Michelle Andrews, Xueming Luo, Zheng Fang, & Jaakko Aspara

Cause Marketing Effectiveness and the Moderating Role of Price Discounts

Can cause marketing (CM) be effective? If so, do price discounts moderate CM effectiveness? Despite the prevalence of linking product sales with donations to charity, field evidence of CM effectiveness is lacking. This is of particular concern for managers who wonder whether the findings of laboratory experiments extend to actual consumer purchases. Using large-scale randomized field experiments with more than 17,000 consumers, this research documents that CM can significantly increase consumer purchases. Notably, the answer to the second question is more complicated. Under the moderating role of price discounts, the impact of CM on sales purchases may follow an inverted U-shaped relationship—that is, strongest when price discounts are moderate rather than deep or absent. Follow-up lab experiments reveal that consumers' warm-glow good feelings from CM represent the underlying process. These findings provide novel insights into the boundary conditions and mechanisms of the sales impact of CM for researchers and managers alike.

Keywords: cause marketing, social responsibility, warm glow, discounts, field experiment

Can cause marketing (CM) boost firm sales revenues? Cause marketing is the practice of donating proceeds from product sales to designated charitable causes (Varadarajan and Menon 1988). Many companies are now engaging in CM, which suggests that it must be effective. For example, eBay's CM campaign, Giving Works, has raised more than $500 million for charities (givingworks.ebay.com). Today, corporate spending on charitable sponsorships approaches $18 billion (Stern 2013). An increasing body of research has also linked CM to consumer liking and purchase intentions using laboratory experiments and attitudinal surveys (Koschate-Fischer, Stefan, and Hoyer 2012; Robinson, Irmak, and Jayachandran 2012).

Michelle Andrews is a doctoral candidate (e-mail: michelle.andrews@temple.edu), and Xueming Luo is Charles Gilliland Distinguished Professor of Marketing, Professor of Strategy, and Professor of Management Information Systems (e-mail: luoxm@temple.edu), Fox School of Business, Temple University. Zheng Fang is Associate Professor, Sichuan University (e-mail: 149281891@qq.com). Jaakko Aspara is Associate Professor of Design Business Management, Aalto University School of Business; and Christian Grönroos Professor of Marketing, Hanken Swedish School of Economics (e-mail: jaakko.aspara@hanken.fi). Please address all correspondence to Zheng Fang. The authors gratefully acknowledge the immense and invaluable support from one of the world's largest mobile service providers to conduct the field experiment, the research grant from the National Science Foundation of China, and the insightful wisdom and constructive comments from three anonymous *JM* reviewers. This work was supported by the National Natural Science Foundation of China (Grant 71172030, 71202138,71472130), the Youth Foundation for Humanities and Social Sciences of the Ministry of Education of China (Grant 12YJC630045, 14YJA630024,14YJC630166), and Sichuan University (Grant skqy201423). The authors acknowledge research seminar participants at Fudan University and Temple University, as well as JP Dube, Darren Dahl, Wayne Hoyer, Szu-Chi Huang, and Yanyan Xu for their invaluable inputs for this research. Sanjay Sood served as area editor for this article.

Despite its prevalence in industry practice and academic research, CM's actual sales impact remains elusive. Industry reports concede that though effective in raising money for charities, it is unclear whether CM can generate high sales revenues for the firm. Rather, the impact of CM has been mostly measured "in fuzzy noncurrency terms, such as millions of media impressions generated or millions of people helped" (Neff 2008). Echoing this sentiment, studies call for large-scale actual sales data and causal research designs to convince managers with hard evidence. Müller, Fries, and Gedenk (2014, p. 11) note that "measures of the effect of CM may be biased," and scholars have urged researchers to amalgamate "behavioral and marketing mix data from a real-world CM program" (Henderson and Arora 2010, p. 56). Indeed, knowledge of the potency of CM will be limited if research cannot identify hard evidence through causal impact and sales purchase data at the individual consumer level. Managers may wonder whether the findings of laboratory experiments extend to actual consumer purchases. Managers and researchers alike might seriously undervalue the impact of CM, corporate philanthropy, and social responsibility. Thus, it is essential for industry and academia to conduct research that corroborates lab studies and quantifies the potential impact of CM on sales revenue for the firm.

Moreover, a recent industry trend is to combine CM deals with price discounts. Macy's department stores provide price promotions at annual Shop-for-a-Cause sales, and Amazon.com online sites have simultaneously offered price discounts and donations to Red Cross (Hessekiel 2012). Yet can price discounts moderate the sales impact of CM? Prior studies in marketing (Strahilevitz and Myers 1998) and economics (Ariely, Bracha, and Meier 2009) have suggested that the answer is not straightforward. On

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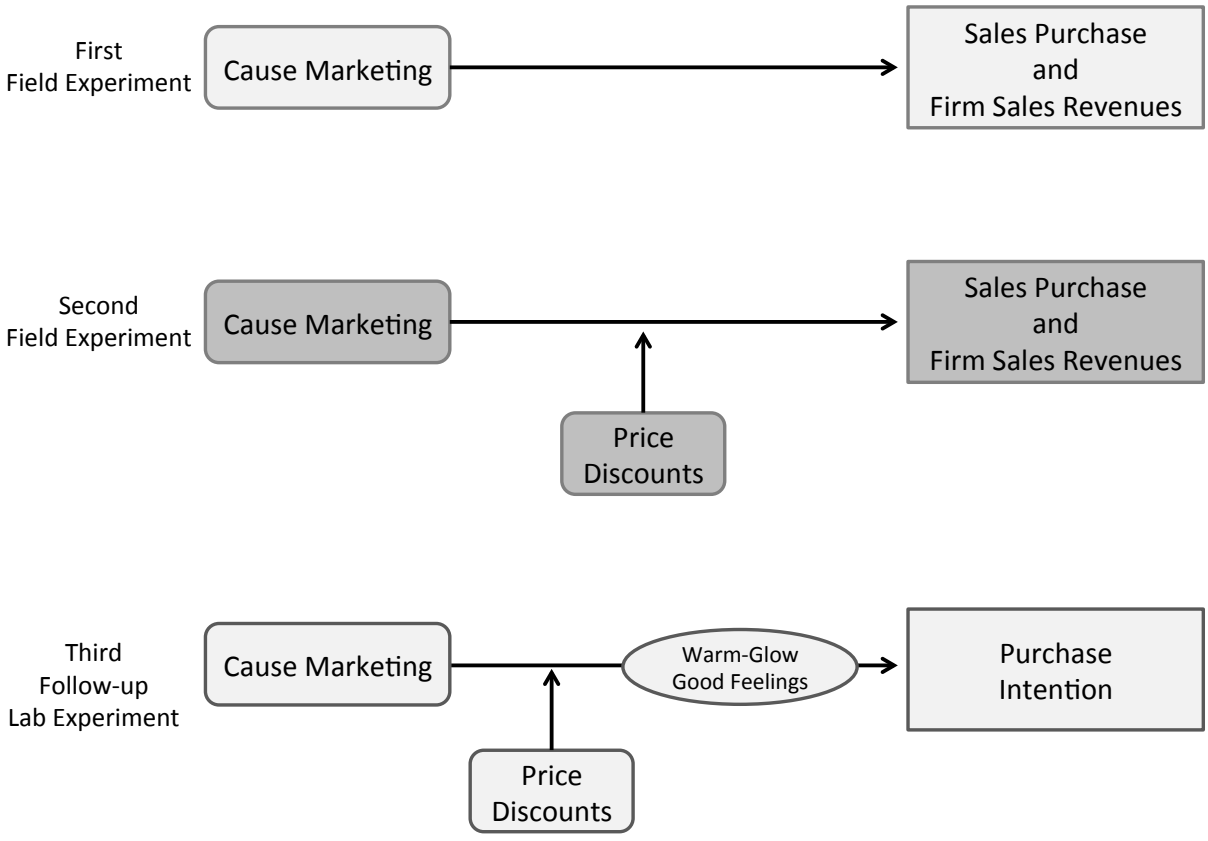
the one hand, some discounts may have positive interactive effects with CM donations by licensing and reinforcing consumers' charitable motivation to participate in a good cause (Morales 2005; Palmatier et al. 2009). On the other hand, deep discounts may have negative interactive effects by robbing consumers of the "warm-glow good feelings" that can result from giving to a charitable cause (Benabou and Tirole 2006; Fiske and Tetlock 1997). This question is critical because discounts and CM are each prevalent practices, but a combination strategy may not always be effective and may lead to a complicated moderating role of price discounts on the sales impact of CM.

To answer these two questions, we conducted large-scale randomized field experiments. In cooperation with one of the largest wireless providers in the world, we sent CM offers to more than 17,000 customers. We are able to gauge the impact of CM through real product offers, cash donations, and sales records data. Because our field experiment incorporates randomized samples of customers in a controlled manner, it can precisely identify the causal sales impact (i.e., treatment vs. control). The results of the field experiments suggest that CM can significantly increase consumer purchases. This empirical evidence from the field is nontrivial for managers who have lingering doubts about whether the findings from laboratory experiments can extend to actual consumer purchases.

We next ascertain how price discounts may moderate the impact of CM on sales. Notably, we find that the impact of CM on purchases is moderated by price discounts in an inverted U-shape—that is, the sales impact of CM may not be the highest at either deep or zero price discounts, compared with a moderate level of price discounts. Furthermore, these findings can be accounted for by the underlying process of consumers' warm-glow good feelings from CM. Follow-up lab studies provide evidence that consumers' good feelings indeed mediate the impact of CM on purchase intention across the price discount conditions.

This research contributes to the literature in three key ways: (1) It addresses an important subject of considerable practical relevance. Despite the substantial interest in CM, there is a dearth of research demonstrating its effectiveness in an actual field setting. We highlight the potential of CM for generating consumer demand and actual sales revenues for the firm. (2) This article is the first to furnish evidence on the interaction between price discounts and CM. It underlines a nonlinear, complicated boundary condition of price discounts for the sales impact of CM. (3) Combining field and laboratory experiments, this article provides new insights into the effect sizes of CM and psychological mechanisms. Figure 1 depicts our experiments. For managers, these results present novel implications regarding how to couple price discounts and CM instruments for optimal sales revenues.

FIGURE 1
Theoretical Framework



Field Experiment 1: The Potential Sales Impact of CM

CM Background

Conceptually, CM is defined as a "firm's contribution to a designated cause being linked to customers' engaging in revenue-producing transactions with the firm" (Varadarajan and Menon 1988, p. 60). Put simply, CM is the practice of linking product sales with firm donations to charitable causes. It is a promotional product offer from the firm with a promise to donate a portion of the sale proceeds to a charitable cause (i.e., a donation-based promotion) (Winterich and Barone 2011). Cause marketing campaigns comprise a specific type of corporate social initiative, characterized by firm involvement in prosocial behaviors through distinct programs designed to enhance the sustainability and responsibility of its products (Robinson, Irmak, and Jayachandran 2012).

For consumers, CM provides the opportunity to participate in contributing to a good cause. Cause marketing incentives thus foster a harmonious confluence of individual desires and others' needs. In this sense, CM enhances both the firm's image and customers' liking, and such embedded premiums can boost product sales (Arora and Henderson 2007). Indeed, consumers are attracted to opportunities that stoke a "warm glow" from having "done their bit" toward improving society (Andreoni 1989, p. 1448). Simply put, doing good leads to feeling good (Isen 1970). Thus, consumers can anticipate warm-glow good feelings from their charity-related purchase (Strahilevitz and Myers 1998).

As Table 1 summarizes, much of the prior literature attests that CM boosts consumer liking and purchase intentions. (For a comprehensive review, see Appendix A.) Although prior laboratory experiments suggest that CM positively affects consumers' pleasant feelings and purchase intentions, field evidence with actual sales purchases is lacking. Therefore, using a large-scale field experiment, we test the influence of CM on actual sales.

Field Experiment 1 Evidence

Method. We conducted a large-scale, randomized field experiment with one of the largest wireless providers in the world. A total of 11,794 mobile users from the corporate partner's client base were randomly selected to participate in this study. The mobile service provider (which has asked to remain anonymous) pushed a short message service (SMS) to these mobile users that promoted discounted IMAX movie theater tickets to a select movie showing at 4 P.M. on a Saturday. We conducted the experiment in a city with a population of approximately 20 million people in western China. The participants reside in urban areas and have similar travel costs to the movie theaters. We randomly selected participants by using SAS software's random number generator and running the RANUNI function. Recipients could purchase the movie tickets by downloading the accompanying movie ticket app. After mobile users downloaded the app, they could then order their movie tickets from the app and reserve their seats. If consumers bought a ticket, the cost was immediately charged to their monthly phone bill. Because the mobile service provider maintains download and purchase records of every user to whom it sent the SMS, it can identify the sales effects of different CM offers. Table 2 reports the key aspects of our field experiments.

Mobile users were randomly assigned to treatment versus control conditions. In the CM treatment condition, mobile users received an SMS that began, "To participate in [wireless provider's] charitable activities of helping newly-admitted poor college students, enjoy [movie name] showing this Saturday at 4pm at IMAX's [theater name] by downloading this online ticket app to purchase your tickets and reserve your seats." We selected this cause because helping newly matriculating students defray tuition costs is immensely important in China, where many talented high school graduates cannot afford college tuition. Our CM message framing is in line with the definition of CM (e.g., "voluntary donations of time or money that are intended to help others"; Winterich, Mittal, and Aquino 2013, p. 121). To ensure that this promise to help poor students afford college tuition was genuine, the message also included the name of a third party (a prestigious university in China) that would guarantee that the donations reached the intended recipients, thereby certifying the credibility of the charity message. In the control condition (no CM), mobile users received an SMS that did not include the charity information or information about the third-party certifier.

Model. In the traditional treatment–control sense, randomized field experiments can avoid endogeneity and causality biases (Goldfarb and Tucker 2011; Petersen and Kumar 2014). That is, the experiment randomization controls for consumers' unobservable heterogeneity that might confound our results. Differences in user purchase likelihoods are then attributed to the treatment effects of CM relative to the control condition of no CM. Our model estimates consumer purchase likelihood as $\text{PurchaseProbability}_i^{CM}$, a logit function of CM. Following Agarwal, Hosanager, and Smith (2011, p. 1063) and Goodman and Malkoc (2012), we assume an i.i.d. extreme value distribution of the error term in the logit model:

$$(1)\qquad \text{PurchaseLikelihood}_i^{CM} = \frac{\exp\left(U_i^{CM}\right)}{1+\exp\left(U_i^{CM}\right)}, \text{and}$$

$$U_i^{CM} = \alpha^l + \beta^l \times CM_i + \gamma^l \times X_i + \varepsilon_{il}^l,$$

where U_i^{CM} denotes the utility of a purchase and X_i is a vector of consumer usage controls and movie theaters. Consumer usage controls include individual users' monthly phone bills (ARPU), minutes used (MOU), short message services (SMS), and data usage (GPRS). These controls account for the unobserved fixed effects in consumers' mobile usage behaviors. Table 3, Panel A, reports the summary statistics of these consumer usage behaviors. In addition, we controlled for unobserved cinema-specific effects. We located cinemas in four different directions of the city's center (north, south, east, and west) and selected four movie theaters that were all situated along the same periphery of

TABLE 1
Relevant Literature on CM

Study	Sample	Lab Experiment or Survey	Field Experiment	Sales	Marketing Mix as Moderators	Marketing Mix as Mediators	Relevant Findings
Arora and Henderson (2007)	1,650	✓					Adding social causes to product sales is more effective than equivalent price discounts, especially for unknown brands, and varies by charity affinity and consumer motivations.
Gupta and Pirsch (2006)	531	✓					Purchase intentions for CM products are higher with company–cause fit, especially when consumers identify with the company or the cause.
Henderson and Arora (2010)	3,041	✓			✓		Cause marketing has positive spillover effects to adjacent categories under a corporate brand but less of an effect for categories in a house-of-brands portfolio, especially as brand strength increases.
Koschate-Fischer, Stefan, and Hoyer (2012)	302	✓					Customers' donation-related predispositions (toward helping others and feeling good) and cause-related predispositions (cause involvement and affinity) positively affect the donation amount–willingness to pay link. However, a lower company–cause fit negatively affects this link, especially the lower the donation amount for utilitarian and less conspicuous products, due to consumer perceptions of corporate motives.
Krishna (2011)	116	✓					Cause marketing can decrease consumer charitable giving and happiness due to consumer perceptions that CM is more selfish than direct donations.
Lichtenstein, Drumwright, Braig (2004)	508	✓				✓	Perceived CSR increases purchases and consumer donations to company-sponsored charities due to customer–company identification and the desire and to reward firms, especially those with weaker CSR histories.
Popkowski-Leszczyc and Rothkopf (2010)	308						Charity auctions command higher selling prices for identical products as the percentage donated to charity increases due to higher bidder charitable motives to boost charity proceeds.
Robinson, Irmak, and Jayachandran (2012)	120	✓				✓	Allowing consumers to choose the cause to support increases their purchase likelihood and willingness to pay for CM products as well as their company perceptions due to their greater perceived role.
Strahilevitz and Myers (1998)	1,200	✓	✓	✓			Cause marketing is more effective for hedonic products than for utilitarian ones due to the affect-based complementarity between sale-related donations and frivolous goods.
Vaidyanathan and Aggarwal (2005)	153	✓					Willingness to purchase a cause-related product increases when consumers are persuaded to make a small commitment toward the cause due to consumers' desire for commitment consistency.
Varadarajan and Menon (1988)	N/A						Cause marketing can be an effective marketing tool for both for-profit and not-for-profit organizations that merges marketing strategy and corporate philanthropy.
Winterich and Barone (2011)	252	✓					Preferences for donation-based versus discount-based promotions are greater for consumers with interdependent versus independent self-construals. This effect is weaker for cause–identity incongruence.
The present study	>17,000	✓	✓	✓	✓	✓	The impact of CM on consumer purchases is moderated by price discounts in an inverted U shape: this impact is highest only at a moderate (rather than at a too deep or zero) discount level. The underlying mediator of these results is consumers' warm-glow good feelings.

TABLE 2
Overview and Description of Variables in CM Effectiveness Experiments

Study	Conceptualization	Definition and Operationalization	Theory	Sample Size	Expectation	Sales Revenue Implications
First Field experiment	**Main effect:** CM	The practice of linking the sale of a product to the support of a charity cause on behalf of a firm by donating sale proceeds to the charity. Consumers are informed that sale proceeds benefit a charity for poor college students.	Consumers like opportunities to "[do] their bit" toward helping society (Andreoni 1989, p. 1448).	11,794 (randomized)	Linear, positive impact of CM 	Cause marketing is effective in generating demand.
Second Field experiment	**Moderating effect:** CM × price discounts	The practice of promoting products as both cause related and having a discounted price. Consumers are informed of our chosen cause, and that product is discounted by zero, moderate, or deep discounts.	A moderate discount level will lead consumers to reward firm efforts and reinforce consumers' charitable motivation to participate in a good cause (Gneezy and List 2013; Morales 2005), but a deep discount will rob consumers of their warm-glow good feelings (Benabou and Tirole 2006).	5,828 (randomized)	Inverted U-shaped impact of CM at different discount levels 	Caution: the combination is tricky. Cause marketing effectiveness may be greatest with moderate discounts compared with deep or zero discounts.
Third Follow-up lab experiment	**Mediation effect:** Good feelings	The positive emotions of warm-glow feelings consumers experience by helping a cause. Participants are asked to indicate how good they would feel if they bought the deal.	Positive emotions of warm-glow feelings lead consumers to make charitable purchases (Andreoni 1989).	426	Underlying process for interactive effects of CM, price discounts, and sales 	When designing CM campaigns, managers should heed consumers' feelings that motivate their purchase behavior.

TABLE 3
Summary Statistics of Consumers' Mobile Usage Behaviors

A: Field Experiment 1 (N = 11,794)

						Percentile			
	M	SD	Variance	Skewness	Kurtosis	20%	40%	60%	80%
Ln(ARPU)	4.014	.789	.623	–.133	–.177	3.348	3.859	4.237	4.694
Ln(MOU)	5.645	1.225	1.501	–.815	1.016	4.762	5.505	6.071	6.652
Ln(SMS)	4.037	1.438	2.069	–.454	–.351	2.773	3.784	4.605	5.333
Ln(GPRS)	6.314	4.477	20.044	–.367	–1.484	.000	5.749	9.249	10.543

B: Field Experiment 2 (N = 5,828)

						Percentile			
	M	SD	Variance	Skewness	Kurtosis	20%	40%	60%	80%
Ln(ARPU)	4.021	.786	.617	–.119	–.184	3.350	3.858	4.229	4.683
Ln(MOU)	5.648	1.230	1.512	–.815	1.009	4.754	5.505	6.078	6.667
Ln(SMS)	4.033	1.433	2.054	–.443	–.379	2.708	3.784	4.615	5.323
Ln(GPRS)	6.270	4.484	20.105	–.354	–1.498	.000	5.666	9.223	10.512

Notes: ARPU, MOU, SMS, and GPRS are key indicators of wireless usage behavior. ARPU = average revenue per user (i.e., the revenue that one customer's cellular device generated); MOU = individual monthly minutes of usage (i.e., how much voice time a user spent on his/her mobile); SMS = short message service (i.e., the amount of monthly text messages sent and received); GPRS = general packet radio service (i.e., a measure of the individual monthly volume of data used with the wireless service provider).

the city. In our equation, ε_i comprises the idiosyncratic error terms, and β tests the effects of CM on purchase probability after controlling for consumer usage and theater fixed effects.

We assess the model goodness-of-fit with Nagelkerke R^2 as specified in Equation 2, Pearson chi-square in Equation 3, and Cox and Snell R^2 in Equation 4.

$$\text{(2)} \qquad \text{Nagelkerke } R^2_N = \frac{R^2_{CM}}{1 - L\left[B^{(0)}\right]^{\frac{2}{n}}},$$

$$\text{(3)} \qquad \chi^2_{\text{Pearson}} = \sum_{\text{all cells}} \frac{(\text{observed count} - \text{expected count})^2}{\text{expected count}}, \text{ and}$$

$$\text{(4)} \qquad \text{Cox and Snell } R^2_{CM} = 1 - \left\{\frac{L\left[\mathbf{B}^{(0)}\right]}{L(\mathbf{B})}\right\}^{\frac{2}{n}},$$

where $L(\mathbf{B}^{(0)})$ denotes the Kernel of the log-likelihood of the intercept-only model, $L(\hat{\mathbf{B}})$ is the log-likehood function for the model with all estimates, and n is the number of cases. We estimate the models with robust standard errors (sandwich estimators) clustered at the theater level to account for possible bias resulting from a common latent trait related to one theater but not observed in the data (Agarwal, Hosanager, and Smith 2011; Goldfarb and Tucker 2011; Luo, Andrews, Fang et al. 2014).

Results. The dependent variable was the decision to purchase. The overall purchase rate was 7.64% (= 901 of 11,794). Table 4 summarizes the empirical results. Model 1 includes only the control variables as the baseline predictions, and Model 2 enters the variable of interest with CM. As Model 2 in Table 4, Panel A, shows, the results suggest that the treatment of CM has a positive and significant impact on the likelihood of consumer purchases ($\beta = .658, p < .01$).

Because logit models specify nonlinear relationships, it is not straightforward to interpret the coefficient results. Thus, we use the marginal effects of logit model estimates and the pairwise comparison of the estimated marginal means to test the sales impact of CM (Ghose, Goldfarb, and Han 2013; Greene 2007). Specifically, using the sequential Sidak pairwise comparison, we find that the estimated marginal means of purchase incidence for CM ($M_{\text{CM present}} = .091$) is significantly higher ($\chi^2(1, N = 11{,}794) = 28.07, p < .01$) than that for the no-CM condition ($M_{\text{no CM}} = .048$). Thus, the results support the potential influence of CM on actual sales.

In summary, this initial field experiment provides empirical evidence that the mere presence of a CM donation in a promotional offer can generate significantly more sales purchases. Compared with the no-CM control condition, the CM treatment condition induced almost two times the purchase incidence.

Field Experiment 2: The Moderating Role of Price Discounts

Can price discounts moderate the sales impact of CM? This is an important question because firms have begun to offer price discounts with proceeds benefiting charity. For example, General Mills offers coupons for its Box Tops for Education foods, and Macy's also combines CM with price discounts. Historically, CM was largely employed as a cost-sharing practice with customers. Prior research has thus compared the effectiveness of CM in relation to price discounts (Strahilevitz and Myers 1998). Studies have also evaluated whether consumers prefer CM offers (warm glow) or price discount offers (cash) (Winterich and Barone 2011), implying trade-offs between the two. In today's hypercompetitive markets, however, consumers not only demand discounts but also expect firms to be caring. Thus, to entice cus-

TABLE 4
Field Experiment Results for the Impact of CM on Purchase

A: Field Experiment 1 Evidence

	Model 1	Model 2
CM treatment effects		**.658****
Ln(ARPU)	.036	.034
Ln(MOU)	–.078*	–.079*
Ln(SMS)	.029	.021
Ln(GPRS)	.213**	.227**
Theater effects	Yes	Yes
Chi-square	1,018.672	1,212.587
Cox and Snell R-square	.116	.173
Nagelkerke R-square	.425	.495
Observations	11,794	11,794

B: Field Experiment 2 Evidence

	Model 3	Model 4	Model 5
CM × PD1			**–.329****
CM × PD2			**–.215***
CM treatment effects		**.608****	**.936****
PD1		–.408**	–.405**
PD2		.342*	.337*
Ln(ARPU)	.028	.025	.026
Ln(MOU)	–.071*	–.072*	–.076*
Ln(SMS)	.023	.021	.022
Ln(GPRS)	.233*	.235*	.232*
Theater effects	Yes	Yes	Yes
Chi-square	781.049	894.450	926.612
Cox and Snell R-square	.106	.178	.189
Nagelkerke R-square	.412	.482	.495
Observations	5,828	5,828	5,828

*$p < .05$.
**$p < .01$.
Notes: ARPU = average revenue per user; MOU = minutes of usage; SMS = number of texts sent and received per user; GPRS = data usage with the wireless provider; PD1 = the price discount dummy comparing the moderate discount with the zero discount conditions (0 = moderate discount, 1 = zero discount); PD2 = the discount dummy comparing the moderate discount with the deep discount conditions (0 = moderate discount, 1 = deep discount). Boldfaced numbers indicate the effects of interest.

tomers, managers may combine price discounts and CM simultaneously, a combination neglected in the literature.

At first glance, such combination appears to be a win–win situation. This is because *alone*, price discounts can increase purchases due to the economic utility of saving money for the consumer (Lemon and Nowlis 2002). Thriftiness is a virtue for most consumers. Procuring the same product for a reduced price can boost consumers' perceived value (Inman, McAlister, and Hoyer 1990; Lemon and Nowlis 2002). Thus, the higher the discount, the greater the consumer purchases.[1]

In addition, as we have discussed, CM *alone* enables consumers to derive warm-glow good feelings from participating in a good cause through their charity-related purchase (Andreoni 1989; Strahilevitz and Myers 1998). Thus, CM as such should have a positive impact on consumer purchases, as the initial field experiment demonstrates.

Yet when the possible moderating role of price discounts is considered, CM may have a complex nonlinear impact on purchases depending on the level of discounts. Specifically, an initial increase from zero to moderate discounts may induce a synergistic license effect and amplify the sales implications of CM. This is because when a firm demonstrates effort by discounting its product price and sacrificing some of its revenue for a charitable cause, consumers can experience positive feelings of gratitude and consequently may be more willing to reciprocate and reward the firm with more purchases (Gneezy and List 2013; Morales 2005). That is, compared with the case of zero discounts, offering some discounts would signal that the firm also cares about the charity enough to sacrifice even more business revenue itself to support its CM initiative. This would license and reinforce consumers' charitable motivation to participate in a good cause (Palmatier et al. 2009), thus likely amplifying the impact of CM on consumers' warm-glow good feelings and, thereby, actual purchases.[2]

However, beyond a moderate level, deep price discounts may backfire and attenuate the impact of CM on consumers' good feelings and actual purchases. This is because overtly large extrinsic incentives in the form of monetary compensation can stymie consumers' intrinsic charitable motivations: they may perceive that the purchasing act is not about *doing good* but rather about *doing well* (Benabou and Tirole 2006; Fiske and Tetlock 1997). That is, blatantly deep discounts would induce consumers to perceive that their CM purchases are no longer about giving to a good cause but rather about doing well by exploiting the deep discounts from the sacrificed firm revenues, even when giving to a charitable cause is involved. This would rob consumers of their warm-glow good feelings toward CM and attenuate the sales impact of CM.[3] If so, deep discounts may deprive consumers of their good feelings and thereby attenuate the impact of CM on purchases.

Taken together, this discussion suggests that neither deep nor zero price discounts could lead to the highest impact of CM on sales. As a result, we test the notion that the impact of CM on consumer purchases may be moderated by price discounts in an inverted U shape: this impact is highest at a moderate (rather than at a deep or zero) price discount level.

[1]We are not concerned about the *main* effects of price discounts on purchases (the literature has largely supported the immediate sales impact of discount promotions because consumers can save more money; Inman, McAlister, and Hoyer 1990; Lemon and Nowlis 2002). Rather, our focus is on the complex *moderating* effects of price discounts on the CM–purchase link.

[2]This self-perception analysis is a type of self-directed attribution, which suggests that consumers may attribute the discount that is combined with CM to the firm's motive to help consumers respond to CM initiatives (Brown and Dacin 1997; Lepper, Greene, and Nisbett 1973).

[3]We thank an anonymous reviewer for this point. Indeed, according to the impression management research, consumers may worry about the impression of their motives when deep discounts are taken (Leary 1995; Newman and Shen 2012), so they may not want to save too much money relative to making a charitable contribution to a good cause (Ashworth, Drake, and Schaller 2005).

Field Experiment 2 Evidence

Method. We conducted another field experiment with the same corporate partner. A total of 5,828 mobile users participated. We used the same randomization protocols, college-tuition charity, and movie cinemas but conducted the experiment with a different manipulation of CM conditions, a new random sample of participants, and different discount conditions.

In this field experiment, mobile users were randomly assigned to receive one of six SMS messages in a 2 × 3 between-subjects design involving two CM conditions (no CM vs. CM with a specified amount to be donated to the charity per ticket sold) and three price discount conditions (no discount vs. moderate discount vs. deep discount). In Figure 2, Panels A and B, we detail the various SMSs sent.

In the CM treatment condition, we specified the CM donation amount to be contributed to the charity. The literature has suggested that donation amount matters because expectations of consumer pleasure from CM and purchase likelihood increase with the *amount* of donation (Koschate-Fisher, Stefan, and Hoyer 2012; Smith and Schwarz 2012). Thus, to extend the first field experiment, in which the mere presence (or absence) of CM was manipulated, we used a different manipulation of CM. That is, we explicitly stated the *amount* of money to be donated to the charity per movie ticket sold. We specified a 5 Chinese RMB donation in the spirit of Macy's Shop-for-a-Cause campaign, in which $5 is donated to charity per shopper. In the control condition (no CM), mobile users received an SMS that did not include the charity information.

There were three price discount conditions: zero versus moderate versus deep discounts. Moderate discounts were operationalized as 30% off the regular price, whereas deep discounts were 50% off. We set a moderate discount to be 30% off because a series of pretests in the field and lab suggest that moderate price discounts refer to the more commonly used discounts of 10% to 30% off. Deep discounts, in contrast, refer to less commonly used discounts of 50% or more off the regular price (Heath, Chatterjee, and France 1995; Inman, McAlister, and Hoyer 1990; Lemon and Nowlis 2002).

Model. To test the moderating role of price discounts on the impact of CM on consumer purchase likelihood, we model the utility as a function of CM, price discounts, and the interaction terms as follows:

$$(5)\quad U_i^{CM} = \alpha^k + \beta^k \times CM_i + \xi^k \times CM_i \times PD1 + \zeta^k \times CM_i \times PD2 + \phi^k \times PD1_i + \pi^k \times PD2_i + \gamma^k \times X_i + \varepsilon_{i2}{}^k,$$

where PD1 and PD2 are two dummies for the three price discount conditions. PD1 is the first price discount dummy, which compares the moderate discount with the no-discount conditions (0 = moderate discount, 1 = no discount). PD2 is the second discount dummy, which compares the moderate discount with the deep discount conditions (0 = moderate discount, 1 = deep discount).

Results. The overall purchase rate was 4.58% (= 267 of 5,828 users made the purchase). Table 4, Panel B, summarizes the key empirical results. Model 3 includes only the control variables as the baseline predictions, Model 4 enters the variable of interest with CM, and Model 5 enters the interaction of CM with the price discount dummy variables. As Table 4, Panel B, reports, the logistic regression results support the main effects of discounts on sales. As we expected, the direct effect of PD1 on purchase likelihood is negative and significant, suggesting that a moderate discount can generate more sales than no discount (the moderate discount was the base). In addition, the direct effect of PD2 on purchase likelihood is positive and significant, suggesting that deep discounts can generate more sales than moderate discounts (Inman, McAlister, and Hoyer 1990; Lemon and Nowlis 2002). Again, because logit models specify nonlinear relationships, we use the pairwise comparison of the estimated marginal means to examine the effects. The mean purchase incidence for the deep discount (M_{deep} = .047) is significantly higher ($\chi^2(1, N = 5{,}828) = 18.29$, $p < .01$) than that for the moderate discount ($M_{moderate}$ = .035). The mean purchase incidence for the moderate discount is significantly higher ($\chi^2(1, N = 5{,}828) = 30.86$, $p < .01$) than that for no discount (M_{zero} = .017).

Consistent with the immediate sales impact of price promotions, these findings are important because they rule out the possible alternative explanation of inferior products in CM. Specifically, deep discount levels might cue inferior product quality (Raghubir and Corfman 1999), and CM could be used to disguise inferior-quality products in corporate hypocrisy fashion (Wagner, Lutz, and Weitz 2009). However, because we find that overall purchase incidence is indeed higher for deep discounts compared with moderate discounts, as well as higher for moderate discounts compared with no discounts, these results help reduce concerns of inferior product quality and consumer skepticism toward CM in our field experiment design.

In terms of the direct effect of CM, the logistic regression results suggest that the treatment effects of CM are positive and significant ($\beta = .608$, $p < .01$; Table 4, Panel B, Model 4). Thus, the CM treatment with a specified donation amount to charity also significantly boosts consumer purchases. Using the sequential Sidak pairwise comparison, we find that the mean purchase incidence for the CM treatment ($M_{amount\ of\ CM}$ = .055) is significantly higher ($\chi^2(1, N = 5{,}828) = 31.62$, $p < .01$) than that for the control condition of no CM ($M_{no\ CM}$ = .023). As such, CM has a positive impact on consumer purchases as a result of the charity-related promotions.

With respect to the moderating role of price discounts, the logistic regression results suggest that the interaction between CM and PD1 is negative and significant ($\xi = -.329$, $p < .01$; Table 4, Panel B, Model 5). This suggests that compared with the base of moderate discounts, zero discounts can attenuate the sales impact of CM, as we expected. More importantly, the interaction between CM and PD2 was also negative and significant ($\zeta = -.215$, $p < .05$; Table 4, Panel B, Model 5). This suggests that compared with the moderate discount, deep discounts can also attenuate the sales impact of CM. Using the sequential Sidak pairwise comparison, we find that the mean purchase incidence of CM deals for moderate discounts ($M_{moderate,\ amount\ of\ CM}$ = .068)

FIGURE 2
Scenarios of SMSs Sent to Different Conditions in Field Experiment 2

A: CM-Present Conditions

CM, Zero Discount | CM, Moderate Discount | CM, Deep Discount

B: No-CM Conditions

No CM, Zero Discount | No CM, Moderate Discount | No CM, Deep Discount

is significantly larger ($\chi^2(1, N = 5{,}828) = 9.56, p < .01$) than that for deep discounts ($M_{deep,\ amount\ of\ CM} = .051$). Furthermore, the mean purchase incidence of CM deals for moderate discounts is significantly larger ($\chi^2(1, N = 5{,}828) = 21.903, p < .01$) than that for no discounts ($M_{zero,\ amount\ of\ CM} = .031$). As Figure 3 illustrates, in the no-CM conditions, the higher the discounts were, the greater the purchase rates—a finding that is consistent with conventional wisdom. Notably, in the CM-present conditions, price discounts indeed affected the sales impact of CM in an inverted U shape: the impact of CM on consumer purchases is greatest at a moderate (rather than at a deep or zero) price discount level.

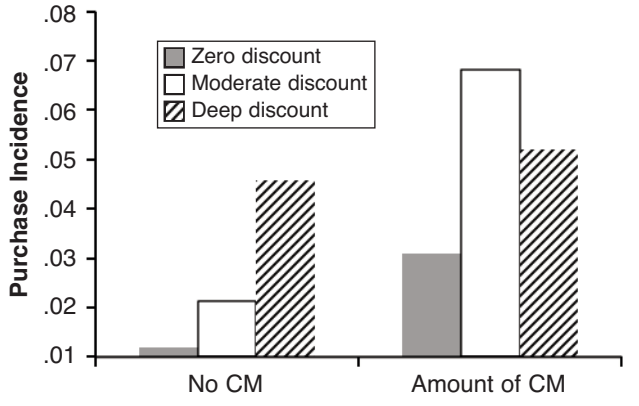
CM Effects on Net Revenue for the Firm

Beyond consumer purchases, it is critical to examine the net sales revenues for the firm. Indeed, Field Experiment 2 involved real monetary values for both the CM donation amount (5 RMB) and price discounts (0 vs. 30% vs. 50% off the regular price of 50 RMB). Figure 4 shows in absolute monetary terms the net sales revenues the firm generated for each promotion message sent. The columns indicate the net sales revenues (= likelihood of purchase from Figure 3 multiplied by the revenue obtained from the purchase in specific conditions; i.e., the regular price of 50 RMB *minus* the condition-specific price discount and/or charity donation).[4]

The results in Figure 4 suggest that for maximum sales revenue, the firm should consider adopting CM combined with moderate discounts (revenue per offer sent = 2.04 RMB). Among CM deals, moderate discounts engender twice the revenue of deep discounts (revenue = 1.04 RMB). The worst option is no CM and no discounts (revenue = .6 RMB). In addition, CM alone can generate relatively higher sales revenue than deep discounts alone, thus providing empirical evidence for the notion that charity-based CM appeals can beget more sales than monetary-based incentives (Arora and Henderson 2007; Strahilevitz and Myers 1998). As such, from the perspective of both consumer purchase likelihood and firm sales revenues, CM effectiveness appears highest with a moderate level of price discounts rather than with deep or no discounts.

[4]Because the firm's service costs are mostly fixed (since the cost of showing the movie does not depend much on the number of viewers), firm profits would also demonstrate a similar pattern as the sales revenues shown in Figure 4.

FIGURE 3
Purchase Incidence as a Function of CM and Price Discount Combinations in Field Experiment 2



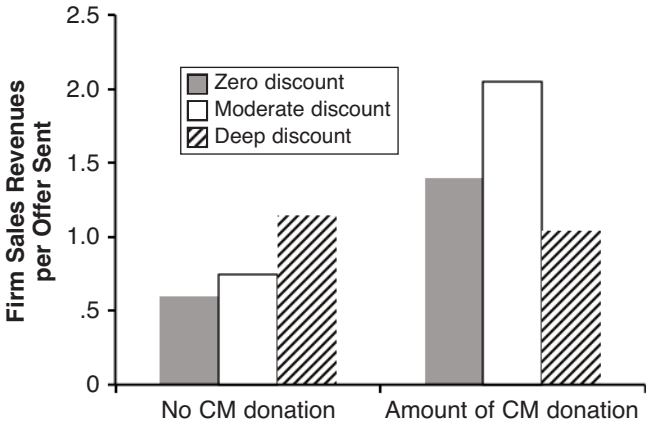
Checks for Results Robustness and Alternative Explanations

To robustly identify the results, we controlled for several confounding factors. First, we developed a new mobile app specifically for these field experiments to rule out bias resulting from familiarity with previously installed apps. Second, we selected only one nonblockbuster movie to promote to decrease the confounding effects of heterogeneity in movie popularity and consumer tastes.

Moreover, the mobile users in our database were sent SMS messages on the basis of a rigorous randomization procedure. Specifically, following Deng and Graz (2002), we randomized through three steps. First, we assigned a random number to each user (using SAS software's random number generator and running the RANUNI function). Second, we sorted all random numbers in sequence. Third, we extracted a sample to send SMSs. These three steps were integrated in an algorithm of the mobile service provider's information technology system. Thus, any alternative explanations stemming from user heterogeneity are randomized away through the field experiment design (Goldfarb and Tucker 2011; Petersen and Kumar 2014).

We also tested the generalizability in terms of the manipulation of price discounts. Indeed, discounts are often framed in percentages in the literature (Heath, Chatterjee, and France 1995; Lemon and Nowlis 2002). However, it would be worthwhile to test the effects of discounts with absolute dollar amounts rather than percentages. To this end, we conducted another field experiment with 2,400 users in a 2 (CM condition: no CM vs. CM with a specified amount of 6 RMB to be donated to the charity per ticket sold) × 3 (price discount condition: no discount vs. moderate discount with 6 RMB vs. deep discount with 15 RMB

FIGURE 4
CM Effectiveness with Firm Sales Revenues from Field Experiment 2



[the regular ticket price is 30 RMB]) between-subjects design. Again, we find a consistent pattern of results. In the no-CM conditions, zero discounts lead to fewer purchases than moderate discounts, which lead to fewer purchases than deep discounts. Moreover, we find that compared with the same amount of absolute discounts (both with 6 RMB), CM has a relatively stronger impact on sales purchase ($p < .01$). This is consistent with research suggesting that CM has a greater effect on demand than comparable discounts (Arora and Henderson 2007; Strahilevitz and Myers 1998). Notably, in the CM conditions, there is still an inverted U-shaped sales impact of CM: the impact of CM on purchases is greatest at a moderate level of discounts compared with either deep or zero discounts, even with an absolute discount amount.

Finally, CM with deep discounts might cause consumers to be suspicious of firm motives. Consumers have grown wary of CM due to perceptions of "corporate hypocrisy" (Miklos-Thal and Zhang 2013; Wagner, Lutz, and Weitz 2009, p. 77). Echoing this, Brown and Dacin (1997) indicate that consumer skepticism about a firm's charitable actions will denigrate their evaluations of firm offerings. Thus, when consumer suspicions about firm motives abound, adding deep discounts may aggravate consumer beliefs that the firm is selling cheap products sugar-coated with charitable appeal (Barone, Miyazaki, and Taylor 2000; Raghubir 2004). However, our field experiment design affirms that consumer skepticism is not a reason for the effects. Specifically, consumers are explicitly informed of the specific movie the deal promoted. Thus, although movies are an experience good whose quality cannot be assessed prior to consumption, consumers may nevertheless consult expert reviews or movie trailers to assure themselves of product quality. In addition, our setting involves IMAX theaters, whose global reputation among movie chains helps certify the quality of the promoted movie. Moreover, as described, we find that sales were greater for deep discounts compared with the moderate or no-discount conditions when CM was absent. If consumers were truly skeptical about product quality, sales would not have been greater for deep discounts. Thus, skepticism does not seem to be at play in our field experiment.[5] Next, we report our lab experiments, which may account for the underlying mechanism for our field experiment findings through the mediating role of consumers' good feelings.

Lab Experiment 3: The Mediating Role of Warm-Glow Good Feelings

What is the underlying process that accounts for the findings in our field experiments? According to the warm-glow account of donation behavior, the good feelings consumers derive from helping charitable causes motivate their favorable response to CM. Essentially, warm glow, or consumers' good feelings toward CM refers to the positive feelings people typically experience when they help a philanthropic cause (Andreoni 1989; Strahilevitz 1999). The psychology and economics literatures have suggested that the feeling of a warm glow is a type of impure altruism driven by people's desire to participate in a charitable cause and to feel good about their altruistic act (Andreoni 1989; Winterich and Barone 2011). Cause marketing both provides an opportunity for consumers to feel good and stokes warm-glow feelings, which in turn can amplify consumer purchase intentions (Arora and Henderson 2007; Viscusi, Huber, and Bell 2011; Winterich, Mittal, and Aquino 2013). In other words, the underlying process through which CM affects purchase is likely to be consumers' warm-glow good feelings.

We expect that the mediating role of consumers' warm-glow good feelings can account for the inverted U-shaped impact of CM on purchases across the zero, moderate, and deep price discount conditions. Namely, as we theorized previously, combining a moderate discount with the CM offer would produce synergy with CM and amplify consumers' warm-glow good feelings (compared with no discounts). This is because some discounts may have positive interactive effects with CM donations by licensing and reinforcing consumers' warm-glow good feelings from giving to a charitable cause (Morales 2005; Palmatier et al. 2009). Thus, compared with no discounts, moderate discounts would license and reinforce consumers' charitable motivation to participate in a good cause, thus likely amplifying the impact of CM on consumers' warm-glow good feelings and, in turn, consumer purchases. However, deep price discounts in CM offers may backfire. Blatantly deep discounts would induce consumers to perceive their CM purchases are no longer about giving to a good cause but rather about doing well by exploiting the deep discounts on the basis of the sacrificed firm revenues, even when contributing to a charitable cause is involved. In this way, deep discounts may have negative interactive effects with CM donations by depriving consumers of their warm-glow good feelings from giving to a charitable cause (Benabou and Tirole 2006; Fiske and Tetlock 1997), thus likely attenuating consumers' actual purchases.

Therefore, to test the good feelings–based mediating mechanism for our findings in the field experiments with high external validity, we design lab experiments with high interval validity. Specifically, in the follow-up lab experiment, we aim to examine whether consumers' warm-glow good feelings mediate the inverted U-shaped impact of CM on purchases across the zero, moderate, and deep price discounts.

Lab Experiment for the Underlying Process

Method. We conducted a lab experiment both to test whether consumers' warm-glow good feelings act as the mediator and to replicate the results of our field experiments. A total of 426 students at a large Chinese university participated in this study for partial course credit. This experiment is a 2 (CM condition: no CM vs. CM with a specific amount to be donated to charity) × 3 (discount condition: no discount vs. moderate discount vs. deep discount)

[5]In a pilot lab experiment, we also measured consumer skepticism of the CM deals and found no statistical differences in skepticism perceptions across the no, moderate, and deep discount conditions ($p > .10$).

between-subjects design. We used the same college tuition charity and the same cinemas as the field experiments.

Participants were asked to imagine that they received an SMS of a deal from the wireless provider. Participants were shown a picture of the SMS in a mobile phone screen, consistent with those in the field experiments. Participants were then randomly assigned to experimental conditions. In the CM treatment condition, we specified the CM donation amount to the charity. In line with our field experiment design, the survey stated that 5 RMB would be donated to the charity per movie ticket sold. In the control condition (no CM), the message did not mention the charitable donation opportunity.

In the price discount conditions, we manipulated the message participants received with three discount conditions (no discount vs. moderate discount vs. deep discount). We set the moderate discount as 10% off to have another variation in the moderate discount condition to generalize our results. The deep discount was set at 50% off the regular price.

We measured warm-glow good feelings with the statement, "I would feel good if I purchased this CM deal" (Taute and Mcquitty 2004). In addition, we measured purchase intention on an eleven-point scale (1 = "very likely to purchase," and 11 = "very unlikely to purchase"). Appendix B reports the experimental materials. We also asked participants to answer demographic questions, including their age, gender, and college major.

Results. Results from the lab experiment replicated those of the second field experiment. Figure 5 shows that there is a positive slope across the no-CM conditions, suggesting that the higher the discount, the higher the purchase intention. Across the CM conditions, there is an inverted U-shaped relationship, suggesting that the impact of CM on consumer purchases is moderated by price discounts such that this impact is highest only at a moderate (rather than at a deep or zero) price discount level. More specifically, analysis of variance results suggest that across the three no-CM conditions, the mean intention to purchase the CM deal was higher for the deep discount than for the moderate discount ($M_{deep,\ no\ CM} = 7.25$, $M_{moderate,\ no\ CM} = 5.21$; $F(1, 426) = 57.19$, $p < .01$). Moreover, the mean intention to purchase the deal was higher for the moderate discount than for the zero discount ($M_{moderate,\ no\ CM} = 5.21$, $M_{zero,\ no\ CM} = 4.29$; $F(1, 426) = 35.06$, $p < .01$). Thus, again, these findings support the main effects of price discounts on consumer purchase intentions, replicating the field experiments. Furthermore, across the three CM-present conditions, the mean purchase intention of the CM deals was higher for the moderate discount than for the deep discount ($M_{moderate,\ CM} = 8.95$, $M_{deep,\ CM} = 7.74$; $F(1, 426) = 38.31$, $p < .01$). In addition, the mean intention to purchase was higher for the moderate discount condition than for the no-discount condition ($M_{moderate,\ CM} = 8.95$, $M_{zero,\ CM} = 5.68$; $F(1, 426) = 68.55$, $p < .01$). As such, these findings with consumer purchase intention also support the idea that price discounts can moderate the impact of CM in an inverted U shape: the impact of CM on consumer purchases may be highest only at a moderate (rather than at a deep or zero) price discount level, thus replicating the field experiments.

Our key interest is to test the mediating role of consumers' warm-glow good feelings. Note that in the no-CM conditions, there is no opportunity to contribute to a charitable cause, so warm-glow good feelings are absent. In other words, there is no need to test the mediational role in these conditions because no charity is involved. As such, our expected mediation here is only within the three CM-present conditions across the three discount levels (n = 185 subjects with the warm-glow good feelings measure). As Figure 6 shows, across the CM-present conditions, consumers' mean warm-glow feelings were greater for the moderate discount condition than for the deep discount condition ($M_{moderate,\ CM} = 8.29$, $M_{deep,\ CM} = 6.87$; $F(1, 426) = 43.82$, $p < .01$). In addition, consumers' mean warm-glow feelings were greater for the moderate discount than for the no-discount condition ($M_{moderate,\ CM} = 8.29$, $M_{zero,\ CM} = 5.25$; $F(1, 426) = 67.09$, $p < .01$). These findings indicate that the impact of CM on warm-glow feelings is also an inverted U shape: it is high-

FIGURE 5
Purchase Intention as a Function of CM and Price Discount Combinations in Lab Experiment

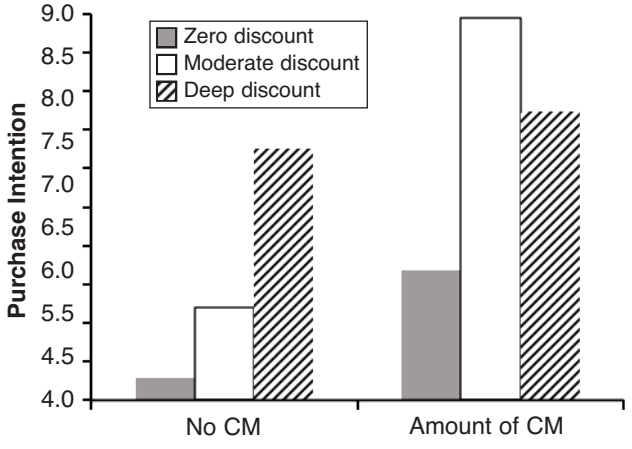
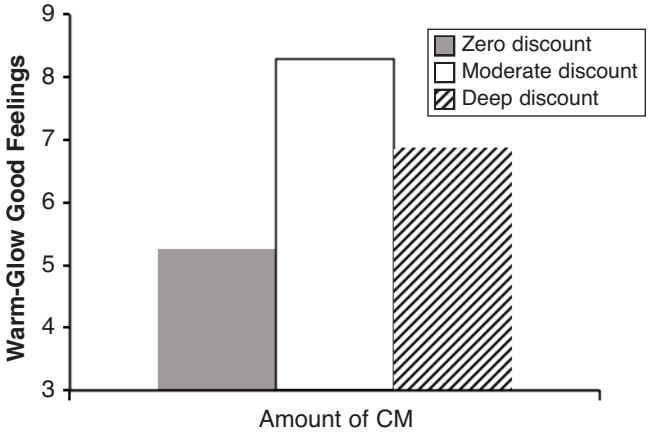


FIGURE 6
Mediating Role of Warm-Glow Good Feelings in Lab Experiment: Results



est only at a moderate (rather than at a deep or zero) price discount level, thus revealing initial evidence for the mediating role of warm-glow good feelings.

To formally test the mediation effects, we conducted bootstrap mediation tests, following Preacher and Hayes (2004) and Winterich, Mittal, and Aquino (2013). Consistent with Field Experiment 2, we need two dummies (PD1 and PD2, with a moderate discount as the base) for the three price discount conditions. Because they are conditional on CM treatment effects, these two dummies are the same as the interactions between CM and PD1 and PD2. As we illustrate in Figure 7, the interaction between CM and PD1 was negative and significant in affecting warm-glow good feelings (–.635, $p < .01$). This suggests that compared with the base of moderate discounts, zero discounts would decrease warm-glow feelings induced by CM, as we expected. The interaction between CM and PD2 was also negative and significant (–.492, $p < .05$). This suggests that compared with the moderate discount, deep discounts would also reduce the warm-glow feelings induced by CM. Together, because both interactions are significant and negative, there is an inverted U-shaped impact of CM on consumers' warm-glow feelings: it is highest at moderate rather than deep or zero discount levels. In addition, warm-glow good feelings significantly affect intention to purchase (.647, $p < .01$). Thus, these findings suggest that there is a chained path relationship from (1) the inverted U-shaped impact of CM across price discounts to (2) warm-glow good feelings, and then to (3) consumer purchase intentions. As such, consumers' warm-glow good feelings mediate the inverted U-shaped impact of CM on purchase intentions across the zero, moderate, and deep price discounts.

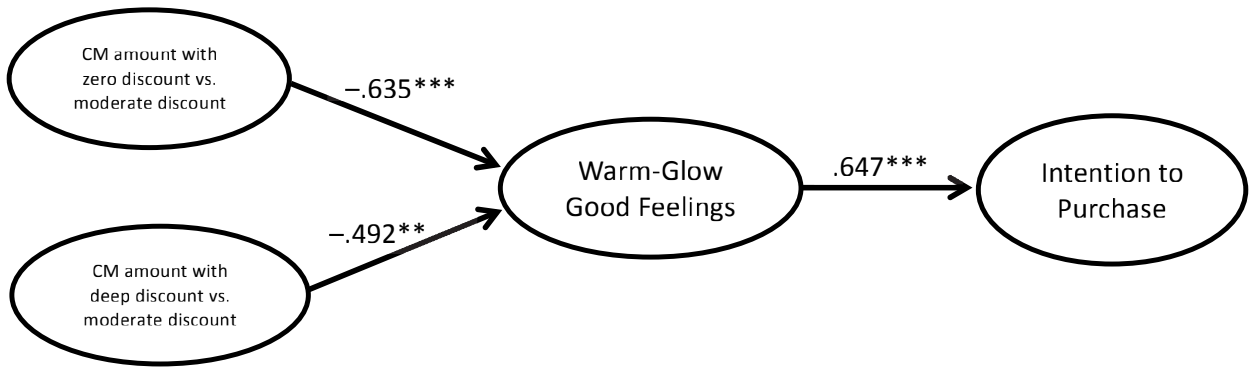
One may argue that consumers may have two sources of positive feelings. One may be driven by giving to a good cause, which we refer to as warm-glow good feelings. The other may be driven by price discounts, which we refer to as satisfaction from saving money. The literature has shown that by and large, the higher the price discount, the greater the perceived satisfaction from saving money (Inman, McAlister, and Hoyer 1990; Lemon and Nowlis 2002). However, conceptually, this satisfaction from saving money is independent of the charity cause and thus should not mediate the inverted U-shaped impact of CM on purchase intention across the discount conditions. Empirically, in another lab experiment with 120 participants (all CM conditions with zero discounts, moderate discounts of 30% off, or deep discounts of 50% off), we measured both warm glow and satisfaction from saving money. The results confirmed that satisfaction from saving money does not mediate the inverted U-shaped impact of CM on purchase intention across the discount conditions, whereas warm-glow still does.[6] Overall, our follow-up lab experiment replicates our field experiments and confirms consumers' warm-glow good feelings as the underlying process for the impact of CM.

Discussion

This research quantifies the potential sales effectiveness of CM. The results from large-scale randomized field experiments indicate that treatments of CM can engender higher customer purchase incidence and firm sales revenues. In

[6]To further rule out the possibility that other constructs such as guilt (Tangney and Dearing 2002), a preference for suffering (Olivola and Shafir 2013), the role of conflict, and feeling cheap (Krishna 2011) may drive the results, we measured these constructs. The results of mediation tests suggest that none of these alternative potential mediators influence purchase intention (βguilt = .06, SE = .07, $p > .1$; βsuffering = .11, SE = .07, $p > .1$; βconflict = .11, SE = .07, $p > .1$; βcheap = –.01, SE = .09, $p > .1$), thus ruling these alternative explanations out. In addition, we conducted a mediation test with a sample of 167 U.S. respondents following the recent trend of literature to examine CM effects across cultures (Korshun, Bhattacharya, and Swain 2014). In that study, we promoted a restaurant deal with CM (a fixed donation to a children's shelter) with discount levels and confirm that warm-glow good feelings mediate the interaction between CM and price discounts on purchase intention. Moreover, in a separate study with a sample of 104 U.S. respondents, we find that consumers primed with moral identity-related concepts respond more sensitively to this interaction, implying that warm-glow good feelings may guide purchasing decisions (i.e., mediate the interaction impact of CM and discounts on purchase), especially for high-moral-identity consumers.

FIGURE 7
Mediating Role of Warm-Glow Feelings in Lab Experiment: Mediation Path Results



*$p < .05$.
**$p < .01$.

addition, when coupling CM with price discounts, a moderate level of price discounts, rather than deep or no discounts, may trigger the highest CM effectiveness. Follow-up lab studies replicate these findings and demonstrate that consumers' warm-glow good feelings of CM are the underlying process. These findings provide several important implications for research and practice.

Contributions to Research

Our research proffers several key contributions. First, it addresses an important subject of considerable practical relevance. Despite the substantial interest in CM, there is a lack of research demonstrating its effectiveness in an actual field setting. This is of particular concern for managers who may doubt whether the findings of laboratory experiments extend to genuine transactions. We show that CM can have a larger effect on revenues than comparable discounts, highlighting the importance of CM for generating demand. By conducting large-scale randomized field experiments, we advance the CM literature as well as research on corporate social responsibility (CSR). To date, these literature streams have largely provided "soft" evidence for CM's effects on customer attitudes and intentions through survey and laboratory studies. Yet our knowledge of the capacity of CM would be constrained if we could not identify "hard" evidence through the causal impact and actual sales data in the field. In addition, our comprehensive, randomized experiments extend prior lab studies and the few small-scale field studies (e.g., Robinson, Irmak, and Jayachandran 2012; Strahilevitz and Myers 1998). Furthermore, we conduct causal analyses of purchase responses to CM at the disaggregated consumer level, beyond prior correlational analyses at the aggregated firm level (Korschun, Bhattacharya, and Swain 2014; Luo and Bhattacharya 2006).

We highlight the burgeoning practice of CM campaigns with a series of choreographed steps, each of which is undertaken by different actors. Specifically, firms coordinate with a charity to promote products as cause related. Thus, consumers do not directly donate money to charity but rather donate indirectly by purchasing cause-related products from the sponsoring firms. Then, the sponsoring firms donate proceeds from such product sales to the charitable cause. This incipient CM practice is crucial because prior theory premises a win–loss situation: the firm transfers some costs of CM onto consumers because their willingness to pay is higher for cause-related products (Koschate-Fischer, Stefan, and Hoyer 2012). We extend this literature by revealing a win–win situation: by combining moderate price discounts with CM offers, the firm can actually reap more revenues. The charity also earns both money and publicity that may boost future donations. Furthermore, consumers save some money with the moderate discount and feel good about participating in CM.

We also provide novel insights into the potential boundary conditions for the impact of CM. We identify a significant moderating role of price discounts, a widely used marketing-mix variable that is controlled by brand managers. Prior research has studied other affiliated moderators such as cause affinity (Koschate-Fischer, Stefan, and Hoyer 2012), cause fit (Gupta and Pirsch 2006), and brand strength (Henderson and Arora 2010; Strahilevitz 2003). Extending this stream of research, we examine the interaction effects of combining two separate promotion practices. We find that although either CM or price discounts can increase sales purchases, combining them can engender complications, leading to nonlinear, inverted U-shaped effects of CM on purchases.

Relatedly, our work pioneers the investigation of consumer response to the *interactions* between CM and price discounts. We provide evidence on such interactions, which have not been tested previously but suggest significant implications for both CM and price promotions. The nascent stream of research has largely focused on comparing the relative effects of CM versus price discount offers (Arora and Henderson 2007; Winterich and Barone 2011) without analyzing the interactions between the two. Extending these studies, we explicitly address the interplay and interactive effects of CM and discounts on sales purchases. The positive impact of CM may be highest when price discounts are neither overtly large nor small or absent. The result that CM effectiveness is amplified when discounts go from zero to moderate but attenuated when discounts go from moderate to deep is novel to the literature.

Our findings also provide a cautionary tale: deep discounts may not amplify CM effectiveness but rather may attenuate it counteractively. Indeed, prior literature has suggested that extrinsic monetary incentives can dampen intrinsic prosocial behavior (Hossain and Li 2014; Peloza, White, and Shang 2013). For example, Ariely, Bracha, and Meier (2009) indicate that monetary incentives can backfire by diluting the public image value of prosocial behavior. Gneezy and Rustichini (2000) report that offering students money to raise charity funds can decrease their efforts and performance by displacing intrinsic motivations. Frey and Oberholzer-Gee (1997) show that financial compensation can crowd out people's intrinsic sense of duty or ability to indulge in altruistic feelings. Psychologists refer to this instance of self-perception analysis, in which people perceive their own behavior as motivated by extrinsic incentives, as an "overjustification effect" of unnecessarily high extrinsic incentives (Lepper, Greene, and Nisbett 1973). In marketing, Newman and Shen (2012, p. 982) find that receiving something in return instigates "ambiguity about whether one is donating to support the charity or instead to receive the item." In addition, Liu and Aaker (2008, p. 553) note that the direct "link between helping and happiness" is attenuated by reciprocal incentives. We contribute to this line of research by examining deep discounts as another type of extrinsic monetary incentive, which can have an unintended consequence of attenuating CM effectiveness. This also adds to the list of contingency factors that negatively affect CM effectiveness, such as firm–cause fit incongruence (Simmons and Becker-Olsen 2006), inability to choose the cause to support (Robinson, Irmak, and Jayachandran 2012), and utilitarian product nature (Koschate-Fischer, Stefan, and Hoyer 2012).

Managerial Implications

Our research provides several important implications for managers. Our large-scale evidence is timely, because practitioners lament that they do not "really know how well [CM] programs stack up because no one's ever actually crunched the numbers" (Neff 2008). Our work responds precisely to this concern by calculating the sales revenues from an actual CM campaign. Marketers can leverage a similar study design to unveil the sales impact of their own CM campaigns.

In addition, our findings provide actionable guidelines for CM industry practices. More and more firms are favoring the combination of CM and other promotional tactics over stand-alone CM. Managers may instinctively attempt to entice customers and increase sales by offering deep discounts in CM deals. Yet we find a pleasant surprise: moderate discounts (10%–30% off) can amplify the sales impact of CM, whereas deep discounts (50% off or more) can actually attenuate it. Thus, managers can save some of their promotional budget but still achieve more sales. Specifically, they can obtain a bigger bang for their promotional bucks with CM deals by coupling moderate rather than deep discounts with CM initiatives.

Moreover, we combine field and laboratory experiments to provide insights into the black box of the psychological mechanisms through consumers' good feelings (e.g., Andreoni 1989; Winterich and Barone 2011). These findings are important to managers in that consumers' good feelings channel the double-edged impact of discounts on CM effectiveness. A moderate level of discounts may signal to consumers that the firm is also acting altruistically by forgoing the opportunity to sell at full price and thereby sacrificing more revenues, thus boosting consumers' warm-glow feelings and consequent purchase likelihood. However, deep discounts may rob consumers of their good feelings and purchase intentions. This extension of the good feelings mechanism to the novel context of extrinsic incentives advances our understanding of how extrinsic incentives can coexist delicately with intrinsic incentives in motivating charitable behavior (Anik, Norton, and Ariely 2014; Koschate-Fischer, Stefan, and Hoyer 2012; Robinson, Irmak, and Jayachandran 2012). Managers should thus consider refraining from bundling CM with deep price discounts to avoid depriving consumers of the warm-glow feelings that drive their purchase intentions for CM initiatives.

Limitations and Further Research

The limitations of this research provide several avenues of further investigation. For example, it is possible that product nature generates differences in the effectiveness of combining CM with price discounts. Whereas in our research, consumers could partly ascertain the quality of the promoted product before consumption, other products such as services bear less assurance of quality than do goods. Therefore, future studies could investigate the potential differences of product nature for the sales outcomes of the combination of CM and price discounts.

It is also possible that the underlying process for these effects differs depending on whether consumers are purchasing in a group or alone. Group settings introduce social impression motives that are absent from solitary purchasing settings (Luo, Andrews, Song et al. 2014). In addition, whether consumers are purchasing for themselves or for others might generate differences as well. For these reasons, future studies could further delineate the boundary conditions of our findings.

Moreover, our pretests and lab studies indicate that moderate price discounts refer to more commonly used discounts, ranging from 10% to 30% off the regular price, whereas deep discounts refer to less commonly used discounts, such as 50% off or more. However, we acknowledge that identifying the precise point of a moderate discount level is challenging. Setting up and executing a large-scale randomized experiment involved striking collaborations with one of the world's largest wireless providers, negotiating the discounts offered in the promotional message, engaging real-world mobile users, and convincing our collaborating partners that it is worthwhile to test different combinations of CM and price discounts to unravel their interactive effects on sales purchases. Part of this collaborative agreement was the ability to run our experiment on a certain percentage of the wireless provider's customer base, which restricted the number of discount conditions we could test. Thus, when feasible, further research could explore the precise point of optimal moderate discounts with more conditions of incremental percentages (5%, 10%, …, 60%, 65%, etc.).

Another fruitful avenue of study involves longevity effects: do consumers who support firms through charitable purchases continue to purchase CM deals from the firm? Recent research suggests a possible affirmation: when firms match donations to a cause, they are more likely to retain those donors in the future (Anik, Norton, and Ariely 2014). Thus, studies could explore the long-term effects of pairing CM with price discounts for both the firm (in terms of customer loyalty and word of mouth) and the charity (in terms of future donations).

Conclusion

This research is an initial step toward leveraging large-scale randomized field experiments to examine the sales impact of CM and the moderating role of price discounts. We hope it spurs further research on how marketers may obtain greater CM effectiveness.

APPENDIX A
A Comprehensive Review of CM Studies

Study	Main Findings	Sample Size	Data	Moderator/Contingency Variables	Mediator Variables
Arora and Henderson (2007)	Cause marketing results in incremental utility for consumers and increases product attitude and purchase likelihood. The effects of CM are greater than the effects of equal-value price promotions. The effects of CM are greater for unknown brands than for known ones. Cause marketing in which consumer effort is required is less effective than no-effort CM. The effectiveness of CM is heterogeneous across consumers and is affected by affinity for the focal charity, personal motivations, and demographic markers. Allowing consumers to select the cause boosts CM effectiveness.	131; 1,650; 489	One lab experiment (with students); two experiments with an online panel	Customer–cause variable (affinity with the cause) Company variables (brand recognition) Cause variables (self- vs. other component; effort required from consumer; choice of cause; multiple causes)	
Chang (2008)	Cause marketing with frivolous products is more effective than CM with practical ones. Consumers accept an offering with a cause more easily when the donation magnitude is low ratherthan high. Product type effects arise when the donation is framed in absolute dollar terms. Donation framing effects are insignificant when donation magnitude is high. The influence of donation magnitude is limited in high-priced items.	960	One lab experiment (with students)	Cause variables (hedonic vs. utilitarian products; high vs. low price products; percentage vs. dollar framing)	
Cui et al. (2003)	A CM offering is likely to elicit more positive responses to disaster causes than ongoing causes when firms use non-transaction-based and long-term support. Female gender, social science education, parents' annual income, and previous donation activity have positive influences on CM evaluations.	389	One lab experiment	Cause variables (disaster vs. ongoing; local vs. national; transaction- vs. non-transaction-based support; long- vs. short-term support)	
Elfenbein and McManus (2010)	Consumers pay higher prices for auction products that generate charitable donations; bidders bid earlier in charity auctions, stimulating other bidders.	2,433 auctions	Data from eBay auctions	Cause variables (product value) Customer variables (nature as bidder)	
Folse, Niedrich, and Grau (2010)	The positive effect of donation amount on participation intention is mediated by consumer inferences about the firm. The effects of purchase quantity on firm inferences and participation intentions are moderated by consumer effort. Purchase quantity influences participation intentions by social exchange, but the effects of purchase quantity are primarily the result of the economic exchange.	630; 477; 116	One experiment with an online panel; two lab experiments	Cause variables (participation effort)	Company variables (perceived CSR and firm motives)
Grau and Folse (2007)	Local donations and positive message framing have positive effects on attitude toward the CM campaign and participation intentions. Donation proximity does not influence evaluations of more cause-involved consumers but does influence those of less cause-involved consumers. Less cause-involved consumers have more favorable attitudes toward CM campaigns when CM messages emphasize the survival rates (positively framed) rather than the death rates (negatively framed), and this effect is mediated by a perception of the firm's social responsibility.	141; 166	Two lab experiments	Customer–cause variables (involvement with the cause) Cause variables (geographical proximity of the donation; positive vs. negative framing of the message)	Company variables (firm CSR)
Gupta and Pirsch (2006)	Company–cause fit has a positive effect on attitude toward the company–cause alliance and on purchase intent. This effect is reinforced by customer–company and customer–cause congruence as well as the customer's overall attitude toward the company.	232; 531	One lab experiment (with students); one experiment with an online panel	Company–cause variables (company–cause fit) Customer–cause variables (customer–cause congruence) Customer–company variables (customer–firm congruence; attitude toward the company)	

APPENDIX A
Continued

Study	Main Findings	Sample Size	Data	Moderator/Contingency Variables	Mediator Variables
Haruvy and Popkowski-Leszczyc (2009)	Consumers represent three segments: two altruistic and one selfish. The former segments elicit the charity premium in cause-related auctions and can be characterized as warm-glow bidders. The difference in donation percentages is a major factor influencing the charity premium. Bidders differ in their responses to donation percentages: other-regarding bidders seek auctions with higher donation percentages; warm-glow bidders only contribute when the charity premium is sufficiently low.	276; 96; 124; 176 auctions	Data from an Internet auction	Cause variables (donation percentage; retail price of the product) Customer variables (number of bidders)	
Henderson and Arora (2010)	Cause marketing (embedded premium) of a corporate brand in one product category carries over to other product categories of the brand (and the presence of CM in multiple categories does not enhance the effect over a single-category promotion). For house-of-brands contexts, an inverse relationship exists between brand strength and incremental gain from CM. Cause marketing is more efficient than price discounting.	530; 3,041	Two experiments with an online panel	Company variables (brand strength; corporate brand vs. house of brands)	
Human and Terblanch (2012)	No significant effects found for CM donation amount or the strength of the donation recipient's brand.	184	One lab experiment (with students)	Cause variables (donation amount) Company variables (donation recipient's brand: branded and well known, branded and fictitious, unbranded and well known)	
Koschate-Fischer, Stefan, and Hoyer (2012)	There is a positive (yet concave/decreasing) relationship between donation amount and willingness to pay for the product in CM. Company–cause fit negatively moderates the relationship between donation amount and willingness to pay for the product. The motives customers associate with the company mediate the moderating effect of fit on the donation amount–willingness to pay link, especially for utilitarian and privately consumed products.	103; 115; 302; 242	Four lab experiments with students	Customer variables (attitude toward helping others; warm-glow motive) Customer–cause variables (cause involvement, cause organization affinity) Company–cause variables (company–cause fit)	
Krishna (2011)	Cause marketing reduces consumers' charitable giving overall, even when it is costless to buy through CM (versus not). Consumers seem to perceive that participating in CM is more selfish than direct charitable donations and are less happy if they substitute CM for charitable giving.	92; 116; 92	One field study; two lab experiments		
Krishna and Rajan (2009)	Cause marketing increases consumers' utility for a product linked to the cause. Cause marketing increases consumers' utility for other products offered by a firm. If each firm has an advantage in a product, there is an equilibrium wherein each firm only links its disadvantaged product to CM. If the spillover is strong, there is another equilibrium wherein each firm only links its advantaged product to a cause. In this case, firms raise prices on both products, earning higher profits than when neither firm engages in CM. A firm will never put its entire portfolio in CM.	216; 50	Two lab experiments (with students)		
Lafferty, Goldsmith, and Hult (2004)	Attitudes toward both the cause and the brand can be improved if consumer perceptions of the alliance are favorable. The cause benefits from the alliance to a greater degree than the brand. Fit between partners is important for acceptance. The effect of CM on attitudes toward the cause and the brand is greater when the cause is higher in familiarity.	463	One lab experiment (with students)	Customer–cause variables (familiarity with the cause)	

APPENDIX A
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Study	Main Findings	Sample Size	Data	Moderator/Contingency Variables	Mediator Variables
Lichtenstein, Drumwright, and Braig (2006)	Perceived CSR affects both customers' purchase behavior (through customer–corporate identification) and their donations to corporate-supported nonprofit organizations. Due to a perceived opportunity to do good by supporting a company that is changing its ways, customers are more likely to donate to a company-supported nonprofit when the company has a weaker history of CSR.	508; 61; 115	One field experiment, two lab experiments	Company–cause variables (connectedness between nonprofit domain and CSR domain)	Company variables (low CSR; perceived opportunity to do good)
Moosmayer and Fuljahn (2010)	Donation amount in CM has a positive influence on consumers' goodwill toward the CM campaign and on perceptions of the benefit to the nonprofit organization. Perceptions of firm behavior, goodwill toward the campaign, and attitude toward the product vary significantly by gender. The influence of donation amount is rooted in external perceptions and moderated by gender.	306	One online experiment (with students)	Customer variables (gender)	
Müller, Fries, and Gedenk (2014)	Donation amount has a positive effect on brand choice when consumers face no financial trade-off. Brand image is positively affected by larger donations if the donation is nonmonetary and negatively affected if the donation is monetary. If CM uses a combination of both monetary and nonmonetary donations, the effect of donation size on brand image has an inverted U shape.	1,361	One experiment with an online panel	Cause variables (monetary vs. nonmonetary donation; financial trade-off in donation vs. discount)	
Nan and Heo (2007)	A CM ad, compared with a similar ad without CM, elicits more favorable attitudes toward the company. With high versus low brand–cause fit, consumer attitudes toward the ad and the brand become more favorable. This effect, however, only emerges for consumers who have high brand consciousness.	100	One lab experiment (with students)	Customer variables (brand consciousness) Company–cause variables (brand–cause fit)	
Popkowski-Leszczyc and Rothkopf (2010)	Auctions with proceeds donated to charity elicit higher selling prices from higher bids by people with charitable motives. This occurs only when the charitable donation is a percentage of the auction revenue; a fixed charitable donation has no influence on prices. Prices increase with the percentage donated to charity. There is voluntary shill-like bidding, whereby bidders try to increase proceeds in charity auctions. Auctions with 25% of revenue for charity have higher net revenues than noncharity auctions.	308, 135, 90 (auctions)	Three field experiments (with Internet auctions)	Cause variables (additional bidding agents; product retail price)	
Popkowski-Leszczyc and Wong (2012)	Higher donation promises lead to increased selling prices in auctions, but at a diminishing rate. Low to medium degrees of donation promises lead to overpayments, meaning that sellers can profit from their charitable associations.	144; 300; 120 (auctions); 132; 134 (lab)	Three field experiments (with Internet auctions); two lab experiments	Cause variables (product retail price; amount of information on selling price; donation promise framing)	
Pracejus and Olsen (2004)	A CM offering's promised donation to a high-fit cause results in five- to ten-times higher donations than a promised donation to a low-fit cause. The value of CM does not justify its cost in terms of short-term sales.	128; 128	Two lab experiments (with students)	Company–cause variables (brand–cause fit)	
Pracejus, Olsen, and Brown (2003)	The donation amount of CM has a positive impact on product choice, along with product attributes.	33	One lab experiment		

APPENDIX A
Continued

Study	Main Findings	Sample Size	Data	Moderator/Contingency Variables	Mediator Variables
Robinson, Irmak, and Jayachandran (2012)	Consumers' freedom to choose the cause in a CM campaign is likely to enhance perceived personal role and purchase intentions. This occurs especially for consumers who are high in collectivism and when the company–cause fit is low. Offering consumers a chance to choose the charity may decrease purchase intentions when they are informed that charities are far from achieving their goals.	41; 88; 95; 120; 90	One field experiment; four lab experiments	Customer variables (collectivism) Company–cause variables (perceptual fit between company and cause; charity's proximity to goal)	Customer–cause variables (customer's perceived role in helping)
Smith and Alcorn (1991)	Three customer segments exist in terms of predisposition to participate in CM and donate: the primary contributor, the economically motivated, and the nonparticipator. Purchase intentions increase with increasing donations and differ by product type and customer segment.	316	Survey	Customer variables (segment, in terms of altruism)	
Strahilevitz (1999)	Sensitivity to monetary value in charity incentives is not as strong as sensitivity to monetary value in price discounts. Consumers are more likely to choose an offering with a donation over an offering with an equivalent discount when the monetary values are relatively small than when they are relatively large. Cause marketing's (price discounts') relative effectiveness in promoting hedonic (utilitarian) products may only occur with relatively large monetary values. Brands linked to large donations are more preferred in hedonic products, whereas brands linked to smaller donations are more preferred in practical products.	92; 116; 64	Three lab experiments (with students)	Cause variables (hedonic vs. utilitarian products; high vs. low monetary value)	
Strahilevitz (2003)	Firms perceived as ethical (unethical) are least (most) likely seen to have ulterior motives in running CM campaigns. Firms perceived as ethically neutral benefit the most from a CM campaign in terms of image.	79; 30	Two lab experiments (with students)	Company variables (firm's initial ethical image)	
Strahilevitz and Myers (1998)	Cause marketing is more effective (than cash discounts) in promoting hedonic/frivolous products than in promoting utilitarian/practical products.	150; 264; 1,200	Two lab experiments; one field experiment (with students)	Cause variables (hedonic vs. utilitarian products)	
Subrahmanyan (2004)	Consumers are more likely to purchase and pay price premiums for CM offerings related to practical vs. hedonic products. The finding is attributed to the consumers' Confucian values. The donation amount increases the likelihood of purchasing brands priced at 10%–25% premiums over alternatives.	187	One lab experiment	Cause variables (donation amount specified vs. not; frivolous vs. practical product type)	
Vaidyanathan and Aggarwal (2005)	Active commitment to a cause is a precondition for willingness to buy a product in CM. Self-perception is an underlying mechanism for the effectiveness of this technique. Cause marketing works only when the cost of supporting the cause is minimal.	98; 153	Two lab experiments (with students)	Customer–cause variables (precommitment to the cause; source of donation money: own vs. company)	
Van den Brink, Odekerken-Schröder, and Pauwels (2006)	Consumers have improved brand loyalty as a result of CM when the firm has a long-term commitment to the campaign and the campaign relates to a low-involvement product. The authors find no significant influence for short-term tactical CM campaigns.	240	One lab experiment (with students)	Company–cause variables (strategic vs. tactical commitment to the cause; management involvement; product involvement)	

APPENDIX A
Continued

Study	Main Findings	Sample Size	Data	Moderator/Contingency Variables	Mediator Variables
Varadarajan and Menon (1988)	Cause marketing is a versatile tool for many marketing objectives, from enhancing corporate visibility and image to stimulating sales and loyalty. It is defined as implementing a firm offer to contribute proceeds to a cause when consumers make cause-related purchases.	N.A.	N.A.		
Winterich and Barone (2011)	Consumers with interdependent (vs. independent) self-construals prefer CM offerings over price-discounted ones. These self-construal effects are mitigated if the CM does not involve a charity that is identity-congruent and if a cause-congruent identity is more salient than self-construal. They are also moderated by charity efficiency and product type.	168; 225; 252; 133; 168	Five lab experiments (with students and staff)	Cause variables (charity efficiency; product type) Customer–cause variables (identity congruence; identity salience)	

Notes: N.A. = not applicable.

Appendix B: Lab Experiment

All participants read the following: "Imagine [wireless provider] has sent an SMS to your mobile phone as pictured here." After viewing the SMS image, participants then answered questions that were designed as a company service survey:

Please indicate the extent to which you agree or disagree with the following questions:

- •[Wireless provider] performs public service often.
- •[Wireless provider] holds promotional events often.
- •[Wireless provider] has cause-related promotions often.

Participants were then asked to indicate the extent to which they agreed or disagreed with the following statements (1 = "strongly agree," and 11 = "strongly disagree"; items were translated and back-translated to ensure accuracy):

To measure warm-glow good feelings (Taute and Mcquitty 2004):

- •I would feel good if I purchased this cause-related deal.

To measure intention to act on the deal:

- •How likely would you purchase this deal?

To measure preference for suffering (Olivola and Shafir 2013; construct reliability = .93):

- •Purchasing this cause-related deal will take effort.
- •It will take a lot of work to purchase this cause-related deal.

To measure guilt (Xu and Schwartz 2009; construct reliability = .93):

- •I would feel guilty if I did not purchase this cause-related deal.
- •It would be a mistake to not purchase this cause-related deal.
- •I will regret it if I do not purchase this cause-related deal.

To measure the role of conflict (Tyebjee 1979; construct reliability = .94):

- •I feel there is a conflict between taking the discount to benefit myself and helping the charity benefit those who need it.
- •Saving money for oneself conflicts with benefiting others through charity.
- •I feel that the monetary discount is at odds with the charitable donation.

To measure feeling cheap:

- •I would feel cheap if I purchase this cause-related deal.

REFERENCES

Agarwal, Ashish, Kartik Hosanager, Michael D. Smith (2011), "Location, Location, Location: An Analysis of Profitability of Position in Online Advertising Markets," *Journal of Marketing Research*, 48 (December), 1057–73.

Andreoni, James (1989), "Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence," *Journal of Political Economy*, 97 (6), 1447–58.

Anik, Lalin, Michael I. Norton, and Dan Ariely (2014), "Contingent Match Incentives Increase Donations," *Journal of Marketing Research*, (published electronically April 25), [DOI: http://dx.doi.org/10.1509/jmr.13.0432].

Ariely, Dan, Anat Bracha, and Stephen Meier (2009), "Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially," *American Economic Review*, 99 (1), 544–55.

Arora, Neeraj and Ty Henderson (2007), "Embedded Premium Promotion: Why It Works and How to Make It More Effective," *Marketing Science*, 26 (4), 514–31.

Ashworth, Laurence, Peter R. Darke, and Mark Schaller (2005), "No One Wants to Look Cheap: Trade-Offs Between Social Disincentives and the Economic and Psychological Incentives to Redeem Coupons," *Journal of Consumer Psychology*, 15 (4), 295–306.

Barone, Michael J., Anthony D. Miyazaki, and Kimberly A. Taylor (2000), "Does One Good Turn Deserve Another? Examining the Influence of Cause-Related Marketing Efforts on Consumer Choice," *Journal of the Academy of Marketing Science*, 28 (2), 250–64.

Benabou, Roland and Jean Tirole (2006), "Incentives and Prosocial Behavior," *American Economic Review*, 96 (5), 1652–78.

Brown, Tom J. and Peter A. Dacin (1997), "The Company and the Product: Corporate Associations and Consumer Product Responses," *Journal of Marketing*, 61 (January), 68–84.

Chang, Chun-Tuan (2008), "To Donate or Not to Donate? Product Characteristics and Framing Effects of Cause-Related Marketing on Consumer Purchase Behavior," *Psychology and Marketing*, 25 (12), 1089–1110.

Cui, Yanli, Elizabeth S. Trent, Pauline M. Sullivan, and Grace N. Matiru (2003), "Cause-Related Marketing: How Generation Y Responds," *International Journal of Retail and Distribution Management*, 31 (6), 310–20.

Deng, C. and J. Gratz (2002), "Generating Randomization Schedules Using SAS Programming," in *Proceedings of the 27th Annual SAS Users Group International Conference*, Cyndie Gareleck, ed. Cary, NC: SAS Institute, 267–70.

Elfenbein, Daniel W. and Brian McManus (2010), "A Greater Price for a Greater Good? Evidence That Consumers Pay More for Charity-Linked Products," *American Economic Journal: Economic Policy*, 2 (2), 28–60.

Fiske, Alan P. and Philip E. Tetlock (1997), "Taboo Trade-Offs: Reactions to Transactions That Transgress the Spheres of Justice," *Political Psychology*, 18 (2), 255–97.

Folse, Judith A.G., Ronald W. Niedrich, and Stacy L. Grau (2010), "Cause-Related Marketing: The Effect of Purchase Quantity and Firm Donation Amount on Consumer Inferences and Participation Intentions," *Journal of Retailing*, 86 (4), 295–309.

Frey, Bruno S. and Felix Oberholzer-Gee (1997), "The Cost of Price Incentives: An Empirical Analysis of Motivation Crowding-Out," *American Economic Review*, 87 (4), 746–55.

Ghose, Anindya, Avi Goldfarb, and Sang Pil Han (2013), "How Is the Mobile Internet Different? Search Costs and Local Activities," *Information Systems Research*, 24 (3), 613–31.

Gneezy, Uri and John List (2013), *The Why Axis: Hidden Motives and the Undiscovered Economics of Everyday Life*. New York: PublicAffairs.

——— and Aldo Rustichini (2000), "Pay Enough or Don't Pay at All," *Quarterly Journal of Economics*, 115 (3), 791–810.

Goldfarb, Avi and Catherine Tucker (2011), "Online Display Advertising: Targeting and Obtrusiveness," *Marketing Science*, 30 (3), 389–404.

Goodman, Joseph K. and Selin A. Malkoc (2012), "Choosing Here and Now Versus There and Later: The Moderating Role of Psychological Distance on Assortment Size Preferences," *Journal of Consumer Research*, 39 (4), 751–68.

Grau, Stacy L. and Judith A.G. Folse (2007), "Cause-Related Marketing (CRM): The Influences of Donation Proximity and Message-Framing Cues on the Less-Involved Consumer," *Journal of Advertising*, 36 (4), 19–33.

Greene, William (2007), *Functional Form and Heterogeneity in Models for Count Data*. Boston: Now Publishers.

Gupta, Shruti and Julie Pirsch (2006), "The Company-Cause-Customer Fit Decision in Cause-Related Marketing," *Journal of Consumer Marketing*, 23 (6), 314–26.

Haruvy, Erman and Peter T.L.P. Leszczyc (2009), "Bidder Motives in Cause-Related Auctions," *International Journal of Research in Marketing*, 26 (4), 324–31.

Heath, Timothy B., Subimal Chatterjee, and Karen R. France (1995), "Mental Accounting and Changes in Price: The Frame Dependence of Reference Dependence," *Journal of Consumer Research*, 22 (1), 90–97.

Henderson, Ty and Neeraj Arora (2010), "Promoting Brands Across Categories with a Social Cause: Implementing Effective Embedded Premium Programs," *Journal of Marketing*, 74 (November), 41–60.

Hessekiel, David (2012), "Cause Marketing Makes Super Bowl, NASCAR Appearances," *Forbes*, (February 6), (accessed August 7, 2014), [available at http://www.forbes.com/sites/davidhessekiel/2012/02/06/cause-marketing-makes-super-bowl-nascar-appearances/].

Hossain, Tanjim and King King Li (2014), "Crowding Out in the Labor Market: A Prosocial Setting Is Necessary," *Management Science*, 60 (5), 1148–60.

Human, Debbie and Nic S. Terblanche (2012), "Who Receives What? The Influence of the Donation Magnitude and Donation Recipient in Cause-Related Marketing," *Journal of Nonprofit & Public Sector Marketing*, 24 (2), 141–60.

Inman, Jeffrey, Leigh McAlister, and Wayne D. Hoyer (1990), "Promotion Signal: A Proxy for a Price Cut?" *Journal of Consumer Research*, 17 (1), 74–81.

Isen, Alice M. (1970), "Success, Failure, Attention, and Reaction to Others: The Warm Glow of Success," *Journal of Personality and Social Psychology*, 15 (4), 294–301.

Korschun, Daniel, Chitra B. Bhattacharya, and Scott D. Swain (2014), "Corporate Social Responsibility, Customer Orientation, and the Job Performance of Frontline Employees," *Journal of Marketing*, 78 (May), 20–37.

Koschate-Fischer, Nicole, Isabel V. Stefan, and Wayne D. Hoyer (2012), "Willingness to Pay for Cause-Related Marketing: The Impact of Donation Amount and Moderating Effects," *Journal of Marketing Research*, 49 (December), 910–27.

Krishna, Aradhna (2011), "Can Supporting a Cause Decrease Donations and Happiness? The Cause Marketing Paradox," *Journal of Consumer Psychology*, 21 (3), 338–45.

——— and Uday Rajan (2009), "Cause Marketing: Spillover Effects of Cause-Related Products in a Product Portfolio," *Management Science*, 55 (9), 1469–85.

Lafferty, Barbara A., Ronald E. Goldsmith, and Thomas M. Hult (2004), "The Impact of the Alliance on the Partners: A Look at Cause–Brand Alliances," *Psychology and Marketing*, 21 (7), 509–531.

Leary, Mark R. (1995), *Self-Presentation: Impression Management and Interpersonal Behavior*. Madison, WI: Brown and Benchmark Publishers.

Lemon, Katherine N. and Stephen M. Nowlis (2002), "Developing Synergies Between Promotions and Brands in Different Price–Quality Tiers," *Journal of Marketing Research*, 39 (August), 171–85.

Lepper, Mark R., David Greene, and Richard E. Nisbett (1973), "Undermining Children's Intrinsic Interest with Extrinsic Reward: A Test of the 'Overjustification' Hypothesis," *Journal of Personality and Social Psychology*, 28 (1), 129–37.

Lichtenstein, Donald R., Minette E. Drumwright, and Bridgette M. Braig (2004), "The Effect of Corporate Social Responsibility on Customer Donations to Corporate-Supported Nonprofits," *Journal of Marketing*, 68 (September), 16–32.

Liu, Wendy and Jennifer Aaker (2008), "The Happiness of Giving: The Time-Ask Effect," *Journal of Consumer Research*, 35 (3), 543–57.

Luo, Xueming, Michelle Andrews, Zheng Fang, and Chee Wei Phang (2014), "Mobile Targeting," *Management Science*, 60 (July), 1738–56.

———, ———, Yiping Song, and Jaakko Aspara (2014), "Group-Buying Deal Popularity," *Journal of Marketing*, 78 (March), 20–33.

——— and Chitra B. Bhattacharya (2006), "Corporate Social Responsibility, Customer Satisfaction, and Market Value," *Journal of Marketing*, 70 (October), 1–18.

Miklos-Thal, Jeanine and Juanjuan Zhang (2013), "(De)marketing to Manage Consumer Quality Inferences," *Journal of Marketing Research*, 50 (February), 55–69.

Moosmayer, Dirk C. and Alexandre Fuljahn (2010), "Consumer Perceptions of Cause Related Marketing Campaigns," *Journal of Consumer Marketing*, 27 (6), 543–49.

Morales, Andrea C. (2005), "Giving Firms an 'E' for Effort: Consumer Responses to High-Effort Firms," *Journal of Consumer Research*, 31 (4), 806–812.

Müller, Sarah S., Anne J. Fries, and Karen Gedenk (2014), "How Much to Give? The Effect of Donation Size on Tactical and Strategic Success in Cause-Related Marketing," *International Journal of Research in Marketing*, 3 (2), 178–91.

Nan, Xiaoli and Kwangjun Heo (2007), "Consumer Responses to Corporate Social Responsibility (CSR) Initiatives: Examining the Role of Brand-Cause Fit in Cause-Related Marketing," *Journal of Advertising*, 36 (2), 63–74.

Neff, Jack (2008), "Yes, There Is an ROI for Doing Good but the Numbers Are Hard to Come by for Efforts by McD's, Sears and Others," *Advertising Age*, (May 26), (accessed August 7, 2014), [available at http://adage.com/article/news/roi-good/127277/].

Newman, George E. and Jeremy Y. Shen (2012), "The Counter-intuitive Effects of Thank-You Gifts on Charitable Giving," *Journal of Economic Psychology*, 33 (5), 973–83.

Olivola, Christopher Y. and Eldar Shafir (2013), "The Martyrdom Effect: When Pain and Effort Increase Prosocial Contributions," *Journal of Behavioral Decision Making*, 26 (1), 91–105.

Palmatier, Robert W., Cherly B. Jarvis, Jennifer R. Bechkoff, and Frank R. Kardes (2009), "The Role of Customer Gratitude in Relationship Marketing," *Journal of Marketing*, 73 (September), 1–18.

Peloza, John, Katherine White, and Jingzhi Shang (2013), "Good and Guilt-Free: The Role of Self-Accountability in Influencing Preferences for Products with Ethical Attributes," *Journal of Marketing*, 77 (January), 104–119.

Petersen, Andrew and V. Kumar (2014), "Perceived Risk, Product Returns, and Optimal Resource Allocation: Evidence from a Field Experiment," working paper, Georgia State University.

Popkowski-Leszczyc, Peter T.L. and Michael H. Rothkopf (2010), "Charitable Motives and Bidding in Charity Auctions," *Management Science*, 56 (3), 399–413.

——— and Leo T. Wong (2010), "The Effectiveness of Donation Promises in Charity Auctions as a Cause-Related Marketing Strategy," working paper, Department of Marketing, Business Economics & Law, University of Alberta.

Pracejus, John W. and G. Douglas Olsen (2004), "The Role of Brand/Cause Fit in the Effectiveness of Cause-Related Marketing Campaigns," *Journal of Business Research*, 57 (6), 635–40.

———, ———, and Norman R. Brown (2003), "On the Prevalence and Impact of Vague Quantifiers in the Advertising of Cause-Related Marketing (CRM)," *Journal of Advertising*, 32 (4), 19–28.

Preacher, Kristopher J. and Andrew F. Hayes (2004), "SPSS and SAS Procedures for Estimating Indirect Effects in Simple Mediation Models," *Behavioral Research Methods, Instruments, and Computers*, 36 (4), 717–31.

Raghubir, Priya (2004), "Free Gift with Purchase: Promoting or Discounting the Brand?" *Journal of Consumer Psychology*, 14 (1/2), 181–85.

——— and Kim Corfman (1999), "When Do Price Promotions Affect Pretrial Brand Evaluations?" *Journal of Marketing Research*, 36 (August), 211–22.

Robinson, Stefanie R., Caglar Irmak, and Satish Jayachandran (2012), "Choice of Cause in Cause-Related Marketing," *Journal of Marketing*, 76 (July), 126–39.

Simmons, Carolyn J. and Karen L. Becker-Olsen (2006), "Achieving Marketing Objectives Through Social Sponsorships," *Journal of Marketing*, 70 (October), 154–69.

Smith, Robert W. and Norbert Schwarz (2012), "When Promoting a Charity Can Hurt Charitable Giving: A Metacognitive Analysis," *Journal of Consumer Psychology*, 22 (4), 558–64.

Smith, Scott M. and David S. Alcorn (1991), "Cause Marketing: A New Direction in the Marketing of Corporate Responsibility," *Journal of Services Marketing*, 5 (4), 21–37.

Stern, Ken (2013), "Why Don't Corporations Give to Charity?" *Slate*, (August 8), (accessed August 7, 2014), [available at http://www.slate.com/articles/business/moneybox/2013/08/corporations_don_t_give_to_charity_why_the_most_profitable_companies_are.html].

Strahilevitz, Michal (1999), "The Effects of Product Type and Donation Magnitude on Willingness to Pay More for a Charity-Linked Brand," *Journal of Consumer Psychology*, 8 (3), 215–41.

——— (2003), "The Effects of Prior Impressions of a Firm's Ethics on the Success of a Cause-Related Marketing Campaign: Do the Good Look Better While the Bad Look Worse?" *Journal of Nonprofit and Public Sector Marketing*, 11 (1), 77–92.

——— and John G. Myers (1998), "Donations to Charity as Purchase Incentives: How Well They Work May Depend on What You Are Trying to Sell," *Journal of Consumer Research*, 24 (4), 434–46.

Subrahmanyan, S. (2004), "Effects of Price Premium and Product Type on the Choice of Cause-Related Brands: A Singapore Perspective," *Journal of Product & Brand Management*, 13 (2), 116–24.

Tangney, June Price and Ronda L. Dearing (2002), *Shame and Guilt*. New York: Guilford Press.

Taute, Harry and Shaun Mcquitty (2004), "Feeling Good! Doing Good! An Exploratory Look at the Impulsive Purchase of the Social Good," *Journal of Marketing Theory and Practice*, 12 (2), 16–27.

Tyebjee, Tyzoon T. (1979), "Response Time, Conflict, and Involvement in Brand Choice," *Journal of Consumer Research*, 6 (3), 295–304.

Vaidyanathan, Rajiv and Praveen Aggarwal (2005), "Using Commitments to Drive Consistency: Enhancing the Effectiveness of Cause-related Marketing Communications," *Journal of Marketing Communications*, 11 (4), 231–46.

Van Den Brink, Douwe, Gaby Odekerken-Schröder, and Pieter Pauwels (2006), "The Effect of Strategic and Tactical Cause-Related Marketing on Consumers' Brand Loyalty," *Journal of Consumer Marketing*, 23 (1), 15–25.

Varadarajan, P. Rajan and Anil Menon (1988), "Cause-Related Marketing: A Coalignment of Marketing Strategy and Corporate Philanthropy," *Journal of Marketing*, 52 (October), 58–74.

Viscusi, W. Kip, Joel Huber, and Jason Bell (2011), "Promoting Recycling: Private Values, Social Norms, and Economic Incentives," *American Economic Review Papers and Proceedings*, 101 (3), 65–70.

Wagner, Tillmann, Richard J. Lutz, and Barton A. Weitz (2009), "Corporate Hypocrisy: Overcoming the Threat of Inconsistent Corporate Social Responsibility Perceptions," *Journal of Marketing*, 73 (December), 77–91.

Winterich, Karen P. and Michael J. Barone, (2011) "Warm Glow or Cold, Hard Cash? Social Identity Effects on Consumer Choice for Donation Versus Discount Promotions," *Journal of Marketing Research*, 48 (February), 855–68.

———, Vikas Mittal, and Karl Aquino (2013), "When Does Recognition Increase Charitable Behavior? Toward a Moral Identity-Based Model," *Journal of Marketing*, 77 (May), 121–34.

Xu, Jing and Norbert Schwarz (2009), "Do We Really Need a Reason to Indulge?" *Journal of Marketing Research*, 46 (February), 25–36.