



The Effect of Sales Promotions on Size and Composition of the Shopping Basket:

Regulatory Compatibility from Framing and Temporal Restrictions

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Most of the literature on sales promotions focuses on responses to the promoted brand. Across two experimental studies and one field study, the authors examine how sales promotions may affect the size and composition of the overall shopping basket. The authors show that the framing of the savings message on sales promotions (e.g., “Save \$x” vs. “Get \$x Off”), the expiration-date restriction cue (immediate expiration date versus future expiration date), and familiarity of brands (well-known versus less familiar) are independent primes of regulatory focus. Further, the authors show that such cues, when compatible with each other or with prior regulatory focus, lead to more unrelated purchases in a store. The authors discuss the findings in the context of theory on regulatory relevance and mindsets, and posit managerial implications for design of sales promotions and store positioning.

Key Words: Sales Promotions, Shopping Behavior, Regulatory Focus, Motivation

The ubiquitous availability and usage of frequent-shopper cards has led to increased retailer interest in designing targeted promotions towards shoppers that increase store sales. In this context, understanding how promotional cues impact individual consumer response and how sales promotions affect the size and composition of the shopping basket of purchases (including both promoted and non-promoted brands) is important. Unfortunately, most extant academic research focuses on how sales promotions affect aggregate sales of the promoted brand (see Blattberg and Neslin 1990 for a review) and not on individual consumer responses to promotions. Our research draws upon regulatory focus theory (Higgins 1998) to study how sales-promotion cues motivate consumers to purchase not only the promoted brand but also non-promoted brands. This approach allows us to make predictions about how sales promotion cues affect the size and composition of a consumer's shopping basket.

Our research contributes to the existing theoretical literature on regulatory focus in several ways. First, we show that independent of a consumer's pre-existing regulatory orientation, marketing cues such as the framing of sales promotions and familiarity of purchased brands can prime regulatory orientation, which can, in turn, influence consumer shopping behavior. Second, we find that compatibility of marketing cues with pre-existing motivations affects consumer shopping behavior, as does compatibility between different marketing cues that prime regulatory orientation. Finally, whereas prior research focuses primarily on the effects of regulatory compatibility on the focal (promoted) brand, our research suggests compatibility effects extend to non-focal brands not featured in the promotion. Our study is also unique in that we not only demonstrate these effects in laboratory-based studies but also in a real-world field experiment conducted in a grocery store.

More specifically, results from two laboratory studies and one field study show that regulatory orientation induced by the framing of a coupon promotion (either savings-message or expiration-date restriction cues) leads to effects similar to pre-existing regulatory orientation. Compatibility with regulatory orientation, whether pre-existing or primed, causes people to add more items, even non-promoted ones, to their basket. Our research suggests the guiding mechanism for such cross-category effects may be how effectively promotions activate relevant mindsets and motivations. Drawing on the theory of regulatory focus (Cesario, Grant, and Higgins 2004; Higgins 1998) and consumer mindsets (Dhar, Huber, and Khan 2007; Gollwitzer, Heckhausen, and Steller 1990), we document two sources of goal compatibility: one that emerges from the framing of the coupon-savings message ("Save \$x" vs. "Get \$x Off") and the other from the expiration-date restriction cue for the coupon (Expiring same day vs. Expiring two weeks later). We also show that brands in a store may themselves be a source of regulatory compatibility. Well-known brands representing safe choices are consistent with a prevention focus and with coupons framed as "Save \$x," whereas less familiar brands representing a need for variety are consistent with a promotion focus and with coupons framed as "Get \$x Off." Well-known brands are also more compatible with immediately expiring coupons, whereas less familiar brands are compatible with coupons with longer time horizons.

THEORETICAL BACKGROUND

Consumers have a variety of motivations during the shopping process. These motivations are related to what consumers value the most in general and, more specifically, to what might be relevant in a shopping situation. Whereas some individuals may focus on saving money and

avoiding losses, others may focus on acquiring things and getting value (Higgins 1998).

Regulatory focus theory (Higgins 2000; Higgins et al. 1994) suggests people have distinct motivational systems that direct behavior toward desired outcomes. Some people are guided by an orientation toward positive outcomes (promotion focus), whereas others are driven by an orientation away from negative outcomes (prevention focus). The result of such differences in orientation is that people adopt different strategies in their goal pursuit. Importantly, regulatory focus theory argues that these differences may be chronic to individuals and that both systems of self-regulation exist in each individual, so that situational cues can activate one orientation or the other (Higgins 1997).

Marketing Cues as Independent Primes of Regulatory Focus

Marketers often use different cues in the shopping environment in their efforts to entice shoppers to make more purchases. Our discussion below focuses on how the sales promotions that retailers offer and brands shoppers purchase may activate regulatory orientation independent of the shopper's pre-existing regulatory orientation.

Framing of sales promotions as regulatory cues. The savings message in sales promotions such as “Buy One Get One Free” (BOGOs) or “Save \$x” present a natural way by which an individual’s sensitivity to positive or negative outcomes may result in different effects. Individuals may derive different levels of value from price discounts (cf. Darke and Chung 2005, Raghurir 1998) and free offers (cf. Chandran and Morwitz 2006, Darke and Chung 2005, Raghurir 2004). Thus, different framing of the savings message on sales promotions may serve as means of attaining goals that are either associated with positive outcomes or with avoidance of negative outcomes. More importantly, the functional relationship between the goals and the means leads to reciprocal patterns of activation: means can activate goals just as much as goals

can activate means (Shah and Kruglanski 2003). Therefore, we suggest that offers with a savings message framed as “Get \$x off” or BOGO prime a promotion focus because they prompt consumers to consider gains or positive outcomes, such as how they can use the money they will save. However, offers framed as “Save \$x” prime a prevention focus because they prompt consumers to consider non-losses, that is, the desire to avoid negative outcomes such as losing out on a good deal. We expect these differences in activation of promotion and prevention focus to result in faster accessibility to constructs related to these foci.

Another component of sales promotions is the presence or absence of restrictions, including purchase limits (“limit 3 per customer”), purchase conditions (“on purchases over \$20”), and expiration-date limits (“offer expires _____”). In particular, limited-time offers draw consumers’ attention toward the short-term consequences of actions and inactions. Consumers anticipating short-term regret are more likely to purchase promoted items (Abendroth and Diehl 2006, Inman and McAlister 1994). Unrestricted offers or offers with a longer expiration-date window are less likely to engender short-term regret (Abendroth and Diehl 2006). We expect such offers to draw less attention to short-term and more to long-term outcomes. Sales promotions with a longer expiration-date are thus likely to activate a promotion focus, whereas those with immediate expiration dates are likely to activate a prevention focus.

Type of brand as regulatory cue. Brand choices people face may independently act as sources of compatibility with their regulatory concerns. Zhou and Pham (2004) suggest, in the context of financial decision-making, that products themselves become associated with promotion or prevention orientation over time. Thus, consumers view stocks and small-business ownership as more representative of promotion focus, whereas they view bonds and certificates of deposits as more representative of prevention focus. Such differences in judgments about

products stem from a preference for safe or low-risk choices and for stability over change when people are in a prevention focus (Aaker and Lee 2001, Liberman et al. 1999), and for choices that reflect creative or risky decision making when people are in a promotion focus (Aaker and Lee 2001, Friedman and Foster 2001, Liberman et al. 1999). We expect consumers to associate less familiar brands with constructs related to promotion focus and to associate well-known brands with constructs related to prevention focus.

Compatibility among Multiple Sources of Activation

Prior research highlights the effects of compatibility between regulatory focus and message cues. Our first set of predictions devolves from this literature. However, limited research exists on how the regulatory orientations marketing cues induce might interact with each other, independent of regulatory focus, which is the subject of our second set of predictions.

Cue compatibility with regulatory orientation. Research on the regulatory relevance effect suggests message cues compatible with a regulatory orientation lead to greater persuasion (Aaker and Lee 2001, 2006; Zhao and Pechmann 2007), a greater willingness to pay for relevant products (Avnet and Higgins 2003, 2006), and a greater motivational intensity (Forster et al. 2001). Consistent with these previous findings, we expect people in a promotion focus may experience greater compatibility with sales promotions that are gain-framed, such as “Get \$x off” or BOGO, and with promotions that have longer expiration dates. On the other hand, people in a prevention focus may experience greater compatibility with promotions framed as non-losses, such as “Save \$x,” and with those that have short expiration dates. Also, because brand type can be a regulatory cue, we expect people in a promotion focus to be more willing to include less familiar brands in their shopping basket, whereas those in prevention focus should favor well-known brands.

Compatibility between cues. Only a few studies look at the effects of compatibility between the cues themselves, independent of the person's regulatory focus. Lee and Aaker (2004, Experiment 3) manipulated perceived risk and message frame (gain or loss) in an ad and found that the gain frame was more effective for low perceived risk and the loss frame for high perceived risk. Zhao and Pechmann (2007, Experiment 2) found that an anti-smoking message with a promotion focus was more effective with a positive frame, whereas one with a prevention focus was more effective with a negative frame. Based on these findings, we expect people receiving a gain-framed coupon or one with a longer expiration date to be more willing to include less familiar brands in their shopping basket compared to people receiving a coupon framed as a non-loss or one with an immediate expiration date, who would favor purchases of well-known brands.

Effects on Size and Composition of Shopping Basket

Extant work looks at the effects of compatibility on a focal product. However, retailers are interested in knowing the effects of a sales promotion on consumers' overall shopping behavior, as well as how these promotions impact even the non-promoted brands. Mulhern and Padgett (1995) found that over three fourths of shoppers specifically seeking to redeem a promotion purchased one or more regularly priced item and spent more money on such items than on the promoted ones.

Following Briley and Wyer (2002), we suggest that once activated, cue compatibility can give rise to a mindset that will inform subsequent judgments and choices, independent of the original context. Dhar, Huber, and Khan (2007) propose consumers initially approach a shopping situation with a deliberative mindset, trying to decide what to buy. However, once they make an initial purchase, they shift to an implemental mindset that makes them more receptive to

additional, unrelated purchases. The authors term this the shopping momentum effect. Therefore, we expect that an activated regulatory orientation will not only guide an initial choice but also spread to other unrelated decisions. However, we suggest this momentum toward unrelated purchases is a function of cue compatibility that determines not just the extent of the momentum but also its direction in terms of brands chosen.

Therefore, we expect cue compatibility affect not only the choice of the promoted brand but also that of unrelated brands. We expect both the framing of the coupon savings-message and the expiration-date restriction cue to interact with shoppers' regulatory orientation in influencing the size of the basket. Also, because types of brands also act as regulatory cues, we expect people in a promotion focus to be sensitive to less familiar brands, whereas those in a prevention focus should favor well-known brands. Further, gain-framed coupons and those with a longer restriction horizon may promote choices of less familiar brands, whereas coupons framed as non-losses or those with an immediate restriction may promote choices of well-known brands. We detail these hypotheses below.

- H1: Consumers' regulatory focus will interact with the savings-message framing of a sales promotion in influencing overall basket size such that those experiencing regulatory compatibility (promotion focus with gain-framed promotion; prevention focus with non-loss framed promotion) will add more items to their basket compared to those not experiencing such compatibility.
- H2: Consumers' regulatory focus will interact with the expiration-date restrictions on a sales promotion in influencing overall basket size such that those experiencing regulatory compatibility (promotion focus with longer horizon promotion;

prevention focus with shorter horizon promotion) will add more items to their basket compared to those not experiencing such compatibility.

H3: Consumers' regulatory focus will interact with type of brand such that:

- a) A greater number of well-known brands will be chosen under prevention focus compared to promotion focus.
- b) A greater number of less familiar brands will be chosen under promotion focus compared to prevention focus.

H4: The framing of the coupon-savings message will interact with type of brand such that:

- a) A greater number of well-known brands will be chosen when coupons are framed as non-losses rather than gains.
- b) A greater number of less familiar brands will be chosen when coupons are framed as gains rather than non-losses.

H5: The expiration-date restriction on a sales promotion will interact with type of brand such that:

- a) A greater number of well-known brands will be chosen when the coupon has an immediate expiration date compared to a longer horizon.
- b) A greater number of less familiar brands will be chosen when the coupon has a longer time horizon compared to an immediate expiration date.

We do not hypothesize a three-way interaction, because there is no theoretical basis for expecting equivalent levels of additivity or attenuation in compatibility for various combinations of the three types of cues. Although evidence exists that conflicting cues may lead to attenuation in accessibility (cf. Aaker and Lee 2001), whether the levels of conflict between, for example,

two promotion-focus cues and one prevention-focus cue will be the same as that between two prevention-focus cues and one promotion-focus cue is unclear.

We now describe two laboratory experiments and one field experiment that test the above propositions. In the first experiment, we manipulate regulatory focus and the savings-message frame but hold expiration-date restrictions constant. We test the effects on both basket size and composition (well-known versus less familiar brands). In the second experiment, we hold type of offer constant (BOGO) and manipulate the expiration-date restriction, use a measure of chronic regulatory orientation, and test the effects on size and composition of the shopping basket. Finally, we run a field experiment to test the generalizability of the results from the laboratory studies. In the field experiment, we manipulate the regulatory orientation of shoppers at a local grocery store, the savings-message frame of the coupons (“Save \$x” vs. “Get \$x Off”), and the presence or absence of expiration-date restrictions and study the effects on overall basket size.

EXPERIMENT 1

Method

Participants. One hundred sixteen undergraduate students (Age 18-25 years, 61 male, 55 female) at the University of Chicago participated for a compensation of \$3 each. Participants had lived an average of 18.4 years in the United States and their average monthly grocery bill was \$36.

Procedure. We used a 2 (Regulatory focus: Promotion vs. Prevention) x 2 (Savings - Message Frame: Non-Loss vs. Gain) x 2 (Brand: Well-Known vs. Less Familiar) mixed factorial design, with type of brand being a repeated measure. We randomly assigned participants to the

four conditions and gave them each a task to induce a promotion or prevention focus based on a procedure adapted from Higgins, et al. (1994). Participants in the promotion focus (prevention focus) wrote a short essay on their hopes (duties) as a consumer and things they wanted to acquire or experience. Following this task, we asked participants to critically evaluate an ad for Sparkle paper towels with the offer reading “Save \$1.50” (non-loss frame) or “Get \$1.50 off” (gain frame) in bold followed by the line “on any 3-pack of Sparkle paper towels,” with the regular price (\$3.00) indicated. Participants then evaluated how easy the ad was to understand, how well it was designed, and how well the elements fit together.

Following this task, we told participants to imagine they had \$100 to spend on groceries, showed them various products with their prices on the following screens, and told them to indicate the number of units of each brand they would buy. Eight product categories with two brands from each category were presented sequentially on the screen and respondents could enter any number from 0 to 10 for each brand. Respondents were free to add both brands to their baskets. The computer calculated the total; if participants exceeded the \$100 limit, they could revise the number of any item. There were no restrictions on the categories chosen. Participants could make all of their choices within one category if they wished to do so. Total units bought and total amount spent were recorded.

Testing of the manipulation of regulatory focus and message frame as independent sources of regulatory orientation. As a part of this study, participants completed a lexical decision task in which they had to judge whether a presented string of letters was a meaningful word by pressing one of two keys on the keyboard as quickly as possible. Eight words pertained to ideals (want, different, ideal, dreams, novelty, desires, variety, and extra), 8 to oughts (similar, caution, safety, need, familiar, control, duties, and common), 16 were neutral in content, and 32

were non-words, created from other neutral words by changing one letter in the spelling. Each trial began with a fixation cross that appeared on screen for 150 ms and a blank screen for 250 ms, to be replaced by a stimulus string that remained on screen till the response. The computer recorded response times and accuracy. A blank screen that remained for an inter-trial time of 700 ms followed each response. Participants then answered background questions about age, gender, number of years in the United States, and average amount spent per month on groceries.

Activation of regulatory orientation. We prepared data from the lexical decision task for analysis by removing all trials that contained errors (8.2%) and those with response latencies greater than 2000 ms (.6%) or lower than 100 ms (.4%). In addition, we removed data for four participants due to excessive errors (presumably because of weak familiarity with the English language). Facilitation scores for temptation and restraint were computed by subtracting each participant's averaged (log-transformed) response times to promotion-focus and prevention-focus related words from those for neutral words. A positive facilitation score would indicate faster response times and thus a higher accessibility for the particular category. The facilitation data for both types of words were subjected to a 2 x 2 MANOVA. Results showed a significant main effect for regulatory focus (Wilks' Lambda = .83, multivariate $F(2, 107) = 11.22, p < .001$) and for savings-message frame (Wilks' Lambda = .91, multivariate $F(2, 107) = 5.43, p < .01$). The interaction between regulatory focus and savings-message frame was not significant ($F < 1$). Univariate tests showed facilitation scores for ideals-related words were higher when people had a promotion focus versus a prevention focus ($M = .012$ vs. $-.009, F(1, 108) = 6.74, p = .01$) and when the coupon was gain-framed versus non-loss framed ($M = .009$ vs. $-.005, F(1, 108) = 3.22, p = .07$). Facilitation scores for oughts-related words were higher when people had a prevention

focus versus a promotion focus ($M = .009$ vs. $-.011$, $F(1, 108) = 7.01$, $p < .01$) and when the coupon was non-loss framed versus gain framed ($M = .006$ vs. $-.008$), $F(1, 108) = 3.48$, $p = .06$.

We then looked at whether positive facilitation for ideals-related and oughts-related words was associated with a greater propensity to choose less familiar brands and well-known brands, respectively. Because the number of items added to the basket is a discrete variable and the decision to add a well-known brand might not be independent of the decision to add a less familiar one, ordinary linear regressions might lead to biased estimates. A negative binomial regression on the number of well-known brands chosen showed a significant positive effect of facilitation scores (logarithmically transformed) for oughts-related words ($b = 3.21$, Wald $\chi^2 = 5.83$, $p < .05$) and a significant negative effect of facilitation scores for ideals-related words ($b = -3.19$, Wald $\chi^2 = 8.17$, $p < .01$). A similar regression on the number of less familiar brands participants chose showed a significant positive effect of logarithmically transformed facilitation scores for ideals-related words ($b = 5.22$, Wald $\chi^2 = 3.77$, $p = .05$). However, the effect of facilitation scores for oughts-related words was not significant ($b = .74$, Wald $\chi^2 = 0.12$, $p > .5$).

Pretest to determine whether type of brand purchased acts as a regulatory cue. Brands in the study were classified as well-known or less familiar based on a pretest among 15 participants who evaluated how familiar they were with each of them ($M_s = 6.23$ vs. 2.48 , $F(1, 14) = 342.1$, $p < .0001$). Further, participants rated each brand along four dimensions: how similar it was to what they normally purchased, how much they would consider the brand a safe choice, how novel the brand would be compared to what they normally purchased, and how much the brand would satisfy a need for variety for the participant. A principal components analysis of the four items with varimax rotation revealed that a two-factor solution explained 74.8 percent of the variance, whereas a single factor solution explained only 44.6 percent of the variance. The first

two items loaded onto one dimension, accounting for 39 percent of the variance, and appeared to reflect prevention focus, and the next two items loaded onto the second dimension, accounting for 35.8 percent of the variance, and appeared to reflect promotion focus. We computed scores on the two scales for well-known and less familiar brands, and analyzed them with a doubly multivariate within-subjects ANOVA. The omnibus test showed a significant effect of type of brand (Wilks' Lambda = .13, $F(2, 13) = 42.9, p < .0001$). Univariate tests showed that less familiar brands (e.g., Nature's Gate Shampoo, Baji's Papadums, Jericho Dead Sea Soap, Sparkle Paper Towels) were rated higher on promotion focus compared to well-known brands (e.g., Pantene Pro-V Shampoo, Ruffles Potato Chips, Dove Soap, Bounty Paper Towels, $M_s = 3.78$ vs. $2.51, F(1, 14) = 7.79, p = .01$), whereas well-known brands were rated higher on prevention focus compared to less familiar brands ($M_s = 5.27$ vs. $3.15, F(1, 14) = 62.99, p < .0001$).

Results

Size and composition of basket. We used a negative binomial regression via the Generalized Estimating Equations procedure with repeated measures on type of brand (0 = Well-Known, 1 = Less Familiar), regulatory focus (0 = Prevention Focus, 1 = Promotion Focus), and message frame (0 = Save \$x, 1 = Get \$x Off) as between-subjects factors. In order to control for demand effects, we did not count the number of units of Sparkle paper towels participants added to the baskets. We specified a compound symmetry structure for the covariance to accommodate correlated choices. See Table 1 in the Web Appendix for details of the analysis.

Results showed a significant main effect of type of brand, with subjects adding more well-known brands to the basket than less familiar ones, $M = 5.65$ vs. $2.78, \text{Wald } \chi^2 = 38.6, p < .0001$. There were three significant two-way interactions. First, we found a significant interaction between regulatory focus and message frame, $\text{Wald } \chi^2 = 8.1, p < .01$. Supporting hypothesis 1,

those in a promotion focus added more items overall to their baskets when they saw a gain-framed coupon versus a non-loss framed one, $M = 4.73$ vs. 3.39 , Wald $\chi^2 = 4.0$, $p < .05$, whereas those in a prevention focus added more items to their basket when they saw a non-loss framed coupon versus a gain-framed one, $M = 4.54$ vs. 3.40 , Wald $\chi^2 = 4.6$, $p < .05$.

Second, we found a significant interaction between regulatory focus and type of brand, Wald $\chi^2 = 12.3$, $p < .001$. Consistent with hypotheses 3a and 3b, less familiar brands had a greater incidence of choice under promotion versus prevention focus, $M = 3.43$ vs. 2.26 , Wald $\chi^2 = 4.2$, $p < .05$, whereas we found a greater choice of well-known brands under prevention versus promotion focus, $M = 6.84$ vs. 4.67 , Wald $\chi^2 = 13.5$, $p < .001$.

Finally, there was a significant interaction between message frame and type of brand, Wald $\chi^2 = 13.6$, $p < .001$. Supporting hypotheses 4a and 4b, there was a greater choice of less familiar brands in the gain frame compared to the non-loss frame, $M = 3.47$ vs. 2.23 , Wald $\chi^2 = 4.5$, $p < .05$, whereas well-known brands had a greater incidence of choice in the non-loss frame compared to the gain frame, $M = 6.90$ vs. 4.63 , Wald $\chi^2 = 12.4$, $p < .001$. The three-way interaction between regulatory focus, message frame, and brand type was not significant, Wald $\chi^2 = 2.7$, $p = .10$. Figure 1 presents the results for the relevant interactions.

Insert Figure 1 about here

Discussion

Experiment 1 provides evidence that the framing of the savings-message in a coupon (“Save \$x” vs. “Get \$x Off”) and type of brand (Well-Known vs. Less Familiar) can

independently activate regulatory orientations. Data from a lexical decision task show an increased facilitation for ideals-related words when people have a promotion focus or see a gain-framed coupon. Positive facilitation scores for ideals-related words are also associated with a greater propensity to choose less familiar brands. Prevention focus, non-loss framed coupons, and well-known brands are all associated with increased facilitation for oughts-related words. Further, promotion-focused individuals react more positively to coupons with the gain frame and tend to add more items to their basket. They also tend to add less familiar items. In contrast, prevention-focused individuals add more items to a basket when exposed to coupons with a non-loss frame. They also tend to add well-known rather than less familiar brands. In addition, we also observe a compatibility effect among multiple marketing cues, independent of regulatory focus. Gain-framed coupons favor purchases of less-familiar brands, whereas non-loss framed coupons are more likely to result in well-known brands being chosen. This confirms that compatibility with regulatory orientation accentuates motivational intensity in the direction of what one is predisposed to doing (Aaker and Lee 2006, Forster et al. 2001).

In Experiment 2, we make four changes. First, we use a BOGO instead of a discount offer. Second, keeping the promotion frame constant, we manipulate the temporal restriction for the offer, which either expires the same day or in two weeks. Third, instead of manipulating regulatory orientation, we measure it, using a chronic accessibility paradigm. Finally, to test the findings' generality, the promotion features a well-known brand, Bounty paper towels, rather than a less familiar one.

EXPERIMENT 2

In this study, we use an individual difference measure of regulatory focus, relying on chronic accessibility as determined by response times to questions about ideals and oughts (Higgins, Shah, and Friedman 1997). We classify people with faster response times to questions about ideals and desires in life as high on promotion focus, whereas we classify those with faster response times to questions about oughts and responsibilities as high on prevention focus.

Method

Participants. Ninety-five undergraduate students (18-29 years in age, 44 male, 51 female) at the University of Chicago participated in this computer-mediated study in exchange for compensation of \$3. Participants, on average, spent \$37 monthly on groceries.

Procedure. We used a 2 (Regulatory Focus: Promotion versus Prevention) x 2 (Expiration Date Restriction: Today versus 2 Weeks) x 2 (Brand: Well-Known vs. Less Familiar) mixed factorial design with type of brand as a repeated measure. Based on Higgins, et al. (1997), we first informed participants they would be completing a questionnaire on their self-concept as a consumer. Participants received descriptions of the ideal and ought selves and listed up to six attributes they would ideally like to possess or those they ought to possess. For each attribute, they rated the extent to which they would like to possess the attribute and the extent to which they believed they actually possessed it, both measured on a 7-point scale (1= not at all, 7 = very much). The computer recorded how long participants took to produce each attribute, how long they took to provide the rating on the ideal/ought scale, and how long they took to provide the rating on the actual scale. We transformed response times logarithmically, then summed all three response times for each attribute and response scores for the first three ideal and ought attributes to arrive at a measure of ideal strength and ought strength, with lower scores indicating higher accessibility (Higgins et al. 1997). In order to simplify exposition, we computed a regulatory

strength score, subtracting response times for ideals from those for oughts. Positive values on this measure indicate a high promotion focus and negative ones a high prevention focus.

Next, participants evaluated an ad for Bounty paper towels. Embedded in the visual was a coupon that read “Buy One, Get One Free, any one (1) 3-roll package of Bounty paper towels.” On the right side, the regular price (\$3) was mentioned. In the two-week expiration case, the coupon mentioned a date two weeks from the date of the experiment, whereas in the immediate expiration condition, the coupon expired on the date of the experiment. Again, we collected ad attitude measures. In addition, participants answered questions about perceptions of temporal distance, indicating how much time they felt they had to redeem the offer (1= Very little time vs. 7 = A lot of time), and about the nature of goals activated, indicating how much they felt the ad made them think of things they planned to do today versus things they planned to do in the future and how much the ad made them think of getting a good deal versus not losing out on a good deal (1= Not at all vs. 7 = Very much). Following this, we presented participants with the same brands and budget as in Experiment 1 and asked them to indicate how many of each item they wished to add to their carts. Participants then answered a series of background questions, as in Experiment 1.

Results

Manipulation check. First, we tested whether the manipulation of temporal restriction was successful in influencing perception of temporal distance. Individuals seeing an offer that expired the same day indicated they has less time to redeem the offer compared to those who saw the longer horizon promotion, $M = 2.78$ vs. 4.21 , $F(1, 93) = 16.9$, $p < .001$. We also tested whether temporal restrictions activated proximal versus distal goals. A one-factor MANOVA on present and future orientation showed a significant effect of type of restriction (multivariate $F(2,$

92) = 9.9, $p < .001$). Participants seeing the “today” frame were more likely to say the ad was made them think of things they planned to do today compared to those who saw the “2 weeks” frame ($M = 2.56$ vs. 2.04 , $F(1, 93) = 2.5$, $p = .06$). Participants who saw the “2 weeks” frame were more likely to say the ad made them think of things they planned to do in the future compared to those who saw the “today” frame ($M = 2.77$ vs. 1.98 , $F(1, 93) = 6.0$, $p = .01$). Finally, a MANOVA on gain and non-loss showed a significant effect of type of restriction (multivariate $F(2, 92) = 6.1$, $p < .01$). Participants who saw the “2 weeks” frame reported the ad made them think of getting a good deal more so than those who saw the “today” frame ($M = 3.73$ vs. 3.08 , $F(1, 93) = 4.6$, $p < .05$), whereas those who saw the “today” frame reported the ad made them think of not losing out on a good deal more so than those who saw the “2 weeks” frame ($M = 2.96$ vs. 2.36 , $F(1, 93) = 3.7$, $p = .06$).

Size and composition of basket. We ran a negative binomial regression with repeated measures for type of brand on number of items added to the basket, specifying a compound symmetry error structure and robust estimates of errors. Independent variables were coupon restriction (0 = today, 1 = 2 weeks) and type of brand (0 = well-known, 1 = less familiar) as categorical variables and the difference score on regulatory strength as a covariate. The covariate was mean-centered at the grand mean. We included interaction terms in the model, crossing both categorical variables and also each categorical variable with the covariate. We did not include the units of Bounty paper towels in the number of items participants added. See Table 2 in the Web Appendix for the model effects for the regression. Results showed that each of the predicted two-way interactions was significant, whereas the three-way interaction between coupon restrictions, regulatory strength, and type of brand was not significant ($p = .11$).

Participants were more likely to add well-known brands under the “today” frame compared to the “2 weeks” frame ($M = 3.86$ vs. 5.38 , Wald $\chi^2 = 6.3$, $p = .01$). They were marginally more likely to add less familiar brands in the “2 weeks” frame compared to the “today” frame ($M = 3.32$ vs. 2.45 , Wald $\chi^2 = 3.0$, $p = .08$). Together, these findings support hypotheses 5a and 5b.

Following Preacher, Curran, and Bauer (2006), we used simple slopes analysis to test for significant effects in interactions between the continuous predictor of regulatory strength and each of the categorical variables. Simple slopes reported represent the difference in the log of expected counts of the response variable for a unit change in the predictor. For ease of exposition, we present the exponentiated means in Figure 2. We examined effects of the covariate at two points: Mean – 1SD (prevention focus) and Mean + 1 SD (promotion focus).

Insert Figure 2 about here

People with a high promotion focus compared to a high prevention focus added more items to their baskets when they saw the “2 weeks” frame (simple slope = $.28$, Wald $\chi^2 = 4.75$, $p < .05$). Those with a high prevention focus compared to a high promotion focus added more items when they saw the “today” frame (simple slope = $-.24$, Wald $\chi^2 = 3.87$, $p = .05$). Together, these results are consistent with hypothesis 2.

Further, we saw a greater choice of well-known brands among people with a high prevention focus compared to high promotion focus (simple slope = $-.16$, Wald $\chi^2 = 3.8$, $p =$

.05), confirming hypothesis 3a. We found a marginally greater choice of less familiar brands among people with a high promotion focus compared to high prevention focus (simple slope = .20, Wald $\chi^2 = 3.2$, $p = .07$), partially supporting hypothesis 3b.

Discussion

As in Experiment 1, these results indicate regulatory focus has a systematic effect on overall shopping behavior. When shoppers are oriented toward saving, we find an ironic effect of short-term sales promotions. The proximal orientation of such prevention-focused individuals leads to greater goal compatibility from time-restricted offers, resulting in more non-promoted items in the basket. An increased choice of well-known brands drives this effect. When shoppers focus on their desires and ideals, promotions with a longer time horizon lead to increased sales of non-promoted items. Unlike we see with prevention-focused individuals, however, an increased choice of less familiar brands rather than well-known ones drives this effect. Experiment 3 further investigates the real-world generalizability of our results for the effects of goal compatibility through a field study. We make three changes to our procedure in Experiment 3. First, instead of using an ad to manipulate compatibility, we use a coupon handed out at the store entrance. Second, instead of promoting a specific brand, we offer a generic discount on the total basket as long as the amount exceeds a specific limit, consistent with the focus of retailers. Finally, we use a different manipulation of regulatory focus in view of obvious difficulties in getting customers to write essays and in measuring response times.

EXPERIMENT 3

Method

Participants. Two hundred twelve participants doing their normal shopping at the neighborhood grocery store were given an opportunity to earn a discount of \$5 on their purchases in the store. One hundred twenty-three of these participants redeemed the coupon.

Procedure. We conducted the study at a local grocery store near the university over the course of three weekdays. As shoppers entered the store, they were met by a research assistant blind to the purpose of the study and greeted with one of two scripts. The scripts were the same except for one sentence that manipulated regulatory focus: “I am a student at the University of Chicago and we are working with the neighborhood to see how shoppers can benefit from the local stores in the neighborhood. We are giving out these coupons that you can redeem at the Hyde Park Co-op store. (After handing over coupon) –Think of all that you can have and enjoy yourself (promotion focus)/ all you need to do to act sensibly (prevention focus) while you are shopping!”

We pre-tested the manipulation of regulatory focus in the laboratory via a lexical decision task, as in Experiment 1. Twenty-six participants (average age 28 years) read on the screen that they were going to evaluate a website design and that the study would pay \$4 for participation. The one-sentence manipulation of regulatory focus followed the statement. Participants then saw a website for an online grocery store and were asked to evaluate its design in order to maintain the cover story. Following this task, they completed the lexical decision task involving words related to promotion and prevention focus.

Each coupon was either framed as “Save \$3 on any purchase over \$10” or “Get \$3 Off any purchase over \$10.” We manipulated the coupon expiration-date restriction cue as “Offer expires today” or “Offer valid all week” then assigned each coupon a code based on the

combination of regulatory focus, content frame, and type of restriction. If a customer redeemed the coupon, the store assistant printed a duplicate copy of the cash receipt and stapled the coupon to it. The coupon code allowed us to match the cash receipt to the relevant conditions of the coupon. The total units purchased and amount spent were recorded for each customer. Technical constraints prevented us from collecting information about the composition of the basket.

Results

Pretest of manipulation. As in Experiment 1, we prepared data from the lexical decision task for analysis by removing trials with errors (6.3%) and those with response latencies greater than 2000 ms (.7%). No responses were faster than 100 ms. We computed facilitation scores for ideals- and oughts-related words after log-transforming the data and analyzed the data using a one-way MANOVA. We found a significant effect of regulatory focus on overall facilitation scores (multivariate $F(2, 23) = 7.7, p < .01$). Facilitation scores for ideals-related words were greater under promotion versus prevention focus ($M = .016$ vs. $-.009, F(1, 24) = 3.69, p = .06$) and those for oughts-related words were greater under prevention versus promotion focus ($M = .013$ vs. $-.014, F(1, 24) = 6.2, p < .05$).

Size of basket. We used a generalized linear negative binomial model with a log link to estimate the effects of the three factors and their interactions. Results showed a marginally significant main effect for regulatory focus, with more items added to the basket under promotion versus prevention focus ($M = 7.97$ vs. $6.75, \text{Wald } \chi^2 = 3.5, p = .06$). These results were qualified by three significant two-way interactions. See Table 3 in the Web Appendix for details of the analysis.

First, we noted an interaction between regulatory focus and coupon-savings message frame (Wald $\chi^2 = 12.5, p < .001$). Contrasts revealed that people in a prevention focus added

more items to their baskets when they received a coupon framed as “Save \$x” (non-loss) versus “Get \$x Off” (gain) ($M = 8.10$ vs. 5.64 , Wald $\chi^2 = 12.9$, $p < .001$). People in a promotion focus added more items to their baskets when they received the “Get \$x Off” coupon versus the “Save \$x” coupon, although this effect was marginal ($M = 9.10$ vs. 6.99 , Wald $\chi^2 = 2.9$, $p = .08$).

Together, these results partially replicate our findings in Experiment 1 (hypothesis 1).

Second, we found a significant interaction between regulatory focus and expiration-date restriction (Wald $\chi^2 = 18.2$, $p < .001$). People in a promotion focus added more items to their basket when they received a coupon with a longer expiration date versus one that expired the same day ($M = 10.12$ vs. 6.28 , Wald $\chi^2 = 10.0$, $p < .01$). People in a prevention focus added more items when they received a coupon that expired the same day versus one with a longer expiration date ($M = 7.77$ vs. 5.88 , Wald $\chi^2 = 8.4$, $p < .01$). These results replicate our findings in Experiment 2 (hypothesis 2).

Finally, we found a significant interaction between the savings-message frame and expiration-date restriction of the coupon (Wald $\chi^2 = 4.6$, $p < .05$). People who received the “Get \$x Off” coupon added more items to their baskets when the coupon had a longer time horizon versus an immediate expiration date ($M = 8.27$ vs. 6.20 , Wald $\chi^2 = 4.5$, $p < .05$). However, contrary to our expectations, we found no difference in the number of items added for the “Save \$x” coupon between the immediate expiration date versus longer time horizon ($M = 7.87$ vs. 7.17 , Wald $\chi^2 = .6$, $p = .44$).

The three-way interaction for regulatory focus, savings-message frame, and coupon expiration-date restriction was not significant (Wald $\chi^2 = .4$, $p = .51$).

Discussion

This field study establishes the generalizability of our results that people's shopping orientation affects the efficacy of sales promotions in stimulating store-level sales, depending on how the savings-message and expiration-date restrictions of the coupon are framed. Both frames not only help accentuate or attenuate the effects of the regulatory orientation shoppers might bring into the store, but also act as independent sources of regulatory orientation, priming behaviors consistent with promotion or prevention focus. Although some of the contrasts were not significant, they were in the hypothesized direction and probably failed to attain significance due to large variance in the data arising from lower levels of control in a field study.

GENERAL DISCUSSION

Results from two laboratory studies and one field study show that marketing cues, such as the way a savings-message of a coupon is framed (Save \$x vs. Get \$x Off: Experiments 1, 3) or the nature of expiration-date restrictions on the promotion (Expiring Same Day versus Expiring Two Weeks Later: Experiments 2, 3), may prime different regulatory orientations among shoppers. These cues not only serve to reinforce or attenuate shoppers' promotion or prevention focus but also act independently of such regulatory foci to guide behavior. Shoppers experiencing compatibility between a given cue and their regulatory orientation or among multiple cues are likely to add more non-promoted items to their baskets. Results from the field study confirm these findings. Further, we show that brands in a store may themselves be a source of regulatory orientation. Well-known brands, representing safe choices, are consistent with a prevention focus and with coupons framed as "Save \$x," whereas less familiar brands representing a need for variety are consistent with a promotion focus and with coupons framed as

“Get \$x Off” (Experiment 1). Well-known brands are also more compatible with immediately expiring coupons, whereas less familiar brands are compatible with coupons with longer time horizons (experiment 2). We now discuss contributions to the literature.

Theoretical Contributions, Limitations, and Future Research

Regulatory focus. These findings contribute to the literature on regulatory focus in two ways. First, whereas prior evidence shows that message frames interact with regulatory focus to enhance or diminish the effectiveness of the message (Lee and Aaker 2004), we show that the savings-message frames may themselves act as primes of regulatory orientation that influence subsequent behavior. This finding is congenial to the findings of Shah and Kruglanski (2003), whereby means have been shown to prime goals in a “bottom-up” fashion. Specifically, coupon messages framed as gains (“Get \$x Off” or “Buy One Get One Free”) prime a promotion focus and those framed as non-losses prime a prevention focus. Manipulating the nature of expiration-date restrictions on the promotion produces similar effects. Restrictions signaling imminent expiry bring attention to the near future and are compatible with prevention focus, whereas promotions not expiring immediately are compatible with promotion focus. This finding is consistent with the view that events in the near future increase concerns about prevention goals, whereas those in the distant future increase concerns about promotion goals (Mogilner, Aaker, and Pennington 2007; Pennington and Roese 2003). Further, we find that brands themselves may act as signals of regulatory orientation, with consumers associating well-known brands with prevention focus and less familiar ones with promotion focus. Although the positioning of a brand may contribute to its perceptions, our data attest to the fact that people seem to encode brands in terms of their inherent risk in choice, echoing the findings of Liberman, et al. (1999).

Second, our findings relate significantly to the literature on value from regulatory fit (Avnet and Higgins 2003; Cesario, Grant, and Higgins 2004). Previous literature shows that value from fit is transferred to the valuation of objects that are part of the decision task (Avnet and Higgins 2003). To our knowledge, only one study has shown that value from fit can extend to objects not directly related to the fit activity (Higgins, et al. 2003). Our findings suggest people experiencing compatibility between multiple sources of regulatory orientation appear to transfer it to unrelated choices, consistent with Higgins, et al. (2003). The feeling of compatibility appears to signal progress toward the activated goal and set people on an implemental rather than deliberative path, leading to a shopping momentum effect (Dhar, Huber, and Khan 2007). The momentum, however, only extends to brands that fit with the underlying orientation, suggesting an important boundary condition for the effect.

Recent theories on regulatory fit point to implicit processes such as a sense of “it just feels right” (Cesario, Grant, and Higgins 2004) and goal fluency (Labroo and Lee 2006). Regulatory compatibility among cues and with prior orientation might therefore cause a sense of processing fluency (cf. Vallacher and Nowak 1999; Winkielman et al. 2002). Fluency is a sign of cognitive progress toward a goal and can help put people on to an implemental path. Thus, regulatory compatibility may become a heuristic to allow selective attention to information that addresses people’s regulatory concerns rather than to serve extensive deliberation (Wang and Lee 2006). Data from our lexical decision task appear to endorse the implicit nature of the process, with increased accessibility to words consistent with the regulatory orientation. Importantly, however, the fact that the effects of compatibility do not appear to extend to all brands but only a sub-set of those consistent with the orientation seems to suggest the effects are

not a form of generalized affect transfer (Heilman, Nakamoto and Rao 2002; Naylor, Raghunathan and Ramanathan 2006)

However, in the absence of a more direct manipulation of motivation and ability, our results are equivocal about processing; further research is needed to investigate the underlying processes. One possible avenue would be an investigation of the affective and motivational underpinnings of the effect; another would explore other types of restrictions, such as purchase quantity or dollar amounts. Our research only examines restrictions on expiration dates. An examination of the temporal dynamics of regulatory orientations might also be interesting. If cues in the store, such as in-store sales promotions, could prime different regulatory orientations, people coming into a store might switch back and forth between orientations as they navigate the aisles. Examining behavior in a single timeframe might cause us to ignore the possibility of very interesting switching dynamics caused by changing goal states.

Managerial implications. Our findings contribute to the sales promotion literature in three areas. First, we examine the effects of sales promotions on the size and composition of the market basket, thereby taking a retailer's rather than a manufacturer's perspective. Second, our research highlights the importance of the consumer's orientation (promotion vs. prevention) in influencing individual differences in responsiveness to promotions. In recent years, retailers have placed more importance on the store environment, which could affect the orientation of their customers, a potentially fruitful area for future research. Third, our research focuses on two important design variables for promotions – the framing of the savings message and the expiration-date restriction – and shows not only how they could impact the efficacy of a promotion but also how they might interact with each other, depending on shopping orientation.

More generally, our research highlights the importance of consistency between positioning strategies retailers use to differentiate themselves and the price promotional strategies that they use. Our research suggests that retailers like Walmart who use everyday low pricing strategies to assure savings, carry well known brands and have conventional store-layouts, consistent with a prevention focus, would benefit from using temporary price promotions with more restrictions and savings messages framed as “Save \$X”. However, stores like Costco and Trader Joe’s that may prime a promotion focus with an unusual store layout, unique items and new products, would benefit from BOGO offers with few restrictions. Our research also suggests that in recessionary economic times when people may have a strong prevention focus, brands might be better off favoring advertising spending to promote brand loyalty as opposed to spending money on trade promotions to switch consumers. Further, retailers might need to adopt different promotional strategies in Asian countries, for example, as opposed to the West, due to different regulatory orientations across countries.

Finally, although our research has focused on the retail environment and sales promotions, we believe it has important practical implications in other areas. Corporate positioning and the culture of firms such as Apple and 3M might impact not only the kind of innovation in which they engage but also the kind of employees they attract. Our research could also provide insight into why promotion-oriented innovation techniques in companies such as 3M may not be readily transferable to prevention-oriented environments such as GE. Considerable opportunity exists for future research to build on our findings and design marketplace tests to determine the application of regulatory focus theory in different marketing and consumer environments.

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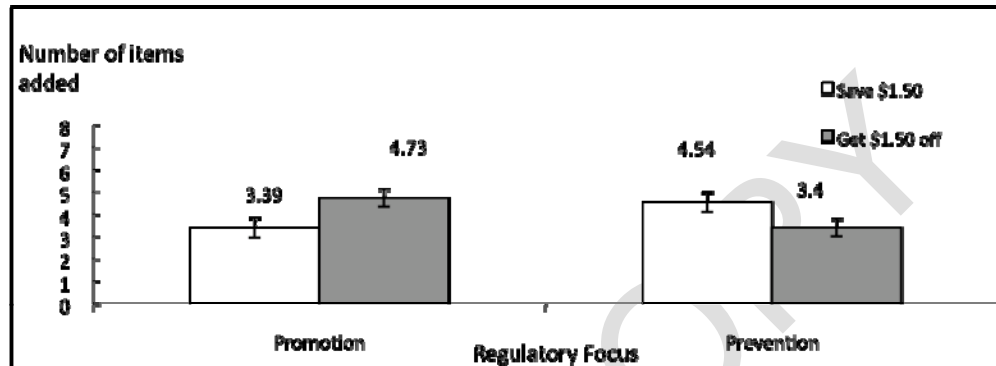
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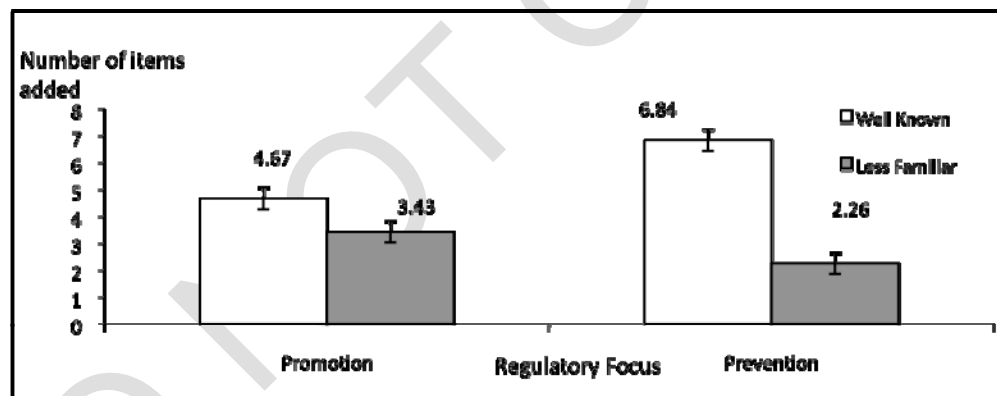
FIGURE 1

EXPERIMENT 1: EFFECTS OF REGULATORY FOCUS, MESSAGE FRAME AND TYPE OF BRAND ON SIZE OF BASKET

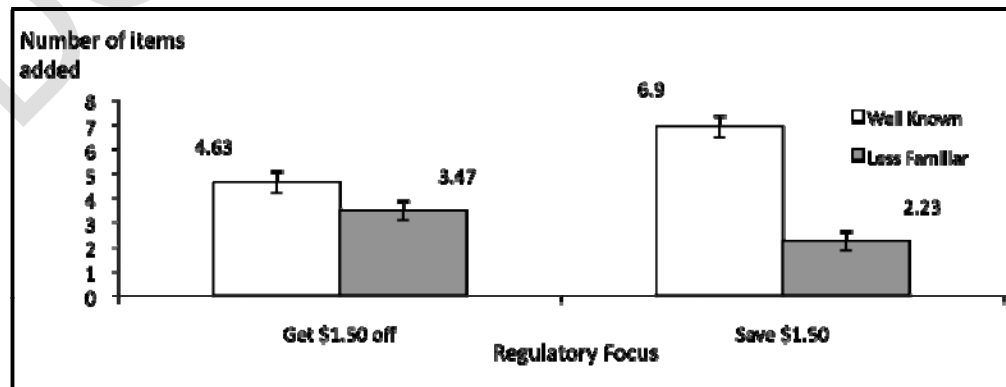
A. Compatibility Between Regulatory Focus and Coupon Message Frame



B. Compatibility Between Regulatory Focus and Familiarity of Brand



C. Compatibility Between Coupon Message Frame and Familiarity of Brand

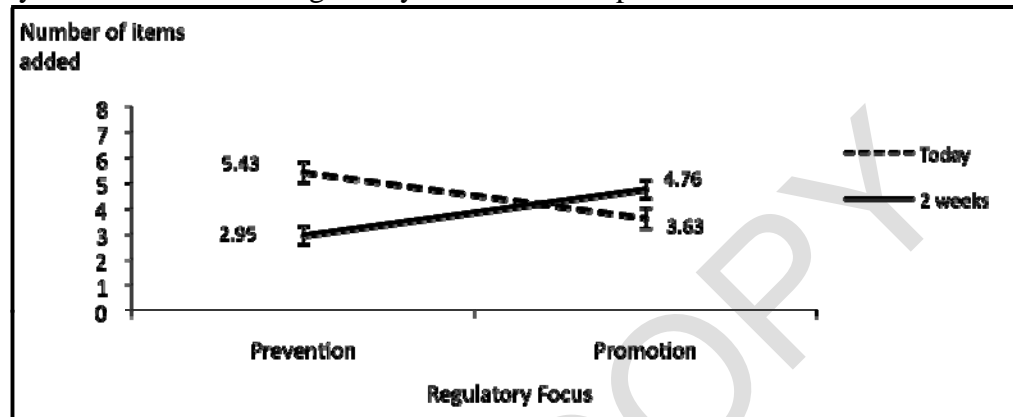


Note: Error bars represent standard errors of means

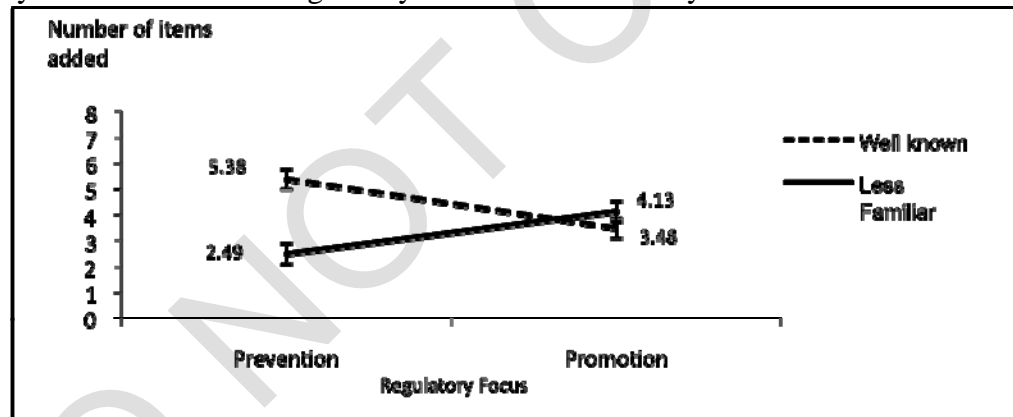
FIGURE 2

EXPERIMENT 2: EFFECT OF CHRONIC REGULATORY FOCUS, COUPON RESTRICTIONS AND TYPE OF BRAND ON SIZE OF BASKET

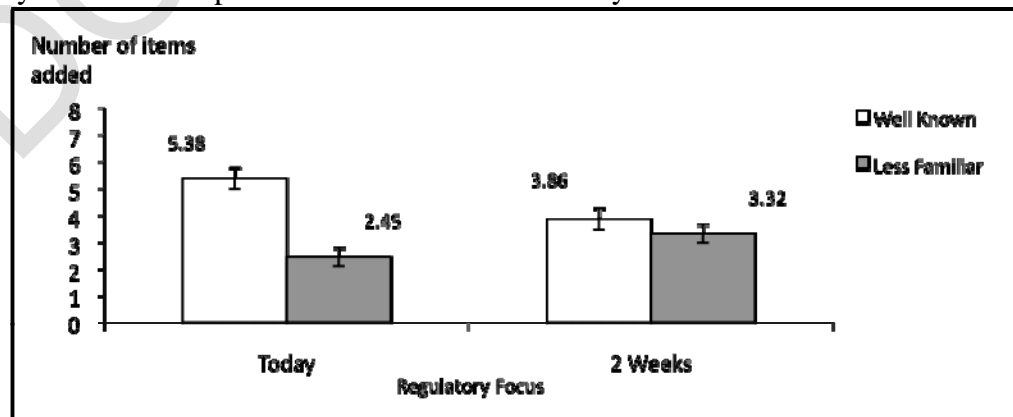
A. Compatibility Between Chronic Regulatory Focus and Coupon Restrictions



B. Compatibility Between Chronic Regulatory Focus and Familiarity of Brand



C. Compatibility Between Coupon Restrictions and Familiarity of Brand



Note: Error bars represent standard errors of means

The Effect of Sales Promotions on Size and Composition of the Shopping Basket: Regulatory Compatibility from Framing and Temporal Restrictions

Suresh Ramanathan and Sanjay K. Dhar

Web Appendix

TABLE 1

Experiment 1: Effects of Regulatory Focus, Message Frame and Type of Brand on Size of Basket

Explanatory Variables	Wald χ^2	$p < \chi^2$
Intercept	628.10	< .001
Message Frame	.04	.84
Brand	38.59	< .001
Regulatory Focus	.03	.86
Regulatory Focus x Message Frame	8.06	< .01
Regulatory Focus x Brand	12.34	< .001
Message Frame x Brand	13.58	< .001
Regulatory Focus x Frame x Brand	2.72	.10

TABLE 2

Experiment 2: Effect of Chronic Regulatory Focus, Coupon Restrictions and Type of Brand on Size of Basket

Explanatory Variables	Wald χ^2	p < χ^2
Intercept	560.15	< .001
Coupon Restriction	.04	.84
Brand	17.05	< .001
Regulatory Strength	.46	.50
Regulatory Strength x Coupon Restriction	17.44	< .001
Regulatory Strength x Brand	6.37	< .05
Coupon Restriction x Brand	7.69	< .01
Regulatory Strength x Restriction x Brand	2.59	.11

TABLE 3

Experiment 3: Effect of Regulatory Focus, Message Frame and Coupon Restrictions on Size of Basket

Explanatory Variables	Wald χ^2	p < χ^2
Intercept	2027.44	< .001
Regulatory Focus	3.51	.06
Message Frame	.31	.58
Coupon Restriction	1.24	.27
Regulatory Focus x Message Frame	12.50	< .001
Regulatory Focus x Coupon Restriction	18.19	< .001
Message Frame x Coupon Restriction	4.56	< .05
Regulatory Focus x Frame x Restriction	.45	.51