## RISKY DISCOUNTS

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## RISKY DISCOUNTS:

## DO PEOPLE PREFER THEM ON A PER-ITEM OR PER-PURCHASE BASIS AND WHY?


#### Abstract

:

Risky discounts differ from other discount formats in that the actual discount level is determined by chance. Four studies investigated whether consumers prefer to receive risky discounts on a per-purchase or per-item basis. Although these options do not differ with regard to expected value, they entail multiple differences (e.g., savings distribution, amount of individual gains, excitement, and effort involved) that may lead to differential consumer perceptions and experiences. Controlling for expected value of savings, participants chose per-item over per-purchase discounts. As hypothesized, the main reasons for this preference were a partly incorrect perception of the properties of the savings distribution, the adoption of a narrow mindset focusing on the best outcome in a series of discount gambles, and the greater excitement provided by multiple discount gambles.


Keywords: discount, risk perception, price promotion, preference, consumer decision making

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## 1. Introduction

Price discounts are a well-studied promotional method (e.g., Chen et al., 1998; Kim \& Kramer, 2006a; Lichtenstein et al., 1989; Ortmeyer \& Huber, 1991). In particular, discount format (e.g., dollars-off, percentage-off, or buy $x$ get $y$ free) has been shown to influence the perceived desirability of offers (e.g., Briesch, 1997; DelVecchio et al., 2007; Sinha \& Smith, 2000). Although various discount formats have been studied, most research has examined the issue with respect to discounts that offer a fixed savings rate. In some cases, these rates are specified precisely (e.g., $50 \%$ off), while in other cases they are initially "tensile," meaning the consumer is advised that there is a range of discounts on offer (e.g., "up to $75 \%$ off") (e.g., Dhar et al., 1999; Stafford \& Stafford, 2000). However, even in the latter case, the consumer becomes aware of the precise discount on any given item prior to purchase. This eliminates all uncertainty.

In the present article, research on discount formats is extended to discount offers made under genuine conditions of risk (i.e., where there are more than one possible discount rate and the probability of each rate is known). Unlike tensile discounts, risky discounts are determined by a well-defined chance procedure, such that consumers, to the extent that they are interested, can learn the odds of each possible discount rate they may receive (e.g., $50 \%$ chance of a $10 \%$ discount and a $50 \%$ chance of a $25 \%$ discount). Actual discount rates of risky discounts are, however, only revealed at the time of purchase. Risky discounts, which have been used by some major department stores (e.g., The Bay in Canada or Kohl's in the US), are an effective promotional tool (Choi \& Kim, 2007, 2008) that might prevent often observed assimilation to discounted prices and the associated negative influence of discounts on store and brand image (e.g., Chandrashekaran \& Grewal, 2003; Moore \& Olshavsky, 1989; Raghubir et al., 2004; Stafford \& Stafford, 2000).

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In practice, risky discounts are usually implemented as "scratch \& save" offers in which customers scratch a card at the time of purchase to reveal the discount rate that is applied to their overall purchase. Distributional information on the possible discount rates is often given in the fine print on such cards (e.g., The Bay) but may sometimes be unavailable. Hence, from the consumer's perspective, the discount may sometimes be characterized as receiving a discount under conditions of uncertainty. However, consumers who are familiar with a store's policy may come to know the probability of possible discounts, in which case the discounts would be appropriately characterized as risky. In the present research, we examine the less ambiguous case in which the probabilities of various discounts are known.

This article aims to examine people's preferences for receiving exactly the same risky discounts (in the present research, scratch \& save cards) either on a per-purchase or per-item basis, as well as their reasons for their choice. A single chance process (e.g., a scratch \& save card) determines the discount rate for the entire purchase in the per-purchase format, whereas in the per-item format a separate chance process determines the discount rate for each item purchased. Preference for per-item or per-purchase discounts has not been examined in the context of certain discounts because applying a fixed discount to each item separately or to the overall purchase would invariably yield exactly the same result. Because risky discounts determine the discount by a chance procedure, repeating this procedure per item may well change the discount experience and outcome compared to redeeming a risky discount only once. At present and to the best of our knowledge, risky discounts are not offered on a peritem basis. However, apt consumers could effectively simulate the per-item format by purchasing each item in a set of desired products separately. ${ }^{1}$ Drawing on previous research, the present studies explored a set of competing hypotheses regarding whether per-item or perpurchase formats for risky discounts would be preferred and why.

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Literature looking at promotions from a consumer perspective has identified different reasons why consumers like and redeem discounts (e.g., Chandon et al., 2000). We organize the putative reasons for per-item versus per-purchase discount format in terms of Raghubir, Inman, and Grande's (2004) framework, which posits that promotions can influence consumers via three routes. Promotions can influence the beliefs consumers hold about the brand or industry (cognitive route); they can influence the economic utility associated with a purchase (economic route); and they can influence feelings and emotions arising within a consumer (affective route).

Slight variations in discount format as is the case with offering the same discount on a per-item or per-purchase basis are not likely to influence the beliefs that consumers hold about a brand or industry. Hence, we hypothesize that risky discount formats could potentially influence consumers via the economic or affective routes rather than the cognitive route. From an economic perspective, the mathematical probability of obtaining particular degrees of saving varies across these discount formats. For example, consider a retailer that provides consumers a "scratch \& save" discount offering a $90 \%$ chance of saving $25 \%$, an $8 \%$ chance of saving $50 \%$, and a $2 \%$ chance of saving $75 \%$. Regardless of whether this discount is offered on a per-item or per-purchase basis the expected value of overall savings is $28 \%$. However, for multi-item purchases, the variance of the savings distribution will be smaller for a per-item discount than for a per-purchase discount. Thus, with the per-item discount, a consumer who has purchased two or more items would have a better chance of obtaining an overall saving of more than $25 \%$ and a slimmer chance of obtaining an overall saving of more than $50 \%$. Provided that consumers correctly perceive this difference, they should prefer peritem discounts if they aim to avoid the worst overall outcome and prefer per-purchase discounts if they aim to achieve a very high overall outcome.

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The different discount formats might also influence economic utility through differences in the process of discount redemption. In contrast to the per-item discount, the per-purchase discount simplifies the redemption process and, thus, saves time for consumers. Previous research has shown that the "hassle" involved in coupon redemption adversely impacts the likelihood of discount redemption (Chakraborty \& Cole, 1991). It is hypothesized that time savings and ease would be the main reasons why people might prefer the perpurchase format.

Differences in the redemption process also likely influence discount preference via the affective route. The "multiple lotteries" experience associated with the per-item format may simply be entertaining for some consumers (as are other retail activities that involve consumer interaction, Mathwick et al., 2002). After all, the worst they can do is to get a small discount on an item. Excitement and fun associated with discount redemption, therefore, might serve as a reason to prefer the per-item discount format. Indeed, this hypothesis is supported by research showing that the experience of entertainment positively influences shopping behavior (e.g., Healy et al., 2007; Holbrook \& Hirschman, 1982).

Finally, there are considerations that might influence discount preference via the affective and economic routes simultaneously. Per-purchase discounts can be framed as constituting one big gain, whereas per-item discounts can be framed as involving multiple smaller gains. Research on mental accounting has shown that even if the overall monetary value of many small gains equals that of one large gain, most people prefer multiple small gains (Thaler, 1980; Thaler \& Johnson, 1990). This preference is presumably due to the concavity of the function relating subjective value to monetary value, as expressed in prospect theory (Kahneman \& Tversky, 1979). Such findings might lead one to expect that consumers would prefer to receive risky discounts on a per-item basis.

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In a related vein, the per-item format may make it easier for consumers to positively interpret their shopping experience by permitting two different "views" of the situation. In the case of per-purchase discounts, consumers are likely to evaluate discount favorability in terms of the discount on their overall purchase-referred to here as the "broad view." However, in the case of per-item discounts, consumers may additionally adopt a "narrow view," whereby they might bask in the light of their most favorable discount (e.g., "I got 75\% off this sweater!"). Indeed, the per-item format permits consumers to hope to achieve a high-level discount on at least one item regardless of the overall discount level (e.g., $75 \%$ off at least once). Given that the probability of achieving a high discount at least once is likely to be considerably higher than the probability of achieving a high discount overall (as in the earlier example), the narrow view may be a particularly rewarding way to frame the discount experience (for the general role of motivational framings in situations of risk, see Larrick, 1993). Simply put, it offers consumers a better chance of "hitting the jackpot" at least once, and hence of having a better story to tell themselves and possibly others about their shopping experience (for the likelihood of people utilising a positively reconstrued recollection, see for example, Walker et al., 2003).

To summarize, and provided that consumers correctly perceive the differences between the discount formats, it is hypothesized that the preference between risky discount options arises via the economic as well as affective routes suggested by Raghubir et al. (2004). Per-item discounts will be viewed as preferable because consumers may aim to avoid the worst overall outcome, they might prefer multiple small gains, they might prefer to focus on a narrow view (i.e., the best out of several outcomes), and they might find it more fun and exciting than the per-purchase format. In contrast, it is hypothesized that per-purchase discounts may be viewed as preferable, if consumers try to maximize their overall savings or if they wish to avoid the time and effort involved in redeeming separate discounts on a per-

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item basis. Overall, there would appear to be more reasons for favoring per-item discounts, and the expectation is that the per-item format will be preferred by a majority of participants.

To test these hypotheses, four studies were conducted. Studies 1 and 2 tested the hypothesized preference for per-item discounts by assessing participants' preferences and their reasons for their preferences. Study 3 examined whether, in the absence of having to choose between formats, the per-item and per-purchase discount formats were nevertheless perceived to differ with respect to attributes hypothesized to underlie consumers' reasons for preferring one format over the other. Finally, Study 4 aimed to generalize the observed preference across designs by examining participants' third-party assessments of the two formats. Study 4 also examined whether participants were able to correctly identify which format offered a better chance of avoiding the lowest possible overall discount (namely, the per-item format) and which offered a better chance of obtaining a higher than expected overall discount (namely, the per-purchase format).
2. Study 1

Study 1 explored whether consumers preferred risky discounts in per-item or perpurchase formats as well as their main reasons for their stated preference. The study was conducted in Canada and the UK because risky discounts are relatively familiar in the former country and relatively unfamiliar in the latter country. Choosing these environments permitted us to test for the possibility of a novelty bias. Consumers have been shown to react positively to novel discounts (e.g., Kim \& Kramer, 2006b). In Canada, consumers are familiar with perpurchase risky discounts but risky discounts on a per-item basis are a novelty. In the UK, consumers are not usually familiar with either type of risky discount. If novelty were the only driving force behind discount preference, Canadian consumers would be expected to prefer per-item discounts and UK consumers to be indifferent. In contrast, it is hypothesized that the majority of participants would prefer the per-item format for the reasons we outlined earlier.

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Moreover, we hypothesize that the predicted minority who prefer the per-purchase format would do so mainly for time savings and greater ease (i.e., economic route).

### 2.1. Sample and Procedure

Study 1 involved a Canadian sample of 150 undergraduates and a UK sample of 67 undergraduates. The overall sample was $69 \%$ female (Canadian sample $=70 \%$, UK sample $=$ $66 \%)$ and the mean age was 20 years (Canadian sample $=20$ years, UK sample $=21$ years).

Participants completed a paper-and-pencil questionnaire asking them to consider a situation in which they go shopping for clothes and choose four equally priced items to purchase. (Price was kept constant at 20 dollars or pounds respectively in order to facilitate discount computation.) When they go to pay, the cashier tells them that the store is running a "scratch \& save" discount that offers $25 \%$ to $75 \%$ off all items purchased. They are further told that the probability of scratching a card and receiving a $25 \%$ discount is $90 / 100,50 \%$ discount is $8 / 100$, and $75 \%$ discount is $2 / 100$. The cashier gives them two options: (A) scratch one card and receive the revealed discount for all four items together or (B) scratch a separate card and receive the revealed discount for each of the four items separately. The discount's percentage and probability range was informed by actual market offers and by research on tensile claims suggesting that a minimum level of at least $20 \%$ is a favorably perceived starting point if a range of discounts is offered (Stafford \& Stafford, 2000). After choosing a discount option, participants were asked to write down the main reason for their choice.

### 2.2. Results and Discussion

As predicted, a significant majority of participants (77\%) chose the per-item discount (option B); $\chi^{2}(1, N=217)=65.26, p<.001$. This preference was observed in both samples. However, in line with a novelty bias, this preference was more pronounced in Canada (82\%) than in the UK $(67 \%), \chi^{2}(1, N=217)=5.83, p<.05$.

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The reasons participants provided for their choice were coded into four categories by two independent coders. Coders agreed on $94 \%$ of cases, and differences were resolved by discussion. Seven participants did not indicate any reasons. Figure 1 illustrates that per-item and per-purchase discounts tend to be chosen for different reasons; $\chi^{2}(3, N=210)=109.23, p$ <.001. This pattern of reasons did not vary significantly across the two samples. Note, however, that 25 percent of cells had an expected cell count of less than five. The vast majority ( $90 \%$ ) of participants who chose the per-item discount said they thought that this option would be more likely to provide them with a higher discount. Some thought they would get a higher discount overall, while others thought that they would get a higher discount at least once, but most did not further clarify their response (all reasons related to discount favorability were merged into one coding category). A small percentage (9\%) of participants who chose the per-item format also mentioned fun and excitement as their main reason. In comparison, about half (53\%) of those who chose the per-purchase discount said they preferred to keep things simple and save time. The second most frequently stated reason for preferring the per-purchase option (37\%) was perceived discount favorability.
[Insert Figure 1 about here]
Overall, the results support the hypothesis that a majority of consumers would prefer the per-item format. The size of this predicted majority as a function of country may reflect a novelty bias given that Canadian consumers, as noted earlier, tend to be familiar with the perpurchase format but not with the per-item format, whereas UK consumers tend to be equally unfamiliar with both formats of risky discount. All subsequent studies are hence conducted with UK samples. Clearly, the findings also provided different levels of support for the various hypotheses forwarded in the Introduction. Specifically, the reasons provided indicate that per-item discounts are preferred mainly because they are perceived as providing a better discount than the per-purchase format in both the narrow and broad sense. The open-ended

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nature of participants' responses, however, did not provide a level of resolution that allows differentiating these two reasons with confidence-an issue that is addressed in Study 2 by using a more precise response option format.

The present findings, however, clearly pointed to the fact that fun and excitement (i.e. the affective route) were primary reasons for preferring the per-item format for only a small percentage of participants. Moreover, no participant mentioned preferring the per-item discount due to a preference for multiple smaller gains over one larger gain of equal monetary value, as mental accounting theory would predict (Thaler, 1980; Thaler \& Johnson, 1990). As predicted, the main reason for the minority preference for the per-purchase discount was to keep the savings process simple and efficient (i.e., the economic route).

## 3. Study 2

Although Study 1 yielded initial insights into why the respective discount formats were preferred, it was unable to assess how perceived discount favorability was determined; whether per-item discounts were preferred because of their overall savings distribution (the broad view) or because they make it more likely to achieve a high discount on at least one item (the narrow view). In addition, it is possible that some participants did not carefully think about their own reasons and, hence, just provided a response that might seem appropriate in the context-such as discount favorability. This might have led to an underestimation of other reasons such as fun and excitement. Thus, Study 2 aimed to replicate Study 1 and to assess reasons for the choice of discount format in a more precise manner.

### 3.1. Sample and Procedure

Fourty-nine UK undergraduates ( $62 \%$ females, mean age $=22$ years) completed a questionnaire depicting the same scenario as in Study 1. After choosing the preferred discount format participants indicated the extent to which listed statements represented reasons for their choice on 7-point scales (where $1=$ "not at all" and $7=$ "absolutely"). Statements were

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based on the theoretical considerations outlined earlier as well as on the reasons elicited in Study 1.

Reasons based on the broad view were assessed with three questions ("The option I chose is likely to give me a better overall discount than the other option," "I am more likely to get at least $50 \%$ off my whole purchase than with the other option,", and "I am more likely to get more than $25 \%$ off my whole purchase than with the other option."). One question was used to assess the extent to which the narrow view was prevalent when choosing the per-item discount ("I am more likely to get a really good discount at least once than with the other option"). One question each assessed the extent to which the effort ("The option I chose is less of a hassle and less time consuming than the other option"), fun ("The option I chose is more fun than the other option."), and excitement ("The option I chose is more exciting than the other option.") involved in discount redemption determined discount choice.

Finally, one question assessed whether the preference for multiple small gains (only applicable to item-specific discount: "I like saving smaller amounts four times better than saving a larger amount only once.") was driving discount preference.

### 3.2. Results and Discussion

Replicating the findings of Study 1, a significant majority of participants (71\%) chose the per-item discount; $\chi^{2}(1, N=49)=9.00, p<.01$. A $2($ Choice $) \times 8$ (Reason) analysis of variance (ANOVA) on importance ratings revealed a significant main effect of reason, $F(7$, 36) $=6.05, p<.001, \eta_{\mathrm{p}}{ }^{2}=.54$. As expected, this main effect was qualified by an interaction effect with choice, $F(7,36)=10.92, p<.001, \eta_{\mathrm{p}}{ }^{2}=.68$. Table 1 shows the means and standard deviations for this interaction. To further examine the nature of this interaction, deviation contrast analyses within level of choice were conducted and the reason with the lowest level of importance was used as the exclusionary category. Among the minority of participants who preferred the per-purchase discount, as predicted, time savings and

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efficiency was the only reason that significantly differed from the grand mean of the remaining reasons' rated importance. By contrast, among the majority of participants who preferred the per-item discount, overall discount superiority, avoidance of the worst discount overall, the opportunity to achieve a good discount at least once (narrow view), greater excitement, and greater fun were rated as significantly more important than the grand mean. Here, specifically achieving the best possible discount (i.e., 75\% off) and having the opportunity to experience multiple small gains rather than one larger gain were rated as significantly less important.

## [Insert Table 1 about here]

To assess the importance of each particular reason as a function of choice, first a one-way multivariate ANOVA on the eight reason measures was conducted, which was statistically significant, $F(8,35)=9.30, p<.001, \eta_{\mathrm{p}}{ }^{2}=.68$. Table 1 shows the univariate results. Specifically, the majority of participants who preferred the per-item format gave significantly stronger ratings of the reasons focusing on overall discount superiority, the opportunity to achieve a good discount at least once (the narrow view), greater excitement, greater fun, and the opportunity to achieve multiple small gains rather than one large gain. In contrast, the minority of participants who preferred the per-purchase format gave significantly stronger ratings of the reason focusing on greater time saving and efficiency. Interestingly, participants preferring per-item and per-purchase formats did not differ in terms of the importance they assigned to avoiding the worst overall outcome or to achieving the best overall outcome. The latter findings suggest that preferences for discount formats are not based on consumers' specific aspiration levels regarding minimum or maximum savings; rather it seems that an unspecific hope of doing well overall is one of the reasons driving preference for per-item discounts.

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Taken together, the findings of Study 2 lend further support to the hypothesis that consumers prefer risky discounts on a per-item basis. Moreover, the findings indicate that the per-item format is preferred due to the perception that it will yield a higher overall level of savings (the broad view) as well as provide a better chance of having at least one high discount (the narrow view) (i.e., economic route with affective aspects). The fun and excitement associated with multiple gambles that could only yield positive results (i.e., affective route) also appears to be a significant reason for preferring the per-item format. The minority who preferred the per-purchase format, on the other hand, seemed primarily motivated by the efficiency associated with that option. Once again, there was little support for the hypothesis that the per-item preference was based on a desire to segregate gains, as mental accounting theory would predict (e.g., Thaler, 1980; Thaler \& Johnson, 1990). Of course, the present test of the segregation hypothesis relies on the assumption that participants kept track of the fact that the expected value of two discount options was the same. We believe that the description of the problem ought to make that clear, but we have also shown that some participants nevertheless did not perceive the two discount options as equal in these terms since some claim that their preference for the per-item discount is based on overall discount superiority. This apparent misperception thus casts some doubt on the inferences we can draw regarding the segregation hypothesis. Nevertheless, the findings do suggest that the absence of this factor as a listed reason in Study 1 was not merely due to difficulty in expressing this reason or accessing it from memory.

## 4. Study 3

Studies 1 and 2 found that a majority of participants would prefer to experience a risky discount if it were presented in a per-item rather than per-purchase format. Both studies further indicated that participants' main reasons for preferring the per-item format included their belief that the per-item format offered a more promising discount than the per-purchase

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format and that it was also more fun (i.e., both the economic and affective routes), whereas their main reasons for preferring the per-purchase format focused on time savings and greater ease (i.e., economic route). Although the robustness of the latter findings is supported by the differing methods used in the two studies (i.e., an open-ended listing procedure in Study 1 and a fixed-item importance rating procedure in Study 2), in both cases evaluations of the alternative formats followed a commitment to a particular stated preference. Thus, it remains unclear whether the alternative formats are perceived differently in the absence of making an explicit choice between them. The reasons stated could reflect retrospectively generated justifications as well as genuinely perceived differences between the options. Study 3 was designed to explore this issue. It was hypothesized that even when participants would not make a choice themselves between formats they would nevertheless tend to view the per-item format as more promising and fun; and, conversely, they would tend to view the per-purchase format as less time consuming and effortful.

### 4.1. Sample and Procedure

Forty-eight postgraduate and undergraduate students studying in the UK (73\% females, mean age $=22$ years) were informed that a shop was running a "scratch \& save" card policy (described as in Studies 1 and 2). Instead of choosing between the different options, participants were asked to rate each option in terms of the extent to which it is "promising," "fun," "effortful," and "time consuming" on 7-point scales ranging from not at all (1) to extremely (7). Three "distracter" items focusing on riskiness, fairness, and the extent to which the outcome was chance determined were also included. These items were not expected to differ between formats, and indeed, none did. The order in which the two formats were evaluated was counterbalanced across participants. No order effects were observed.

### 4.2. Results and Discussion

Table 2 shows the means and standard deviations of participants' ratings as a function

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of feature and format. As predicted, and as Table 2 also shows, the per-item format was evaluated as significantly more fun than the per-purchase format, whereas the per-purchase format was evaluated as significantly less time consuming and effortful than the per-item format. The two formats, however, were evaluated as roughly comparable in terms of how promising they were seen to be.

Thus, the findings overall support the idea that the reasons participants offered in Studies 1 and 2 largely parallel the features they perceive these options to possess prior to choosing one for themselves. It is unclear why ratings of "promise" did not differ as predicted. Perhaps the term promising was ineffective in conjuring up a more favorable level of savings. Alternatively, in the absence of having to state one's preference for a type of discount format, participants may simply have not perceived a savings advantage for one format over the other. In Study 4, participants' perceptions of specific types of savings advantages were examined more closely.
[Insert Table 2 about here]

## 5. Study 4

Study 4 had three aims. The first aim was to test whether the majority preference for per-item risky discounts was robust and could be replicated when participants made their assessments from an observer's perspective rather than a consumer's perspective. Specifically, it was predicted that participants would regard a hypothetical per-item discount consumer as more hopeful than a per-purchase discount consumer who was similar in all other respects. In this regard, the shift of perspective was yet another test of the robustness of the earlier findings of a per-item format majority preference.

A second aim of Study 4 was to test whether participants could correctly ascertain which discount format would provide a better chance of achieving particular savings objectives. Studies 1 and 2 indicated that participants believed that per-item discounts yield

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better chances of providing an overall high discount than per-purchase discounts. However, the reasons why people believe that the per-item format is more favorable, in terms of overall savings, remain unclear. In the scenario used in previous studies, the expected savings were identical for the two formats, but the variance of the savings distribution was smaller in the per-item case due to a larger sample and thus less sampling error, as the law of large numbers dictates. To be precise, the mathematical probability of getting an overall discount greater than $25 \%$ is .34 for the per-item format and .10 for the per-purchase format, whereas the mathematical probability of getting an overall saving of at least $50 \%$ is .10 for the perpurchase format and less than .0015 for the per-item discount. Thus, since the expected value of savings in this problem is $28 \%$ of the overall purchase price regardless of format, the upside of the per-item format is that it offers a better chance of escaping the worst possible discount ( $25 \%$ ) but the downside is that it also offers a worse chance of getting an overall high discount of $50 \%$ or more.

Would participants be able to perceive the up- and down-side of the per-item format in these terms? There is evidence to suggest that such discriminations in discount features would be difficult for most individuals to make. Consumers have difficulty in processing price information (e.g., Estelami, 2003; Kruger \& Vargas, 2008), and people, more generally, have difficulty appreciating the notion and implications of regression to the mean (e.g., Tversky \& Kahneman, 1974). Moreover, those who preferred per-item and per-purchase discounts in Study 2 did not differ in the importance they assigned to "avoiding the worst possible discount" or "achieving the best possible discount" as reasons for their preference. Of course, it is possible that one might be able to correctly identify which format offers the better chance of escaping the worst discount or achieving a very high discount and yet not indicate that as an important reason for their choice (especially when their choice is not influenced by the

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economic route). Thus, Study 4 provides a more definitive test of participants' abilities to correctly perceive these chance-dependent attributes of format.

The final aim of Study 4 was to test the hypothesis that the choice of discount format offered may be of practical importance to retailers in terms of its promotional consequences. A promotion becomes particularly successful, if it not only satisfies consumers and stimulates consumption but also stimulates consumers to endorse the retailer through positive word-ofmouth advertising (cf. Wirtz \& Chew, 2002). A previous study showed that "scratch \& save" discount policies do in fact increase word of mouth (Choi \& Kim, 2007). It was hypothesized that a more popular format for offering such discounts-namely, on a per-item basis-would enhance word-of-mouth communication even further. That is, we predicted that participants would view the per-item discount format as more likely than the per-purchase discount format to generate positive word-of-mouth advertising.

### 4.1. Sample and Procedure

Fifty-four UK undergraduates ( $57 \%$ females, mean age $=20$ years) participated in the study. Participants completed a paper-and-pencil questionnaire depicting a scenario based on the previous studies. In contrast to the previous studies, however, per-item and per-purchase discount formats were assigned to hypothetical consumers. Participants were told that two shoppers, Susan and Molly, both go to different shops where they each decide to buy the same four garments, each of which is equally priced. Susan goes to shop A where the cashier offers her one "scratch \& save" card for her whole purchase of four garments-namely, a perpurchase discount. Molly goes to shop B where the cashier offers her four "scratch \& save" cards, one for each garment-namely, a per-item discount. After reading the scenario, participants indicated which consumer would: (a) be more hopeful when starting to scratch, (b) have a better chance of getting an overall savings of more than $25 \%$ off, (c) have a better chance of getting an overall savings of at least $50 \%$ off, and (d) be more likely to spread

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positive word-of-mouth communications about the shop. For each item, participants chose from the following options: "Susan," "Molly," or "equally for both shoppers."

### 4.2. Results and Discussion

Table 3 shows the proportion of responses for each of the dependent measures and chi-square tests of departures from a uniform distribution across the three response options. As predicted, and replicating the basic finding of a per-item format majority preference, most participants (55.6\%) thought that the per-item discount shopper (Molly) would be more hopeful than the per-purchase discount shopper (Susan). Excluding participants who thought both shoppers would be equally hopeful, a significant majority thought the per-item discount shopper would be more hopeful, $\chi^{2}(1, N=38)=12.74, p<.001$. These findings support the assertion that the majority preference for the per-item format is robust given that in the present study participants adopted a different perspective (i.e., "participant-as-observer" rather than "participant-as-consumer") in which they made predictions about the experiences of other shoppers.

## [Insert Table 3 about here]

Turning to the second aim of Study 4, as Table 3 shows, most participants (55.6\%) correctly indicated that the per-item discount holder had better chances of success in receiving an overall discount greater than $25 \%$ than did the per-purchase discount holder. Only one-fifth of the sample thought the per-purchase discount holder fared better in this respect. These two percentages in direct comparison were significantly different, $\chi^{2}(1, N=41)=8.81, p<.01$. Nevertheless, a sizable minority (44\%) of participants did not correctly identify the per-item discount holder's advantage in this respect, and the actual response pattern significantly deviated from the ideal distribution of all participants choosing the per-item discount holder, $\chi^{2}(2, N=54)=500.04, p<.001$.

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Similar analyses were conducted on the question asking who is more likely to get an overall discount of at least $50 \%$ off. Table 3 shows that the modal response (made by $40.7 \%$ of participants) was to state incorrectly that the per-item discount would be more likely to get an overall discount of at least $50 \%$ off. However, the pattern of responses did not significantly deviate from an equal distribution, thus indicating that neither of the options was perceived as more likely to yield an outcome of $50 \%$ or more. The actual response pattern significantly deviated from the ideal distribution of all participants choosing the per-purchase discount holder, $\chi^{2}(2, N=54)=1,381.73, p<.001$.

Taken together, the findings from these two measures indicate why the majority of participants in Studies 1 and 2 regarded the per-item format as providing a superior overall savings level. That is, most regard the per-item format as increasing one's chances of escaping the worst possible outcome without seeming to realize that the per-item format also reduces one's chances of getting an overall savings of $50 \%$ or higher. The findings clearly reveal that a significant proportion of participants do not correctly perceive the relative strengths of the two formats in terms of these chance-related attributes.

The final aim of this study was to examine whether participants judged the per-item discount format to be more likely to inspire word-of-mouth advertising for the discount provider. As predicted, and as Table 3 shows, participants indicated that the per-item discount would be more likely to inspire positive word-of-mouth advertising than the per-purchase discount. Thus, not only do the majority of participants believe that the per-item discount shopper would be more hopeful, they also believed that she would be more inclined to share their positive experience with other potential shoppers.

## 6. General Discussion

The present research yielded several findings that shed light on consumer preferences for promotional methods that capitalize on risk or uncertainty. The central question was

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whether consumers would choose to experience risky discounts on a per-item or per-purchase basis. Consumers may prefer per-item risky discounts, which are not commonly found in the market place, for a variety of theoretical reasons. Indeed, Studies 1 and 2 both revealed a majority preference for the uncommon per-item format. Moreover, Study 4 involving a shift of participants' perspective to that of an observer found consistent results. Thus, the studies obtained fairly robust evidence for a majority preference for the per-item format.

Drawing on Raghubir et al.'s (2004) framework, this preference for a per-item discount had been hypothesized for a number of economic and affective reasons. The present studies put these various hypotheses to the test and revealed clear differentiating support. We first discuss reasons supporting the economic route, before discussing reasons supporting the affective route, and reasons that are likely to simultaneously affect the perception of economic utility and affective response.

Drawing on a normative analysis of the difference between the two discount formats for multi-item purchases, it had been hypothesized that consumers would prefer the per-item format if they wished to avoid the worst possible overall discount, whereas they would prefer the per-purchase format if they wished to attain a discount that substantially exceeded the discount's expected value. Both aspects of this dual hypothesis follow from the same underlying law-of-large-numbers principle. That is, as the size of the sampling distribution increases, the variance around the mean will decrease. Thus, both exceedingly low and exceedingly high overall savings levels will be less probable in the per-item format than in the per-purchase format. Results indicate that participants are not particularly sensitive to the role that the law of large numbers plays in differentiating the two discount formats for outcomes at the extremes. In Study 1, participants did not spontaneously list these factors as bases for their preference. In Study 2, when asked to rate the importance of various reasons for their preference, no difference between participants who preferred per-item and per-purchase

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formats were found on measures of avoiding the worst possible overall discount or achieving a very high overall discount. Finally, Study 3 revealed that, whereas a majority of participants correctly thought the per-item format offered a better chance of avoiding the worst discount, they did not appear to realize that the same format also restricted their chances of attaining an exceptionally high overall discount.

From a descriptive standpoint, our findings cohere with previous research. There is ample evidence showing that people have difficulty appreciating the significance of the law-of-large-numbers (e.g., Tversky \& Kahneman, 1971), as they do for many other statistical principles (e.g., Kahneman \& Tversky, 1973), and there is little reason to suspect that they would do better in the present context. The fact that most participants in Study 4 correctly ascertained that the per-item format offered a better chance of avoiding the worst possible overall discount, but did not equally realize the downside of less sampling error (namely, having also a smaller chance of obtaining a high discount) might explain the findings in Studies 1 and 2, which indicated that one reason for the per-item majority preference was the perception that it offered an overall higher expected discount (which in fact was not the case). However, even if that were so, statistical considerations could be difficult for consumers to articulate as reasons for their preference, given their opaqueness for most statistically naïve individuals.

Apart from overall discount likelihood, we had hypothesized a second reason related to the economic route that may influence preference, namely procedural requirements. As hypothesized, the minority who preferred the per-purchase format was mainly motivated by time saving and procedural ease. This finding is consistent with earlier findings that the "hassle" involved in coupon redemption reduces the likelihood of discount redemption (Chakraborty \& Cole, 1991). This factor may gain in importance in cases where the number of purchase items is very high. Imagine, for instance, how ineffective a per-item risky

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discount format would be in the context of grocery shopping. The fun and excitement of multiple draws would likely quickly give way to boredom and frustration.

The fun and excitement involved in discount redemption had been proposed to be a reason for preference originating from the affective route. As hypothesized, the per-item format was perceived as superior in that regard. Several participants in Study 1 listed fun and excitement as reasons for their per-item discount preference and these factors were rated as relatively important reasons among those who preferred the per-item discount in Study 2. Moreover, participants in Study 3 rated the per-item format as significantly more fun than the per-purchase format. Hence, risky discounts might instill consumer preference through the positive anticipatory experience of waiting to learn what one's discount will be. As the peritem discount involves multiple gambles this anticipatory experience is more prolonged compared to the per-purchase discount. Note, however, that the studies at hand investigated anticipated fun and excitement only. It would be interesting for future studies to look at whether the actual experience is actually an enjoyable one and whether the actual discount(s) received influence the hedonic experience of discount redemption.

Apart from reasons that can be clearly categorized as either economic or affective we had hypothesized the existence of reasons that affect economic utility perceptions and affective responses simultaneously. Drawing on mental accounting theory (Thaler, 1980; Thaler \& Johnson, 1990) and prospect theory (Kahneman \& Tversky, 1979), it was also hypothesized that consumers might prefer the per-item format because it allowed savings to be segregated, thereby enhancing overall subjective value. Although the present studies do not rule out this possibility, participants' did not spontaneously mention this reason in Study 1 and its importance did not differ between per-item and per-purchase choosers in Study 2 (notably, despite this reason not being relevant in the case of a per-purchase discount). Possibly this was due to the fact that all formats had featured percentage claims. Thus, the

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percentage value participants might have focused on (especially since the cost of each item purchased was kept constant) was the same across formats. Alternatively, it is possible that the effect of hedonic editing has not been accessible to introspection or that hedonic editing has been reflected in the increase in reported excitement (which we mainly attributed to the extended gambling experience).

In a related vein, it was hypothesized that the per-item format may make it easier for consumers to positively interpret their shopping experience by permitting two different "views" of the situation. In the broad view, discounts are evaluated in terms of their overall savings. In the narrow view, by contrast, discounts are evaluated in terms of the most favorable discount obtained. Hence, the per-item format gives consumers more latitude in the construction of mental accounts. For instance, a consumer who got a mediocre overall discount might prefer to focus on the single item purchased that yielded a high discount. There was support for this hypothesis. Indeed, only those who preferred the per-item discount in Study 1 spontaneously mentioned the fact that they could get a high discount on at least one item as a reason for their preference. In Study 2 this reason was also rated as the most important by those who preferred the per-item format. These findings suggest that consumer preferences for promotional methods depend not only on objective savings but also on the hedonic value they may offer through the stories of "good luck" they hold the prospect of supporting. The emphasis some participants placed on obtaining a "peak discount" at least once is consistent with research showing that retrospective assessments of pleasure follow a peak-end rule (Kahneman et al., 1993) in which the most pleasurable point and the last point of a pleasurable episode largely determine subjective assessments of pleasure (e.g., Baumgartner et al., 1997; Do et al., 2008).

Our main aim was to learn which discount format consumers prefer given they have a choice. Based on the similarity of results of within-and between subject designs found for

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non-risky gain integration (Heath et al., 1995; Thaler, 1985; Thaler \& Johson, 1990), we assume that the established preference transfers to settings in which discount options are judged in isolation from each other. Future research would be necessary to establish this beyond doubt. Building on insights gained about preference and reasons for this preference, several further routes for future research can be suggested. Future research could examine how format preferences vary as a function of the number of purchase items, disparity in item prices, and the type of items. Such research could reveal important moderators of the present findings. For instance, in line with the idea of emotional accounting (Levav \& McGraw, 2009), it could be that consumers aim to match the experiential quality of the discount with the experiential quality of the product. Hence, per-item discounts might be particularly preferred for hedonic products (e.g., designer clothing). In a related vein, it would be interesting to see whether manipulating consumer motivation and characteristics of the consumer choice situation in line with the revealed reasons does actually influence discount format preference. It would also be interesting to see whether different consumer traits such as risk preference and anxiety (e.g., Maner et al., 2007; Weber \& Milliman, 1997) or regulatory focus (i.e. achieving prevention or promotion goals, e.g. Avnet \& Higgins, 2003; Halamish et al., 2008), which might affect the importance of specific reasons, influences people's choices between the discount options.

Future research might also investigate whether the appeal of per-item discounts can be observed before consumers enter the store. That is, how do consumers react towards different formats of risky-discount claims? For example, per-item discounts may lead to different price cognitions and enhanced price affect compared to per-purchase discounts (Peine et al., 2009). It would be particularly interesting to investigate whether drawing consumers' attention to the excitement and fun associated with risky discounts or-in the case of per-item discounts-the chance to at least once hit the jackpot is an effective claim from the outset. Another area of

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interest is whether different discount formats vary with regard to the actual redemption experience. For instance, is the same objective outcome perceived differently depending on whether it was achieved by a per-item or per-purchase discount? Another direction for future research relates to inter-individual causes for discount preferences. Traits such as deal proneness, variety seeking, risk aversion, or frugality, as well as differential experiences of the value of time and money, likely influence consumer preference for per-item versus perpurchase discount formats.

There are a variety of ways in which differences between risky discount formats can become behaviorally relevant. For example, per-item discounts make the link between a product and its price more salient, and this may have an influence on consumers product perception (e.g., evaluation) and behaviors (e.g., speed of repurchase) (e.g., Kamleitner \& Hölzl, 2009). Considering that previous research indicated that risky discounts may indeed be a successful promotional method (Choi \& Kim, 2007, 2008) following some of these research avenues may be promising from both theoretical and applied perspectives.

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Table 1: Importance of reasons as a function of chosen option in Study 2

|  | Chosen option |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Per-purchase $^{\mathrm{a}}$ | Per-item $^{\mathrm{b}}$ |  |  |  |
| Reason | $M$ | $S D$ | $M$ | $S D$ | $F(1,42)$ |
| Overall discount superiority | 3.91 | 1.64 | $5.42^{* * *}$ | 1.15 | $11.53^{* *}$ |
| Achieve best discount overall | 4.18 | 0.87 | $3.70^{* *}$ | 1.70 | 0.81 |
| Avoid worst discount overall | 4.91 | 1.45 | $5.24^{* *}$ | 1.62 | 0.37 |
| Good discount at least once | 4.36 | 1.43 | $5.64^{* * *}$ | 1.43 | $6.51^{*}$ |
| More exciting | 4.09 | 2.02 | $5.39^{* * *}$ | 1.62 | $4.72^{*}$ |
| More fun | 3.36 | 1.91 | $5.12^{* *}$ | 1.62 | $8.92^{* *}$ |
| Multiple small gains | 2.27 | 1.49 | $3.39^{* * *}$ | 1.60 | $4.19^{*}$ |
| Less hassle/time consuming | $5.82^{*}$ | 0.98 | 2.12 | 1.56 | $54.34^{* * *}$ |
| * $p<.05,{ }^{* * *} p<.01,{ }^{* * *} p<.001$. |  |  |  |  |  |

${ }^{\text {a }}$ Within-column significance tests are based on a deviation contrast in which each level is compared to the grand mean value of 4.38 , excluding the reference category "Multiple small gains" (selected because of its lowest mean value).
${ }^{\mathrm{b}}$ Within-column significance tests are based on a deviation contrast in which each level is compared to the grand mean value of 4.84, excluding the reference category "Less hassle/time consuming" (selected because of its lowest mean value).

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Table 2: Evaluation of discount options as a function of feature and format in Study 3

| Feature | Format |  |  |  | $t(46)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Per-item |  | Per-purchase |  |  |
|  | M | $S D$ | M | $S D$ |  |
| Promising | 4,66 | 1.51 | 4.30 | 1.37 | 1.21 |
| Fun | 4.53 | 1.64 | 3.96 | 1.20 | 2.02* |
| Effortful | 4.52 | 1.75 | 3.30 | 1.53 | $3.90 * * *$ |
| Time consuming | 5.11 | 1.63 | 2.91 | 1.77 | $5.91{ }^{* * *}$ |
| Risky | 3.64 | 1.88 | 4.09 | 1.82 | 1.10 |
| Fair | 4.45 | 1.02 | 4.21 | 1.10 | 1.05 |
| Chance determined | 4.92 | 1.60 | 4.83 | 1.63 | 0.30 |

" $p<.05,{ }^{*} p<.01, \quad p<.001$.

Table 3: distribution of responses (in \%) in Study 4

| Per-item | Per-purchase | Both |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Measure | (Molly) | (Susan) | equally | $\chi^{2}(2, N=54)$ |
| Is more hopeful | 55.56 | 14.82 | 29.62 | $13.78^{* *}$ |
| Better chances overall discount $>25 \%$ | 55.56 | 20.37 | 24.07 | $12.11^{* *}$ |
| Better chances overall discount $\geq 50 \%$ | 40.74 | 27.78 | 31.48 | 1.44 |
| Spreads more positive word of mouth | 42.59 | 11.11 | 46.30 | $12.11^{* *}$ |

${ }^{*} p<.05,{ }^{* *} p<.01,{ }^{* * *} p<.001$.

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Figure 1: Participants' main reasons for choosing per-item and per-purchase discounts in Study 1



[^0]:    ${ }^{1} \mathrm{We}$ are grateful to an anonymous reviewer for making this suggestion.

