Spending More to Save More:
The Impact of Coupons on Premium Priced Products

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ABSTRACT

Past research and conventional wisdom suggests that coupons are used by price-sensitive consumers to save money. Three studies show that coupons for premium-priced products can actually make consumers spend more money than they would have spent in the absence of coupons. In study 1, we analyze scanner purchase data for two product categories. This analysis provides evidence that more than one out of four coupon-users increase their expenditures when using coupons, as compared to their non-coupon purchases. We specifically examine the effects of coupons for premium-priced products in Study 2 through a laboratory experiment, and find that a coupon decreases the unattractiveness of high price by framing the price as a mixed gain rather than as a net loss. Finally, in another laboratory experiment (Study 3) we find that the tendency to clip and redeem coupons for expensive products is due to coupon-users' proclivity to focus on coupon value rather than net price.

"People want economy and they will pay any price to get it."
Lee Iacocca, the *New York Times* (1974)

It is widely believed that consumers use coupons to save money. The website of a promotions management agency (CouponInfo Now 2003) states that over 4.4 billion coupons were redeemed in 2000, representing consumer "savings upwards of $3.9 billion." Similarly, Supermarket Business (1997) reported that 5.3 billion coupons redeemed in the year 1996 "saved the consumers about $3.5 billion." To promote the notion of savings to consumer, almost all coupons have the word "save" printed on their face.

This view of coupons as a savings mechanism appears to be based on the premise that coupon-using consumers tend to be more price sensitive than non-users of coupons (e.g. Narasimhan 1984). Blattberg and Neslin (1990, p. 311) state, "since coupon-users are more price sensitive, the coupon is distributing savings among those who care about getting those savings." While coupons offer a uniform level of savings for all consumers, the benefits accrue only to those who value the savings enough to be willing to clip, collect and redeem coupons. A number of researchers therefore have argued that coupons are price discrimination vehicles that serve to discriminate between consumers with differing degrees of price sensitivity (Blattberg and Neslin 1990; Narasimhan 1984; Vilcassim and Wittink 1987). All these studies suggest that coupon redemption helps consumers to save money.

While these prior studies have added considerably to our knowledge of how and why coupons are used, there are two important questions that do not appear to have been examined in the literature. First, the fundamental assumption that consumers in fact save money by using coupons has never been empirically tested. Vilcassim and Wittink (1987) found that coupons are more likely to be used for higher-priced brands in the category. This suggests that some coupon-

users in the process of saving money may "trade up" and spend more on the category. Thus, the first question that we seek to address in the current research is whether consumers actually spend less money when they use coupons.

The second issue that we seek to address is the following: while coupon-users as a group may be price sensitive, do coupon-users actually evaluate the "net price" when they use coupons or are their decisions more influenced by the "coupon value"? Suppose that a consumer has clipped a coupon for $1 on a pack of soup that has a regular price of $2.50. While making a purchase decision, will she focus on the gain of $1 or will she compare the net price of $1.50 (after adjusting for coupon value) with those of other competing products? In other words, a person using a coupon has two cues to use to evaluate satisfaction: the economy perceived as being derived from the value of the coupon, and/or the economy perceived as being derived from the lowered net price as a function of the coupon. We posit that deal-satisfaction[1] (*i.e.*, satisfaction with coupon value) and price-satisfaction (*i.e.*, satisfaction with net price) affect coupon-users differently; focusing on price-satisfaction can induce consumers to save money with coupons, while focusing on deal-satisfaction may not reduce their expenditure. In fact, focusing on deal satisfaction can sometimes induce them to spend more. Past research suggests that such a distinction between price-satisfaction and deal-satisfaction can be insightful in understanding consumer behavior. Raghubir (1998) examined the effect of coupon value on price perception and found that when consumers are unaware of prices, high coupon values serve as signals of high prices. Darke, Freedman and Chaiken (1995) found that consumers selectively use price discounts as heuristic cues in evaluating the price. Further, Lichtenstein, Ridgway and Netemeyer (1993) and Lichtenstein, Netemeyer and Burton (1990) suggested that deal-proneness and price-consciousness could lead to distinct behavioral propensities. In a similar vein, Grewal,

Monroe and Krishnan (1998) noted that acquisition value and transaction value are distinct psychological constructs. All these studies suggest that offering a deal is not just the same as lowering the price by an equivalent amount. Although past research has noted the distinction between consumers' perceptions of coupon value and net price, no study has specifically examined the interactive effect of these two variables on consumers' expenditure.

In sum, the objective of this paper is to address the following questions: *(i)* whether consumers' expenditures for coupon purchases are lower than that for non-coupon purchases; and, *(ii)* whether deal-satisfaction and price-satisfaction have differential impact on coupon-redemption behavior. Our theoretical framework draws on the mental accounting model proposed by Thaler (1985) and proposes that coupons for premium priced brands can induce price-sensitive consumers to spend more because coupons invoke a reference-price dependent satisfaction. This proposition is tested via three studies, one using scanner data from actual purchases, and using data elicited through two controlled laboratory experiments that manipulate the variables of interest. Using these different methodologies enhances the contributions of this paper: we first demonstrate the phenomenon being investigated in a field setting that is characterized by a high level of external validity, and then follow this up through laboratory experiments that are high in internal validity to delineate the mechanism underlying the phenomenon.

We now briefly describe the extant literature that we draw upon in order to develop our conceptual model. We then describe each of our studies together with the results. We conclude with a discussion of our results, and their implications for a theoretical understanding of the psychological benefits of using coupons, over and above the more-researched monetary benefits.

CONCEPTUAL FRAMEWORK

Although a number of researchers have suggested that coupon-users tend to be more price-sensitive than non-users of coupons (e.g., Narasimhan 1984; Vilcassim and Wittink 1987), others have noted that coupons have effects beyond simply providing a lower price to consumers. Schindler (1992) conducted a number of shopping simulation studies and concluded that "the effects of a coupon promotion are due to more than the size of the discount involved" (Schindler 1992, p. 447). However, his research did not examine the impact of coupons on consumers' expenditure. Lichtenstein and his colleagues distinguish between value-consciousness and coupon-proneness (Lichtenstein, Netemeyer, and Burton 1990; Lichtenstein, Ridgway, and Rao 1993) and suggest that a price reduction in coupon form might produce an increase in consumer response beyond that expected from an equivalent low price. *Value-conscious consumers*, according to them, would respond similarly to a price discount in coupon form and an equivalent price reduction. But *coupon-prone consumers* would respond more positively to a coupon discount even if the product were offered at the same discounted price without a coupon. The study by Shimp and Kavas (1984) suggests that this phenomenon may be due in part to the feeling of being a "smart shopper".

Sen and Johnson (1997) conducted a laboratory study in which they found that the mere and arbitrary possession of a rebate coupon for an alternative prior to making a choice enhances preference for that alternative. The authors attributed this to loss aversion (Tversky and Kahneman 1991), arguing that consumers who had the coupon viewed not using it as a loss. More recently, Heilman, Nakamato, and Rao (2002) found that consumers receiving an unexpected coupon while in the store made more unplanned purchases and had larger grocery baskets.

This stream of research, thus, suggests that coupons offer a reference dependent satisfaction that is over and above the satisfaction from the price-reduction offered by coupons (Neslin 2002). Our interest is in isolating this reference dependent effect and examining whether this effect can prompt coupon-users to spend more than their regular outlay for the category. Thaler's (1985, 1990) mental accounting model provides a framework for disentangling the price-related and reference-dependent benefits of coupon. Thaler proposes that a consumer making a purchase decision considers two kinds of utilities: *acquisition utility* and *transaction utility*. Acquisition utility, according to Thaler, is a function of the difference between the actual price p paid for the product and the product's value equivalent $\overline{p}$ (*i.e.*, the price the consumer is willing to pay). Acquisition utility is denoted by the function $v_a(\overline{p}, -p)$. Transaction utility is the utility or satisfaction derived by paying p when the reference price is p^*, and is denoted by the function $v_t(p^*, -p)$. The reference price p^* is the price expectation and could be based either on shelf price or other stimulus based cues (Mayhew and Winer 1992; Winer 1988). The total utility for the product can be viewed as the sum of the acquisition and transaction utilities.

To see how this would be applied to purchases involving a coupon, consider the following example. Suppose that two products are available in a category, priced at \$3.49 and \$2.50. Further suppose that both the products are valued by a consumer at \$2.50; *i.e.*, she would be willing to pay no more than \$2.50 to buy either product. Then her acquisition utility for the expensive product at that price can be designated as $v_a(2.50, -3.49)$. If the retail store revises the regular price of the expensive product down to \$2.79, then her acquisition utility increases to $v_a(2.50, -2.79)$, which continues to be lower than that for the relatively inexpensive product. However, instead of revising the regular price down, if the store offers a 70-cents coupon on the expensive product, not only does her acquisition utility increase as before, but she also gains a

transaction utility of $v_t(3.49, -2.79)$. It is possible then that the total utility for the expensive product with a 70-cents coupon will be higher than the utility for the other product priced at $2.50, despite the fact that the net price for the expensive product is $2.79. Thus, offering a product with a coupon results in a higher utility than offering the same product at the same price without a coupon. This higher utility stems from the fact that coupons invoke a higher reference price. This reference price is very salient and credible because coupon users know that if they don't redeem the coupon, then they will have to pay the regular price. An important inference that emerges from this discussion is that coupons add a reference dependent, psychological component to the utility for a product and thereby increase consumers' willingness to pay more for the same product at the same net price. Consequently, this increase in utility induced by coupons may result in consumers spending more than they otherwise would. The paradoxical nature of this result makes it an interesting one: price-sensitive consumers search for coupons to save money, but if they find a coupon for an expensive brand that they would not have normally considered, the coupon increases their propensity to buy that expensive brand and thus makes them spend more.

Another way to interpret the effect of coupons in the above example is that the coupon disaggregates a net loss of 29 cents (paying $2.79 for a product valued at $2.50) into a loss of 99 cents ($2.50 less $3.49) and a gain of 70 cents ($3.49 less $2.79). Consumers prefer such disaggregated loss and gain to an aggregated net loss. An interesting study by Tversky and Kahneman (1986) shows people's preference for situations where losses and gains are disaggregated, relative to situations where only the net effect is known, is quite ubiquitous. In their study, one group of participants was presented with a scenario where the salaries paid by a firm to its employees were decreased by 7%, while in another group participants were told that

the firm increased salaries by 5% but the inflation rate was 12%. Although the net effect was the same in both conditions, the firm's policy was perceived to be significantly unfair in the former condition relative to the latter.

Transaction utility theory suggests that the weights that consumers place on acquisition utility and transaction utility differ across consumers. Formally, Thaler's (1985) model is expressed as-

$$Total\ Utility = v_a(\overline{p}, -p) + b\, v_t(p^*, -p)$$

In the context of products purchase using coupons in a store, $\overline{p}$ refers to the price of an equivalent product (i.e., value equivalent) and p refers to the post coupon price (i.e., net price after adjusting coupon value) that the consumer has to pay to acquire the product. Transaction utility is a function of p^*, which refers to the regular pre-coupon price that serves as the reference price for the product. In this paper we focus on two popularly used psychological constructs to gain insights on the perception of net price and gains offered by coupons, namely price-satisfaction and deal-satisfaction. Price-satisfaction captures consumers' satisfaction with the net, post coupon price relative to the competing products' price. Deal-satisfaction, on the other hand, measures the satisfaction with the gain offered by coupon value with respect to the regular price. Thaler (1985) suggested that "pathological bargain hunters would have $\beta > 1$" (p. 205). Stated differently, a consumer who weighs deal-satisfaction more than price-satisfaction is more likely to consider an expensive product with a coupon as a good buy. We test this proposition of the model in an experimental setting. To foreshadow our results, we find that consumers are more likely to buy expensive products when they focus on deal-satisfaction rather than price-satisfaction.

In summary, based on Thaler's mental accounting model and the findings of past research on coupons, we propose that coupons for expensive products can significantly increase the likelihood that coupon-users will spend more money, upgrade to higher-priced products, and experience more satisfaction with the price paid. In the subsequent sections of this paper, we present three studies that test this hypothesis. In Study 1 we analyze scanner data on purchase of soups and brownie mixes, and show that more than a fourth of the coupon using households in our sample spend more money when they use coupons than when they do not. We also show that availability of coupons for expensive products induced these households to spend more. In Study 2 we describe a laboratory experiment that directly examines the effect of coupons for expensive products. We show that when a coupon is available for a higher-priced brand, it makes the brand more attractive even when the net price after adjusting for the coupon value remains relatively high. Study 3 examines differences within coupon-users and shows that when coupon-users place more weight on deal-satisfaction (*i.e.*, coupon value) they tend to spend more and when they place more weight on price-satisfaction (*i.e.*, net price) they tend to save money. We now present the details of each of these studies.

STUDY 1:
COUPON-INDUCED SPENDING – A FIELD INVESTIGATION

The objective of this study is to determine the extent to which consumers increase or decrease their monetary expenditure when they use coupons to buy products. We do this by analyzing UPC scanner data on actual purchases of soups and brownie mix. Several factors made these two categories appropriate for analysis. First, both these categories are actively promoted categories; 69% of households used coupons at least once to buy soups and 42% of households used coupons to buy brownie mixes. Second, both these categories offer a wide range of prices.

The effect of coupons on net price can be most clearly observed when the median coupon value is smaller than the price range. Ninety percent of the soup SKUs purchased had prices ranging from $0.25 to $1.11 and the median coupon value in this category was 20 cents. Similarly, 90% of brownie mixes had prices in the range $0.15 to $0.75 and the median coupon value was 40 cents. So both these categories provided plenty of opportunities for coupon-based transactions to be at prices higher than the non-coupon prices. Finally, since consumers frequently buy both these categories, data on prices paid with coupons as well as prices paid without coupons, to compare the effect of coupons on category expenditure, were easily accessible.

Data

Our database consists of soups and brownie mix household panel records from 19 stores in the Sioux Falls area; five of these were independent stores and the rest were members of five store chains. In each of these markets, household panelists were issued magnetic ID cards to be presented at the checkout counter when shopping at the participating stores. The data spans a period of 107 weeks starting from the thirty-second week of 1985. Information about pre-coupon price paid, coupon usage and coupon face values were collected from household purchase records. (Pre-coupon price refers to the regular price that coupon-users would have had to pay if they did not redeem any coupon to purchase the product.) The post-coupon price paid was calculated by deducting the coupon value from the pre-coupon dollars paid for each transaction.

There were 2,032 households in the panel who purchased brownie mixes from these stores during this period and 844 of these households used coupons at least once. In the same period, 3,351 households purchased soups and 2,316 of these households used coupons at least once. To test our hypothesis, we compared the average price paid when coupons are used ($Price_{(c)}$) with the average price paid when no coupons are used in the transaction ($Price_{(nc)}$) for

each household. We refer to the difference between these two prices ($Price_{(nc)}$ minus $Price_{(c)}$) as the *Coupon-Induced Price Difference* (CIPD). CIPD was estimated at the household level. This simple measure indicates whether coupon redemption increased or decreased the expenditure in the category. If coupon usage leads to monetary savings, then the value of CIPD should be greater than zero. This would suggest that the average spending for the household for that product category was lower when they used coupons.

We estimated the average price paid by each of the 844 households that had used coupons for brownie mixes and 2,316 households that had used coupons for soups, separately for transactions that involve coupons and transactions that did not involve coupons. Next, we estimate the CIPD value for each of these households by simply subtracting the average price for transactions with coupon $Price_{(c),}$ from the average price for transactions without coupons, $Price_{(nc)}$. Thus, this measure was calculated for each of the 2,316 households for soups and each of the 844 households for brownie mixes separately.

Results and Discussion

Table 1 shows the average prices paid and coupon face values for the households in the sample. In the table, households are classified into the following groups:

(i) Coupon-induced spenders: These households, who constituted 26% of the coupon using households in soups category and 27% in the brownie mixes category, incurred higher expenses when they used coupons. When coupons were not clipped, these households were very value conscious and paid an average of $0.51 for soups but when they purchased the category using coupons, their average spending increased to 0.66 ($t = 16.32$; $p < .01$). Similarly, when the coupon-induced spenders used coupons for brownie mixes, their average price increased from

$1.10 to $1.41 ($t = 25.7$; $p < .01$). It seems that for these households, the availability of coupons prompted them to buy more expensive products that they would not have bought otherwise.

(ii) Coupon-induced savers: These households, 74% of the soup purchase sample and 49% of the brownie mix purchase sample, saved money by using coupons. When they did not use coupons they paid an average price of $0.53 for soups, but when they used coupons they paid only $0.32. Similarly, in the case of brownie mixes, they paid $1.51 when purchasing the category without coupons, and $1.17 when they used coupons to buy the category.

(iii) Coupon-induced purchasers: In the case of brownie mixes, there was a third category of coupon-users – consumers who bought only when they had coupons. These were households who never bought the category without using coupons; they represented 24% of the brownie mix sample. Since we did not have the non-coupon data available for these consumers, it is not feasible to conclude whether coupons induced these consumers to save money or spend more. However, if the presence of coupons actually triggered their category purchase, then one could infer that the presence of coupons prompted these consumers to increase their expenditure on the category.

Insert Table 1 about here

These results clearly suggest that coupons can induce a significant proportion of consumers to increase their outlay for the category. Across both the categories, one in every four coupon-users ends up spending more when they redeem a coupon than when they do not. In fact, a comparison of the regular prices of purchases with coupons with purchases without coupons (see Table 1) suggests that consumers who used coupons to buy products that they normally buy, saved money and those who used coupons to upgrade to premium products ended up spending

more. For coupon induced savers, the regular price of soups that they bought with coupons was exactly the same (53 cents) as the average price of the products that they bought without coupons; similarly the regular price of brownie mixes that they bought with coupons was close ($1.51 versus $1.61) to the price of brownie mixes that they bought without coupons. But in the case of coupon-induced spenders, the regular prices of their coupon-based purchases were significantly higher than the prices of purchases without coupons both in the case of soups (51 cents versus 91 cents) and brownie mixes ($1.10 versus $1.81).

Ironically, the coupon-induced spender segment seems to be *more* price-sensitive than the segment that uses coupons to save money. When no coupons were redeemed, the spenders bought less expensive soups ($0.51) than the savers ($0.53, $p < .01$). In the brownie mix category also, when purchases were made without coupons, the spenders spent less ($1.10) than the savers ($1.51, $p < .01$). Clearly, the category of households that spent more were quite price conscious, and yet they ended up increasing their expenditure when they redeemed coupons. Stated differently, coupons for expensive products seem to have decreased their price sensitivity. Consumers who normally (*i.e.*, even without coupons) bought these expensive products saved money when they redeemed coupons, but consumers who normally bought low priced products ended up spending more when they redeemed coupons.

Thaler's mental accounting model suggests that the coupon-induced spenders are influenced by a benefit provided by coupons that is linked to the reference price of the product. The reference dependent gain offered by coupons increases coupon-users' total utility for the expensive products and thus induces them to spend more. However, given the nature of the data, it is difficult to draw causal inferences about the effect of reference-dependent gain offered by coupons because coupon availability is not the only factor that can change across various

purchase occasions. Therefore in the subsequent study we present a controlled laboratory experiment that examines the effect of coupons on willingness to buy expensive products.

STUDY 2:
COUPON-INDUCED SPENDING – A LAB INVESTIGATION

Study 1 showed that coupons for higher-priced products could induce consumers to spend more money than they would spend in the absence of coupons. We propose that this is because coupons offer a reference-dependent gain; *i.e.*, a psychological benefit of using coupons that is a function of the reference price. Because scanner data do not allow us to other factors and tease out this effect of coupons, in Study 2 we describe a laboratory experiment conducted for this purpose.

The objective of this study is to examine the reference -dependent effect of coupons after controlling for all other possible confounding factors. Further, we investigate whether transaction utility can actually induce consumers to spend more. Since coupons invoke a reference price and provide reference dependent utility, we hypothesize that:

H1a: Coupons will increase the purchase intent for an expensive product even when net price for the product (after adjusting for coupon value) is relatively high.

H1b: Coupons for expensive products will induce consumers to spend more on the category.

The basic task in this study required participants to choose from among six liquid hand soap products, including two new variants, after seeing an advertisement for the two new varieties. The six products offered to the participants were of two types; two products were expensive products while the remaining four were relatively inexpensive. Purchase intentions were measured for all products so that for each participant we had two sets of dependent

measures – one set for expensive products and the other set for inexpensive products. The type of product, thus, was a within subject factor.

Half the participants received a coupon for each of the two expensive products and were told that they could use the coupons in the subsequent purchase task, while the other half were not given any coupons. However, the net prices were kept constant across the two conditions. The experiment thus employed an orthogonal 2 (coupons for expensive products: with coupon vs. without coupon) x 2 (type of products: expensive vs. inexpensive) mixed factorial design, where the former was a between-subjects factor and the latter a within-subjects factor.

Since our interest is in examining the reference dependent effect of coupons, the net price of the product was kept constant across both conditions. The net price that the participants had to pay was kept constant for each brand across the two coupon conditions; *i.e.*, the price that participants in the coupon condition had to pay, after deducting the coupon value, was the same as the price the participants in the non-coupon condition had to pay (see Table 2).

The experimental design was motivated by the desire to keep the purchase task as close as possible to actual purchase situations. In most shopping situations, consumers choose from a consideration set consisting of a limited number of brands (which we kept as six in this study) and those consumers who are coupon-users often get coupons for more than one brand (we provided coupons for two brands). They then choose one or more coupons, clip them and carry them to the store. In this study as well, half the participants received coupons for the two expensive brands and had to choose one brand in the subsequent shopping task.

Method

Participants. Eighty undergraduate students from a large North Eastern university participated in the experiment as partial fulfillment of a requirement in their introductory marketing course. Their average age was around 20 years and fifty one of them were male.

Stimuli and Procedure**.** Participants were told that a reputed household product firm was interested in knowing their response to two new variants of handsoaps. The stimuli and the measures were presented to the participants in a booklet. Immediately after seeing the instructions, the participants saw an advertisement for Softsoap hand soap. On the following page, they saw descriptions of the two new variants that were ostensibly being added to the Softsoap range of hand soaps—Softsoap Antibacterial Naturals and Softsoap Vitamins. The prices of these two products were higher than that of other four products. They were presented with the following description of Softsoap Antibacterial Naturals:

> "Softsoap® Antibacterial Natural Liquid Hand Soaps are enriched with pure, natural ingredients to cleanse, moisturize and gently care for your family's hands. Contains natural moisturizing ingredients. Washing with Softsoap® Antibacterial Natural Liquid Hand Soaps is proven to effectively eliminate the dirt and germs your family encounters."

Participants then read a similar paragraph about the other new variant, Softsoap Vitamins. Participants in the coupon-present condition were shown two coupons, one for each of the new variants that they had just read about. The coupon for Softsoap Antibacterial Natural was for 70 cents while that for Softsoap vitamins was for 40 cents. Participants in the coupon-absent condition neither received nor saw these coupons.

Next, all the participants were informed about the shopping task. Specifically, they read the following instructions: "Now imagine that you are in a supermarket to buy liquid hand soap. The following brands are available in the shop and their prices are as listed below." Participants

in the coupon-present condition were given an additional instruction: “Imagine that you have clipped both the coupons that you saw before and that the store accepts these coupons.” All participants then saw a list of six products and their prices. Three of the products were variants of the Softsoap brand, two were variants of the Dial brand and the sixth product was a store brand, Shop Rite. The net prices of the products ranged from $1.49 to $2.79. Table 2 lists the names of the products and the prices used in this study.

Insert Table 2 about here

In the coupon-present condition, the price of Softsoap Antibacterial Naturals (all products were of 7.5 Oz) was shown as $3.49. Since they also had a coupon worth 70 cents, the net price for this product was $2.79. In the coupon-absent condition, the price of this product was shown as $2.79. Similarly, the price of Softsoap Vitamins was depicted as $2.99 in the coupon-present condition and after deducting a coupon worth 40 cents, the net price for this product was $2.59. In the coupon-absent condition, the price of this product was shown as $2.59. The prices for other four products were kept the same across both conditions. Two aspects of these prices may be noted. First, the two expensive products continued to be relatively expensive even after adjusting for the value of coupons. Second, the net price for the expensive products was kept constant across the two conditions.

Most participants completed the study in less than 10 minutes. After completing the questionnaire, they were debriefed for demand effects; there was no evidence to suggest that participants had surmised the experimental objectives.

Dependent measures**.** Two dependent measures were measured to analyze the effect of coupons: purchase intent and price paid. The measures are described below.

In order to measure purchase intent, participants were asked how likely they were to buy each of the six listed brands on a five-point semantic-differential scale anchored at "unlikely to buy" and "likely to buy." It was hypothesized that purchase intent would be lower for the expensive products because of their higher price, but that the presence of a coupon for these products would increase purchase intent for these products; *i.e.*, there would be an interaction between the presence of a coupon and the product type.

In order to examine the impact of coupons on average price paid, participants were asked to indicate which product they were most likely to buy, if they were to choose one of the six products. They recorded their brand choice was by circling one of the six listed products. Our theory predicts that consumers are more likely to buy expensive products in the coupon-present condition despite their high prices and that this would manifest in the average price paid in the coupon-present condition. Price paid by consumers was analyzed by simply averaging the net price paid (after adjusting for coupon value for products with coupons) by consumers across the two coupon conditions.

Results and Discussion

Purchase Intent. We examined the effect of coupons on purchase intention for the most preferred (of the two) expensive products and for the most preferred (of the four) inexpensive products. Since there were two expensive products, we considered the higher of the two purchase intentions for these two products to be the purchase intention for the expensive product. Similarly, since there were four inexpensive products, the highest of the four purchase intents was taken as the purchase intent for the inexpensive product. Note that a simple average of

purchase intentions for either of these two categories of products is not meaningful because purchase intentions are driven not only by prices but also by product features. For instance, some consumer may like Softsoap Antibacterial Naturals and dislike Softsoap Vitamins, both in expensive products category, and therefore have high purchase intention for the former and low purchase intention for the latter. Averaging dependent variables across the products will, in such cases, diminish the effect size. Instead, taking the highest purchase intention in both the categories captures the effect of price after adjusting for product preferences.

Purchase intent was submitted to a 2 (coupons for expensive products: present vs. absent) x 2 (products: expensive vs. inexpensive) repeated-measures ANOVA with the second factor as the repeated measure. There was a main effect of product type; the pattern of means suggested that the purchase intents for the expensive products were in general lower than that for the inexpensive products (3.32 vs. 4.28; contrast $F(1, 78) = 48.55$; $p < .01$). The ANOVA also revealed the predicted coupon x product interaction ($F(1, 78) = 5.12$; $p < .05$). Coupon availability increased the purchase intent for expensive product from 3.08 to 3.59 ($F(1,78) = 4.48$; $p < .05$). However, coupons availability for expensive products did not affect the purchase intent for inexpensive product (mean 4.35 vs. 4.22; contrast $F < 1$).

Insert Figure 1 about here

This result (see Figure 1) is consistent with our findings in study 1. Consumers are generally price-sensitive and prefer lower-priced products, other things being equal. But when coupons are available for expensive products, their likelihood of purchasing the expensive product increases. H1a is thus supported.

Price paid. The net price of the chosen brand was considered as the participant's expenditure on the product category. If the participant chose a couponed product, then the net price was calculated by subtracting the coupon value. This measure of category expenditure was analyzed by running a single-factor ANOVA with coupon-present versus coupon-absent as the independent variable. There was a main effect of coupon on the price paid ($F(1, 78) = 5.85$; $p < .05$). In the coupon-present condition the average price paid by the participants was $2.28, whereas in the coupon-absent condition the price paid by participants was $2.07. Thus, coupons for expensive brands increased the propensity of consumers to spend more, supporting H1b.

The results of this study support the basic hypothesis that the mere presence of a coupon can increase the likelihood that consumers will buy higher priced products. Controlling for confounding factors, we find evidence for the impact of reference dependence as a function of whether or not coupons were present in a purchase situation. The presence of coupons offered a psychological benefit that is over and above the monetary benefit, and induced the participants to spend more money to buy more expensive products. The presence of coupons made higher-priced products seem like good deals and this led to higher purchase intents for the coupon products despite their prices being high even after adjusting the coupon value.

STUDY 3:
THE UNDERLYING PSYCHOLOGICAL MECHANISM

Though the above study establishes that coupons can make consumers spend more, an interesting question remains unanswered. When does a coupon prompt people to spend more? In studies 1 and 2 we found that coupons can lead to higher purchase intentions, even if the net price after adjusting the coupon value is higher than that of comparable products. However, results of study 1 suggests that not every coupon user incurs higher expenditure; only one in four

coupon-users increase their expenditure when using coupons because they are more likely to buy expensive products. So the "upgrading effect" of coupons seems to be moderated by other factors. In this study, we examine certain factors that moderate the "upgrading effect" of coupons.

Two distinct types of psychological constructs are involved in coupon evaluations. First, coupon value indicates the magnitude of gain with respect to the regular price. In other words, coupon value is a measure of "the deal". Therefore an increase in coupon value should result in an increase in "deal-satisfaction". Second, a discount can lower the price level relative to comparable product and thus increase satisfaction with the net price. In the context of coupons, we use "price-satisfaction" to refer to consumers' satisfaction with the net price of the product, after adjusting for coupon value. Although deal-satisfaction is contingent on price-satisfaction, these are distinct constructs (Lichtenstein, Ridgway and Netemeyer 1993) because even after a very good deal, the net price can be perceived as unsatisfactory relative to a competing product.

Thaler (1985) suggested that transaction utility might not have a uniform affect on all consumers. He suggested that pathological bargain hunters would place greater weight on transaction utility. In a similar vein, Lichtenstein et al. (1990) argued that, "individual who are more dependent on transaction utility are more likely to be coupon prone" (p. 57). Thaler's (1985) theory of transaction utility as well as Lichtenstein et al.'s (1990) view of coupon-proneness suggests that the relative weights that consumers place on price-satisfaction and deal-satisfaction might vary across consumers. When consumers are focused on the net price that they pay, they will be unwilling to pay more than their normal outlay for the category. On the contrary, when consumers are focused on deal value, then it seems quite likely that in the process

of gaining a good deal, they may end up incurring a higher expenditure. This line of reasoning leads us to hypothesize that:

H2: Coupon-users are more likely to buy expensive products when they focus on deal-satisfaction rather than on price-satisfaction.

In order to test our hypothesis we conducted a laboratory experiment where participants were asked to choose between two products, one of which was priced significantly higher than the other. We provided coupons for the expensive product and explicitly manipulated the focus on the decision maker. Unlike the previous study, all participants in this study saw the coupon for the expensive product. But in one condition the decision makers' attention was drawn to the fact that the coupon would expire shortly while in the other condition the net price was made more salient. In order to examine the impact of focus, we also manipulated another orthogonal factor, coupon value. The net price of the products and all other factors remained same across the four conditions.

We hypothesize that since the net prices remained unchanged across the four conditions, the coupon value will impact purchase intent only in the deal focus condition. We expect that participants will vary the *weights* they put of deal-satisfaction and price-satisfaction because of the focus manipulation. More specifically, participants in the deal-focused condition should be more influenced by coupon value while those in the price focused condition should be more influenced by net price. Further, our hypothesis predicts that participants who focus on deal-satisfaction are more likely to buy the expensive product with the coupon, as compared to the participants who focus on price-satisfaction.

Method

Participants**.** One hundred and one undergraduate students from a large university on the West Coast participated in the experiment to fulfill a requirement in their introductory marketing course.

Stimuli and procedure**.** In this study we used the same stimuli as used in the previous study, namely hand soaps. However, in the last study we used six products, two expensive and four inexpensive to simulate a real shopping situation. Since the primary objective of this study is to understand the process underlying the "upgrading effect" of coupons, we restricted the consideration set to just two products. Participants were told about two products, Softsoap Antibacterial Naturals and Dial Antibacterial Naturals; the former was always priced higher than the latter. Participants read the following shopping scenario:

> "Mrs. Jones is a 40 year old housewife living with her husband and two kids. Their family has a lifestyle that is representative of an average American household. Mrs. Jones is doing her weekly grocery shopping at her neighboring grocery store. One of the items on her list is liquid handsoap. On the handsoap shelf she noticed two brands of handsoap and is trying to decide which one to choose. The two brands of handsoap that she saw on the shelf are as follows:
>
> | | |
> |---|---|
> | Softsoap Antibacterial Naturals (7.5 Oz) | $3.09 ($3.49) |
> | Dial Antibacterial Naturals (7.5 Oz) | $2.29 |
>
> Last Sunday she had clipped a coupon for Softsoap for 30 cents (70 cents) and is carrying the coupon with her. After adjusting for the coupon value, Softsoap will cost her $2.79."

Coupon-value was manipulated between participants; in one condition participants saw a coupon value of 30 cents while in the other conditions participants saw a coupon value of 70 cents. Note that since this study is examining moderating factors within coupon-users, unlike in the previous study, in this study all participants were told about the coupon for Softsoap; the value of coupons changed across conditions. As in the previous study, the shelf price changed such that the net price of the expensive product after redeeming the coupon remained unchanged at $2.79 across conditions and this price was higher than the alternative by around 22%.

We also manipulated the decision focus between participants. Half of the participants were assigned to the "deal focused" condition and they read the following statement: "She is deciding whether or not to use the coupon for Softsoap. The coupon for Softsoap expires this week and she will not be able to use the coupon next week." The other half was assigned to "price-focused" condition and they read: "She is deciding whether or not to buy the higher priced product". The study therefore employed a 2 (focus: coupon vs. net price) x 2 (coupon-value: 30 cents vs. 70 cents) factorial design. Our hypothesis predicts that coupon value will have little or no impact in the price focus condition, but in the deal focus condition since participants are expected to place higher weight on deal-satisfaction, coupon value will impact purchase intent.

Dependent Measures. The primary dependent variable was projected purchase intent. Participants responded to the questions "How likely is that Mrs. Jones will buy Softsoap Naturals?" on a seven point semantic differential scale anchored as "unlikely to buy" and "likely to buy". A higher intent score indicated a greater willingness to buy the more expensive product.

Participants also indicated their satisfaction with the price of each of the six products on a four-item, seven-point semantic differential scale. For instance, they indicated their price-satisfaction for Softsoap in response to the statement: "The post-coupon price for Softsoap is…" The four items were, "unreasonable – reasonable", "bad value – good value", "unfair – fair" and "good deal – bad deal". In the case of couponed product, it was specified that price refers to the post-coupon price, so this measure captures the impact of net prices. It may be noted that the net price for the expensive product remained constant at $2.79 across all conditions, so we did not expect any effects of the independent variables on price-satisfaction. However, we did predict that the *weight* that participants will accord to price-satisfaction in forming purchase intent would depend on the focus manipulation.

In addition to price-satisfaction, we also measured deal-satisfaction. Participants responded to the question "The coupon value for Softsoap Antibacterial Naturals is:" on a five item, seven-point semantic differential scale. The items were anchored as "low-high", "bad deal-good deal", "bad value-good value" and "bad saving-good saving". We predicted that as coupon values increased from 30 cents to 70 cents, deal-satisfaction also will increase accordingly.

Quality perceptions of each brand were also recorded on three-item semantic differential scale to rule out the possibility that quality perceptions, rather than price perceptions, were mediating the effect of coupons. Since most students had heard of both the brands before and the net prices were kept constant, we did not anticipate any effect of the experimental factors on quality perceptions.

Results and Discussion

Since the four measures of deal-satisfaction were highly correlated (Cornbach's $\alpha = 0.89$) they were averaged to form a composite score. Similarly, the four measures of deal-satisfaction (Cornbach's $\alpha = 0.88$) were averaged to form a composite price-satisfaction score. In order to analyze the relative impact of coupon value and focus manipulation on deal-satisfaction and price-satisfaction, the two measures of satisfaction were submitted to a 2 x 2 x 2 mixed ANOVA with type of satisfaction (deal-satisfaction vs. price-satisfaction) as a repeated measure and focus (coupon vs. price) and coupon value (30 cents vs. 70 cents) as between subject factors. A significant satisfaction type by coupon interaction served as a check for our coupon manipulation ($F(1,95)=5.93$, $p < .05$). When coupon value was 30 cents deal-satisfaction was significantly lower than price-satisfaction (4.28 versus 4.95; $F(1, 95) = 4.58$; $p < .05$). However, as predicted when the coupon value increased to 70 cents, deal-satisfaction also increased to 4.63 and was not

statistically different from price-satisfaction (4.63 versus 4.73; $F < 1$). The focus manipulation, as predicted, did not affect price-satisfaction or deal-satisfaction ($p > .30$).

The focus manipulation was expected to change the relative weights that consumers place on price-satisfaction and deal-satisfaction. In order to test for this effect, two regression equations were run. Purchase Intent was regressed on deal-satisfaction and price-satisfaction in the price focus condition and deal focus condition separately. The estimated standardized regression coefficients for the two conditions are as follows[2].

Price focus condition ($R^2 = 0.87$):

*Purchase Intent = (0.01) Deal-satisfaction + (0.89**) Price-satisfaction*

Deal focus condition ($R^2 = 0.88$):

*Purchase Intent = (0.69**) Deal-satisfaction + (0.27) Price-satisfaction*

In the price focus condition, the coefficient of price-satisfaction was significant ($p < .01$) and that of deal-satisfaction was not significant ($p > .96$). While in the deal focus condition, the coefficient of deal-satisfaction was significant ($p < .01$) and that of price-satisfaction was not ($p > .17$). These statistics confirm that our focus and coupon manipulations worked as predicted. The coupon value manipulation had a direct effect on deal-satisfaction relative to price-satisfaction and focus manipulation changed the weights that participants put on deal and price-satisfactions.

Purchase Intent. Purchase intent was submitted to a 2 x 2 ANOVA with coupon value and focus as between subject factors. Neither coupon value nor focus had a main effect on purchase intent ($F < 1$), but the coupon value by focus interaction was significant ($F(1,97) = 5.08$; $p < .05$). Simple contrasts revealed that an increase in coupon value increased purchase intent from 3.81 to 4.72 in the deal focus condition ($F(1,97) = 4.61$; $p < .05$). However, in the

price focus condition, increase in coupon value had no affect on purchase intent ($p > .29$). These results support our hypothesis that coupon-users who focus on deal-satisfaction are more likely to redeem coupons to buy expensive products than those who focus on price-satisfaction.

Quality perceptions of both the products were submitted to a 2 x 2 x 2 mixed factorial ANOVA where the first factor was type of product (expensive vs. inexpensive) and the other two factors were coupon value and focus. Although the quality of the expensive product was perceived to be higher than that of the inexpensive product (means 5.86 vs. 5.22; $F(1,96) = 33.97$, $p < .01$) there was *no* significant effect of the manipulated factors on ($p > .30$) on quality perceptions. This result clarifies that the observed effects on purchase intents can be attributed only to the interaction of price and deal-satisfaction.

Path Analysis**.** A path analysis was done with the objective of analyzing the relative effect of deal-satisfaction and price-satisfaction on purchase intent. Before embarking on this path analysis, all price-satisfaction and deal-satisfaction measures were together submitted to a factor analysis to confirm that price-satisfaction and deal-satisfaction are distinct, non-redundant constructs. Only two factors had eigenvalues above 1 and the scree plot also suggested that two factors should be retained. Further, factor patterns obtained after varimax rotation revealed that the four price-satisfaction measures loaded on factor 1 while the four deal-satisfaction measures loaded on factor 2. These results suggest that even though price-satisfaction and deal-satisfaction are correlated, they are distinct, non-redundant constructs.

Insert Figures 2a and 2b about here

As illustrated in Figures 2a and 2b, two separate path models were estimated, one for the price focus and the other for the deal focus condition. Following Asher (1976), path coefficients

were estimated by regressing each endogenous variable on variables that impinge on it. Since there were three endogenous variables, three such regression equations were estimated for each focus condition. In each focus condition, first price-satisfaction for both the expensive and inexpensive products was regressed on net price. Next, in each focus condition, deal-satisfaction for the brand with coupon (*i.e.*, the expensive brand) was regressed on price-satisfaction and coupon value. We anticipated that deal-satisfaction would depend not only on coupon value but also on whether consumers were satisfied with the net price. Finally, purchase intent was regressed on deal-satisfaction and price-satisfaction.

The paths to purchase intent support our hypothesis. In the deal focus condition, consumers give little weight to the net price while forming their purchase intentions for expensive products. In such cases, purchase intent is influenced by satisfaction with the coupon value. If consumers perceive the coupon value to be high, then they will buy the product even if the net price is relatively high. On the contrary, in price focus condition, purchase intent is influenced by net price. In such cases, a high coupon value may not lead to high purchase intent if the net price is not competitive. In fact, in the price focus condition, deal-satisfaction depends only on the net price and not on coupon value. This pattern of path coefficients substantiates Thaler's (1985) argument that the weights consumers place on transaction utility and acquisition utility will vary across consumers. These results also support our proposition that proclivity to buy expensive products can be predicted by the weights that consumers place on coupon value and net price.

GENERAL DISCUSSION

The results presented in this paper add to the growing body of behavioral literature that provides insights on the coupon-redemption behavior of consumers. The purpose of this paper

was to study the impact of coupons on consumers' price perceptions and purchases of premium products. The three studies presented in this paper describe an apparent paradox in consumer behavior—that consumers often spend more while attempting to save money. Study 1 shows that more than one in four coupon-users buy more expensive products and increase their expenditure when using a coupon. Since this study used scanner-based purchase data from two product categories, the results have the advantage of external validity. Study 2 confirms this finding in an experimental setting, and shows that coupons increase purchase intentions for expensive products, even when the net price after adjusting for coupon value is higher than that of comparable products. Finally, study 3 shows that the tendency to spend more with coupons can be attributed to consumers' focus on coupon value rather than on net price. Studies 2 and 3 were conducted in a more controlled manner in a laboratory setting, and hence have the advantage of being able to delineate the attributional process driving the basic phenomenon with high internal validity.

Together these studies show that coupons offer a psychological benefit over and above the actual monetary savings provided. The theoretical framework and the empirical results presented in this paper suggest that this benefit stems from the higher reference price evoked by coupons. As a result, consumers pay more money and yet are more satisfied with the price paid after using coupons. These results are consistent with the notion that coupons serve as price cues (Raghubir 1998), that coupon proneness is distinct from value proneness (Lichtenstein et al. 1993), and that mere possession of a coupon can impact consumer preferences (Sen and Johnson 1997). Our results also are consistent with the findings of Heilman, Nakamoto and Rao (2002) that in-store coupons increase the shopping basket of consumers. However, our focus is different

from those of the past studies; the analyses presented in this paper specifically examine the impact of coupons on consumers' expenditures, price perceptions and price sensitivity.

Our results also provide empirical support to Thaler's (1985) transaction utility theory. Consistent with the predictions of the model, we show that transaction utility, as measured by satisfaction with the deal and acquisition utility, as measured by satisfaction with the net price, are distinct concepts. Further, in accordance with the model we show that the weight that consumers place on these two distinct types of price satisfaction can affect the over-all evaluation of the price. However, in our study we experimentally manipulate the weight that consumers place on transaction utility; but the question whether 'beta' in Thaler's (1985) model is an individual difference variable or a situational variable, remains unaddressed. Future research should examine the hypothesis that deal prone segment is formed by consumers who chronically place more weight on transaction utility.

A number of interesting implications emerge from the findings presented in this paper. First, these findings clarify that the term "savings" in the context of coupons does not always imply lower expenditure; often it is just a notional saving with respect to a reference price. Second, these findings show that coupons serve as catalysts for product upgrading ("trading up"). In general, we find that consumers use coupons in at least three ways: *(a)* to reduce dollar expenditure on a purchase, *(b)* to trigger a category purchase, and *(c)* to upgrade to higher-priced products that they might not otherwise buy. Moreover, since coupon-users as a group tend to be more deal sensitive, the last point suggests that deal-sensitive consumers are more willing to upgrade to a premium product when the transaction involves a coupon. For many consumers, spending more, apparently, is more satisfying when the purpose of such spending is to save more. This finding presents an interesting insight for coupon management. Since coupons are

generally targeted at price-sensitive consumers, a marketing manager might be inclined to issue coupons only for lower priced products in his product portfolio. Our results clarify that marketing managers might benefit by issuing coupons for expensive products in their portfolio even if the net price of the expensive product (after adjusting for coupon value) remains relatively high. Coupons on expensive products is a win-win proposition for the firm and the coupon user; deal sensitive coupon-users will upgrade to the premium products to avail the gain being offered by coupons and the firm will benefit by a change in their product mix in favor of premium products. This phenomenon clearly has not escaped the attention of manufacturers and retailers. Vilcassim and Wittink (1987) showed that the higher the shelf-price of a brand, the greater the percent of purchases of the brand made with a coupon.

Our findings also suggest ways in which brand managers and retailers can use coupons to influence consumers' purchase behavior both for premium priced and for economy products. A manager for a premium product can emphasize the desirability and urgency of the deal (via a high face value and shorter expiration period, for example) in order to induce greater weight on deal-satisfaction, leading to higher purchase intent for the promoted, premium product. On the other hand, a manager who wishes to encourage purchasing of an economy product should emphasize the attractiveness of the product's net price (after deducting the coupon value) relative to more expensive alternatives. This would lead to greater weight on price-satisfaction and increase purchase intention for the promoted, economy product.

FOOTNOTES

1. This term has been used in the literature to refer to various effects of sales promotion. In this paper, we use deal-satisfaction to refer to satisfaction with the value of coupon discount.
2. The results did not change when purchase intent was regressed on each of these variables separately. In the coupon focus condition, when purchase intent was regressed on deal-satisfaction, the coefficient was significant and high ($\beta = 0.48$; $p < .01$) but when purchase intent was regressed on price-satisfaction the coefficient was lower ($\beta = 0.29$; $p < .01$). In the price focus condition, when purchase intent was regressed on deal-satisfaction the coefficient was not significant ($\beta = 0.21$; $p > .14$) but when purchase intent was regressed on price-satisfaction the coefficient was significant ($\beta = 0.52$; $p < .01$).

TABLE 1

A Classification of Coupon-users for Soup and Brownie Mix

Type of Household	% Coupon using Households	Average Price paid when coupons were *not* used ($) [a]	Details of Coupon based transactions		
			Average Net Price paid when coupons *were* used ($)	Average Coupon Value ($)	Estimated Regular Price ($)
Coupon-users for Soup					
Coupon-Induced Spenders	26% (n=603)	0.51	0.66	0.24	0.90
Coupon-Induced Savers	74% (n=1713)	0.53	0.32	0.21	0.53
Coupon-users for Brownie Mix					
Coupon-Induced Spenders	27% (n=230)	1.10	1.41	0.40	1.81
Coupon-Induced Savers	49% (n=414)	1.51	1.17	0.44	1.61
Coupon-Induced Purchasers	24% (n=200)	-	1.26	0.45	1.71

[a] The average price paid by households that never used coupons was $0.54 for soups and $1.35 for brownie mixes.

TABLE 2

Brand and Prices Used as Experimental Stimuli in Study 2

Hand Soap Products	Price in $ (Coupon-absent condition)	Price in $ (Coupon-present condition) [a]
Expensive Products		
Softsoap Antibacterial Naturals (7.5 oz.)	2.79	3.49
Softsoap Vitamins (7.5 oz.)	2.59	2.99
Inexpensive Products		
Softsoap 2-in-1 Antibacterial liquid handsoap plus real moisturizing lotion (7.5 oz.)	2.29	2.29
Dial Antibacterial moisturizing liquid soap (7.5 oz.)	2.29	2.29
Dial Antibacterial liquid soap (7.5 oz.)	2.29	2.29
ShopRite liquid handsoap (7.5 oz.)	1.49	1.49

[a] In the coupon-present condition, participants had a coupon worth 70 cents for Softsoap Antibacterial Naturals and a coupon worth 40 cents for Softsoap Vitamins.

FIGURE 1

Coupons for expensive products decrease the unattractiveness of high price.

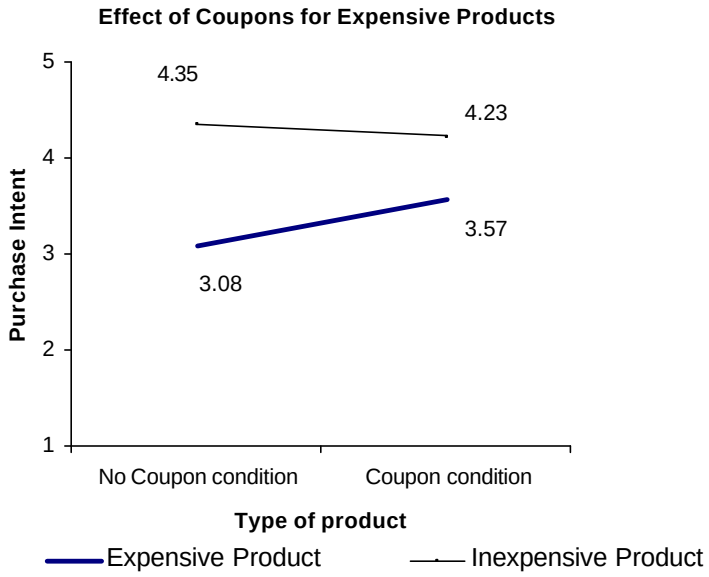


FIGURE 2a

In deal focus condition, a good deal leads to higher purchase intent irrespective of net price.

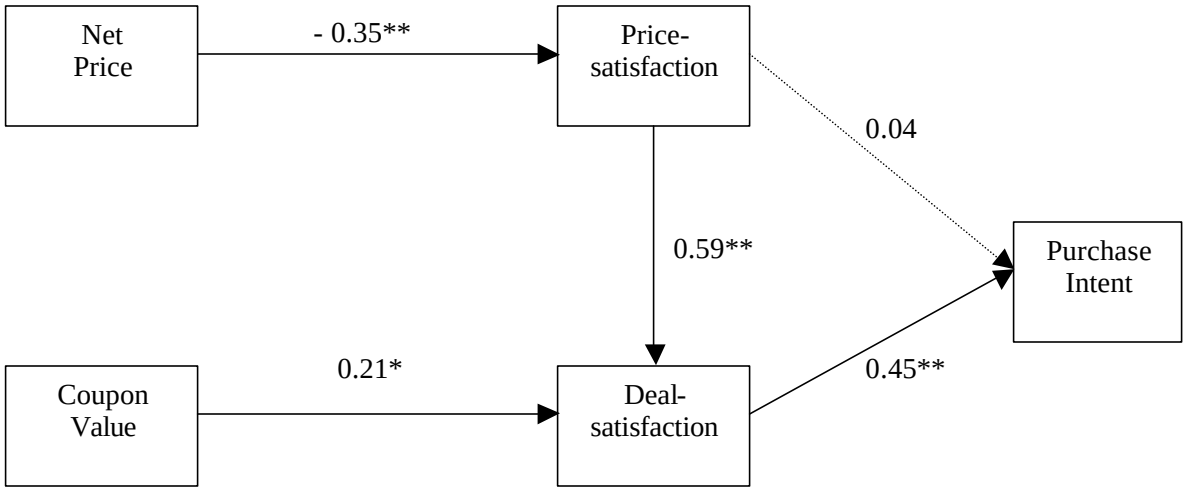
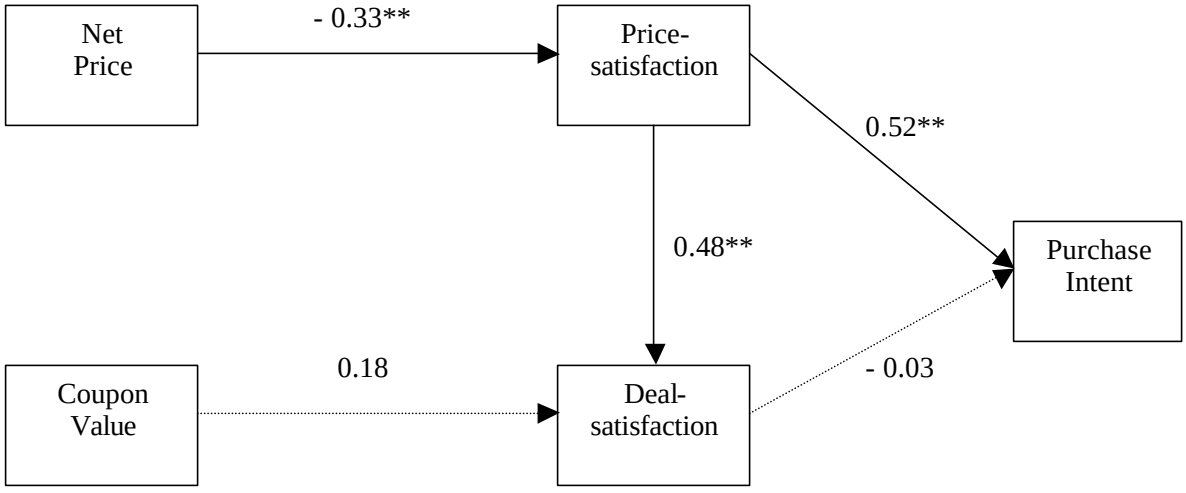


FIGURE 2b

In price focus condition, deal-satisfaction does not have a direct effect on purchase intent. Purchase intent is influenced by satisfaction with net price.



** indicates p < .05; * indicates p < .10

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