The Warm Glow of Restaurant Checkout Charity

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Abstract
Checkout charity is a phenomenon whereby frontline employees (or self-service technologies) solicit charitable donations from customers during the payment process. Despite its growing ubiquity, little is known about this salient aspect of the service experience. The present research examines checkout charity in the context of fast-food restaurants and finds that, when customers donate, they experience a “warm glow” that mediates a relationship between donating and store repatronage. Study 1 utilizes three scenario-based experiments to explore the phenomenon across different charities and different participant populations using both self-selection and random assignment designs. Study 2 replicates with a field study. Study 3 examines national store–level sales data from a fast-food chain and finds that checkout fund-raising, as a percentage of sales, predicts store revenue—a finding consistent with results of Studies 1 and 2. Managers often infer, quite correctly, that many consumers do not like being asked to donate. Paradoxically, our results suggest this ostensibly negative experience can increase service repatronage. For academics, these results add to a growing body of literature refuting the notion that small prosocial acts affect behavior by altering an individual’s self-concept.

Keywords
frontline service encounters; customer engagement; checkout charity

Would you like to donate to Kidscents by rounding up your purchase to the nearest dollar?
—Rite Aid

I want to help Animal Outreach Humane Society save cats and dogs. Add a US$1 donation to my order for this non-profit.

Solicitations such as these are increasingly presented to consumers during the payment process. The practice is commonly referred to as “checkout charity,” and in 2014, the top 77 programs collected US$388 million dollars from consumers (Sullivan, 2015). In addition, popular press accounts suggest that the prevalence of this controversial practice is on the rise (Loveland, 2014; Thurston, 2013). Indeed, a recent survey of American consumers indicated that 71% had donated to charity at the register (Good Scout, 2016). This same survey, however, indicated that only a slight majority (55%) of respondents like being asked to give to charity. Particularly relevant to the present research, of the 45% who do not like being asked, 35% indicated they give anyway to avoid feeling guilty.

In this article, we examine the effect of checkout charity on restaurant performance and explore the mechanisms by which this effect might operate. In particular, we examine the potential of checkout charity to increase repeat purchase by providing the donating guest with a feeling of “warm glow.” Alternatively, we examine whether checkout charity might “license” repeat purchase by bolstering the customer’s prosocial identity—another process that has been suggested in the marketing literature. In doing so, we contribute to several important topics relevant to hospitality practice. One of these is corporate social responsibility (CSR). Several recent papers have demonstrated how a company’s donations to charity have the potential to influence outcomes such as purchase intentions (Koschate-Fischer, Huber, & Hoyer, 2016) and loyalty (Habel, Schons, Alavi, & Wieseke, 2016). What makes the present research different from these previous studies, however, is the nature of

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the CSR. Checkout charity stands apart from other CSR tactics in that it is actually the company’s customers who are making the donation.

Second, because it is customers who are donating, checkout charity qualifies as a customer engagement behavior (CEB)—another topic of increasing relevance to service organizations (Van Doorn et al., 2010). Third, because of where it occurs, a better understanding of checkout charity contributes to the literature on retailing and frontline service encounters (Bitner & Wang, 2014; Grewal, Levy, & Kumar, 2009; Singh, 2000). Finally, as our findings inform how checkout charity engenders repeat purchase, this research contributes to the growing focus on customer value management strategy (Palmatter, 2015; Verhoef & Lemon, 2013). In summary, checkout charity is an increasingly prevalent phenomenon that resides at the intersection of several pressing topics in the services marketing literature. As such, we believe it warrants empirical investigation.

We undertake this investigation using multiple methods and sources of data. We first utilize three scenario-based experiments to explore the phenomenon across different charities and different participant populations using both self-selection and random assignment designs. Study 2 then replicates with a field study at a fast-food restaurant to provide evidence of ecological validity. Study 3 examines national store–level sales data from the same fast-food chain and finds that checkout fund-raising, as a percentage of sales, predicts store revenue—a finding consistent with results of the other studies.

**Theoretical Background and Research Questions**

The key question the present research answers for practitioners is how checkout charity might impact sales. Will it drive consumers away or might it actually encourage repeat purchase? Recent research seems to suggest the latter. Giebelhausen, Chun, Cronin, and Hult (2016) found that when guests make a small sacrifice for the sake of the environment (by participating in a voluntary green program), they experience a feeling of “warm glow” that increases their service encounter satisfaction. It is reasonable to suspect that the positive effect of a small charitable donation on repeat purchase might operate in the same way. Other research, however, suggests that engaging in a prosocial behavior can cause an individual to positively reevaluate their self-concept (Khan & Dhar, 2006). This process generates “moral credentials” that license consumption of hedonic or indulgent products (Miller & Effron, 2010). A key contribution of the present research is to examine whether warm glow or prosocial identity shifts (or both) operate in the context of restaurant checkout charity, particularly with respect to its positive effect on repeat purchase (i.e., restaurant repatronage). The remainder of this literature review is devoted to discussing each of these processes in greater detail.

**Prosocial Self-Identity**

Licensing is a phenomenon whereby calling to mind previous instances of socially desirable behavior makes individuals feel more comfortable taking actions that could be seen as socially undesirable. One way this effect can operate is via “moral credentials.” The moral credentials model states that a good deed bolsters an individual’s prosocial self-concept, allowing them to construe a potentially undesirable behavior as appropriate (Miller & Effron, 2010). For example, Monin and Miller (2001) examined moral credentials in the context of sexism. Participants provided with an opportunity to disagree with sexist statements were more willing to later choose a man over an equally qualified woman for a stereotypically male job. The moral credentials model suggests that, after establishing themselves as nonprejudicial, participants construe their decision to hire the male candidate as nonprejudicial (Merritt et al., 2010).

This moral credentials model has been adopted by several researchers in the domain of marketing. For example, Khan and Dhar (2006) found that, compared with a control condition, Yale University students asked to imagine they had volunteered to spend 3 hr per week doing community service expressed higher agreement with the following statements reflecting a prosocial self-concept: “I am compassionate,” “I am warm,” “I am sympathetic,” “I am helpful.” Furthermore, in this study, Khan and Dhar reported that prosocial self-concept mediated the effect of their manipulation on the participant’s relative preference for purchasing designer jeans over a vacuum cleaner. In another study conducted at Yale University, Gneezy, Imas, Brown, Nelson, and Norton (2012) found that students forced to donate part of their study payment to charity (i.e., “costly altruism”) reported higher levels of prosocial identity. That is, they rated themselves as more “helpful” and less “selfish.” Gneezy et al. also reported that their measure of prosocial identity mediated an effect of the donation on truth-telling in a subsequent sender–receiver game. One might argue that moral credentials resulting from a checkout charity donation would license an individual to increase their patronage of a particular restaurant, especially if the food served at that restaurant would be classified as indulgent (e.g., a fast-food restaurant). That is, individuals who participate in a checkout charity donation may experience a boost in their prosocial identity and, in turn, construe fast food as more appropriate or desirable, increasing restaurant repatronage.

However, other recent research finds that prosocial behaviors do not universally evoke prosocial identity shifts, suggesting that specialized circumstances may be required to evoke prosocial identity shifts. Blanken, van de Ven,
Zeelenberg, and Meijers (2014), for example, reported three failed attempts to replicate the prosocial identity effects reported by Sachdeva, Iliev, and Medin (2009). Winterich and Barone (2011) also found self-identity effects only among participants above a median split on independent self-construal—an individual difference variable that measures how people form their self-identity. These failures to replicate a prosocial identity shift suggest that there may exist an alternative mechanism underlying prosocial behaviors. We thus will explore an alternative process in the context of checkout charity—warm glow.

**Warm Glow**

One alternative process, often examined in the study of prosocial behavior, is warm glow (Andrews, Luo, Fang, & Aspara, 2014; Habel et al., 2016). Warm glow was first conceptualized in the economics literature examining “impure altruism” (Andreoni, 1989). Impure altruism posits that people are motivated to do good deeds (at least in part) because of the emotional benefits they receive. Recent research in hospitality contexts has found that small good deeds (i.e., reusing your towel at a hotel) have the ability to provide guests with a feeling of warm glow that increases their satisfaction with a service encounter (Giebelhausen et al., 2016). However, this same research also finds that individuals who fail to do a good deed report lower levels of warm glow compared with control conditions. This observation is in line with the checkout charity survey (mentioned in the introduction) where many consumers report donating to avoid feeling guilty. As such, in the context of the present research, warm glow is conceptualized as a bivalent emotional response resulting from one’s decision of whether or not to donate to a restaurant’s checkout charity campaign.

We suggest that there will be a positive relationship between warm glow and restaurant repatronage. Indeed, there are several possible ways in which this relationship might manifest. First, consumers may be motivated to return to a restaurant to reexperience the warm glow they earned with their checkout charity donations. Second, as per the extant literature, warm glow may heighten service encounter satisfaction, which in turn increases behavioral intentions to return to the restaurant. A third alternative mechanism is through moral credits. The psychology literature has identified a mechanism by which an individual, through positive behavior, builds up credits that can be cashed in on what they recognize to be less-than-ideal behavior (Zhong, Liljenquist, & Cain, 2009). If the restaurant in question represents a “guilty pleasure,” then checkout charity might increase restaurant repatronage by providing these credits.

Untangling what mechanism (or, more likely, mechanisms) might mediate the path from warm glow to restaurant repatronage is a viable topic for future research. The present research, however, focuses on providing evidence of the first step in this causal chain. As discussed above, the literature offers two possibilities for why checkout charity donations may increase restaurant repatronage: Consumers experience (a) a self-identity shift or (b) a feeling of warm glow. Our studies are designed to inform if one (or both) of these processes are evoked when consumers decide whether or not to donate to a restaurant’s checkout charity campaign, and which process has the most potential to influence repatronage intentions. Last, we conduct an analysis to see whether these repatronage intentions might actually translate into increased revenue for the restaurant.

Stated more formally, in our three studies, we explore the following research questions:

**Research Question 1:** Does checkout charity participation induce a warm glow and/or influence prosocial self-identity?

**Research Question 2:** Does warm glow mediate the relationship between checkout charity and repatronage intentions?

**Research Question 3:** What is the impact of checkout charity participation on restaurant sales performance?

### Study 1: Warm Glow Versus Prosocial Identity

A primary goal of Study 1 was to evaluate the ability of a checkout charity donation to influence a feeling of warm glow and, potentially, prosocial identity. In addition, Study 1 was designed to test the generalizability of this phenomenon in two ways. To examine whether or not the results would generalize across different types of charities, Study 1a and 1b manipulated charity type while Study 1c further introduced a third type of charity. To explore whether the effect might generalize across different populations, Study 1a and 1c used a sample of 297 and 151 Amazon Mechanical Turk workers, respectively, while Study 1b used a sample of 302 undergraduate students recruited from an Ivy League business school. All studies collected a measure of store repatronage intentions to evaluate the extent to which either warm glow or prosocial identity might influence repeat consumption. Last, Study 1c addressed concerns regarding self-selection by randomly assigning participants to donation conditions.

### Study 1a and 1b: Stimuli and Procedure

In the study introduction, participants were told, “This study asks you to think about some different options and make a choice while imagining that you actually were in this situation.” Participants were then randomly assigned one of three scenarios. One, scenario was designed to act as
a control condition where there would be no ethical ramifications of the choice. In particular, participants were asked to imagine they were shopping and needed to choose between paper towels that were more absorbent and paper towels with more sheets per roll. A second condition presented the following scenario:

Imagine that you are eating lunch at Charlie’s Burgers, a local fast-food restaurant. Your order of a cheeseburger, fries, and a drink comes to six dollars and 50 cents. The cashier asks if you would like round up your purchase to seven dollars. The extra 50 cents will be donated to a community service that provides educational services to children in a homeless shelter.

The third condition presented a scenario identical to the one above, but tested a different charity type, indicating that the donation would go to a charity that “works toward improving the environment.” Following the scenarios described above, participants were asked to choose an option and to “state the reasons for the choice you made.” This procedure resulted in five groups of interest: (a) a control group where participants choose type of paper towel, (b) a group where participants choose to donate 50 cents to a charity benefiting under privileged children, (c) a group where participants choose to donate 50 cents to a charity benefiting animals, (d) a group where participants choose a type of paper towel, and (e) a group where participants choose to donate 50 cents to a charity benefiting the environment.

**Study 1c: Stimuli and Procedure**

Study 1c is largely identical to Studies 1a and 1b, but does offer a few important changes. Most importantly, to address potential concerns that the effects in Studies 1a and 1b might be due to self-selection, Study 1c randomly assigned individuals to the “donated,” “did not donate,” and “control” conditions. The nature of Study 1c’s control condition was the other major change. This time, instead of using an unrelated “choice” as the control, we used the same restaurant scenario, but just removed the checkout charity solicitation. This change offers a different reference point from which to examine the effect of choosing to donate (not donate). Also, it creates a control condition where we can measure intentions to repatronize Charlie’s Burgers. Last, to provide additional evidence of generalizability, we utilized a third type of charity—a local animal shelter. This procedure resulted in three groups of interest: (a) a control group where participants read the Charlie’s Burger scenario with the checkout charity solicitation removed, (b) a group where participants were randomly assigned to donate 50 cents to a charity benefiting animals, and (c) a group where participants were randomly assigned to donate 50 cents to a charity benefiting the environment.

**Measures**

As mentioned above, the primary goal of Study 1 was to evaluate the ability of a small charitable donation to (a) evoke a feeling of warm glow and/or (b) shift the participant’s pro-social identity (PSID). Therefore, we collected randomized measures of both warm glow and PSID immediately following the question where participants indicated the reason for their choice. Warm glow was evaluated with a seven-item, 9-point semantic differential measure, asking participants to indicate the extent to which they felt: ashamed/proud, in the wrong/in the right, irresponsible/responsible, selfish/altruistic, wicked/virtuous, unethical/ethical, immoral/moral (Study 1a: \( \alpha = .949 \); Study 1b: \( \alpha = .917 \); Study 1c: \( \alpha = .967 \)). We also collected a measure of PSID (Khan & Dhar, 2006), asking participants to indicate, on a 7-point scale, the extent to which they feel themselves as helpful, sympathetic, warm, and compassionate (Study 1a: \( \alpha = .864 \); Study 1b: \( \alpha = .758 \); Study 1c: \( \alpha = .898 \)). After these measures had been collected, those in the restaurant stimuli condition completed the following 9-point measure of repatronage intentions adapted from Blodget, Hill, and Tax (1997): (a) How frequently do you think you would eat at Charlie’s Burgers if there was one near you (never/very frequently); (b) based on my experience, I would return to this Charlie’s Burger location (strongly disagree/strongly agree); and (c) what is the likelihood that you would become a frequent customer of Charlie’s Burgers (very unlikely/very likely).

**Study 1a Analysis**

To evaluate potential differences between Study 1a’s five experimental conditions, we utilized one-way ANOVA with planned contrasts and effect-size calculations. Above we hypothesize that, following a checkout charity solicitation, nondonors will report lower warm glow versus a control condition while donors will report higher levels of warm glow compared with that control condition. As such, for these comparisons, directional contrasts are appropriate. We have no a priori expectations regarding differences between charity types. Thus, for these contrasts, we utilize two-tailed tests. Please see Figure 1 for a plot of the cell means with 95% confidence intervals. When visually interpreting 95% confidence intervals, it can be helpful to consider that a 50% margin of error overlap (i.e., approximately 25% of the confidence interval’s total length) approximates a two-tailed \( p = .05 \) (see Cumming & Finch, 2005).

**Warm glow.** For warm glow, the omnibus ANOVA was statistically significant at the .05 level, \( F(4, 293) = 16.38, p < .001 \), suggesting it was unlikely the observed differences between the means were due to chance alone. Follow-up contrasts indicated no significant difference in the warm glow of donors across the two charities (\( M_{\text{environment}} = 7.28, \)).
SD = 1.60, M_{children} = 7.22, SD = 1.25, p = .849), but significant differences versus the control conditions (M_{control} = 6.36, SD = 1.57) for both donor conditions (children, p < .001; environment, p < .001). Significant differences were also observed between the control condition and nondonors (children, p < .001; environment, p = .023). In addition, compared with the warm glow of environmental nondonors (M = 5.83, SD = 1.52, n = 46), those who refused to donate to the children’s charity reported significantly lower warm glow (M = 4.90, SD = 1.79, n = 26, p = .014). To estimate the size of the difference between donors and nondonors, we pooled the donor groups and compared them with one another. The results indicated a “large” (d = 1.41) effect as per Cohen’s (1988) guidelines.

Prosocial identity. For prosocial identity, the omnibus ANOVA was insignificant (p = .928), suggesting that the mean differences across conditions may likely have been due to chance alone. Arguably, such a result warrants no follow-up contrasts. However, relying on the omnibus has been likened to playing the guitar with mittens on (Abelson, 1995). Thus, we also conducted all pairwise comparisons—none of which were statistically significant (p values ranging from .218 to .950).

Repatronage intentions. For repatronage intentions, the omnibus ANOVA (excluding the control condition as we did not measure repatronage intentions for participants who were not exposed to the restaurant description) was not statistically significant at the .05 level, F(3, 181) = 1.108, p < .347. In the environmental charity condition, the difference between donors and nondonors was marginally significant (M_{nondonors} = 4.73, SD = 2.27, M_{donors} = 5.47, SD = 2.21, p = .052). This difference was not statistically significant for the children’s charity (M_{nondonors} = 4.96, SD = 2.18, M_{donors} = 5.34, SD = 2.12, p = .171). For a meta-analysis combining the results of all five Study 1 charities, please see Figure 4 in the Study 1 discussion.
Regarding our second research question, Zhao, Lynch, and Chen (2010) pointed out that it is not necessary to demonstrate a significant relationship between an independent variable and dependent variable, the traditional first step in the Baron and Kenny (1986) process, before proceeding with a mediation analysis. Therefore, to evaluate the extent to which warm glow or prosocial self-concept may mediate an effect of donating on repeat consumption (i.e., repatronage intentions in this case), we conducted a multiple mediation analysis as per Preacher and Hayes (2008). The results indicated that the relationship between checkout charity participation and repatronage intentions was indeed mediated by warm glow (90% confidence interval = [0.3331, 1.4016]) but not by shifts in prosocial self-concept (90% confidence interval = [-0.1577, 0.0339]). After controlling for these two variables, the direct effect of donating on repatronage was insignificant (p = .950). We should point out that, given our directional hypotheses regarding warm glow, a 90% confidence interval is an appropriate test that minimizes the potential for Type II error (i.e., a “false negative”). For prosocial identity, which we predict will not mediate the relationship between checkout charity donations and repatronage, a 90% confidence interval represents the more conservative option for testing this suspected null effect.

Study 1b Analysis

Warm glow. Similar to Study 1a, a significant omnibus ANOVA, \( F(4, 298) = 5.28, p < .001 \), was followed by a pairwise comparison indicating that the difference in the warm glow of donors across the two charities was not statistically significant at the .05 level (\( M_{\text{donated}}_{\text{environment}} = 7.14, SD = 1.13, n = 73, M_{\text{donated}}_{\text{children}} = 6.82, SD = 1.43, n = 75, p = .137 \)). As with Study 1a, compared with the control condition (\( M = 6.59, SD = 1.22, n = 101 \)), donors to the environmental charity reported significantly higher warm glow (\( p = .003 \)). For this student sample, however, the warm glow of donors to homeless children was not significantly higher than that of the control group (\( p = .121 \)). Regarding nondonors, the warm glow of environmental nondonors (\( M = 6.25, SD = 1.28, n = 32 \)) was statistically equivalent to that of nondonors to the children’s charity (\( M = 5.93, SD = 1.75, n = 22, p = .368 \)). Compared with the control condition, those who refused to donate to the children reported significantly lower warm glow compared with the control condition (\( p = .016 \)). The warm glow of nondonors to environmental causes was not lower than that of the control condition (\( p = .105 \)). However, if we pool both charities to gain additional power, the pairwise comparisons with the control condition are statistically significant for both donors in general (\( M_{\text{donated}} = 6.98, SD = 1.30, n = 148, p = .011 \)) and nondonors in particular (\( M_{\text{did not donate}} = 6.12, SD = 1.48, n = 54, p = .018 \)). Perhaps more importantly, effect size of donating (vs. not donating) for this sample was found to be of “medium” (\( d = 0.616 \)) size (Cohen, 1988). We suspect that this slightly smaller effect among our student sample is likely due to 50 cents being a less relevant amount of money.

**Figure 3.**

**Study 1c: Warm Glow, Prosocial Identity, and Repatronage Intentions.**

*Note.* Bars represent 95% confidence intervals.

**Figure 4.**

**Forest Plot of Mean Differences in Repatronage Intentions Across Study 1 Charities.**
indicative of indirect-only (i.e., “full”) mediation.

Results indicated that the relationship between checkout charity participation and repatronage intentions was mediated by warm glow. After controlling for these two variables, the initially significant direct effect of donating on repatronage intentions was insignificant ($M_{\text{donors}} = 7.14, SD = 1.70, n = 51, p < .001$). Those randomly assigned to not donate reported significantly higher warm glow compared with the control condition ($M_{\text{did not donate}} = 4.14, SD = 1.81, n = 49, p < .001$). The difference between donors and nondonors represented an extremely large effect size ($d = 1.71$). Interestingly, this was a larger effect size than was observed in the self-selection studies. A visual inspection suggests that the increased effect is due to lower warm glow among those randomly assigned to not donate. While it is outside the scope of Study 1, future research may wish to explore why random assignment designs seem to heighten the effect.

Prosocial identity. An omnibus ANOVA indicated no significant difference between the conditions in terms of prosocial self-concept. Similar to the results for warm glow, the observed effect of donating (vs. not donating, $d = 0.23$) was somewhat larger than what was observed in Studies 1a and 1b—again due to lower scores in the “did not donate” condition. However, this difference did not achieve statistical significance ($M_{\text{did not donate}} = 4.83, SD = 1.73, n = 49, M_{\text{donated}} = 5.19, SD = 1.52, n = 51, p = .123$).

Study 1c: Analysis

Warm glow. For warm glow, the omnibus ANOVA indicated significant differences among the three experimental conditions, $F(1, 148) = 37.22, p < .001$. Follow-up pairwise comparisons indicated that, compared with the control condition ($M_{\text{control}} = 5.39, SD = 1.75, n = 51$), individuals randomly assigned to donate reported significantly higher levels of warm glow ($M_{\text{donated}} = 7.14, SD = 1.70, n = 51, p < .001$). Those randomly assigned to not donate reported significantly lower warm glow compared with the control condition ($M_{\text{did not donate}} = 4.14, SD = 1.81, n = 49, p < .001$). The difference between donors and nondonors represented an extremely large effect size ($d = 1.71$). Interestingly, this was a larger effect size than was observed in the self-selection studies. A visual inspection suggests that the increased effect is due to lower warm glow among those randomly assigned to not donate. While it is outside the scope of Study 1, future research may wish to explore why random assignment designs seem to heighten the effect.

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Discussion

As expected, in Study 1, warm glow was more sensitive than prosocial identity to checkout charity donations. This result is consistent with recent research from Blanken et al. (2014) which also reports three failed attempts to significantly shift participants’ self-concept. In other words, Study 1 suggests that the effect from minor prosocial acts is better explained by warm glow than by self-concept shifts. Notably, there currently exists only one study in the marketing literature where such an effect is subjected to a direct
test of mediation—and that study only uses a measure of prosocial identity. Our work is the first attempt to include both measures (warm glow and prosocial identity) and consistently finds warm glow as a more viable mechanism underlying minor prosocial acts.

Study 1 offers a series of three scenario studies. We recognize that, increasingly, scenario studies are not well received by marketing academics. However, we would suggest that they do have their merits. For example, having multiple scenario studies can provide insight into the generalizability of an effect in a way that no single study can. Also, conducting multiple studies allows one to conduct a “mini meta-analysis” to determine the size of an effect under investigation—an analysis now requested by the American Psychological Association for all new submissions. For example, using the procedure described by Cumming (2012), as shown in Figure 4, across the five different charities explored in Study 1, an estimated difference between non-donors and donors is .658.

In terms of generalizability, across several different charities and participant populations, we observed a similar pattern whereby, compared with a control condition, donors to a checkout charity experienced higher levels of warm glow while non-donors experienced lower warm glow. Similarly, all three studies found that warm glow (and not prosocial identity) mediated the effect of donating on repatronage intentions. We did observe that, compared with the MTurkers, our sample of Ivy League undergraduates seemed to exhibit a more muted response—a result that may have been due to this group’s relative price insensitivity. Future research may wish to examine how price sensitivity (or donation size) moderates the effect of donations on warm glow. However, with regard to the present research, it is the consistency across the three data collections (rather than their differences) that inspires us to move forward and examine the phenomenon of checkout charity in the context of actual donation behavior.

Study 2: Field Study

To provide insights regarding the ecological validity of the scenario studies, a field study was conducted at a fast-food restaurant that engages in checkout charity. This restaurant was not located within walking distance of a college campus. In addition, to address potential concerns regarding demand effects, Study 2 utilizes a more subtle measure of warm glow and collects that measure after participants report their repatronage intentions.

Stimuli and Procedure

The study occurred during a fundraising campaign where cashiers asked customers whether they would be willing to donate to the company foundation (which supports emergency services). If customers agree, they are asked to sign a paper medallion that is later taped up on the wall behind the register. Customers who elect not to purchase a medallion still have the opportunity to contribute to the foundation by rounding their purchase up to the nearest dollar (the checkout charity campaign conducted throughout the year).

Cashiers, blind to hypotheses, were instructed to randomly ask two out of three customers whether they would like to purchase a medallion. The remaining third served as a control group. After ordering, customers typically sat at a table or stood near the counter while they waited for their food to be prepared. At this time, a researcher approached individual customers and asked them whether they would be willing to fill out a short survey while they waited. As an incentive to participate, customers were told that they could keep the pen as a token of the researchers’ appreciation. Participants were then told that they could drop their completed surveys into a bucket near the door on their way out; 120 surveys were collected.

The outlet operator required a short survey. Thus, the approved survey was a single page, limiting our ability to collect multi-item measures. It asked participants how many times they had eaten at a [restaurant brand], the amount of their bill, whether the cashier invited them to donate, whether they donated, whether they paid with cash, and their zip code. The primary dependent variable, repeat purchase intentions, was measured with a single-item 7-point semantic differential scale, asking participants to strongly disagree/strongly agree with the statement, “Based on my experience today, I will return to this [restaurant brand] location.” Warm glow, the hypothesized mediator, was then measured with a single item, asking patrons to strongly disagree/strongly agree with the statement, “I am proud to be a [restaurant brand] customer.” Another strongly disagree/strongly agree item asked participants the extent to which they were satisfied with the service. At the request of the operator, additional items were included to evaluate the ordering experience, cleanliness, décor, and how many times they had eaten at the store previously.

Analysis

Study 1 was primarily concerned with demonstrating that checkout charity donations would not shift prosocial identity. As such, we had measured warm glow and prosocial identity immediately following the manipulation and considered them as the primary dependent variable for our analyses. For Study 2, we have shifted our focus to providing more managerially relevant insights regarding how checkout charity affects store repatronage. As such, ANOVA was used to examine differences in repeat purchase intentions among three groups: (a) the control group who were not asked to purchase a medallion and who did not round up their purchase, (b) individuals who either purchased a medallion or rounded up their purchase, and (c) those who declined to donate. The omnibus test indicated significant differences among the groups, $F(2, 113) = 5.756, p = .004$. Follow-up planned comparisons found that, compared with
the control condition, repeat purchase intentions were significantly higher among individuals who donated ($M_{\text{control}} = 5.829, M_{\text{donated}} = 6.560, p < .001$). Individuals who donated also had significantly higher repeat purchase intentions as compared with those who did not donate ($M_{no~donation} = 6.040, p = .023$). A post hoc comparison found no significant difference between the individuals who choose not to donate and the control condition ($p = .432$). This last result is of particular interest given the managerial concern that there is a potential downside to asking for donations.

A mediation analysis was conducted to evaluate the extent to which the effect of donating on repeat purchase intentions might be mediated by warm glow. The 90% bias-corrected confidence interval ($[0.0174, 0.4356]$) for the indirect path did not include zero, suggesting warm glow was a viable mediator. With the inclusion of the warm glow measure into the regression, the significant relationship between donating and repeat purchase intentions, $b = .6126, t(2, 111) = 3.0787, p = .001$, remained significant, $b = .4060, t(2, 111) = 3.0787, p = .005$. In other words, our single-item measure of warm glow only accounted for some of the variation in purchase intentions caused by donating. Therefore, we conducted a second mediation analysis including our measure of service satisfaction. For this analysis, the 90% bias-corrected confidence interval did not include zero for either warm glow (90% confidence interval = $[0.0028, 0.2191]$) or satisfaction (90% confidence interval = $[0.1082, 0.6951]$), indicating both mechanisms were operating. In addition, with the inclusion of satisfaction, the initial relationship between donating and patronage intentions became statistically insignificant, $b = .1992, t(2, 111) = 1.5324, p = .064$.

**Discussion**

The results of Study 2 provide evidence of ecological validity. The study takes place in the field and examines the outcomes of actual charitable contributions. We again find that those who donate report greater repatronage intentions. In addition, we find that this effect is mediated, albeit partially, by the extent to which customers agreed with the statement, “I am proud to be a customer of [restaurant brand].” While these results are encouraging, Study 2 is not without weaknesses. One issue is that the DV in Study 2 was again a measure of behavioral intentions. Study 3 is designed to address this particular issue by examining store sales data.

**Study 3: National Store-Level Data Analysis**

The purpose of Study 3 is to seek supporting real-world evidence that checkout charity leads to higher repeat purchase resulting in a positive impact on outlet performance. In line with this goal, the data for Study 3 are actual sales and checkout charity rates provided by the corporate office of a fast-food restaurant chain with approximately 1,000 U.S. locations. All restaurants in this chain participate in an ongoing checkout charity program whereby cashiers verbally solicit customers for donations to the corporation’s nonprofit foundation.

**Data Source and Measurement**

**Net sales.** The key performance measure we use in our model is net sales. The panel data are based on weekly reporting of restaurants with information on their sales performance, the amount of foundation donations, restaurant size, and age. Our final sample contains 944 restaurants with 117,793 observations, reporting measurements from January 2013 to December 2015.

**Donation behavior.** To create a variable that would capture checkout charity engagement, we divided each store’s total weekly contribution to the foundation by the store’s weekly sales. A higher score indicates that a store collects donations either from a greater percentage of its customers or from the same customers to a greater extent. We define donation behavior as the proportion of total amount of donation to the net sales by a given restaurant in a given week. We find that the average percentage of foundation donation of net sales is 0.008%.

**Control variables.** We include two control variables in our model that might influence the level of sales at a particular restaurant outlet. As young/small restaurants may exhibit different cyclical dynamics than old/large businesses and thus affect sales performance (Fort, Haltiwanger, Jarmin, & Miranda, 2013), we control for the building size and age of the store. The list of the variables, descriptive statistics, and descriptions of the operationalization are shown in Table 1.

### Table 1. Variable Operationalization and Descriptive Statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Operationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Sales</td>
<td>14,043.58</td>
<td>3,921.29</td>
<td>Weekly net sales (US$)</td>
</tr>
<tr>
<td>Donation Behavior</td>
<td>0.008</td>
<td>0.006</td>
<td>Proportion of total amount of foundation donation to the net sales in a given week</td>
</tr>
<tr>
<td>Size</td>
<td>1,986.57</td>
<td>383.71</td>
<td>Building size (square feet)</td>
</tr>
<tr>
<td>Age</td>
<td>1,511.24</td>
<td>1,496.51</td>
<td>Length since opening date (days)</td>
</tr>
</tbody>
</table>

...
Model Estimation

We estimate a panel data model to assess the impact of donation behavior on a restaurant’s subsequent week’s net sales. To examine whether donation behavior causes net sales, we use the amount of net sales in the previous week and the predictors in the previous week to estimate the model (Granger, Ghysels, Swanson, & Watson, 2001). Thus, a time lag between net sales (at time $t$) and foundation donation (at time $t-1$) is applied resulting in Equation 1:

$$
\text{NetSales}_t = \alpha + \pi_1 \text{NetSales}_{t-1} + \beta_1 \text{Donation}_{t-1} + \beta_2 \text{Size}_{t-1} + \beta_3 \text{Age}_{t-1},
$$

where $i$ denotes a restaurant, $t$ is the week period, Donation is percent foundation donation of net sales, Size is building size, and Age is days open.

Panel data structure. The panel data structure of our data (multiple restaurants across multiple weeks) allows us to control for variables which are not observed or measured such as the difference in business practices across restaurants, or variables that change over time but not across entities (i.e., local market, state regulations, etc.). Overall, it accounts for individual heterogeneity. Nevertheless, we need to ensure whether our data fit the assumptions of panel data analysis such as stationarity and no first-order autocorrelation, and whether there is a correlation between individual’s error term and predictor variable. First, we performed the Fisher-type unit root test of the null hypothesis that all the panels contain a unit root (Choi, 2001). We found no evidence of nonstationarity (modified inverse $\chi^2 = 269.78$, $p < .001$). Second, we performed an autocorrelation test (Wooldridge, 2002) to test for serially correlated errors. The evidence shows that there is serial autocorrelation, $F(1, 935) = 84.33$, $p < .001$; thus, we estimate the panel regression with first-order autoregressive disturbances for random and fixed-effect models in STATA 13.1 (Baltagi & Wu, 1999). Finally, we use the Hausman test to determine whether a random or fixed-effect model would be more appropriate (Hausman, 1978).

Results

The Hausman test results suggest that the fixed-effect model is appropriate to examine the impact of donation behavior on sales performance ($\chi^2 = 188.56$, $p < .001$). Therefore, we focus on and report the estimates of the fixed-effect model as shown in Model 1 (Table 2). The coefficient of donation behavior is positive and significant (8,729.33, $p < .001$), indicating that higher percentage of foundation donation of net sales in the previous time period increases the net sales after controlling for the effect of previous period’s net sales ($0.331$, $p < .001$). In other words, donation behavior is related to subsequent sales performance.

Robustness checks. We perform robustness checks, dealing with (a) the time-invariant control variable, (b) the endogeneity issue, and (c) the national charity campaign effect. First, although the fixed-effect model is more appropriate, we also report the results using a random-effect model to control the effect of the size of the outlet. As shown in Model 2 (Table 2), we find robust evidence in support of a positive impact of donation behavior on net sales. Second, certain unobserved firm-specific factors such as random

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5,955.08*** (43.52)</td>
<td>6,446.86*** (136.76)</td>
<td>6,044.62*** (45.30)</td>
<td>5,950.25*** (43.53)</td>
</tr>
<tr>
<td>Donation behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donation$_{t-1}$</td>
<td>8,729.33*** (953.66)</td>
<td>15,838.14*** (800.91)</td>
<td>8,628.06*** (1,872.38)</td>
<td>10,206.73*** (986.93)</td>
</tr>
<tr>
<td>Control variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NetSales$_{t-1}$</td>
<td>0.331*** (0.003)</td>
<td>0.448*** (0.003)</td>
<td>0.563*** (0.002)</td>
<td>0.331*** (0.003)</td>
</tr>
<tr>
<td>Size$_{t-1}$</td>
<td>0.743*** (0.063)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age$_{t-1}$</td>
<td>-0.084*** (0.022)</td>
<td>-0.171*** (0.013)</td>
<td>-0.080** (0.018)</td>
<td>-0.078** (0.022)</td>
</tr>
<tr>
<td>National campaign</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F$ statistic/Wald statistic</td>
<td>4,987.44***</td>
<td>32,106.55***</td>
<td>8.05E + 06***</td>
<td>3,756.25***</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.788</td>
<td>.745</td>
<td>.793</td>
<td>.788</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01.
marketing campaigns at different restaurants could affect the donation behavior and, in turn, also impact the restaurants’ sales performance, leading to endogeneity. To address the endogeneity concern, we apply an instrument variable approach by using the lagged value of donation behavior which is commonly used for instruments (Kang, Germann, & Grewal, 2016). As shown in Model 3 (Table 2), the findings remain robust to this approach, allaying endogeneity concerns. Finally, in addition to their ongoing checkout charity campaign, restaurants in our focal company participate in a month-long national donation campaign. Therefore, the pattern of donation behavior during national donation campaign differs from other months. To control for this effect, we created a dummy variable to account for this effect called “National Campaign.” As shown in Model 4 (Table 2), our findings remain robust.

Discussion

The results of the above analyses indicate a significant relationship between customer checkout charity contributions (as a percentage of sales) and overall sales in the subsequent week. In other words, the results of Study 3 point to a positive relationship between checkout charity and unit performance consistent with encouraging repeat store patronage. Although supportive of our arguments, there may exist any number of alternative explanations for the relationship between donation behaviors and sales we observed. However, we are not claiming Study 3 to stand on its own but rather in concert with the other evidence provided.

General Discussion

The practice of collecting small charitable donations from consumers is quickly becoming an established aspect of many retail and service experiences, including restaurants. However, there is currently little research that directly examines how these small donations might affect subsequent consumption (e.g., repeat purchase). The present research offers a variety of contributions to this emerging literature as well as informing hospitality management practices. We discuss each in detail below.

Checkout charity is a controversial practice. Many managers believe that it is detrimental to the frontline service experience and, thus, hurts sales. Its growing prevalence, however, suggests corporate offices feel otherwise—or perhaps many simply believe the CSR benefits outweigh the costs (Koschatz-Fischer, Stefan, & Hoyer, 2012). Interestingly, checkout charity is different from other CSR tactics in that it is actually the company’s customers who are being socially responsible. In other words, it represents an emerging type of consumer engagement behavior (Van Doorn et al., 2010). However, as mentioned in the introduction, it is an engagement behavior that many consumers dislike—with a large percentage only participating to avoid the guilt associated with refusing (Good Scout, 2015). As such, it is perhaps somewhat surprising that we consistently observe the potential for a positive relationship between checkout charity and repatronage. However, while many managers might doubt such an effect, it is perfectly consistent with the academic literature on “licensing” which examines how good behavior can provide permission to indulge.

There are a number of reasons to suspect that prosocial consumer behavior will result in warm glow rather than a prosocial self-identity shift. One is that prosocial consumer behavior is often characterized by relatively minor acts such as donating spare change, reusing your hotel towel, or bringing your own bags to the grocery store. Intuitively, it seems that such small acts might not be sufficient to shift self-concept. As discussed above, emerging research is beginning to make the case that self-concept is only relevant for difficult (vs. relatively minor) prosocial consumer behaviors (Blanken et al., 2014; Giebelhausen et al., 2016; Giroux, Pons, & Maltese, 2014) or with specific types of consumers (Winterich & Barone, 2011).

The present research examines one outcome of checkout charity and provides preliminary evidence of an underlying psychological process. However, more research is necessary to fully understand what happens when a marketer asks their customers to donate to a charity. In particular, future research may wish to explore complementary mechanisms such as service satisfaction, mood, or moral credits. Exploring moral licensing via a moral credits versus credentials process holds significant promise (Mazar & Zhong, 2010; Miller & Effron, 2010). Future work could also more closely examine how checkout charity affects perceptions of the frontline service encounter (from both the customer and the employee’s perspective). Many frontline service employees are unmotivated to ask for donations at the checkout. Thus, a greater understanding of how the characteristics of such appeals (e.g., duration, type, fit) impact their identification with their employer and willingness to participate is another potential line of research that would contribute to existing services literature (Baker, Rapp, Meyer, & Mullins, 2014; Singh, 2000). Future research might also examine the size of the charitable donation. Would it be the case that a larger donation results in more warm glow—or is a tiny donation all that is necessary? The present research would seem to suggest the latter.

Research into the increasingly prevalent phenomenon of checkout charity is only beginning. However, the results presented above at least suggest that checkout charity campaigns can help raise funds for CSR initiatives while potentially increasing sales at no cost to customer satisfaction. For the academic community, these results contribute to the growing literature on prosocial marketing. In particular, the results suggest that researchers should consider the role of warm glow in models.
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