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Do Promotions Make Consumers More Generous? The Impact of Price Promotions on Consumers' Donation Behavior

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Abstract

Despite growing concerns regarding the increasing consumerism related to promotions, this research documents a positive effect of price promotions on consumers' donation behavior. Specifically, the authors propose that price promotions increase consumers' perceived resources, which in turn increase consumers' donation behavior. A series of seven studies, combining field and experimental data, provide converging support for this proposition and its underlying mechanism of perceived resources. Furthermore, the authors show that the positive effect of price promotions on consumers' donation behavior is attenuated when consumers focus on the amount of money spent (rather than saved), when consumers feel they have overspent their budget, and when the monetary savings cannot be realized immediately. Finally, the authors show that this effect is stronger when donation solicitation occurs immediately after the price promotion (vs. after a delay). This research documents a novel behavioral consequence of price promotions and uncovers a mechanism by which price promotions can lead to positive social consequences and contribute to a better world.

Keywords

donation behavior, perceived resources, price promotion

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As an effective strategy for attracting consumers and increasing sales, price promotions are undoubtedly one of the most important marketing tools. In the last decade, price promotion events, such as Black Friday and Cyber Monday in Western countries as well as Alibaba's Double 11 Singles' Day in China, have become increasingly popular and yielded record-setting sales for the companies involved. For example, in 2019, U.S. consumers spent $7.4 billion on Black Friday and $9.4 billion on Cyber Monday (Klebnikov 2019). In the same year, the Chinese e-commerce giant Alibaba achieved a sales volume of more than $38.3 billion on Singles' Day alone (Kharpal 2019).

Despite the large sales volume achieved in price promotion events, some criticize the events for promoting consumerism and materialism. For example, the media has portrayed Black Friday as "America's greediest holiday" (Gertz, Porter, and Roeder 2018). As a result, several retailers and organizations call for boycotts on Black Friday and Cyber Monday sales (Ethical Consumers 2018), arguing that Black Friday not only ruins the spirit of Thanksgiving but also decreases social welfare by making consumers stingier and more selfish. An important question thus arises: Can price promotions lead to any positive social consequences? In the current research, we aim to address this question in the context of donation behavior.

While a large body of research has examined the effect of price promotions on firm performance and consumers' purchasing behaviors, the existing research is relatively silent on whether and how price promotions have important social consequences. In this research, we demonstrate that price promotions actually can have a positive impact on consumers' donation behavior via an increase in consumers' perceived resources. A series of seven studies, combining field and experimental data, offer converging support for this proposition. Providing support for the perceived resources mechanism, we show that the effect of price promotions on donation behavior is moderated by whether consumers focus on the money spent rather than saved, whether consumers feel they have overspent their budget, and whether the monetary savings can be realized immediately. Furthermore, we show that the increase in perceived resources dissipates over time, and thus, the positive effect of price promotions on donation behavior is stronger when donations are solicited immediately after the price promotion. We also demonstrate the external validity of this effect in two field surveys among actual shoppers as well as two field experiments.

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This research makes important theoretical and practical contributions. From a theoretical perspective, our findings contribute to the price promotion literature by shedding light on the positive social consequences of price promotions. To the best of our knowledge, this is the first research to examine how price promotions can facilitate consumers' donation behavior. While the cause-related marketing literature has studied promotions and donation behavior together, it has focused narrowly on charitable donations as the promotion (e.g., Strahilevitz and Myers 1998; Varadarajan and Menon 1988). By contrast, the present research focuses on donation behavior as a *consequence* of promotions. Furthermore, while researchers have examined various factors that influence consumers' donation behavior, price promotion (to the best of our knowledge) has never been considered one of those factors. This research thus adds to the donation behavior literature by identifying price promotion as a novel situational factor that can drive consumers' donation behavior.

From a practical perspective, this research provides pertinent and actionable implications for both charitable organizations and firms. Charitable organizations can optimize their campaigns by choosing strategic targets and timing for donation solicitations—specifically, charities should target consumers who are taking part in promotions (because this group of consumers is easy to identify and is more likely to donate than the general population) and should solicit donations immediately after a price promotion event. For firms, price promotions may be great opportunities to raise funds for charitable causes, in the spirit of corporate social responsibility, by soliciting donations right after consumers have made their purchases. In traditional cause-related marketing practices, consumers might doubt a firm's prosocial motivation because its charitable donations depend on whether consumers purchase the products (Dean 2003; Foreh and Grier 2003). Our findings suggest that firms can overcome this negative inference and enhance their corporate social responsibility image by soliciting donations *after* consumers make their purchases.

In the following section, we review the relevant literature and derive our hypotheses for the mechanism by which price promotions can influence consumers' donation behavior. Finally, we articulate implications of our findings in the "General Discussion" section.

Literature Review

Price Promotions

The effects of price promotions have been studied extensively from both the marketer and consumer perspectives. From the marketers' perspective, the most obvious benefit of a price promotion is that it can increase sales (Blattberg and Neslin 1990). This increase of sales caused by price promotions is attributed to two major mechanisms: purchase acceleration, in which consumers purchase promoted products sooner or in larger quantities, and brand switching, in which consumers switch to promoted brands of higher quality (Bell, Chiang, and Padmanabhan 1999). However, price promotions may also entail potential long-term risks for firms. Specifically, stockpiling may preempt future sales (Ailawadi et al. 2007); frequent promotion events may increase consumers' price sensitivity (Mela, Gupta, and Lehmann 1997) and may also undermine firms' brand equity (Yoo, Donthu, and Lee 2000).

From the consumers' perspective, they can benefit from price promotions in several ways. First, consumers can derive utilitarian benefits, such as monetary savings and the opportunity to upgrade to higher-quality products (Blattberg and Neslin 1990; Chandon, Wansink, and Laurent 2000). Second, consumers can derive hedonic benefits, such as happiness or enjoyment, from saving money (Ashworth and McShane 2012; Chandon, Wansink, and Laurent 2000; Mukhopadhyay and Johar 2007). Third, by participating in price promotions, consumers may construct a positive self-perception as a smart shopper (Schindler 1998).

Price promotions may also induce certain negative responses from consumers. For example, consumers may make negative inferences about a discounted product (e.g., that it must be low-quality; Darke and Chung 2005; Raghubir and Corfman 1999). As a result, some consumers might be reluctant to make purchases during price promotions (Ashworth, Darke, and Schaller 2005). In line with this notion, Cai, Bagchi, and Gauri (2016) showed that the sales volumes of indulgent products (e.g., ice cream) actually decrease when there is a small price discount (e.g., $<10\%$ off). In addition, prior research suggests that price promotions can reduce perceived product efficacy (Shiv, Carmon, and Ariely 2005) and negatively influence consumers' enjoyment of postpurchase consumption (Lee and Tsai 2014). Moreover, a price promotion can prompt unplanned or impulsive purchases (Heilman, Nakamoto, and Rao 2002), which can induce negative emotions such as guilt (Mukhopadhyay and Johar 2007). More recently, Shady and Lee (2020) showed that mere exposure to price promotions can cause consumers to act more impatiently in unrelated domains.

Although robust research has studied the impact of price promotions on firms' performances, consumers' purchasing behaviors, and consumption experiences, there is a gap in the literature on the social consequences of price promotions. In this research, we aim to address this gap by examining whether and how price promotions influence consumers' donation behavior.

Antecedents of Donation Behavior

Prior research has suggested that consumers' donation behavior can be driven by both individual and situational antecedents. In terms of individual factors, moral identity (e.g., Lee, Winterich, and Ross 2014; Reed, Aquino, and Levy 2007; Winterich, Mittal, and Aquino 2013), gender identity (Winterich, Mittal, and Ross 2009), and self-construal (Duclos and Barasch 2014) have been studied as important predictors of donation behavior.

In addition, prior research has examined various situational factors that influence donation behavior, such as positive mood (e.g., Isen and Levin 1972; Lyubomirsky, King, and Diener 2016), discrete emotions such as guilt and love (e.g., Basil, Ridgway, and Basil 2008; Cavanaugh, Bettman, and Luce 2015), mortality salience (e.g., Cai and Wyer 2015), and social norms (e.g., White and Peloza 2009). In the current research, we contribute to

the donation behavior literature by identifying price promotion as a novel situational antecedent of donation behavior.

Conceptual Development and Hypotheses

In this research, we examine the effect of price promotions on consumers' donation behavior. Specifically, we propose that price promotions can increase consumers' perceived resources, and the perception of greater resources, in turn, can increase consumers' donation behavior. We elaborate on our conceptual framework to derive our hypotheses in the following subsection.

The Impact of Price Promotions on Consumers' Perceived Resources

In this research, we define "perceived resources" as consumers' perception of their current monetary resources. Such a perception can be influenced by both objective factors (e.g., one's actual monetary resources) and subjective factors (e.g., the subjective experience of saving money). Price promotions can work on both levels.

First, price promotions can offer actual monetary savings. If consumers have already mentally budgeted their purchase expenses, then a price promotion (e.g., a discount on the promoted product or an offer for more of the same product for free) reduces consumers' expenses, thus freeing up monetary resources for other purposes (Blattberg and Neslin 1990; Chandon, Wansink, and Laurent 2000). This is especially true for unexpected promotions (e.g., surprise coupons). In line with this notion, prior research suggests that consumers perceive unexpected savings from buying products on sale as windfall gains (Arkes et al. 1994; Heilman, Nakamoto, and Rao 2002). This phenomenon is also referred to as a "psychological income effect" (Heilman, Nakamoto, and Rao 2002). Thus, the actual monetary savings from price promotions should prompt consumers to perceive an increase in resources.

Second, price promotions can increase consumers' subjective experience of saving money, which is derived from a comparison with a reference price (Grewal, Monroe, and Krishnan 1998; Lichtenstein, Netemeyer, and Burton 1990; Thaler 1985). For example, transaction utility theory (Thaler 1985) suggests that consumers gain transaction utility when they compare the price they pay with a reference price. In price promotions, the regular price is usually offered as a reference price, causing consumers to perceive that they are saving money. Consistent with transaction utility theory, prior research has shown that consumers perceive savings in price promotions when they compare the discounted price with the higher original price (Blair and Landon 1981). Various marketing efforts (e.g., strategic display of a higher manufacturer's suggested price) can also increase consumers' perceived savings in price promotions (Krishna et al. 2002). In no-promotion situations, in contrast, an external reference price is usually not available, so there are no salient perceived savings. Therefore, compared with no-promotion situations, participating in price promotions can make consumers believe they are saving money. This subjective experience of saving money can also increase consumers' perceived resources. Synthesizing these two factors, we propose that price promotions can boost consumers' perceived resources.

Perceived Resources and Consumers' Donation Behavior

The amount of resources that consumers have available to allocate is an important driver of donation behavior (Berman et al. 2020; Dovidio et al. 2006; Sober and Wilson 1999). Because donation behavior requires consumers to direct resources away from the self and toward others, consumers should be more (vs. less) likely to engage in donation behavior when their actual resources are abundant (vs. scarce). In line with this notion, Korndörfer, Egloff, and Schmukle (2015) conducted a large-scale test and found an overall positive relationship between social class and donation behavior. Similarly, Andreoni, Nikiforakis, and Stoop (2017) used a field experiment to show that rich (vs. poor) households are more likely to behave prosocially by returning "misdelivered" envelopes. Nevertheless, the literature contains mixed empirical evidence on how a consumer's actual resources affect their donation behavior. For example, Piff et al. (2010) found that people from lower socioeconomic classes or with less power are more motivated to help others in need.

In this research, we focus on the amount of perceived (not actual) resources, which has a more established positive relationship with donation behavior (Havens, O'Herlihy, and Schervish 2007; Roux, Goldsmith, and Bonezzi 2015; Wiepking and Breeze 2012). For example, Havens, O'Herlihy, and Schervish (2007) and Wiepking and Breeze (2012) showed that, regardless of actual financial resources, people who perceive their financial situation as more abundant (vs. scarce) are more generous in their donations. In another stream of literature on the effects of resource scarcity on consumer behavior, Roux, Goldsmith, and Bonezzi (2015) showed that perceived resource scarcity can trigger a competitive orientation and reduce consumers' likelihood of donating to charities. Similarly, Levontin, Ein-Gar, and Lee (2015) suggested that a perceived resource deficiency causes consumers to donate less to charities. These findings lead to our prediction that an increase in perceived resources should promote donation behavior.

Note that the donation behavior literature distinguishes between donation rate and donation amount. The existing literature on the relationship between resources and donation behavior has documented a consistently positive impact of resources on donation amount and an inconsistent impact of resources on donation rate (for a review, see Wiepking and Bekkers [2012]). In the current research, we examine donation behavior by analyzing both the donation rate and donation amount.

Hypotheses

In this research, we define perceived resources as consumers' perception of their current monetary resources. Building on the aforementioned discussion, we propose that price promotions can increase consumers' perceived resources, and the greater

perceived resources, in turn, increase consumers' donation behavior. More formally,

> **H_1:** Price promotions increase consumers' donation behavior.
>
> **H_2:** The positive effect of price promotions on donation behavior is mediated by an increase in perceived resources.

As discussed previously, the positive effect of price promotions on perceived resources can come from two sources: actual monetary savings and a subjective experience of saving money. The relative importance of these two driving forces may differ across situations. Specifically, consumers experience actual monetary savings when they have already decided to make the purchase and the promotion comes as a surprise. In such cases, consumers perceive the saved money as windfall gains. However, the subjective experience of saving money depends on the comparison with a salient reference price. Thus, when a promotion is unexpected, consumers may experience a greater increase in perceived resources due to both actual monetary savings and a subjective experience of saving money. By contrast, when a promotion is expected, consumers do not benefit objectively from actual monetary savings, but they may still experience a subjective experience of saving money. In the current research, we examine both expected and unexpected promotions. Furthermore, because the definition of perceived resources in this research pertains to consumers' perception of their *current* monetary resources, consumers are less likely to experience an increase in their perceived resources when the monetary savings from the promotion cannot be realized immediately.

Thus, we propose that the positive effect of price promotions on consumers' donation behavior should be attenuated (1) when consumers are made to think about how much money they have spent rather than saved, (2) when consumers feel they have overspent their budget, and (3) when the monetary savings from the promotion cannot be realized immediately. Next, we discuss how each of these factors influences consumers' perceived resources in more detail. Of course, there are probably other conceptually relevant moderators that we do not explore here, and we encourage future research to test other possibilities.

Focus on money spent. Consumers have greater perceived resources after participating in price promotions because monetary savings from promotions are often more salient to consumers (Blair and Landon 1981; Krishna et al. 2002). Following this logic, the salience of monetary savings should be disrupted if consumers are prompted to focus on the money they have spent on their purchases. In such cases, consumers' perceived resources are less likely to increase because the subjective experience of saving money is weaker. Instead, consumers may realize that their current monetary resources have been diminished by the recent purchases.

> **H_3:** The positive effect of price promotions on consumers' donation behavior is attenuated when consumers are made to think about how much money they have spent (vs. saved) on their purchases.

Budget overspending. As discussed previously, consumers' subjective experience of saving money in price promotions depends on the comparison with a higher reference price (e.g., regular price). However, such subjective perception can be influenced by a different reference price: mental budget. Specifically, consumers tend to track their expenses against their mental budget (Heath and Soll 1996; Stilley, Inman, and Wakefield 2010). When consumers feel that they have overspent their budget, their subjective experience of saving money is reduced as they realize that they have spent more money than they should. In such situations, their perceived resources are less likely to increase.

> **H_4:** The positive effect of price promotions on donation behavior is attenuated when consumers feel that they have (vs. have not) overspent their budget.

Realization of monetary savings. As we have mentioned, the monetary savings from promotions cause consumers to perceive an increase in their current monetary resources. However, the savings from price promotions are not always immediate. For example, stores often issue rebates or rebate coupons that consumers cannot use until their next purchase. In such situations, consumers' current expenditures are unaffected by the promotion, so their perceived resources are unlikely to increase until they realize those monetary savings in the next purchase. Therefore, the positive effect of price promotions on consumers' donation behavior should be attenuated when the monetary savings cannot be realized immediately.

> **H_5:** The positive effect of price promotions on donation behavior is attenuated when the monetary savings cannot be realized immediately (e.g., future rebates).

In addition to the aforementioned three moderators that influence the relationship between price promotions and consumers' perceived resources, we identify another managerially relevant moderator that can influence the relationship between perceived resources and donation behavior.

Time interval between the price promotion and donation solicitation. After consumers participate in a price promotion, their increase in perceived monetary resources—and subsequent increase in donation behavior—should diminish over time for two main reasons. First, if consumers actually saved money in the promotion, they may spend that money on other consumption alternatives in the near future. Second, consumers may gradually adapt to the subjective experience of saving money as time passes after the promotion event (Gourville and Soman 1998; Thaler 1999). Thus, the positive impact of the increase in perceived resources on donation behavior should dissipate with a delay between the price promotion event and donation solicitation.

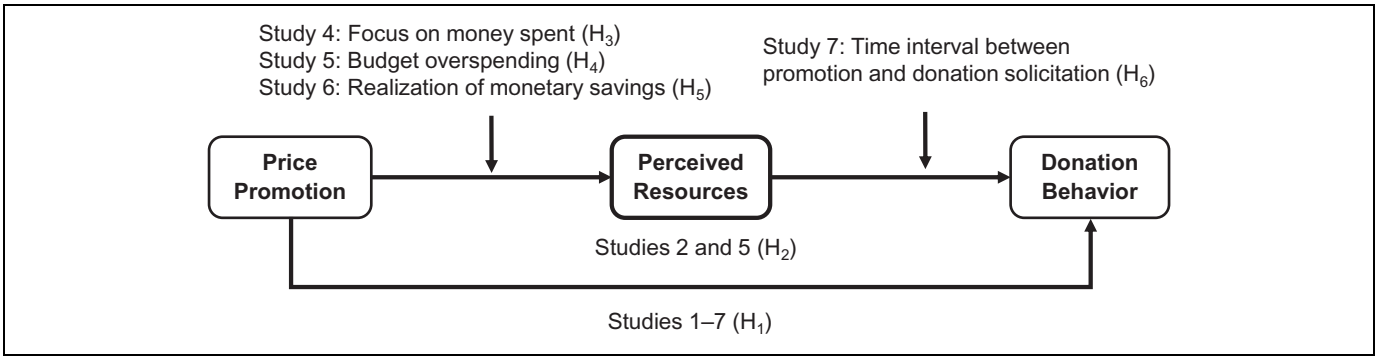

Figure 1. Overview of conceptual framework and studies.

H_6: The positive effect of price promotions on donation behavior is stronger when the donation is solicited immediately after the price promotion and is attenuated when there is a delay.

Overview of Studies

We tested our hypotheses in seven studies (for an overview of our conceptual framework and studies, see Figure 1). Study 1 provided initial field evidence for the positive effect of price promotions on consumers' donation behavior (H_1). Study 2 manipulated the presence as well as the magnitude of price promotions, provided causal evidence, and offered process support by examining the mediating role of perceived resources (H_2). Study 3 provided further causal evidence in a field experiment (H_1). Study 4 provided further support for the perceived resources mechanism by examining whether the effect is attenuated when consumers focus on the amount of money they spent in the promotion (H_3). Study 5 examined the moderating role of budget overspending (H_4). Study 6, another field experiment, examined the moderating role of the immediacy of the savings (H_5). Finally, Study 7 tested the moderating role of the time interval between the price promotion and donation solicitation (H_6). Across studies, we applied consistent outlier exclusion criteria (i.e., ± 3 SD from the mean) in our analyses and clearly stated any additional exclusion criteria in each study (for exclusion details across studies, see Web Appendix 7). Studies 2 and 5 also examined the impact of price promotions on consumers' feelings (for supplementary analyses on these measures, see Web Appendix 5). Across the seven studies, using both field and experimental data, our findings converged to establish the robustness and external validity of the effect and to provide support for the underlying mechanism of perceived resources.

Study 1: Field Evidence from Alibaba's Double 11 Sales Event

Alibaba's Double 11 sales event is the largest price promotion event in China, and its online retail website, Tmall, offers big price promotions on November 11 (hence the name "Double 11"). In Study 1, we used this opportunity to collect field evidence on the impact of price promotions on consumers' charitable behaviors. Actual donation data from two charitable organizations provided preliminary support for our hypothesis (see Web Appendix 1). To further examine the impact of the Double 11 sales event on charitable behaviors, we surveyed individual shoppers who participated and examined whether their spending during the Double 11 sales event positively predicted their charitable behaviors in the subsequent week.

Method

One hundred thirty-five shoppers who participated in the 2017 Alibaba's Double 11 sales event (44.4% female; all $\geq$18 years old) were recruited from an online panel in China on November 18 to complete this study in exchange for monetary compensation. Shoppers were told that the study aimed to understand consumers' shopping experience, and they completed a few ostensibly unrelated surveys. In the first survey, they were asked to indicate how much money (in RMB) they actually spent on their purchases during the sales event on a 22-point scale (1 = 0–200, 2 = 201–500, . . . , 21 = 40,001–50,000, and 22 = >50,000). Next, shoppers were asked to rate how much money they perceived they had saved during the sales event on a seven-point scale (1 = "very little money saved," and 7 = "a lot of money saved").

The second survey ostensibly sought to understand the shoppers' daily life experiences in the one week preceding the survey (i.e., the week after the sales event). Specifically, shoppers were asked whether they had engaged in each of 13 types of behavior in the week of November 12–18 (1 = yes, 0 = no; for the list of behaviors, see the Appendix). The responses to these 13 items were summed to form a composite charitable behaviors index. Shoppers were also asked whether they would be interested in engaging in those behaviors in the future. The responses to these 13 items were averaged to form a behavioral intention index (α = .92). Finally, shoppers completed basic demographic questions including their age range and gender; these measures were included in all subsequent studies and will not be mentioned again.

Results and Discussion

Perceived savings. A linear regression analysis revealed that the amount spent during the sales event had a significant, positive

effect on perceived savings (b = .11, t(133) = 3.20, $p = .002$). In other words, the more money shoppers spent during the Double 11 sales event, the more money they perceived they had saved.

Charitable behaviors during the week of the Double 11 sales event. In a linear regression, the amount spent during the event had a significant positive correlation with engagement in charitable behaviors (b = .26, t(133) = 2.89, $p = .004$). A mediation analysis (Hayes 2017, PROCESS Model 4 with 5,000 bootstrap samples) revealed that perceived savings mediated this effect (indirect effect = .11, SE = .05, 95% confidence interval [CI] = [.03, .22]).

Intention to engage in future charitable behaviors. Similarly, a linear regression analysis revealed a significant positive correlation between the amount spent during the Double 11 sales event and shoppers' intention to engage in charitable behaviors in the future (b = .07, t(133) = 3.29, $p = .001$). Again, a mediation analysis (Hayes 2017, PROCESS Model 4 with 5,000 bootstrap samples) revealed that perceived savings mediated the effect (indirect effect = .02, SE = .01, 95% CI = [.01, .05]).

As a robustness check, we conducted the same analyses with age and gender as covariates. Notably, controlling for age and gender did not alter the interpretation or level of significance of our results in this or any of the subsequent studies.

In summary, Study 1 found that shoppers' spending during the Double 11 sales event positively predicted both their charitable behaviors in the week following the event and their intention to engage in charitable behaviors in the future. Furthermore, perceived savings from the price promotions mediated the effect of shoppers' spending on their charitable behaviors. One limitation of such field data is that it can provide only correlational evidence. For example, one could argue that shoppers who spent more during the Double 11 sales event happened to be more interested in various forms of charitable behaviors in general. In the next studies, we intend to provide causal evidence for the effect of price promotions on consumers' charitable behavior.

Study 2: Manipulating the Presence and Magnitude of Price Promotions

In Study 2, we aimed to provide causal evidence for the impact of price promotions on consumers' donation behavior by manipulating not only the presence but also the magnitude of the price promotion. Furthermore, we examined the mediating role of perceived resources.

Method

Two hundred participants in the United States (37.5% female; $M_{age} = 34.7$ years) were recruited from Amazon's Mechanical Turk to complete this study in exchange for monetary compensation. Participants were randomly assigned to one of four conditions (no promotion vs. 10% off vs. 50% off vs. 50% off with double spending).

All participants were asked to imagine that they were visiting a shopping mall. In the 50%-off (10%-off) condition, participants were told that the shopping mall was having a 50% off (10% off) sales event, and they spent \$500 on purchases that originally cost \$1,000 (\$560). In the no-promotion (control) condition, participants were simply told that they spent \$500 on purchases. Finally, in the 50%-off-with-double-spending condition, participants were told that they spent \$1,000 on purchases that originally cost \$2,000. Because participants in the 50%-off-with-double-spending condition saved the most money, we expected that they would experience even greater perceived resources and hence would donate more to charities, relative to participants in the 10%-off and 50%-off conditions.

Subsequently, all participants were told that as they walked out of the shopping mall, they noticed that United Way was raising money for the Hurricane Florence Relief Fund to support local communities in South Carolina, North Carolina, Virginia, and the surrounding areas affected by Hurricane Florence. Participants indicated the amount they were willing to donate to this charity fund. Next, participants responded to three items regarding their perceived resources after making their purchases in the shopping mall: ("After making the purchase, I feel that I have saved a lot of money," "After making the purchase, I feel that I have more resources at hand," and "After making the purchase, I feel that my resources are sufficient"; 1 = "strongly disagree," and 7 = "strongly agree"). Responses to these three statements were averaged to form a perceived resources index ($\alpha = .88$). Finally, participants responded to two items regarding whether Hurricane Florence had affected them personally and whether it had affected their family and/or close friends (1 = "not at all," and 7 = "very much"); controlling for these two items in our subsequent analyses did not alter the interpretation or level of significance of the results (reported next).

Results and Discussion

To better understand the donation behavior behaviors in our experiments, we analyze both the donation rate and the average donation amount in each condition. In line with prior research (e.g., Winterich, Mittal, and Aquino 2013; Winterich, Mittal, and Ross 2009), we report the average donation amount across all participants (i.e., including those who indicated a zero donation amount) in the article. For completeness, we also report the average donation amount among only those who donated (i.e., excluding those who indicated a zero donation amount) in Web Appendix 6.

Donation rate. The percentage of participants who were willing to make a donation (i.e., who indicated a nonzero donation amount) did not significantly differ across conditions (Wald $\chi^2(3) = 3.73$, $p = .29$). Participants in the no-promotion condition (65.31%) exhibited a directionally lower likelihood of donating than participants in the 10%-off condition (76.00%), 50%-off condition (66.67%), and 50%-off-with-double-

spending condition (80.00%). The difference between the no-promotion condition (65.31%) and the pooled promotion conditions (74.17%) was not significant (Wald $\chi^2(1) = 1.57$, $p = .21$).

Donation amount. Given the large variance in the donation amount, we first identified and removed two outliers that were three standard deviations above or below the mean. In addition, the donation amount was positively skewed (skewness = 2.56, SE = .17). Thus, we log-transformed the donation amount after adding 1 to each score to include zeros in the analysis. The pattern of results remained the same regardless of whether we log-transformed the donation amount; for ease of interpretation, we report the untransformed means. An analysis of variance (ANOVA) revealed a significant main effect of the price promotion ($F(3, 194) = 3.88$, $p = .01$, $\eta_p^2 = .06$), and a trend analysis confirmed a linear trend ($F(1, 194) = 10.94$, $p = .001$, $\eta_p^2 = .05$). As Figure 2 shows, participants in the 50%-off condition ($M_{50\%} = \$14.92$, SD = \$22.09) indicated a greater donation amount than participants in the no-promotion condition ($M_{\text{no promo}} = \$7.54$, SD = \$11.44; $F(1, 194) = 2.89$, $p = .09$, $\eta_p^2 = .02$). More interestingly, participants in the 50%-off-with-double-spending condition indicated an even greater donation amount ($M_{50\%, \text{ double spend}} = \$23.86$, SD = \$30.29) than both participants in the 50%-off condition ($M_{50\%} = \$14.92$, SD = \$22.09; $F(1, 194) = 2.99$, $p = .09$, $\eta_p^2 = .02$) and participants in the no-promotion condition ($M_{\text{no promo}} = \$7.54$, SD = \$11.44; $F(1, 194) = 11.52$, $p < .001$, $\eta_p^2 = .06$). The donation amount in the 10%-off condition ($M_{10\%} = \$11.37$, SD = \$13.52) fell in the middle and did not differ significantly from the no-promotion condition ($F(1, 194) = 2.01$, $p = .16$, $\eta_p^2 = .01$), though the pattern was consistent with our expectation. Furthermore, a planned contrast between the no-promotion condition and the pooled promotion conditions was significant ($M_{\text{no promo}} = \$7.54$, SD = \$11.44 vs. $M_{\text{promo pooled}} = \$16.74$, SD = \$23.49; $F(1, 194) = 6.99$, $p = .01$, $\eta_p^2 = .03$).

Perceived resources. An ANOVA on the perceived resources index also revealed a significant main effect of the price promotion ($F(3, 194) = 29.51$, $p < .001$, $\eta_p^2 = .31$), and a trend analysis confirmed a linear trend ($F(1, 194) = 79.81$, $p < .001$, $\eta_p^2 = .29$). As shown in Figure 2, participants in the 50%-off condition ($M_{50\%} = 4.82$, SD = 1.76) reported greater perceived resources than participants in the no-promotion condition ($M_{\text{no promo}} = 2.57$, SD = 1.23; $F(1, 194) = 53.78$, $p < .001$, $\eta_p^2 = .22$). Interestingly, participants in the 50%-off-with-double-spending condition ($M_{50\%, \text{ double spend}} = 5.29$, SD = 1.47) reported even greater perceived resources than both participants in the 50%-off condition ($M_{50\%} = 4.82$, SD = 1.59; $F(1, 194) = 2.39$, $p = .12$, $\eta_p^2 = .01$) and participants in the no-promotion condition ($M_{\text{no promo}} = 2.57$, SD = 1.23; $F(1, 194) = 77.79$, $p < .001$, $\eta_p^2 = .29$). Participants in the 10%-off condition ($M_{10\%} = 4.28$, SD = 1.59) also reported greater perceived resources than participants in the no-promotion condition ($M_{\text{no promo}} = 2.57$, SD = 1.23; $F(1, 194) = 30.33$, $p < .001$, $\eta_p^2 = .14$). Furthermore, a planned contrast between the no-promotion condition and the pooled promotion conditions was also significant (F1, 194; $M_{\text{no promo}} = 2.57$, SD = 1.23 vs. $M_{\text{promo pooled}} = 4.80$, SD = 1.65) = 77.35, $p < .001$, $\eta_p^2 = .29$).

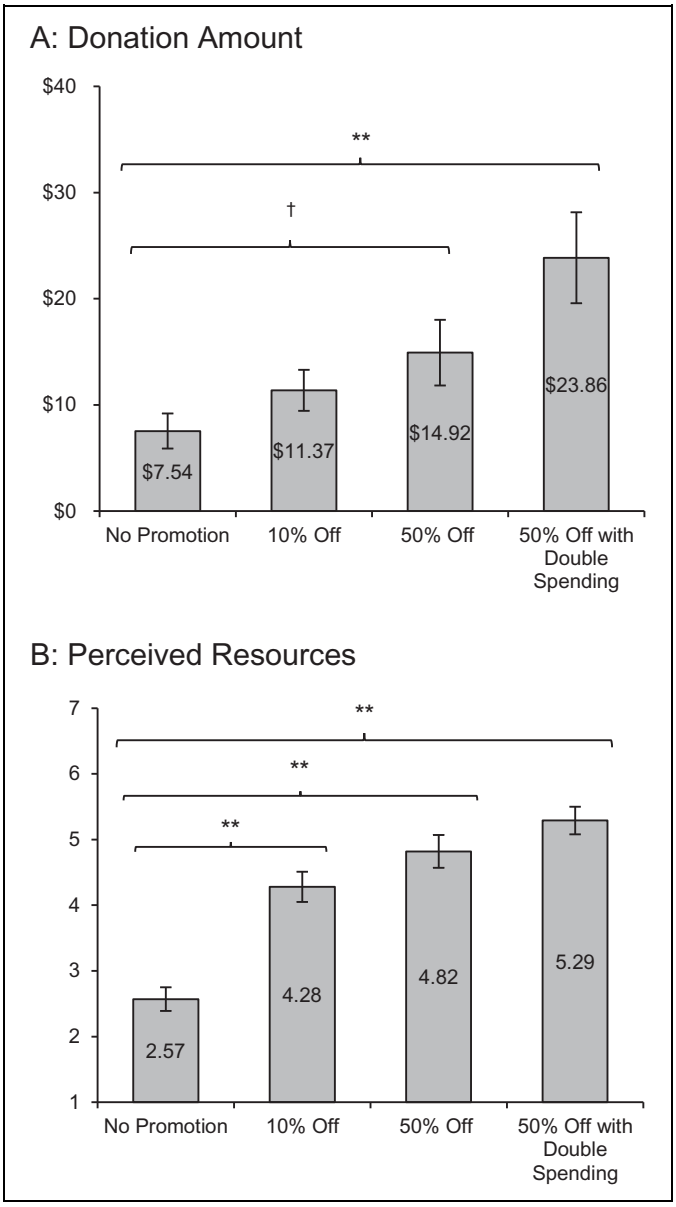

Figure 2. Donation amount and perceived resources as a function of price promotion (Study 2).
†$p < .10$.
**$p < .01$.
Notes: Error bars denote ± 1 SE.

Mediation analysis. A mediation analysis (Hayes 2017, PROCESS Model 4 with 5,000 bootstrap samples) on log-transformed donation amounts revealed that perceived resources significantly mediated the effect of the price promotion (1 = promotion, 0 = no promotion) on participants' donation behavior (indirect effect = .61, SE = .15, 95% CI = [.32, .93]). After

Table 1. Mediation Effect of Perceived Resources (Study 2).

Omnibus Test of Direct Effect	**F(3, 193) = .66, p = .57**	
Condition (Baseline: No Promotion)	**Direct Effect [95% CI]**	**Indirect Effect [95% CI]**
10% off	[−.62, .55]	[.20, .74]
50% off	[−.71, .51]	[.28, .92]
50% off with double spending	[−.38, .91]	[.33, 1.11]

controlling for the indirect effect, the direct effect of the price promotion on donation behavior was no longer significant (direct effect = .01, SE = .26, 95% CI = [−.51, .53]). A mediation analysis with price promotion as a multicategorical variable provided consistent support for the mediating role of perceived resources (for detailed results, see Table 1).

In Study 2, participants in the price promotion conditions (relative to the no-promotion condition) made a greater average donation to a charitable organization, and this positive effect increased with the magnitude of the monetary savings. Interestingly, participants in the 50%-off-with-double-spending condition reported the highest level of perceived resources—perhaps driven by both the perception that they had more money to spend and their greater monetary savings—and these participants also indicated the greatest average donation amount. Furthermore, we showed that perceived resources mediated the effect of the price promotion on donation behavior. In this study (as well as in Study 5), we also included some affective measures to examine the role of feelings such as happiness and guilt. Unlike perceived resources, these affective measures did not directly mediate the effect of price promotions on donation behavior (for supplementary analyses on these measures, see Web Appendix 5).

Study 3: Manipulating Price Promotion in a Field Experiment

Study 3 used a field experiment to examine the causal impact of price promotions on donation behavior in a more realistic setting. We conducted the field experiment in collaboration with a café, where we randomly distributed discount coupons to customers. We predicted that customers who received (vs. did not receive) a discount coupon would make more donation behavior to a charitable cause.

Method

We conducted the field experiment in a café in a large city in China in June 2020. Because there were no queues at the cashier counter of this café, we could use random assignment without the customers noticing. The field experiment followed a two-cell (promotion vs. no promotion) between-subjects design, and we introduced the promotion manipulation after customers gave their orders to the cashier. To avoid potential data contamination, we did not include subsequent orders made by repeat customers. In the price promotion condition, a 10 RMB discount coupon was applied to the customer's order. In the no-promotion condition, customers received no discount. Customers were randomly assigned to one of the two conditions. In one day (between 9 A.M. and 9 P.M.), we observed 121 orders (37.2% female customers).

After each customer paid the bill, the research assistant, dressed as a staff member, handed the customer their receipt with an attached donation appeal and collected the café's copy of the receipt, which recorded the order details and the manipulation information. Meanwhile, another research assistant, disguised as a customer, recorded each customer's gender, estimated age, and number of companions.

The donation appeal flyer solicited donations to help pay the medical expenses of a 28-year-old woman diagnosed with leukemia. To reduce a potential norm of reciprocity, we chose this real donation appeal, which was posted by the recipient herself on a large online charity fundraising platform. Posters with the same information were also displayed at the cashier counter (for the field experiment setting, see Web Appendix 2). The research assistant who was disguised as a staff member was blind to our hypothesis and was instructed not to interact with customers regarding the donation appeal. We attached the QR code to the donation appeal flyer, so customers could make their donation decision at their own tables privately instead of deciding at the cashier counter. Customers who intended to donate could scan the QR code printed on the donation appeal flyer to view detailed information about the donation cause and make an actual donation. To match the donation data with the experimental conditions, we asked participants to enter the last four digits of their order number after they made their donation. At the end of the day, research assistants transferred all donations to the woman on behalf of the customers.

Of the 121 orders observed, 20 orders were excluded because the customer did not take the receipt and attached donation flyer. To cleanly manipulate price promotion, we also removed eight orders made by customers using other discounts and one order for which the customer refused to accept the coupon. As a result, 92 orders qualified for our analysis.

Results and Discussion

Donation rate. First, we examined the percentage of customers who donated in each condition. A binary logistic regression revealed that customers in the promotion condition were more likely to donate (17.50%) than those in the no-promotion condition (1.92%; Wald $\chi^2(1) = 4.75$, $p = .03$). Next, we examined whether having a companion affected the customer's donation decision. When included as a covariate in our analysis, having a companion did not have a significant effect (Wald χ^2 (1) = 2.45, $p = .12$), and the effect of the price promotion on the donation rate remained significant (Wald χ^2 (1) = 4.55, $p = .03$).

Donation amount. The donation amount was positively skewed (skewness = 4.23, SE = .25). Thus, we log-transformed the donation amount, as in Study 2. The pattern of results remained the same, so we report the untransformed means for ease of

interpretation. A one-way ANOVA revealed a positive effect of the price promotion on the donation amount (M_{promo} = ¥1.00, SD = ¥2.52 vs. $M_{no\ promo}$ = ¥.08, SD = ¥.56; $F(1, 90) = 7.29$, $p = .008$, $\eta_p^2 = .07$). In addition, having a companion did not significantly affect the donation amount ($F(1, 89) = 2.01$, $p = .16$, $\eta_p^2 = .02$), and the effect of the price promotion remained significant after controlling for this covariate ($F(1, 89) = 6.78$, $p = .01$, $\eta_p^2 = .07$).

The results of this field experiment thus provided strong causal evidence for the positive effect of price promotions on donation behavior. Specifically, we found that a discount at a café significantly increased actual donation behavior among café customers.

Study 4: The Moderating Role of Focusing on Money Spent

In the next few studies (Studies 4–6), we aimed to test the underlying mechanism of perceived resources by examining whether the positive effect of price promotions on consumers' donation behavior is attenuated if we disrupt the impact of price promotions on consumers' perceived resources. In Study 4, we examined whether directing consumers' focus to the amount of money they just spent would reduce their perceived resources and hence attenuate the positive effect of price promotions on donation behavior.

Method

Three hundred thirty-five students from a large university in Singapore (65.1% female; M_{age} = 22.4 years) completed an online experiment in exchange for a chance to win SGD $20. The experiment followed a 2 (promotion vs. no promotion) × 2 (control vs. focus on money spent) between-subjects design, and participants were randomly assigned to one of the four conditions.

As a cover story, we told participants that we were interested in their preferences for food delivery services. Participants were asked to imagine that they had been endowed with $20 and were instructed to use some of it to purchase a voucher; participants then had a choice to donate some of the leftover endowment to a charity. To make the experiment incentive-compatible, we followed recent research (Allard, Hardisty, and Griffin 2019) and informed participants that we would randomly select ten participants and actually fulfill their decisions (i.e., they would receive their chosen voucher and any remaining endowment that did not go to the charity). To avoid a selection issue (i.e., that participants in the promotion condition might be more likely to make a purchase), we required participants to make a purchase choice between two product options.

In the no-promotion condition, participants were told that they could purchase a $10 voucher from either Grabfood or Foodpanda, two popular food delivery companies in Singapore. In the promotion condition, participants were told that they could purchase a $20 voucher for $10 (50% off) from either of these two companies. We controlled the final purchase price ($10 in both conditions) to eliminate the potential concern that participants in the promotion condition would spend less money on the required task and thus have more disposable money for a donation. After making the purchase decision, participants in the focus-on-money-spent condition were asked to recall how much money they spent on the voucher, whereas those in the control condition did not receive this instruction.

Subsequently, all participants took a survey in which they were asked to indicate how much they were willing to donate (between $0 and $10) to the Children's Charities Association to help physically, mentally, and socially disadvantaged children in Singapore. Participants were told that they would be expected to send their indicated donation amount if they won the lottery. Finally, they completed the same perceived resources scale ($\alpha = .89$) used in Study 2.

After completing the study, all participants provided their email addresses for the lottery draw. Ten randomly chosen participants received the cash prize and were given the donation method to fulfill their promise to the charity.

Results and Discussion

Donation rate. A binary logistic regression analysis on the donation rate revealed a significant interaction effect between the price promotion and focus manipulation (Wald $\chi^2(1) = 6.86$, $p < .01$). There was also a significant main effect of the focus manipulation (Wald $\chi^2(1) = 12.35$, $p < .001$), whereas the main effect of the price promotion was not significant (Wald $\chi^2(1) = 1.48$, $p = .22$). Within the control condition, participants in the promotion condition were more likely to donate to the charity (95.35%) than those in the no-promotion condition (84.34%; Wald $\chi^2(1) = 5.06$, $p = .02$). This effect was eliminated in the focus-on-money-spent condition (promotion: 70.73% vs. control: 79.76%; Wald $\chi^2(1) = 1.80$, $p = .18$).

Donation amount. No outliers were identified for donation amount, and there was no skewness problem (skewness = −.13, SE = .13). An ANOVA with the price promotion and focus manipulation as independent variables and donation amount as the dependent variable revealed a significant interaction effect ($F(1, 331) = 5.54$, $p = .02$, $\eta_p^2 = .02$). There was also a significant main effect of the focus manipulation ($F(1, 331) = 17.42$, $p < .001$, $\eta_p^2 = .05$), whereas the main effect of the price promotion was not significant ($F(1, 331) = .75$, $p = .39$, $\eta_p^2 = .002$). Within the control condition, the average donation amount was greater in the promotion condition (M_{promo} = $7.12, SD = $3.31) than in the no-promotion condition ($M_{no\ promo}$ = $5.80, SD = $3.83; $F(1, 331) = 5.22$, $p = .02$, $\eta_p^2 = .02$). Within the focus-on-money-spent condition, however, the effect of the price promotion on the donation amount was eliminated (M_{promo} = $4.44, SD = $3.98 vs. $M_{no\ promo}$ = $5.05, SD = $3.88; $F(1, 331) = 1.10$, $p = .30$, $\eta_p^2 = .003$).

Perceived resources. An ANOVA on the perceived resources index revealed a significant main effect of the price promotion ($M_{promo} = 4.86$, SD = 1.27 vs. $M_{no\ promo} = 4.05$, SD = 1.46;

$F(1, 331) = 29.21$, $p < .001$, $\eta_p^2 = .08$) and a significant main effect of the focus manipulation ($M_{control} = 4.62$, $SD = 1.52$ vs. $M_{focus} = 4.29$, $SD = 1.43$; $F(1, 331) = 4.56$, $p = .03$, $\eta_p^2 = .01$). However, the interaction term was not significant ($F(1, 331) = 1.05$, $p = .31$, $\eta_p^2 = .003$).

The results from this study replicated the previous findings using an incentive-compatible online experiment. Furthermore, we found that the positive effect of the price promotion on donation behavior was eliminated when consumers were guided to think about the money they spent in the promotion. However, we did not observe a significant interaction effect on the perceived resources index. We suspect that although the focus manipulation significantly reduced participants' subjective experience of saving money, participants in the promotion condition had more actual monetary resources (i.e., a voucher worth \$20) than those in the no-promotion condition (in which the voucher was worth only \$10). In the next study, we address this limitation by using a cleaner manipulation.

Study 5: The Moderating Role of Budget Overspending

Study 5 aimed to test budget overspending as a moderator of the effect of price promotions on donation behavior. Specifically, we predicted that the positive effect of price promotions on perceived resources (and, subsequently, on donation behavior) would be attenuated when the purchase exceeded consumers' mental budget.

Method

Five hundred fourteen undergraduate students in China (43.8% female, all ≥18 years old) from an online subject pool participated in this study for monetary compensation. The study followed a 2 (promotion vs. no promotion) × 2 (over budget vs. within budget) between-subjects design.

All participants imagined that they were browsing one of their favorite online shops. In the promotion conditions, participants were told that the online shop was having a 50% off sale, and they spent ¥500 on products that originally cost ¥1,000. In the no-promotion conditions, participants were told that they spent ¥500 in the online shop. In the over-budget (within-budget) conditions, participants were told that their spending exceeded (was within) their budget. Subsequently, participants imagined that when they paid the bill through Alipay, they noticed that the platform was raising money to plant trees in a remote area in China. The cost of planting each tree was ¥3, and each participant could donate a maximum of ten trees. Participants indicated the number of trees they were willing to donate. Finally, they completed the same perceived resources scale ($\alpha = .79$) used in Study 2.

Results and Discussion

Donation rate. Across conditions, a large majority of participants were willing to donate at least one tree (within-budget/promotion: 98.44%, within-budget/no-promotion: 96.12%, over-budget/promotion: 93.80%, over-budget/no-promotion: 93.75%). A binary logistic regression analysis on the donation rate revealed only a significant main effect of budget overspending (Wald χ^2 (1) = 3.79, $p = .05$); neither the main effect of the price promotion nor the interaction effect was significant ($ps > .34$).

Number of trees donated to charity. Given that the dependent variable was count data, we conducted a Poisson regression (e.g., Coxe, West, and Aiken 2009; Kupor and Tormala 2018) on the number of trees donated, with budget overspending and the price promotion as independent factors. The analysis revealed a significant main effect of the price promotion (Wald $\chi^2(1) = 3.74$, $p = .05$), no significant main effect of budget overspending (Wald $\chi^2(1) = .25$, $p = .62$), and most importantly, a significant interaction effect (Wald $\chi^2(1) = 3.71$, $p = .05$). Specifically, within the within-budget condition, the average donation amount was greater in the promotion condition ($M_{promo} = 6.07$, $SD = 3.20$) than in the no-promotion condition ($M_{no\ promo} = 5.26$, $SD = 3.37$; Wald $\chi^2(1) = 7.38$, $p = .007$). This effect did not occur within the over-budget condition ($M_{promo} = 5.76$, $SD = 3.32$ vs. $M_{no\ promo} = 5.76$, $SD = 3.41$; Wald χ^2 (1) < .001, $p = .99$).

Perceived resources. An ANOVA on perceived resources revealed a significant main effect of the price promotion ($F(1, 510) = 44.30$, $p < .001$), a significant main effect of budget overspending ($F(1, 510) = 26.21$, $p < .001$), and most importantly, a significant interaction effect ($F(1, 510) = 7.27$, $p = .007$). Specifically, among the within-budget participants, those in the promotion condition reported greater perceived resources ($M_{promo} = 5.27$, $SD = 1.11$) than those in the no-promotion condition ($M_{no\ promo} = 4.20$, $SD = 1.30$; $F(1, 510) = 43.73$, $p < .001$). This effect was attenuated among the over-budget participants ($M_{promo} = 4.38$, $SD = 1.31$ vs. $M_{no\ promo} = 3.93$, $SD = 1.44$; $F(1, 510) = 7.84$, $p = .005$).

Moderated mediation analysis. Next, we tested whether perceived resources mediated the effect of the price promotion on the donation amount and whether budget overspending moderated the path from the price promotion to perceived resources. A moderated mediation analysis (Hayes 2017, PROCESS Model 7 with 5,000 bootstrap samples) with perceived resources as the mediator and budget overspending as the moderator revealed a significant index of moderated mediation ($b = -.57$, $SE = .22$, 95% CI = [−1.01, −.15]). Specifically, in the within-budget conditions, the indirect effect of the price promotion on donation via perceived resources was positive and significant ($b = .98$, $SE = .16$, 95% CI = [.68, 1.32]). However, in the over-budget conditions, this indirect effect was attenuated ($b = .42$, $SE = .16$, 95% CI = [.11, .75]).

Results from Study 5 provided further support for the underlying mechanism related to perceived resources. Specifically, the study showed that budget overspending attenuates the positive effect of price promotions on consumers' donation

behavior via its influence on perceived resources. To further test the moderating role of budget overspending, we conducted an additional study in which we manipulated the product type. Prior research suggests that consumers usually have mental budgets for necessity purchases, whereas indulgence purchases often entail budget overspending (Kivetz and Simonson 2002; Stilley, Inman, and Wakefield 2010). This additional study followed a 2 (promotion vs. no promotion) × 2 (necessity purchase vs. indulgence purchase) between-subjects design, and it is reported in Web Appendix 3.

Study 6: The Moderating Role of the Immediacy of the Savings

The objective of Study 6 was twofold. First, we aimed to provide further field evidence for the effect of price promotions on consumers' donation behavior. To this end, we collaborated with a café to run price promotions, and we examined customers' actual donation behavior. Second, we wanted to examine the perceived resources mechanism by comparing the effects of an instant discount coupon versus a rebate coupon. Specifically, consumers who received a rebate coupon could use the money to offset their spending in the next (but not the current) purchase. In other words, the rebate coupon did not offer immediate monetary savings, so the rebate coupon (unlike the discount coupon) should not increase consumers' current perceived resources. Therefore, we predicted that consumers who received the instant discount coupon would exhibit greater donation behavior than those who received the rebate coupon or no coupon.

Method

We conducted this field experiment in a café on the campus of a large university in China in October 2019. The field experiment followed a three-cell between-subjects design (no promotion vs. instant discount coupon vs. rebate coupon). To minimize the risk that customers would notice the existence of other conditions, which could potentially cause data contamination, we did not randomize the conditions within a day. Instead, we conducted the study over the course of six days (Tuesday, Wednesday, and Thursday for two consecutive weeks) and randomly assigned one experimental condition to each day (yielding two days per condition). In total, we observed 399 customers (48.6% female), with 107, 127, and 165 customers in the no-promotion, instant-discount-coupon, and rebate-coupon conditions, respectively.

The field experiment commenced when customers came to order food/drinks from the cashier. In the no-promotion condition, customers did not receive any kind of coupon. In the instant-discount-coupon condition, the cashier gave each customer a ¥5 coupon (valid until November 30) and told them that they could use the coupon on their current order. In the rebate-coupon condition, the cashier gave each customer a ¥5 coupon (valid until November 30) and told them that the coupon was valid only on future purchases. Customers paid and then waited at the pick-up counter for their orders; as they waited, a research assistant approached them with a donation appeal poster for House of Kindness, a charity run by the university's student union to help replace broken free-sharing umbrellas provided for students and teachers on the campus. The same poster was also displayed at the café's pick-up counter (for the field experiment setting, see Web Appendix 4). The research assistant asked each customer to consider donating, and customers who agreed proceeded to donate any amount by scanning the QR code on the poster. At the same time, another research assistant, who pretended to be a server in the café, observed and recorded each customer's gender, estimated age, number of companions, and donation behavior (yes/no), and she collected each customer's receipt when they picked up their order.

Results and Discussion

Donation rate. A binary logistic regression on the donation rate revealed a marginally significant effect of the price promotion (Wald $\chi^2(2) = 4.52$, $p = .10$). Specifically, the donation rate in the instant-discount-coupon condition (52.76%) was higher than in both the rebate-coupon condition (40.61%; Wald $\chi^2(1) = 4.24$, $p = .04$) and the no-promotion condition (42.99%; Wald $\chi^2(1) = 2.21$, $p = .13$). Importantly, there was a significant difference between the instant-discount-coupon condition (52.76%) and the other two conditions combined (41.54%; Wald $\chi^2(1) = 4.11$, $p = .04$). The results remained robust after controlling for the presence of a companion (Wald $\chi^2(2) = 4.86$, $p = .09$), which had an insignificant effect (Wald $\chi^2(1) = .54$, $p = .46$).

Donation amount. The donation amount varied from ¥0 to ¥100. Due to the high variance, we identified and removed six outliers that were three standard deviations above or below the mean. The donation amount was positively skewed (skewness = 1.81, SE = .12), so we log-transformed the donation amount; the pattern of results remained the same regardless of the log-transformation, and we report the untransformed means for ease of interpretation. An ANOVA revealed an insignificant effect of the price promotion on the donation amount ($F(2, 390) = 2.03$, $p = .13$, $\eta_p^2 = .01$). Specifically, the average donation amount was directionally higher in the instant-discount-coupon condition ($M_{instant}$ = ¥3.45, SD = ¥4.48) than in both the no-promotion condition ($M_{no\ promo}$ = ¥2.87, SD = ¥4.50; $F(1, 390) = 2.12$, $p = .15$, $\eta_p^2 = .005$) and the rebate-coupon condition (M_{rebate} = ¥2.86, SD = ¥4.93; $F(1, 390) = 3.74$, $p = .05$, $\eta_p^2 = .01$). Importantly, there was a significant difference between the instant-discount-coupon condition and the other two conditions combined ($F(1, 390) = 3.76$, $p = .05$, $\eta_p^2 = .01$). The effect remained robust after controlling for the presence of a companion ($F(2, 389) = 2.14$, $p = .12$, $\eta_p^2 = .01$), which had an insignificant effect ($F(1, 389) = .30$, $p = .59$, $\eta_p^2 = .001$).

The results of this study provided further field evidence in a real shopping environment for the positive effect of price promotions on consumers' donation behavior. Furthermore, we found that customers who received immediate monetary

savings (i.e., the instant discount coupon) were more likely to donate than customers whose monetary savings were not immediate (i.e., the rebate coupon).

Study 7: The Time Interval Between Price Promotion and Donation Solicitation

Study 7 investigates another boundary condition—the time interval between the price promotion and the donation solicitation—that we hypothesized would moderate the positive effect of price promotions on donation behavior. As time passes after a price promotion, consumers may spend their savings on another purchase or may gradually adapt to the savings; both outcomes should eliminate any increase in perceived resources that the promotion originally conferred. Thus, we expected that the positive effect of price promotions on donation behavior would be stronger if the donation was solicited immediately after the price promotion and would be attenuated if there was a delay between the price promotion and donation solicitation.

Method

Two hundred ninety-four shoppers who made purchases on December 12 in the 2019 Alibaba's Double 12 sales event (63.4% female, all $\geq$18 years old) were recruited from an online panel in China on either December 12–13 (124 shoppers) or December 20–21 (170 shoppers) to complete this study in exchange for monetary compensation. As a cover story, we told all shoppers that we were interested in understanding their shopping experience. As in Study 1, shoppers completed a few ostensibly unrelated surveys. In the first survey, they were asked to indicate how much money (in RMB) they actually spent on their purchases on the same 22-point scale used in Study 1. We did not measure perceived savings to rule out demand effects as a possible explanation for the results of Study 1.

In the second survey, shoppers saw a donation appeal from the charity Wardrobe of Love, which raises funds to purchase new winter clothes for children in need. Shoppers indicated their intention to donate to this charity on a seven-point scale (1 = "definitely will not donate," and 7 = "definitely will donate").

Results and Discussion

Consistent with the findings of Study 1, a linear regression analysis revealed that the amount spent during the Double 12 sales event was significantly positively correlated with shoppers' intention to donate to the charity ($b = .09$, $t(292) = 3.59$, $p < .001$). More importantly, a linear regression with donation intention as the dependent variable and the amount spent and time interval ($-.5$ = immediately after the promotion, .5 = one week after the promotion) as independent variables revealed a significant main effect of the amount spent ($b = .09$, $t(290) = 3.65$, $p < .001$) and a significant main effect of the time interval ($b = .76$, $t(290) = 3.49$, $p < .001$). These main effects were qualified by a marginally significant interaction effect between the time interval and amount spent ($b = -.08$, $t(290) = -1.66$, $p < .10$).

Specifically, among shoppers who were surveyed immediately after the Double 12 promotion event, the donation intention significantly increased with the amount spent in the promotion ($b = .13$, $t(290) = 3.36$, $p < .001$), but this effect did not occur among shoppers who were surveyed one week after the promotion event ($b = .05$, $t(290) = 1.62$, $p > .10$). Study 7 thus showed that the positive effect of price promotions on donation behavior is stronger when the donation is solicited immediately after the price promotion, and it disappears over time.

General Discussion

Across a set of seven studies, using both field and experimental data, we provide robust evidence that price promotions can increase consumers' donation behavior (for a summary of the results, see Table 2). Study 1 provided correlational field evidence for the proposed effect. Study 2 manipulated the presence as well as the magnitude of the price promotion and provided causal evidence for the effect. Study 2 also showed that perceived resources mediated the effect of price promotions on donation behavior. Study 3 provided further causal evidence by implementing a price promotion in a field experiment. Next, we provided further support for the perceived resources mechanism by showing that the positive effect of price promotions on consumers' donation behavior was attenuated when consumers focused on how much money they spent (rather than saved) in the promotion (Study 4), when the purchase involved budget overspending (Study 5), and when the monetary savings could not be realized immediately (Study 6). Finally, we showed that the effect was attenuated by a longer delay (one week vs. one day) between the price promotion and donation solicitation (Study 7). Together, our findings converged to establish the robustness of the positive effect of price promotions on consumers' donation behavior.

It is worth noting that although we found a consistent effect on the donation amount, we found mixed results on the donation rate. This might have been partially caused by a procedural difference in the donation rate measurement: in our field experiments (Studies 2 and 6), we first asked customers whether they would like to donate; only customers who decided to donate then moved on to make a donation. In other words, it was a two-step donation decision as we explicitly asked customers to make two sequential decisions: (1) whether to donate and (2) how much money to donate. In the other studies, however, we asked all participants to indicate the donation amount, and we computed the donation rate by coding those who indicated a donation amount of "0" as "didn't donate" and those who indicated a nonzero donation amount as "donated." Nevertheless, these results are consistent with the prior findings that different factors may affect donation choice and donation amount (e.g., Dickert, Sagara, and Slovic 2011; Fajardo, Townsend, and Bolander 2018).

Furthermore, we should acknowledge that the effect of price promotions on donation behavior may be multiply determined. For example, prior research has suggested that affective responses such

Table 2. Summary of the Effect of Price Promotions on Donation Behavior in Each Study.

Study	Sample Size	Data Collection Method	Focal Effects: Coefficient Between Money Spent in the Price Promotion and Charitable Behavior			
1	135	Online survey (China)	.26[a]			
7	294	Online survey (China)	Immediately after promotion: .13[a] One week after promotion: .05[c]			
			Donation Amount		**Donation Rate**	
			Promotion	**No Promotion/ Other**	**Promotion**	**No Promotion/ Other**
2	200	Online experiment (USA)	$16.74[d]	$7.54[a]	74.17%[d]	65.31%[c]
3	92	Field experiment (China)	¥1.00	¥.08[a]	17.50%	1.92%[a]
4	335	Online experiment (Singapore)	Control: $7.12 Focus on money spent: $4.44	Control: $5.80[a] Focus on money spent: $5.05[c]	Control: 95.35% Focus on money spent: 70.73%	Control: 84.34%[a] Focus on money spent: 79.76%[c]
5	514	Online experiment (China)	Within budget: 6.07 Over budget: 5.76	Within budget: 5.26[a] Over budget: 5.76[c]	Within budget: 98.44% Over budget: 93.80%	Within budget: 96.12%[c] Over budget: 93.75%[c]
6	399	Field experiment (China)	¥3.45	¥2.87[b,e]	52.76%	41.54%[a,e]
Web Appendix 3	320	Online experiment (USA)	Necessity: $12.32 Indulgence: $6.15	Necessity: $5.14[a] Indulgence: $5.77[c]	Necessity: 81.25% Indulgence: 70.00%	Necessity: 70.00%[b] Indulgence: 81.25%[b]

[a]The difference between the promotion condition and the no-promotion/other condition was significant ($p < .05$).
[b]The difference between the promotion condition and the no-promotion/other condition was marginally significant ($p < .10$).
[c]The difference between the promotion condition and the no-promotion/other condition was insignificant ($p > .10$).
[d]The promotion conditions were pooled to compare with the no-promotion condition.
[e]The no-promotion condition and rebate-coupon condition were pooled to compare with the instant-discount-coupon condition.

as happiness (Isen and Levin 1972) and guilt (Basil, Ridgway, and Basil 2008) may influence charitable behavior. We measured some affective responses in Studies 2 and 5 (see Web Appendix 5). In Study 5, while we found some evidence that greater perceived resources could also increase happiness, happiness did not directly mediate the effect of price promotions on donation behavior. Furthermore, guilt did not mediate the observed effect in our studies, and a guilt-based account would predict a stronger effect for purchases associated with guilt (e.g., budget overspending in Study 5; an indulgence purchase in the additional study)—but we found an attenuated effect in these scenarios.

Theoretical Contributions

This research makes several important theoretical contributions. First, while existing research has examined the effect of price promotions on firms' performances and consumers' purchasing behaviors, there is a gap in the literature regarding whether and how price promotions can have important social consequences. This research fills that gap. Specifically, this research shows that price promotions can boost consumers' perceived resources and thereby increase their donation behavior—a positive social consequence. Second, while promotions and donation behavior have been studied together in the cause-related marketing literature, our research is unique in its focus on donation behavior as a *consequence* of a promotion rather than as the promotion itself (Strahilevitz and Myers 1998; Varadarajan and Menon 1988). Third, our research adds to the donation behavior literature by identifying price promotions as a novel situational factor that drives consumers' donation behavior. More broadly, this research answers the call for a greater understanding of when and why marketing activities can contribute to a better world by improving consumer and societal welfare.

Practical Implications

This research offers pertinent and actionable implications for charitable organizations. Specifically, our findings may help charitable organizations make three important decisions:

1. *Whom to target*: Consumers who have participated in price promotions. Our research indicates that these consumers have a greater charitable tendency, and it should be easier to identify and target them than to reach out to potential donors on the basis of individual characteristics (e.g., sympathy, donation history).

2. *When to solicit donations*: Immediately after consumers make purchases. A few years ago, a global movement named Giving Tuesday was initiated by New York City's 92nd Street Y and the United Nations Foundation in the post-Thanksgiving season. Our findings not only help explain the success of this Giving Tuesday phenomenon but also provide insights about the timing for government or international organizations to initiate charitable campaigns.

3. *How to increase the effectiveness of donation appeals*: Our research indicates that charitable organizations should pair their donation appeals with promotions for necessities (vs. indulgences) that offer immediate discounts (vs. future rebates). Furthermore, the donation appeals should direct consumers' focus toward the money they saved (vs. spent) in the promotion. These are ecologically valid factors in the marketplace, and charitable organizations can take advantage of them to optimize their donation appeals.

Furthermore, this research suggests that firms can use price promotions as great opportunities to collaborate with charitable organizations. For example, the outdoor brand Patagonia has made a commitment since 2016 to donate 100% of its profits from Black Friday to charities (Lauletta 2016). Unfortunately, in traditional cause-related marketing practices, consumers might doubt a firm's prosocial motivation because the benefits for the charity are contingent on consumers' purchases from the firm (Dean 2003; Foreh and Grier 2003). Our findings suggest that by soliciting donations *after* consumers complete their purchases, firms can cultivate a purer image of corporate social responsibility. This strategy was exemplified recently by Ralph Lauren, which partnered with the World Health Organization to fight the COVID-19 pandemic by soliciting donations from customers immediately after they submitted their orders on the store's official online shop. This collaborative strategy between firms and nonprofit organizations represents a win-win situation that can benefit both stakeholders and contribute to a better world.

Limitations and Future Research Directions

This research also raises interesting directions for future studies. First, while this research focused on the positive impact of price promotions on monetary donation behaviors, it would be interesting to explore the generalizability of this effect to nonmonetary donation behaviors (e.g., volunteering). We found preliminary evidence for this in Study 1, but more studies are needed to establish a robust effect. Second, in addition to exploring different types of promotions, future research could examine whether different elements of a promotion also moderate the effect of price promotions on donation behavior. For example, it would be interesting to examine whether the percentage or the absolute size of the discount has a greater effect on consumers' perceived resources. Third, future research could investigate other boundary conditions, such as consumers' chronic resource availability or price consciousness. These research directions would further enrich our understanding of the social implications of price promotions and could offer relevant insights for firms and consumer welfare.

Appendix: 13-Item Scale Used to Measure Charitable Behaviors (Study 1)

The original stimuli appeared in Chinese.

13 Types of Charitable Behaviors

1. Give directions to a stranger who loses his/her way.
2. Give money to beggars or strangers who need it.
3. Give food to beggars or homeless people who need it.
4. Donate money to charitable organizations.
5. Donate goods or clothing to charitable organizations.
6. Volunteer for charitable organizations.
7. Help strangers carry things (e.g., luggage, bags).
8. Let someone in need queue in front of you at a supermarket, fast-food restaurant, etc.
9. Offer your own seat to a standing stranger in need on a bus or metro.
10. Participate in community service activities.
11. Raise funds for charitable organizations.
12. Help people in other ways.
13. Donate money via online charity platforms (e.g., Alibaba charity platform, Tencent charity platform, JD Foundation charity platform).

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Author Contributions

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