the number of offers each customer or household is allowed to take advantage of.

Limitations and suggestions for future research: Admittedly, our results are based on laboratory experiments. In Study 1, we used a rather small convenience sample and used one test object only. In Study 2, we used only one technique to vary the presence vs. absence of luxury benefits. We expect emotions of thrill and hope to be more intense when price lotteries are actually used to promote products in stores and online shops. Then, the effect of price lotteries may be even higher. Moreover, we did not provide additional pieces of information that foster thrill and hope and increase the comprehensibility of the lottery’s rules. Future research could address these issues. As there is a natural fit between some types of clothing (e.g., expensive outdoor clothing), jewelry, or vacations in exotic countries and luxury benefits, investigation into the effectiveness of price lotteries that promote products from these categories could provide additional evidence for our theory.

Note

[1] We conducted an experiment to test the attention toward a price lottery compared to a discount. We manipulated a fictitious leaflet of the retailer Tchibo which is well-known in the German market and developed two versions. Each version consisted of nine pages. On page no. 6, a laptop computer with a regular price of €599.95 was advertised. In one of the versions, 20% discount was announced, and in the other version, a price lottery was described (one in five customers will get it for free). The leaflets were shown to 60 students, i.e., were exposed to 30 students per condition. We assessed free recall after seven days. In the discount condition, only five of 30 participants were able to recall that the laptop was offered. In the lottery condition, eleven of 30 respondents recalled the laptop. This result indicates that price lotteries attract the consumers’ attention to a higher extent ($t_{df = 179}, p < .05$).

References


Keywords
Pricing; Price promotions; Price lotteries; Thrill and hope.