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Embedded Premium Promotion: Why It Works and How to Make It More Effective

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In this paper we define an embedded premium (EP) as an enhancement that involves a social cause added on to a product or service. We characterize EP as a sales promotion strategy and juxtapose it with traditional approaches, such as discounts and rebates. Across three experiments, using a nationwide Internet panel and employing stated measures and model-based inference, we find that at low denominations EP is more effective than an equivalent price discount. We describe how an EP's social association may influence consumer choice quite differently than price promotions and, contrary to the asymmetric price promotion effect documented in the promotions literature, we find that EP benefits an unknown brand more than a known brand. Our hierarchical Bayes approach uncovers heterogeneity in EP effectiveness that can be explained by affinity toward the focal charity, personal motivations, and demographic markers. An identifiable segment of individuals prefer the "other" over "self," suggesting possible EP optimization and segmentation strategies. Two such strategies, customization and coverage, are empirically tested, and the former is shown to be very effective. Our findings have broad implications for brand managers with regard to resource allocation and EP program return on investment (ROI), as well as important social welfare implications.

Key words: embedded premium; sales promotion; consumer choice; hierarchical Bayes; ROI; cause-related marketing

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1. Introduction

An increasing number of brands in the marketplace are being linked to social causes. Consumer packaged-good brands such as Yoplait, Cheerios, and Kemp's, retailers such as Target, and service firms such as Working Assets have associations with a variety of social causes, such as children's education and breast cancer research. While such examples of "doing well while doing good" (Cone et al. 2003) are common, limited empirical research in marketing has investigated the effect of such associations on consumer choice behavior. Because of the absence of suitable terminology, we begin by formally defining the term embedded premium (EP) as an enhancement that involves a social cause added on to a product or service. In the Cheerios example above, Box Tops for Education is the enhancement we call the EP. For Yoplait, EP is the association with the Susan G. Komen Breast Cancer Foundation.

Like traditional forms of promotion, an EP provides an additional incentive to consumers, yet research has not focused on juxtaposing this new form of sales promotion with existing price promotion strategies such

as rebates and coupons, which reward the consumer (self), and not the cause (other). The tension between concern for the "self" and the "other" is at the core of EP effectiveness and is, therefore, of great theoretical interest. Such self-other trade-offs that consumers make are also important to brand managers because of their implications for ROI and long-term sustainability of any EP program.

Existing research on transaction-contingent corporate charitable activities, such as EP promotions, has largely avoided comparison with traditional sales promotion because the approach is often framed in the language of social responsibility and "oughts" (Robin and Reidenbach 1987). At the strategic level, such research questions have revolved around consumer perceptions of corporate motivations when a company claims to be socially responsible. It is shown that these perceptions affect consumer responses to the company (Sen and Bhattacharya 2001, Drumwright 1996, Ross et al. 1992), the product (Brown and Dacin 1997, Osterhus 1997) and the cause (Lichtenstein et al. 2004). Existing research on tactical dimensions of EP campaign execution has explored aspects such as

product type (Strahilevitz and Myers 1998), EP magnitude (Strahilevitz 1999), attribute trade-offs (Barone et al. 2000), and EP effectiveness relative to advocacy advertising (Menon and Kahn 2003).

Aside from the scarcity of research on the performance of EP promotions relative to traditional forms of price promotion, two other observations can be made about existing research in marketing involving an embedded premium. First, little is known about consumer attributions and why they consider buying a product with an EP (Webb and Mohr 1998). This is important to understand because individual attributions may be different, and some attributions may be stronger drivers of consumer choice than others. Second, existing literature ignores heterogeneity in EP effectiveness across consumers—an EP effect is assumed to be either present or absent in the population. Because of a lack of understanding of EP-related interpersonal differences, we do not know why and how it works and what could be done to enhance its effectiveness.

In this paper we attempt to address these voids in the existing literature, which are of theoretical as well as managerial interest. We begin by developing an understanding of consumer motivations for choosing products with an EP. Using a choice context we formally recognize differential EP effectiveness across consumers and attempt to explain the causes of such differences. Next, we carefully investigate the juxtaposition of EPs against traditional forms of price promotion and illuminate their differences. In light of its heterogeneous effect across consumers and with a goal to maximize effectiveness, we investigate two alternate implementation strategies for an EP program: coverage and customization.

Our research approach involves three experiments using over 2,100 Web panelists spread all over the United States. We use a combination of stated measures and model-based inference to accomplish our research goals. A hierarchical Bayes model of consumer choice is used to incorporate heterogeneity in EP effectiveness. The experiments involve two separate contexts—bottled water and credit card. We use both within-subjects and between-subjects designs.

Across studies we show that EP is a unique and effective form of promotion whose effect is heterogeneous across consumer populations. Interpersonal differences in EP attractiveness vary by cause affinity and personal attributions, and EP sensitivity is invariant to promotion depth (e.g., 15¢ versus 30¢ versus 45¢). At small denominations we find that an EP is more effective than traditional forms of promotion, such as a discount or a rebate. Interesting differences emerge when EP effectiveness is compared between unknown and known brands. Contrary to the asymmetric price promotion effect (Blattberg and

Wisniewski 1989), we find a stronger effect for an unknown brand with an EP than for a known brand, as positive EP associations enhance quality perceptions for the unknown brand. We demonstrate that EP effectiveness could be improved via a customization strategy where consumers are allowed to select their preferred cause, but find evidence against a coverage strategy—bundled EPs have a dilution effect. The self-other gap, a measure of concern for oneself versus a social cause, is heterogeneous across respondents, with almost 20% of individuals exhibiting “selfless” preferences. We find that the self-other gap is related to a variety of behavioral, attitudinal, and demographic markers, suggesting the feasibility of segmenting the marketplace based on EP effectiveness.

This paper is divided into multiple sections. We begin with an overview of existing literature that relates to our research, followed by a section on hypothesis development. The subsequent empirical section reports results from three studies. We end with a discussion of our findings and directions for future research.

2. Theory and Hypotheses

Economists define private goods, such as cereal and yogurt, as rival and excludable. The antithesis of a private good is a nonrival and nonexclusionary public good such as clean air or highways (Varian 1992). Naturally occurring combinations of a public and private good, such as shade-grown coffee, are called impure public goods (Kotchen 2005, Cornes and Sandler 1994). By extension, products linked with a social cause could be called impure private goods. Such products represent the confluence of individual and collective interests, and because of their mixed nature, are likely to possess some unique properties. In this paper we refer to the public good enhancement added on to standard private goods as an EP. EP, therefore, refers to that incremental element of the product, such as a purchase-contingent donation to breast cancer research, that, when added, creates an impure private good.

2.1. How EP Works and Why the EP Effect May Be Heterogeneous

The consumer choice process in marketing is typically conceptualized as one of utility maximization. A marketplace offering is viewed as a bundle of attributes x , and utility u_i for person i is viewed as a function $u_i = f(x, \beta_i)$, where β_i captures her preference structure. Consider the case when one of the choice alternatives includes an EP. Consumer utility for such an alternative could be viewed as $u_i = f(x\beta_i; x^+\gamma_i)$ where x^+ represents the EP, and γ_i captures consumer sensitivity to the EP. Across all consumers who buy such an alternative, the collective

contribution to the social cause and net impact on social welfare (Sen 1977) equals $\sum_i x^+$. Unlike a typical dyadic marketing exchange involving a buyer and a seller, an EP involves a third party, namely, the social cause. The presence of a third party presents some interesting theoretical questions with important substantive implications. These questions are the focus of our enquiry in this paper.

Keller (2003) suggests that linking a brand to a cause can enhance brand knowledge. Prior to their recombination into an impure private good such as Cheerios with Box Tops for Education, consumers held two separate schemas for its public (public education) and private (toasted oat cereal) good constituent elements. The EP element of the impure private good leverages existing knowledge structures for the public good onto the consumer's schema for the private good. The resulting schema plus tag representation (Smith et al. 1988) of the product in the consumer's mind is a confluence of personal utility derived from the product and the cause association ($x\beta_i + x^+\gamma_i$). Furthermore, the strength of consumer affinity for the associated cause (Sen and Bhattacharya 2001) should be an important determinant of EP effectiveness.

Since the time of Smith ([1759] 1966), economists have been keenly interested in the apparent anomaly of regard for others inside a paradigm defined by self-interest. One perspective has focused on the instrumentality of other-regarding behavior, suggesting that interest in the welfare of others is a calculative means to enhanced self-interest (Becker 1976). Other economic explanations posit that other-regarding individuals are experimentally confused into altruistic behavior (Andreoni 1995), purchase moral satisfaction (Kahneman and Knetsch 1992) and warm-glow (Andreoni 1990) by their choices, or have nonpaternalistic pure-altruism value functions (Palfrey and Prisbrey 1997). Regardless of the theoretical framing, a consistent finding is that individuals differ in degrees of apparent concern for the other (Andreoni and Miller 2002, Palfrey and Prisbrey 1997).

In light of the above discussion we propose the following foundational hypotheses that serve as building blocks for the remaining hypotheses:

HYPOTHESIS 1A (H1A). *The presence of an EP results in incremental utility for the individual.*

HYPOTHESIS 1B (H1B). *The incremental utility because of an EP is heterogeneous across individuals.*

HYPOTHESIS 1C (H1C). *Individual differences in affinity for the social cause included in the EP induce a heterogeneous EP effect. Higher cause affinity results in higher EP effectiveness.*

2.2. How Is EP Different from Price Promotions?

Traditional price promotion grapples with the negative impact that discounting can have on product quality perceptions. Because a given consumer may apply a price-quality heuristic when evaluating products, a brand manager exercises caution when engaging in extensive price promotion for fear of damaging brand equity (Darke and Chung 2005). While a price discount may damage brand quality perceptions when the consumer infers the promotion as an indicant of product quality (Raghubir and Corfman 1999), the use of EP has the potential to enhance product quality perceptions. By leveraging positive consumer evaluations for a cause, an EP-laden brand can have its product evaluation *enhanced through association*. Parallels to the schema-enhancement effect of the embedded premium can be found in literature involving celebrity endorsers and composite brand extensions. For example, the effectiveness of celebrity endorsers in advertising has been explained via an affect transfer mechanism (Sengupta et al. 1997) while cobranding research (Park et al. 1996) shows that a second “modifier” brand can enhance perceptions toward the existing target brand. In light of the above discussion, we propose that:

HYPOTHESIS 2 (H2). *Unlike traditional price promotions, the presence of an EP increases individual product quality perceptions.*

The promotions literature in marketing (see Neslin 2002, p. 12 for a summary) suggests an asymmetric effect of price promotions on brand sales. The (perceived) high-quality national brands are found to gain more from a price promotion than the lower-quality store brand. In contrast to a price promotion, a promotion involving an EP operates in an opposite manner. We expect that brands about which consumers know little may benefit most from EP promotions. This is likely to occur because for an unknown brand a consumer's mind is like a clean slate, and the affect transfer from the EP association should be stronger for such a brand. While the effect of an EP promotion is expected to be asymmetric, the direction of the asymmetry is expected to be opposite to the price promotion case.

HYPOTHESIS 3 (H3). *The effect of EP promotion strategies will be stronger for an unknown brand than for a known brand.*

H3 has broad implications for brand managers of low-share or new brands. Rather than starting a price war with a price promotion and gaining a reputation as a low-quality brand, the brand manager for a new brand introduction might opt for an EP promotion, which may improve consumer product perceptions

Figure 1 Promotion Strategy Matrix

Effort	Payoff destination	
	Self	Other
No effort	Discount (15¢ off)	EP (15¢ donated to Red Cross)
Effort	Rebate (15¢ for every lid)	EP Effort (15¢ donated to Red Cross for every lid)

and perform disproportionately better than the alternative forms of promotion. To investigate this more carefully, we focus our attention on two dimensions of a promotion, namely, payoff destination and effort.

2.2.1. PayOff Destination. The beneficiary of a promotion could be the consumer or another entity, such as a cause. In the following discussion we refer to the former as self and the latter as other. This self versus other trade-off represents the first dimension of a promotion. In their most stylized form, EPs are most closely related to price discounts. In the majority of applications, EPs are dollar or percent-of-purchase denominated, and thus from a brand manager's perspective it would be reasonable to ask how offering consumers a 15¢ EP is different from offering a 15¢ price discount.

2.2.2. Effort. The second dimension on which promotions may differ is the effort required to claim the promised money. Brand managers have long used mail-in rebates as a form of third-degree price discrimination to segment the market based on price sensitivity and time utility (Blattberg and Neslin 1990). In the same way, many EPs have an added contingency of mailing in some portion of the product packaging, such as the lid, to trigger the donation to charity.

The two dimensions of payoff destination and effort presented in Figure 1 provide a framework to investigate the differences between EP and traditional price promotion strategies.

All else equal, it is reasonable to expect that an effortful promotion should be less attractive to a consumer than a promotion that requires no effort. The effort contingency imposes an additional cost to the consumer, allowing the firm to segment the market based on this sensitivity (Varian 1992). The logic of utility maximization and the propensity to free-ride on the provision of public goods (Cornes and Sandler 1984) suggests that a payoff to self is likely to be more attractive than a payoff to society (other).

HYPOTHESIS 4A (H4A). *Promotions with a self component are more effective than those with an other component.*

HYPOTHESIS 4B (H4B). *For such promotions the effect is stronger when no effort is required compared to an effort-contingent promotion.*

2.3. How to Enhance EP Effectiveness

Cause affinity has been shown to be an important determinant of EP effectiveness (Lichtenstein et al. 2004). Cause affinity is also known to vary across consumers (Bendaputi et al. 1996). The heterogeneous effect of EP, driven in part by cause affinity, suggests two strategies to enhance its effectiveness: coverage and customization. We discuss each in some detail.

2.3.1. Coverage. Unlike price promotion, where the underlying discriminator across consumers is price sensitivity, a unique aspect of an EP is that it could potentially contain multiple social causes. Recognition of heterogeneity in cause affinity, therefore, offers the opportunity to attract a wider spectrum of consumers, making EP a powerful promotion tool. We refer to the EP strategy to offer multiple social causes as coverage. Consider, for example, two causes C1 and C2, where each may be attractive to different individuals. A coverage strategy suggests that inclusion of both C1 and C2 in an EP promotion offer, compared to the case when either C1 or C2 is included, should result in increased EP effectiveness. More individuals are likely to purchase an alternative that has multiple causes as an EP compared to an alternative that has only one cause as an EP.

2.3.2. Customization. Another method to increase EP effectiveness is customization. Because it permits consumers to select the cause for which they have the highest affinity, and higher affinity is likely to result in an enhanced EP effect, customization is expected to increase EP effectiveness. The effectiveness of a customization strategy parallels the demand-side justification for longer product-line length—it allows a firm to satisfy heterogeneous preferences, thus increasing its total sales (Bayus and Putsis 1999).

Both coverage and customization are distinct from price promotions, where the underlying discriminator across consumers is price sensitivity and therefore is quite restrictive in how its effectiveness could be improved. Formally, we propose that:

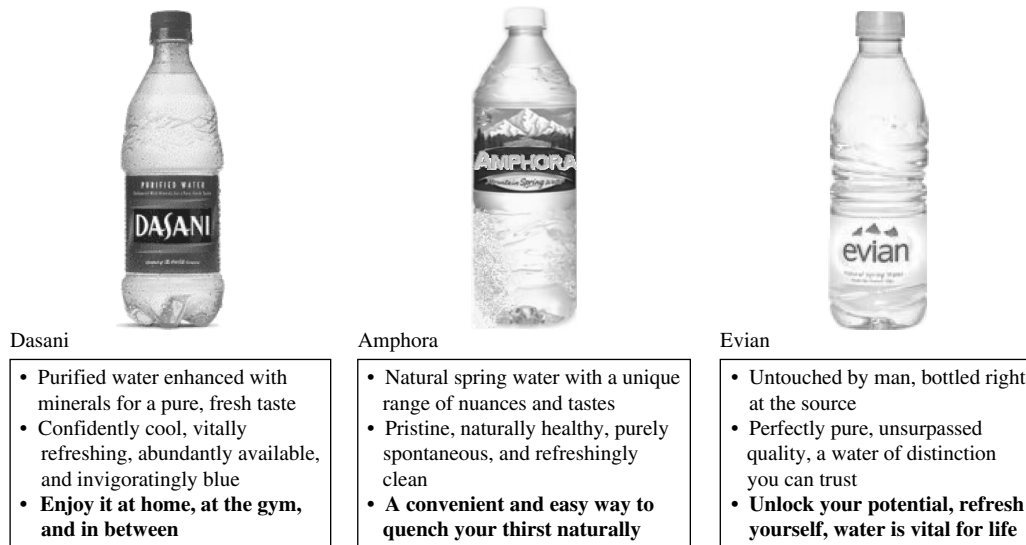
HYPOTHESIS 5 (H5). *Compared to a single preselected cause, multiple causes increase coverage and therefore enhance EP effectiveness.*

HYPOTHESIS 6 (H6). *Compared to a single preselected cause, customization is a more effective form of EP promotion.*

Next we report three studies that test Hypotheses 1–6. Study 1 focuses on H1A, B, C and H2. Study 2 tests H3 and H4A, B. The final study tests H5 and H6.

3. Study 1

Study 1 investigates the impact of an embedded premium on brand choice, link any incremental utility

Figure 2 Experimental Stimuli (Control Group)

Note. Source: Coca-Cola Inc. (Dasani) and The Dannon Group (Evian).

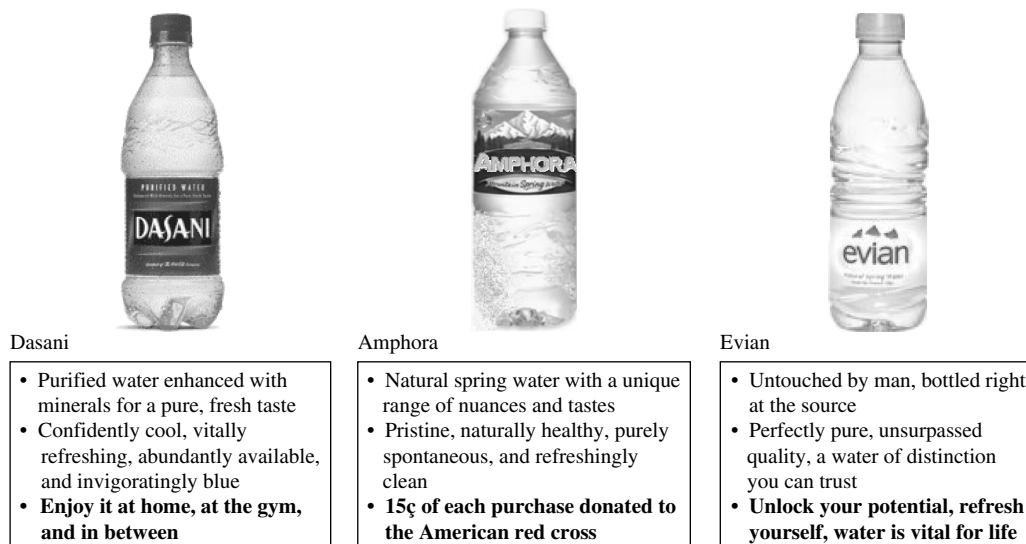
to consumer attributions, and examine any impact EP might have on product quality perceptions (H1A, B, C and H2). To accomplish these goals, participants completed an online bottled water product-evaluation experiment. As a precursor to Studies 2 and 3, which involved a national panel, 131 upper-division undergraduates at a large Midwestern university participated in Study 1.

The key independent variable in the study was the presence or absence of EP—a donation to the American Red Cross. In keeping with previous research on the depth of promised EP donations (Strahilevitz 1999, Pracejus et al. 2003), there were three such treatment conditions, which varied only

by the amount of the promised donation to the Red Cross: 15¢, 30¢, and 45¢. We also included a control condition, resulting in a total of four conditions.

Individuals assigned to the control group were provided with product descriptions for three brands of bottled water (two known brands, Evian and Dasani, and a fictitious brand, Amphora) as shown in Figure 2.

Individuals in the treatment conditions viewed the same product descriptions for the same three brands, with the exception that Amphora, the unknown brand, featured an EP. The final line of the product description for Amphora was changed to read, “15¢ of each purchase donated to the American Red Cross,” as shown in Figure 3.

Figure 3 Experimental Stimuli (Treatment Group)

Note. Source: Coca-Cola Inc. (Dasani) and The Dannon Group (Evian).

A conjoint choice task of six choice sets, each containing three alternatives, was included in each condition to infer EP effects. The conjoint design, obtained using the Optex procedure in SAS, included two attributes each at three levels: brand (Dasani, Evian, Amphora) and price (\$1.00, \$1.25, \$1.50). We also included a choice task in which respondents were asked to select one alternative from the three available brands, all priced at \$1.25. In addition to the conjoint task, respondents completed dependent measures that were more direct, such as brand attitude, purchase likelihood, and product quality (all measured on a seven-point scale; see Appendix B for all scale items used in the study).

Attitudinal, behavioral, and demographic measures of interest were also recorded for use as covariates. After completing the main body of the study, participants were asked if they would consider buying a product with a cause association, and if so to elaborate on their reasons why. Participants completed the study using a web browser. After clicking on the study link, they were randomly assigned to a condition and directed to the study location and their responses were automatically recorded.

3.1. Results

The analyses reported next and in subsequent studies use a combination of frequentist and Bayesian methods. This is necessary because we use both stated measures (e.g., purchase likelihood on a 1–7 scale) and model-based inference (e.g., parameter estimates for a choice model) to study EP. Consistent with tradition in social sciences, we report p -values to indicate statistical significance when comparing means for stated measures. For choice models we use MCMC estimation methods and Bayesian inference to conclude differences between estimates. Consistent with standard reporting practice in marketing (Rossi et al. 1996, Arora and Allenby 1999), we report the Bayesian equivalent of a p -value to indicate statistical significance. Using the MCMC estimation procedure, we can empirically evaluate the posterior distributions of model parameters or functions of those parameters (e.g., choice probabilities) to conduct a one-tailed or two-tailed test. As a formal test to conclude whether two parameter estimates are significantly different from each other, we report “prob,” which is

one minus the probability that the absolute difference between the parameter estimates is greater than zero (two-tailed). In order to test whether the parameter A estimate is greater than B , prob simply reports one minus the probability that parameter A exceeds parameter B (one-tailed).

3.1.1. Manipulation Check. Overall, the experimental manipulation was successful, with individuals in the EP treatment groups reporting significantly higher associations between the unknown brand, Amphora, and the Red Cross than in the control group (5.66 versus 2.92, $p < 0.05$). We find no effect for the magnitude of the EP amount, because both purchase likelihood ($F < 1$, ns) and attitude toward the Amphora brand ($F < 1$, ns) are not significantly different in any of the three 15¢, 30¢, or 45¢ treatment conditions. The percentage of respondents choosing the Amphora brand was also not different between the three EP amount conditions ($\chi^2 < 1$, ns). The finding that EP is invariant to depth is similar to the literature on contingent valuation of public goods, which finds strong evidence of amount insensitivity (Baron 1997). The mere presence of an EP, rather than its magnitude, may be sufficient to impact consumer choice. Owing to this result, in subsequent analyses the three EP amount treatment conditions are collapsed into one.

3.1.2. Evidence for EP Effect. In support of Hypothesis 1A, we find a main effect of EP on key dependent measures such as purchase likelihood and attitude toward the brand (see Table 1). Both purchase likelihood for (3.91 versus 3.22, $p < 0.05$) and attitude toward (4.20 versus 3.57, $p < 0.05$) the Amphora brand are significantly higher in the test condition than in the control condition. Although heterogeneity in affinity toward the Red Cross was small in this sample, individuals with above-median affinity have significantly higher purchase likelihood ratings than the control group (4.23 versus 3.22, $p < 0.05$) whereas those with below-median affinity do not (3.69 versus 3.22, ns), thus supporting H1C. We revisit the impact of affinity more carefully in Study 2 using a more heterogeneous sample.

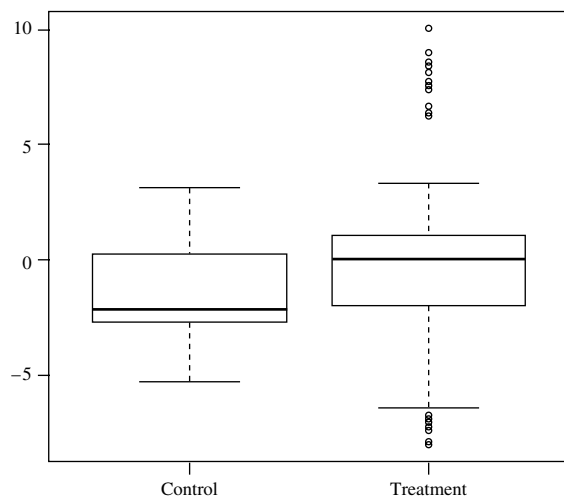
To compare choice share across conditions, responses for the choice set in which participants were asked to select one alternative from the available three

Table 1 Study 1 Results

Experimental treatment	Manipulation check (Red Cross Association)	Attitude towards Amphora	Purchase likelihood for Amphora	Choice share for Amphora (%)	Parameter estimate of Amphora	Quality of Amphora
Control	2.92	3.57	3.22	5	−3.69	3.14
EP	5.66*	4.20*	3.91*	23*	−1.55†	3.69*

*The difference between test and control is significant ($p < 0.05$).

†The difference between test and control is significant (prob < 0.05).

Figure 4 Distribution of Heterogeneity (Amphora Parameter)

brands, all priced at \$1.25, were used. In the control condition Amphora received only 5% choice share, but when Amphora promised a donation to the Red Cross in the treatment condition, choice share jumped to 23% ($p < 0.05$), providing additional support for H1A. Quality perceptions for the brand are significantly higher when associated with an EP (3.14 versus 3.69, $p < 0.05$) in support of H2.

Next, a multinomial logit discrete-choice model was estimated using a hierarchical Bayes approach (Allenby and Ginter 1995). The model hierarchy and the estimation algorithm used are detailed in Appendix A. The Amphora coefficient is significantly larger in the test condition than in the control condition (-3.69 versus -1.55 , $\text{prob} < 0.05$) providing additional support for H1A. At the individual level, the distribution of the Amphora coefficient across the two conditions reveals some interesting patterns (see Figure 4). Specifically, in addition to the mean shift, we also notice the emergence of a subgroup of individuals who find Amphora with an EP extremely attractive, providing support for H1B. These are individuals in the upper tail and have large coefficients corresponding to Amphora.

3.1.3. EP Motivations. Next we explore individual motivation for considering products with an EP. As indicated earlier, individuals in the EP treatment group were asked if they would consider buying a product associated with a social cause, and why. For Study 1, 93% of the respondents indicated that they would consider buying a product with an EP. Of those, 92% had a usable elaboration, which was content analyzed by two independent raters who were blind to the study's purpose. Coding for this analysis was guided by literature from economics and social psychology, which suggests that individuals may choose to help others for either self or other reasons (Andreoni and Miller 2002, Batson et al. 1991). Although such self and other themes emerged from the analysis, our content analysis revealed five meaningful categories of motivations, often spanning the self-other dichotomy, that are detailed in Table 2.

The first group (11% of total) was comprised of people who received “warm glow” by engaging in purchases with an EP component. They indicated that the presence of EP in products they buy made them feel good about themselves. A second group (9%) of individuals viewed the EP as a signaling mechanism, and reported that it provided product assurance in situations where they might otherwise be indifferent between alternatives in the consideration set. For the third group of individuals (36%), interest in the EP focused on how it facilitated achieving desired outcomes. For this largest group “killing two birds with one stone,” lowering the barriers to contributing, and improving the consumption experience were some important ways these consumers felt the EP facilitated their personal needs. Attributions for another large group (29%) emphasized EP attractiveness based on an outwardly focused altruistic desire to help others. The final group of individuals expressed interest in an EP promotion mainly from an activist orientation (13%).

Brand attitude, purchase likelihood, and choice share vary by attribution class. For example, individuals belonging to the “product assurance” and

Table 2 Individual Motivations

Attribution class	Percent of sample (%)	Exemplar	Attitude	Purchase likelihood	Choice share (%)
Feel good	11	It would make me feel good about myself.	3.67	3.89	22
Product assurance	9	I might be indifferent on which brand I choose, but if I know that my choice could help a charitable organization it would make up my mind for me.	5.29*	5.14*	43*
Facilitation	37	Because I would be receiving what I needed while simultaneously helping those less fortunate.	3.97	3.69	21
Help others	29	Because it would benefit a worthy cause.	4.78*	4.26*	30*
Activism	13	Because my money is going to other places than just the bigwigs' pockets.	3.60	3.00	20
Control group			3.57	3.22	5

*The difference between attribution class and control is significant ($p < 0.05$).

“help others” groups have significantly higher attitude and purchase likelihood measures than the control group. These individuals are likely to exhibit a higher propensity to purchase products with an EP.

An exploratory analysis of individual motivations therefore reveals diversity in factors that cause people to adopt products with an EP, providing support for H1B. Some of these motivating factors are more effective in influencing behavior than others. Contrary to a price cut, which invokes a uniform price focus among consumers, EP conjures a menu of personal motivations with differential outcomes on effectiveness. In some circumstances, the EP serves as an aid to decision making to tip the scale in favor of the promoted product for an otherwise indifferent consumer. In other cases, it facilitates the accomplishment of interconnected personal strivings, which can include helping the charitable organization.

3.2. Study 1 Summary

In summary, Study 1 provides evidence for an EP effect using stated measures as well as model-based inference. This effect is heterogeneous across people and may be characterized by a subgroup of individuals who are extremely sensitive to the presence of EP. Individual motivations driving the EP effect vary. We uncovered five classes of individual motivations, and EP effectiveness was found to be different across these classes, revealing some unique aspects of EP that are in contrast with traditional forms of price promotion.

While these findings are interesting, they suggest several new research questions. First, do the results in Study 1 apply to established brands as well? A limitation of Study 1 is that the EP association was restricted to Amphora, a new brand in the market. Second, how does EP compare to traditional promotions such as discounting and coupons? For an EP program to be a sustainable strategy, it is important that it be compared to other forms of promotion to assess relative effectiveness. Next, we investigate these issues in a separate study. Encouraged by the initial results of Study 1, we use respondents belonging to a national Internet panel.

4. Study 2

Study 2 tests Hypotheses H3 and H4A, B. The study design was comprised of the following factors, each at two levels: Brand (Unknown, Known), Promotion payoff destination (Self, Other) and Effort (No effort, Some effort). In all, there were $2 \times 2 \times 2$ treatment conditions and one control group, resulting in a total of nine conditions, which are detailed in Table 3. The basic study design, including the choice model, was identical to Study 1, and the depth of payback was set at 15¢.

The study was fielded online where MarketTools panelists from all over the United States were invited

Table 3 Study 2 Conditions

Condition	Manipulation
Known brand, self, no effort	Dasani, 15¢ discount
Known brand, self, effort	Dasani, 15¢ rebate if you send in lid
Known brand, other, no effort	Dasani, 15¢ donated to Red Cross
Known brand, other, effort	Dasani, 15¢ donated to Red Cross if you send in lid
Unknown brand, self, no effort	Amphora, 15¢ discount
Unknown brand, self, effort	Amphora, 15¢ rebate if you send in lid
Unknown brand, other, no effort	Amphora, 15¢ donated to Red Cross
Unknown brand, other, effort	Amphora, 15¢ donated to Red Cross if you send in lid

to participate. Each respondent was first directed to a site that randomly assigned him/her to one of the nine experimental condition URLs. We systematically oversampled respondents into the control and EP conditions to facilitate post hoc covariate analysis to uncover links between model parameters and individual attitudes, behaviors, and demographics. For those conditions, this results in cell sizes three times larger than the other study conditions.

4.1. Results

In all, a total of 1,650 participants completed the study. Sample characteristics of the study participants are provided in Table 4. The sample exhibits diversity on dimensions such as gender, age, education, income, bottled water consumption, and affinity towards the Red Cross. Similar to Study 1, the experimental manipulations for each treatment condition were successful ($p < 0.05$).

4.1.1. EP Comparison with Traditional Promotions. First, we focus our attention on comparing EP

Table 4 Sample Profile—Study 2 ($n = 1,650$)

Variable	Summary statistics			
Female	59.2%			
Married	57.9%			
Age	18–34 25.5%	35–44 19.7%	45–54 25.1%	55+ 29.7%
Educational attainment	High school 19.2%	Some college 40.8%	College degree 23.9%	Masters degree 16.1%
Household income	Under \$35 K 31.0%	\$35 K–\$50 K 20.3%	\$50 K–\$75 K 28.2%	Over \$75 K 20.5%
Region	East 21.9%	Central 28.4%	South 34.4%	West 15.3%
More than 90% of water consumption is with Dasani brand	12.2%			
Drink bottled water daily	39.5%			
Mean Red Cross affinity (sd)	5.79 (1.42)			

Table 5 Study 2 Results Summary

Condition	Sample size	Attitude	Purchase likelihood	Choice share (%)	Parameter contrast against control	Quality
Amphora						
Control	330	4.09	3.70	11		3.81
EP-no effort	330	4.54*	4.28*	25*	1.5469 [‡]	4.16*
EP-effort	110	4.56*	3.99	20*	2.0128 [‡]	4.16*
Discount	110	4.27	3.97	18	0.5192	3.99
Rebate	110	4.39	4.02	22*	1.8927 [‡]	3.97
Dasani						
Control	330	4.97	4.63	48		4.86
EP-no effort	330	5.35*	5.08*	62*	2.6010 [‡]	4.96
EP-effort	110	5.28	4.95	57	2.1211 [‡]	4.97
Discount	110	5.08	4.78	53	1.2629 [‡]	4.85
Rebate	110	5.15	4.76	57	1.2640 [‡]	4.81

*The difference between test and control is significant ($p < 0.05$).[‡]The difference between test and control is significant (prob < 0.05).

with traditional forms of promotion. Because of multiple measures, we only point to effects that hold across both stated measures (attitude, purchase likelihood, and choice share) and model-based inference (parameter contrast against control group). We find that promotion payoff destination matters. Table 5 shows that a discount or rebate appears to have lower incremental value to respondents than an equivalent EP-no effort or EP-effort. This effect is common across known and unknown brands. This is *opposite* to what we had predicted in H4A and is likely to be related to redemption size. At small denominations, such as 15¢, the incremental utility associated with a discount or rebate may be quite low. Most price promotions are much deeper than the manipulation used in this study;¹ thus, respondents may have a reference depth for price cuts that must be met for the promotion to have an effect. However, the moral satisfaction purchased with the EP may be high because the incremental utility is linked to the warm glow of contributing and not to the amount of the contribution (Kahneman and Knetsch 1992).

The results of both stated and inferred measures indicate that imposing an effort contingency on an EP reduces its impact, supporting H4b. Although the effect is weaker, an effortful EP still has an impact relative to control or price promotions; thus, the possibility of acceptable effectiveness while limiting promotional expenditures has important managerial and policy implications that we revisit in the discussion

¹ Van Heerde et al. (2000) describe a 20% price-cut as “typical” in their CPG data sets. Price cuts across all tuna brands and all forms of promotional support used in Van Heerde et al. (2004) average 24%. These values are higher than the price-cut range of 10%–15% used in this experimental manipulation.

Table 6 Known vs. Unknown Brand

	Sample size	Attitude	Purchase likelihood	Quality	Choice share	Parameter estimate
Amphora						
Control	330	4.09	3.70	3.81	11%	−4.3891
EP-no effort	330	4.54*	4.28*	4.16*	25%*	−2.8422 [‡]
Percent increase (%)		11	16	9	127	
Eta squared		0.020	0.023	0.013	0.033	
Dasani						
Control	330	4.97	4.63	4.86	48%	0.1047
EP-no effort	330	5.35*	5.08*	4.96	62%*	2.7057 [‡]
Percent increase (%)		8	11	2	29	
Eta squared		0.012	0.011	0.001	0.018	

*The difference between test and control is significant ($p < 0.05$).[‡]The difference between test and control is significant (prob < 0.05).

section. Next, we more carefully investigate the similarities and differences in the EP effect for the known and unknown brand.

4.1.2. Known vs. Unknown Brand EP Effectiveness. Results for this comparison appear in Table 6. For the unknown brand, Amphora, the results of Study 2 replicate what we found in Study 1. Across brand-specific measures of attitude, purchase likelihood, choice share, and parameter estimate, we see evidence in support of the effect of EP. For the known brand, Dasani, presence of an EP also results in higher attitude, purchase likelihood, choice share, and parameter estimate than the corresponding measures in the control group.

Two distinct differences emerge in how EP operates for a known versus unknown brand. First, in support of H3, unlike for the unknown brand, we do not find any gains in the quality measure for the known brand. This may be occurring because respondents are likely to have strong prior beliefs about the perceived quality of an existing brand. An unknown brand, on the other hand, is like a clean slate and any positive “tag” that gets attached to an individual’s otherwise neutral schema is therefore likely to enhance perceived quality. In support of this schema enhancement effect, note that the quality bump for the unknown brand is significant in *both* the EP-no effort and EP-effort conditions (Table 5). Second, across all measures the effect size and percent gain because of an EP is higher for the unknown brand. This is an interesting finding when contrasted to the well-known asymmetric effect of traditional price promotions for national versus store brands (Blattberg and Wisniewski 1989). While the EP effect is also found to be asymmetric, the direction of the asymmetry is reversed. We find that the unknown brand benefits *more* from an EP association than a known brand. What is different

Table 7 Brand Loyalty and Price Sensitivity

Dasani loyalty	%	Choice share (%)		Never choose Dasani @ \$1.50 (%)	
		Control	Dasani EP	Control	Dasani EP
Low (<10% Dasani usage)	55%	30	44*	88	83
Medium (10% ≤ Dasani usage < 90%)	33%	70	73	73	66
High (>90% Dasani usage)	12%	95	100	34	15*
Marginal (%)		48	62*	78	68*

*The difference between test and control is significant ($p < 0.05$).

about the unknown brand is that the EP association also enhances the brand's quality perceptions. The cause association may be playing the important role of legitimizing an otherwise obscure brand, resulting in higher overall gains for an unknown brand over known brands.

4.2. Post Hoc Findings

4.2.1. Brand Loyalty and EP. In Table 7 we report a measure of loyalty that was created based on the respondent's stated consumption for the Dasani brand. For 12% of respondents, Dasani accounts for over 90% of personal bottled water consumption, while for 55% of respondents Dasani is the chosen brand less than 10% of the time. Treating this loyalty measure as an independent variable and Dasani choice share as the dependent variable, we find that gains because of EP are highest among respondents with low loyalty to Dasani. For the "low Dasani loyals" the choice share for Dasani is 30% in the control group and 44% in the Dasani EP condition ($p < 0.05$). The gains in choice share for the remaining 45% of the respondents (the medium and high Dasani loyals) are not significant. EP effectiveness therefore appears to be tied to the presence *and* the size of the "nonloyal" group. For a known brand, if such a group exists and is substantial in size, EP effectiveness is likely to exist. This finding is consistent with the empirical generalization that the majority of gains from a sales promotion come from brand switching (Bell et al. 1999) and resonates with our results from Study 1, which found that the incremental utility from EP was greatest among those who perceived EP as a "scale tipper."

4.2.2. Price Sensitivity and EP. We also find evidence for a link between EP and price sensitivity. To study this, we focus our attention on the percentage of respondents who never choose Dasani at the high price of \$1.50 in the choice-based conjoint task. Overall, the presence of an EP reduces this percentage (78% versus 68%, $p < 0.05$). Therefore, the data suggests that presence of an EP makes respondents

less price sensitive and more willing to choose the brand when it is premium priced. What is even more interesting is the fact that the largest reduction in this percentage occurs for the "high Dasani loyal" group (34% versus 15%, $p < 0.05$). While preliminary, this is an interesting finding because it points to the distinction between EP and traditional price promotions. Whereas price promotions are known to make individuals more price sensitive (Blattberg et al. 1995), EP has the opposite effect.

4.2.3. Cause Affinity and EP. Finally, consistent with Lichtenstein et al. (2004), cause affinity also impacts EP effectiveness. To see this linkage, we use a three-item measure of cause affinity based on the attitude toward the organization scale (Moore et al. 1995). Because of its high reliability (Cronbach $\alpha = 0.95$), we combine the three items and use a median split to create high and low levels of affinity. This measure was then used as a covariate for the brand estimate in the choice model. For both Amphora and Dasani we find evidence in support of H1C: the higher the cause affinity, the higher the brand coefficient (prob < 0.05).

4.3. Study 2 Summary

In summary, Study 2 shows that, when compared to an equivalent price promotion (i.e., a discount or rebate), at small denominations (e.g., 15¢) an EP is more effective. Also, an effortful EP is found to have a diminished but similar effect to that of a no-effort EP, which has social welfare implications that we discuss later. Extending our findings from Study 1, Study 2 shows that the EP effect exists for both unknown and known brands. However, the effect size is larger for the unknown and lower-quality brand. This asymmetric EP effect is in the opposite direction to the well-documented price promotion effect. This finding may be driven by the fact that a distinctive aspect of how an unknown brand benefits from an EP is enhanced quality perceptions, which do not occur for the known brand. Post hoc analyses reveal an interesting interplay of EP with brand loyalty and price sensitivity. The latter is particularly interesting because unlike price-focused promotions, an EP promotion could make consumers *less* price sensitive. Finally, we find that higher affinity toward the cause featured in the EP generates higher incremental utility for the impure private good.

Viewed collectively, Studies 1 and 2 show that EPs are an effective form of promotion and their effect is heterogeneous across consumer populations. While individual attributions for purchasing a product with an EP vary, cause affinity also explains interpersonal differences in EP effectiveness. Existence of depth invariance suggests that EPs, when present, could be of a small denomination. At such small levels we find that an EP is more effective than traditional

Table 8 Conjoint Choice Attributes and Levels

Attribute	Levels
Brand	National Bank, Capital One
Interest rate	9.9% APR, 12.9% APR
Payback percentage	1%, 5%
Payback destination	WHO, WHO & Habitat, Charity of Choice, Cash Back

forms of promotion such as a discount or a rebate. Interesting differences emerge when EP effectiveness is compared between unknown and known brands. Overall, an EP is found to have a stronger effect for an unknown brand than for a known brand. We attribute this to enhanced quality perception of the unknown brand, which benefits from the positive “ruboff” of the associated cause. Although we find that imposing an effort contingency on EP reduces its effectiveness, the corresponding promotion cost savings may be substantial for the brand.

Next, we study how EP effectiveness could be enhanced. Because cause affinity was found to be a driver of EP effectiveness, we consider two alternative strategies to enhance the EP effect: coverage (H5) and customization (H6).

5. Study 3

To test H5 and H6, Study 3 uses a different context (credit card) and design (within subject) than the previous two studies. There were three main parts of the study. In the first part, respondents were asked to indicate their charity preference for a credit card offer with an EP option. Specifically, they were asked, “If evaluating a credit card offer with a charitable donation option that lets you decide who receives your money, which one of these five organizations would you choose to support: American Cancer Society, World Health Organization, Habitat for Humanity, SchoolWise (for local schools), or National Wildlife Federation.” Data from this question were collected to test H6. Along the same lines, respondents were also asked to indicate their preferred type of cash-back option. Respondents were asked, “If evaluating a credit card offer with a cash-back option, how would you like to receive that payment: monthly check, annual check, quarterly gift certificate, monthly credit, or end of year merchandise voucher.” The latter question was included to control for potential demand

effects that the former may cause, and the order of the questions was counterbalanced.

In part two, respondents completed a choice-based conjoint task of potential credit card offerings that varied on four attributes (see Table 8): brand, interest rate, payback percentage, and the focal attribute, payback destination. Each respondent provided choice data for a total of 16 choice tasks that were designed using the Optex procedure in SAS. An example choice task is shown in Figure 5.

Three of the four levels of the payback destination attribute had an EP component. The first level, donation to a single predetermined charity (the World Health Organization), was included as the baseline EP case. The second level, a joint donation to two fixed charities (the World Health Organization and Habitat for Humanity), was included to test coverage (H5). Our pretests indicated that the World Health Organization and Habitat for Humanity were moderately well-liked charities, with relatively low affinity correlation. The third level, a charity of the respondent’s choice, was included to test for customization (H6). The five charities included to facilitate customization (American Cancer Society, SchoolWise for local schools, National Wildlife Federation, World Health Organization, and Habitat for Humanity) were selected to represent divergent charitable domains as represented in the National Taxonomy of Exempt Entities (National Center for Charitable Statistics 2003). The fourth level for the payback destination attribute, namely cash-back, was included to compare the differential effect of self versus other payoff destination (H4A) in a trade-off scenario.

In part three of the survey, respondents provided information on their credit card behavior, such as frequency of usage, typical monthly amount charged, and rewards program participation, if any. We also asked respondents to indicate their affinity towards the five causes included in the study. Finally, detailed demographic information on variables such as gender, age, household status, education, income, and political affiliation was collected.

5.1. Results

Table 9 profiles the sample for this study. To assess the validity of the hierarchical Bayes multinomial logit model used in this study (see Appendix A for details),

Figure 5 Example Conjoint Choice Task

<ul style="list-style-type: none"> ➤ Capital One Visa ➤ 9.9% Fixed APR ➤ 1% of your monthly charges donated to the World Health Organization and Habitat for Humanity 	<ul style="list-style-type: none"> ➤ Capital One Visa ➤ 12.9% Fixed APR ➤ 1% of your monthly charges donated to the charity you selected 	<ul style="list-style-type: none"> ➤ National Bank Visa ➤ 9.9% Fixed APR ➤ 5% of your monthly charges credited back to you
A	B	C

Table 9 Sample Profile Study 3 ($n = 489$)

Variable	Summary statistics			
Female	60.1%			
Married	62.0%			
Age	18–34	35–44	45–54	55+
	23.1%	19.2%	25.8%	31.9%
Educational attainment	High school	Some college	College degree	Masters degree
	18.6%	40.5%	24.9%	16.0%
Household income	Under \$35 K	\$35 K–\$50 K	\$50 K–\$75 K	Over \$75 K
	31.1%	17.3%	27.9%	23.7%
Region	East	Central	South	West
	19.8%	25.4%	37.6%	17.2%
Political affiliation	Democrat		Republican	Independent
	27.0%		38.4%	18.8%
Have a credit card that earns cash rewards	29.9%			
Charge more than \$667/month to credit cards	21.9%			
Use a credit card more than once a week	41.7%			
Mean perceived fit: Credit cards and charities (sd)	2.79 (1.579)			
Mean attitude toward charitable giving (sd)	4.73 (1.482)			

we report two measures of fit—mean absolute deviation (MAD) and hit rate. Hit rate is calculated by using individual-specific estimates to predict their choices using the maximum utility rule. Mean absolute deviation is computed as $|1 - \text{probability}(\text{chosen alternative})|$ by using individual estimates to obtain the choice probability. Using data from all 16 choice sets from the choice-based conjoint task, average in-sample hit rate (0.84) and MAD (0.24) across the sample suggest that the model fits the data well. Using data from 14 choice sets to obtain parameter estimates to then predict the choice outcome for two holdout choice sets also indicates that the model does well (Hit rate = 0.78, MAD = 0.27). Both in-sample and out-of-sample statistics suggest that the model used to analyze the data is reasonable.

Table 10 reports posterior means and variances of the aggregate parameter estimates for the HB MNL model. Higher posterior variance for an attribute can be interpreted as higher sample heterogeneity for that attribute level. The following attribute levels were set to zero to establish baselines for the dummy coding: National Bank, 12.9% APR and 1% WHO.

Posterior means for both the Capital One Brand and 9.9% APR coefficients have reasonable signs because they suggest that, on average, a highly advertised brand and lower interest rate are found to be more desirable by respondents. Of primary interest are the remaining seven parameters in Table 10, about which several observations can be made. First, coefficients corresponding to the self payoff destination are larger (prob < 0.05) than attribute levels when the payoff

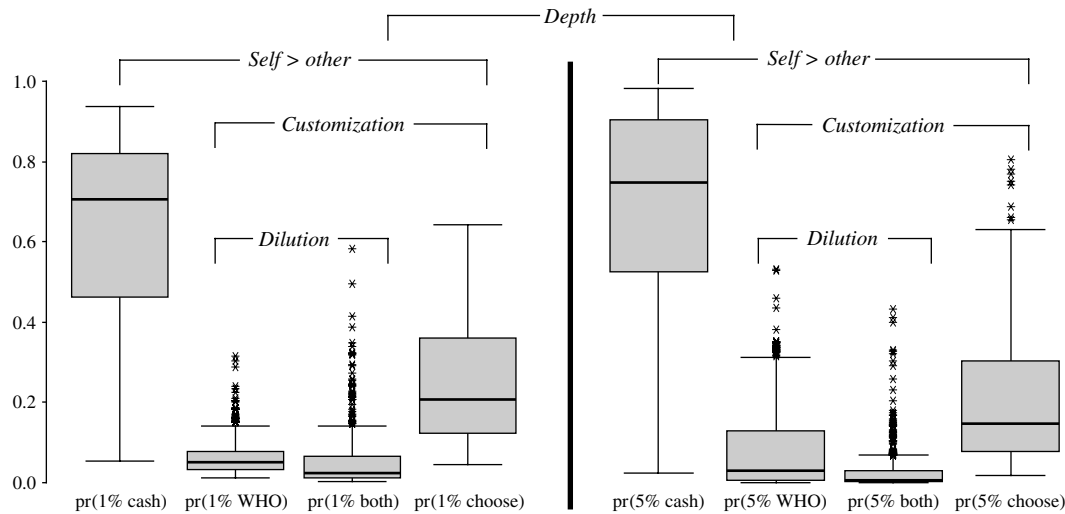
destination is the other. For both 1% and 5% levels, the cash-back estimate is larger than corresponding estimates when the payoff destination is a single social cause WHO (2.42 versus 0 for 1%, prob < 0.05; and 4.15 versus 0.85 for 5%, prob < 0.05). Unlike Study 2, this result is consistent with H4A. Second, for both 1% and 5% levels, we also find that WHO alone is more attractive than the option of combining WHO with Habitat for Humanity (0 versus –0.65 for 1%, prob < 0.05 and 0.85 versus –0.19 for 5%, prob < 0.05). This provides evidence against H5. Finally, for both 1% and 5% levels, the coefficients corresponding to the chosen charity are larger than WHO, a predetermined payoff destination (1.37 versus 0 for 1%, prob < 0.05 and 2.72 versus 0.85 for 5%, prob < 0.05). This provides evidence in support of H6. When comparing across levels, the 1% choose option outperforms 5% WHO (1.37 versus 0.85, prob < 0.05), suggesting that

Table 10 Parameter Estimates Study 3

Product attribute	Posterior mean*	Posterior variance of parameter heterogeneity
Capital One brand	1.54	1.22
9.9% APR	3.30	6.82
1% cash-back	2.42	1.91
1% charity of choice	1.37	1.08
1% WHO & Habitat	–0.65	1.61
5% cash-back	4.15	3.24
5% charity of choice	2.72	2.73
5% WHO	0.85	7.51
5% WHO & Habitat	–0.19	5.04

Note. *Bold: significantly different from zero (prob < 0.05).

Figure 6 Payback Destination Comparison



the benefits of customization could indeed be quite powerful.

5.2. Heterogeneity in EP Effects

The above conclusions ignore heterogeneity in individual estimates. To see interpersonal differences we create a hypothetical market situation where each respondent in our data is assumed to evaluate four credit cards that are identical in every respect (Capital One card, 12.9% APR and 1% payback), except for the payback destination options of cash, WHO, WHO + Habitat for Humanity, or the cause chosen by the individual. We then use individual parameter estimates to compute a choice probability for each one of the four available credit card offers. Choice probability box plots for the four credit card alternatives are shown in Figure 6. In addition to the case where the payback is 1%, we also include box plots for the case when the payback equals 5%.

First, let us look at the results corresponding to a payback of 1%, which appear on the left-hand side panel of Figure 6. Consistent with the parameter estimate results discussed earlier, across individuals, the median choice probability for the credit card with a cash-back option is higher than other credit card options with an EP (0.71 versus 0.05, 0.02, 0.21, prob < 0.05). The median choice probability for the 1% WHO card is higher than 1% WHO + Habitat card (0.05 versus 0.02, prob < 0.05), which is a pattern opposite to the coverage argument suggested in H5. The median choice probability for the 1% WHO card is lower than the 1% choose card (0.05 versus 0.21, prob < 0.05), which supports the customization argument (H6). The overall pattern of results corresponding to the 5% option, which appear on the right-hand side panel of Figure 6, is similar to the 1% case. Beyond

these aggregate insights, looking at interpersonal differences provides the opportunity to more carefully investigate two issues: (1) why coverage does not appear to work, and (2) the nature of the self versus other trade-off at the individual level.

5.2.1. Coverage. The aggregate results imply that a coverage strategy may not be as effective as an EP featuring a single cause, but we would like to investigate this result at the individual level. Overall, 73.2% of respondents have a higher probability of choosing the WHO EP option over the bundled WHO + Habitat EP option. These respondents exhibit a reduction in choice probability when social causes are combined in what we call the “dilution” group. The remaining respondents, however, show the opposite effect—evidence consistent with the coverage argument in H5.

To investigate this further, we look at differences in cause affinity within both the coverage and dilution groups. We find that 72.5% of individuals in the coverage group like Habitat more than WHO, whereas this proportion is only 43.3% in the dilution group ($p < 0.05$). Differential cause affinity may therefore explain the pattern of results at the individual level. One limitation of studying customization and coverage within the same experiment is that it becomes a weak test of coverage. Because individuals could select a pure WHO or pure Habitat (via choose own cause) credit card, a mixed WHO + Habitat card arguably became the less attractive alternative for individuals who truly care about either cause. It would be useful to conduct another test for coverage using a between-subjects design by excluding the customization option.

5.2.2. Self vs. Other. The overlapping tails of the choice probability box plots in Figure 6 illustrate individual differences in choice behavior on the self-other

Table 11 Covariate Analysis

Self-other gap	Have a cash card	Charge >\$667/mo	Perceived fit	Attitude toward charity	Female	College graduate	HH income >\$75 K	<25 years old	Republican
1% cash–1% choose	0.523	0.817	–0.193	–0.359	0.441	0.332	0.052	–0.075	0.221
5% cash–5% choose	0.351	0.482	–0.263	–0.406	0.227	0.049	–0.082	–0.594	–0.072

Note. Bold: significantly different from zero (prob < 0.10).

dimension. For 81% of respondents the 1% cash-back option has the highest choice probability of the four hypothetical offers. Thus, when framed as a percentage of credit card purchases, we find support for H4A and the well-worn notion that the majority of individuals are selfish utility maximizers (Andreoni and Miller 2002). The remaining respondents would choose other over self, and it is this EP-sensitive segment that warrants closer investigation.

5.2.3. Covariate Analysis. In our final analysis, we explore possible drivers of the self-other gap. To do so, we first reparameterize the hierarchical Bayes multinomial logit choice model to explicitly estimate the self-other gap coefficient as detailed in Appendix A. Selected covariates of interest were also included in the model hierarchy to uncover any relationships with the gap coefficients at the 1% and the 5% level. Specifically, the first gap coefficient captures the distance between 1% cash-back and 1% to charity of choice, and the second gap coefficient corresponds to a similar gap, but at the 5% level. At the aggregate level, as potential payoffs increase from 1% to 5%, people become more selfish and the self-other gap widens (0.331 vs. 1.128, prob < 0.05).

We report the impact of the covariates on the posterior mean of the 1% and 5% self-other gap coefficients in Table 11. We find that the self-other gap coefficient is higher (meaning an individual wants the cash for themselves) for respondents who have a card that earns cash rewards, charge more money to credit cards, are female, and have a college degree. This coefficient is lower for respondents who perceive charitable activities to be a good fit with credit card companies and have a more positive attitude toward charities in general.

5.3. Study 3 Summary

In summary, Study 3 demonstrates that EP effectiveness could be improved via a customization strategy. We find evidence against a coverage strategy wherein a bundled EP strategy was shown to have a dilution effect. The self-other gap was found to be heterogeneous across respondents. Our empirical evidence suggests that individuals tend to get more “selfish” as payback levels increase. The self-other gap is related to a variety of behavioral, attitudinal, and demographic variables. This suggests that it may

be possible to segment the marketplace based on EP effectiveness, and certain groups of individuals may be more effective targets for an EP program.

Unlike in Study 2, we find evidence consistent with H4A in this study. Promotions with a self component are found to be more effective than those with the other component. Viewed collectively, Studies 2 and 3 suggest that while at a high denomination a promotion with a self component is more effective than a promotion with an other component, the opposite is true at low denomination levels. Anecdotal evidence suggests that there may be some merit to such a claim because most real-world EP offerings are in the 10 ¢ range (e.g., Box Tops for Education), whereas coupons and rebates rarely have redemption values below 25¢. A more definitive claim on the moderating role of denomination level in H4A would require a single study that varies promotion depth from low to high (e.g., 5¢–50¢ in increments of 5¢) on both the self and other dimension.

6. Discussion

While most managers believe the idea of associating a cause with a brand to be sound business practice (Porter and Kramer 2002), this research addresses important unanswered questions about EP promotions, such as: why they work, how individuals differentially react to their presence, how effective they are relative to regular price promotions, and how they can be optimized. In an era of increasing marketing accountability (Rust et al. 2004), EP promotions must be a legitimate tactical weapon in the brand manager’s strategic promotion arsenal rather than a “feel-good” gimmick, and our research is an attempt to make such a comparison. The unique aspects of our approach—formally recognizing heterogeneity, describing the EP mechanism, and benchmarking against sales promotion—yield some illuminating theoretical and substantive results.

Capturing heterogeneity reveals that some individuals are extremely sensitive to EP for behavioral, attitudinal, and motivational reasons, and can be described as a segment. Heterogeneity in cause affinity also justifies implementation of a customized EP offering. By introducing terminology from public goods economics to describe both the product under

consideration (impure private good) and the charity-linked product enhancement (EP), we present a process of cognitive representation that describes how charitable donations embedded in a product offer can enhance brand perceptions. Owing to these positive associations, an EP improves quality perceptions and asymmetrically benefits brands for which consumers know very little, contrary to the asymmetric price effect documented in the sales promotion literature (Blattberg and Wisniewski 1989). Embedded premiums not only impact choice, but do so at levels where traditional sales promotions appear to be ineffective.

In an effort to benchmark its effectiveness and demonstrate its value to brand managers, this research links EP to sales promotion, but EP also has its roots in at least three streams of marketing literature that emphasize a company's relationship to society. While social marketing (Rothschild 1999) leverages marketing knowledge to affect change in consumer behavior, socially responsible marketing (Robin and Reidenbach 1987) incorporates collective obligations into marketing strategy decisions. As it was originally conceptualized (Varadarajan and Menon 1988), cause-related marketing bears the closest resemblance to EP, but most research on that topic emphasizes corporate reputation (Brown and Dacin 1997) and consumer response to company activities at strategic levels (Sen and Bhattacharya 2001), while ignoring the fundamental comparison to sales promotion that is our central research question. Cause-related marketing defines a company activity, but does not describe the product or service being sold (i.e., impure private goods) nor explain how the linked cause is conceptualized (i.e., embedded premium). By portraying EP in the parlance of promotion, we provide brand managers with a reference point for ROI consideration and strategies for optimization.

6.1. Implications for Marketing Practice

The most basic takeaway from this research is that EP is a promotion strategy that works. Consumers are differentially responsive to its effect based on personal motivations, dispositions, cause affinity, and characteristics of the connected brand. EP can be an effective lever to not only increase sales, but also to alter perceptions toward the brand. For brand managers looking for ways to create a point of differentiation for a lesser-known brand, the creation of impure private goods through embedded premiums presents a useful tactical option.

Across studies there are two self versus other results with important substantive implications. First, we find that at low promotional levels an EP is more effective than traditional price promotions. The implication for brand managers is that EP promotions

may be cost-effective alternatives to couponing or discounting. Whereas a price cut or coupon must be sufficiently deep to produce a response, a small EP can generate incremental consumer utility because there are significant noneconomic drivers of this effect, such as an informational component and warm glow. Second, although when framed as a substantively meaningful quantity (percentage of annual credit card charges) in a trade-off setting we find that self trumps other, there are some individuals who would still choose an EP over cash in their pocket. This substantial and demographically measurable market segment is a potentially attractive target for EP-style promotions and focused message strategies (Iyer et al. 2005).

Unlike a price promotion that discriminates on price, an EP segments on noneconomic criteria such as liking for the cause, which means that for many individuals the amount of the EP is irrelevant. Savvy brand managers could leverage this insight and consider small denomination, effort-contingent campaigns that maximize EP promotion ROI. The noneconomic basis for EP valuation also presents the potential for misuse, with firms exploiting consumer's EP proclivities by charging higher prices for warm glow and cutting donation amounts to a minimum threshold.

6.2. Limitations and Future Research Directions

The cross-sectional nature of data used in this research precludes any investigation of the long-term effects of an EP association. From a strategic standpoint, long-term implications of an EP program on brand equity are of considerable importance. An investigation of temporal effects of EP therefore is a logical next step in this program of research. This could also include studying possible liabilities that come with associating a brand name with a cause whose activities you do not control. Another research question pertaining to temporal effects of EP might be: Do the positive associations from the cause remain with the brand even after the EP goes away? Sales promotion scholarship has carefully examined the postpromotion dip and long-term consequences of discounting (Blattberg et al. 1995), so an extension into the EP domain seems appropriate. Many brands (e.g., Yoplait) engage in EP flighting—offering an EP for a period of time and then removing it, so an investigation of such ongoing programs would be instructive. Investigating the EP effect using purchase data from household panelists or in a natural experiment would improve the generalizability of the findings over the time horizon and in differing promotional contexts.

An important consideration when evaluating the collective impact of EP programs is the extent to which preference interdependence (Yang and Allenby

2003) influences EP sensitivity. Our current research treats consumer choice as an individual process and ignores obvious social influence in the choice process. Anyone with kids in elementary school knows how much pressure kids can exert when the annual school fundraiser takes place, and companies like Target do an excellent job quantifying how “well” parents are doing supporting their school through the use of the Target Visa card. The literature on public goods and network externalities makes two different predictions with regard to this effect. The free-riding perspective says that if you know that others are contributing to a public good, you are less likely to contribute yourself (Cornes and Sandler 1984), while the bandwagon perspective suggests that the more people you know who contribute, the more likely you are to as well. The individual/collective nature of EP with its unique self and other fusion makes this an interesting area of marketing scholarship.

An avenue of inquiry not addressed in this research involves the broader competitive dimensions of EP. For example, what are the ramifications for a brand that chooses to battle competitor price cuts with an EP? EP distinctiveness suggests a potential first-mover advantage for an early EP entrant (Carpenter and Nakamoto 1989, Ailawadi et al. 2005), but research has not addressed such questions. Owing to its heterogeneous motivations, EP effects may not be limited only to capturing brand switchers, but instead could impact primary demand and increase the size of the entire pie (Arora et al. 1998, Sun 2005). Some product categories, such as cosmetics, where Avon and Estée Lauder both feature EPs that support the Susan G. Komen Breast Cancer Foundation, already see competition on the EP dimension. Future research should consider the competitive dynamics for a category when EP no longer is a point of distinction for a brand, but is instead a point of parity.

Our research employs an experimental approach using survey data. While such an approach offers distinct advantages, it does contain some limitations relating to measurement and external validity. Measures for constructs such as attitude and purchase intention can suffer from a ceiling effect that may constrain our ability to accurately quantify the EP effect for well-known brands. Also, social desirability effects, experimental framing, and manipulation

salience may amplify the EP effect in an experimental setting. Future research, therefore, should attempt to marry the benefits of behavioral data with survey data to investigate the theoretical and substantive issues related to EP that we discuss above.

In summary, EP is much more than a promotion strategy, because not only can it sell more product, it can also help the brand, the consumer, and society. Rather than operating primarily on one dimension, EP invokes a host of associations, both social and personal, that act as levers on consumer choice behavior. This unique win-win-win situation merits ongoing inquiry because of its strategic, public, and behavioral importance. Companies should embrace EP as an opportunity to link public interest to the private performance of the firm, not out of a sense of obligation, but because it is a sophisticated promotional tool at the brand manager’s disposal.

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Appendix A. Choice Model and Estimation

For choice alternative j , the deterministic part of the utility of a respondent equals

$$u_j = \sum_k x_{jk} \beta_k, \quad (A1)$$

where x_{jk} indicates the level of attribute k ($k = 1, \dots, K$) in product alternative j and β_k is the $(K \times 1)$ preference vector. Assuming independently and identically distributed extreme value error (McFadden 1974) in Equation (A1), the choice probabilities for alternative j can then be written as:

$$\Pr_j = \frac{\exp(u_j)}{\sum_l \exp(u_l)}. \quad (A2)$$

Heterogeneity in preferences is captured by the following random-effects specification (Allenby and Ginter 1995, Allenby et al. 1998):

$$\beta_i \sim \text{Normal}(\bar{\beta}, B). \quad (A3)$$

To study the link between individual preferences β_i and covariate Z , rewrite Equation (3) as

$$\beta_i \sim \text{Normal}(\Gamma_Z, B), \quad (A4)$$

An MCMC method (Gelfand and Smith 1990, Chib and Greenberg 1995) is used to estimate the model. After an initial burn-in of 10,000 draws, every 10th draw was retained

Appendix B. Scales Used for Variable Measurement

Variable name	Item(s)	Measure
Attitude toward the brand	What is your overall attitude toward the Dasani* brand of bottled water?	1 (very unfavorable) ... 7 (very favorable)
Purchase likelihood	How likely would you be to purchase the Dasani* brand of bottled water, if all brands were priced at \$1.25?	1 (extremely unlikely) ... 7 (extremely likely)
Quality perception	Dasani* water is of high quality.	1 (strongly disagree) ... 7 (strongly agree)

Appendix B. Scales Used for Variable Measurement

Variable name	Item(s)	Measure
Loyalty	Approximately what percentage of your current bottled water consumption is with the Dasani* brand of bottled water?	Open-ended percentage
Affinity	What is your overall attitude toward the American Red Cross†?	1 (very bad) ... 7 (very good)
	How useful is the American Red Cross†?	1 (extremely useless) ... 7 (extremely useful)
	How necessary to society is the American Red Cross†?	1 (very unnecessary) ... 7 (very necessary)
EP willingness	"I would consider buying a product that promised a donation to charity contingent on my purchase."	Yes No
EP motivation	Why would you consider buying a product that promised a donation to charity contingent on your purchase?	Open-ended text
Perceived fit	Credit card companies and charitable organizations seem to relate to each other.	1 (strongly disagree) ... 7 (strongly agree)
Attitude towards charitable giving	Money given to charities goes for good causes.	1 (strongly disagree) ... 7 (strongly agree)

*Measures were taken for all three brands of bottled water used in Studies 1 and 2 (Dasani, Evian, Amphora).

†Measures were taken for the Red Cross in Studies 1 and 2 and for all five charities used in Study 3.

from an additional 40,000 iterations to compute summary statistics for the posterior distribution of the model parameters. See Allenby and Ginter (1995) and Arora and Allenby (1999) for complete details. In order to estimate the self-other gap the basic idea is as follows: If $y = x_1\beta_1 + x_2\beta_2$ where β_1 is the self parameter (e.g., 1% cash-back) and β_2 is the other parameter (e.g., 1% to a cause), then the difference $\delta_2 = \beta_1 - \beta_2$ is estimated by following these steps: (i) reexpress $y = (x_1 + x_2)\delta_1 - x_2\delta_2$ where $\delta_1 = \beta_1$ and $\delta_2 = \beta_1 - \beta_2$ and (ii) estimate δ_1 and δ_2 instead of β_1 and β_2 .

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