



# Service fundraising and the role of perceived donation efficacy in individual charitable giving

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## ABSTRACT

Perceived donation efficacy (PDE) is the degree to which a donor believes that a charitable gift will make a difference in the cause that he or she is supporting. Extant research leaves important questions to be answered about the kinds of fundraising models that affect PDE, and PDE's subsequent influence on charitable giving. We find that PDE and, in turn, charitable giving can be impacted by a newly proposed fundraising model that substitutes volunteer service for miles walked in the more traditional “walk-a-thon” model. The real-world success of the service fundraising model is first established in a field study with an actual nonprofit organization. Subsequent experiments further suggest that the influence of fundraising models on PDE is broader than simply making more efficient use of donors' dollars. We also offer the first empirical evidence that PDE mediates the relationship between fundraising models and charitable giving.

## 1. Introduction

The impact of nonprofit organizations is far-reaching and vital to the wellbeing of humanity. In many communities around the world, nonprofit organizations provide some of the most basic and essential services to those in need - services such as access to clean water, food and shelter. However, despite the valuable work most of these organizations perform, many lack resources and find themselves understaffed and underfunded. According to a 2015 survey of nonprofit organizations (Nonprofit Finance Fund, 2015) more than three-fourths of those surveyed reported an increase in demand for services, yet more than half of them couldn't meet demand. Of those who reported that they could not meet demand, 71% stated that they couldn't provide services due to a lack of resources. Based on the potentially dire consequences of these shortcomings, it is imperative to better understand what drives charitable giving so that nonprofit organizations can maximize their aid to the underprivileged.

Contrasted against the general struggle of nonprofit organizations, one – Charity: Water – has garnered significant attention for its success, raising a quarter of a billion dollars in ten years and bringing clean water to over seven million people in developing countries (National Retail Federation, 2017). Charity: Water's model relies on large corporate donations to cover operating costs, so that 100% of individual donors' dollars directly fund water projects. Charity: Water's success

and unique model have also generated scientific inquiry. Gneezy, Keenan, and Gneezy (2014) found in both a lab study and a field experiment with Charity: Water that donation frequency and amount increase as the amount of donors' contributions allocated toward overhead decrease. Gneezy et al.'s results suggest that the effect is driven by donors' sense that their contributions will make a difference to the cause they are supporting. This has been referred to as perceived donation efficacy (PDE), or the degree to which donors believe their contribution will make a difference to the cause they are supporting (Bekkers & Wiepking, 2010). However, such a perception was not measured, and thus it could not be empirically established that PDE drove outcomes. Indeed, while Bekkers and Wiepking (2010) reviewed over 500 studies that delineated eight primary drivers of charitable giving, their conclusions on efficacy as a driver were somewhat tempered, writing that, “although efficacy has been studied extensively in the helping behavior literature, we have been unable to locate any experimental studies on philanthropy that manipulated efficacy” (p. 942). Gneezy et al. (2014) likewise did not measure PDE, leaving the relationship among fundraising models, PDE, and charitable giving ambiguous, which is an important gap to address from both a theoretical and applied perspective. PDE is theoretically established more broadly than as sheer dollar efficiency, which itself may be confounded with other constructs (e.g., organizational credibility Arpan & Roskos-Ewoldsen, 2005). Outside of a handful of studies on nonprofit

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organizations' financial (and overhead, specifically) disclosures, prior research has neither examined alternative fundraising models for enhancing PDE nor empirically established that PDE causes charitable giving. Beyond being an important theoretical gap to address, from an applied perspective the overhead coverage fundraising model for enhancing PDE is of limited use since the solicitation of big corporate donations may be incompatible with many nonprofit organizations' means or values.

Therefore, the goal of this research is to build a clearer understanding of PDE, both in terms of the fundraising models that impact it and in terms of its relationship to charitable giving. We do so by proposing and investigating the impact of a readily applied fundraising model that offers a twist on the common “walk-a-thon” model, which simply substitutes charity service hours for distance walked in a charitable solicitation. We call this the service fundraising model. In a field study and three online experiments, we examine how the service fundraising model impacts PDE and, in turn, charitable giving intentions and actual charitable gifts. Expanding on prior research that only suggested PDE and downstream giving effects through overhead coverage (Gneezy et al., 2014) or donation efficiency (Diamond & Kashyap, 1997) fundraising models, we find robust evidence that the service fundraising model also enhances PDE and increases charitable giving relative to more traditional fundraising models. Notably, these findings bring PDE more in line with its broad conceptualization than with prior empirical work that constrained it within sheer financial efficiency. In doing so, we resolve additional extant questions about the relationship between PDE and charitable giving. Specifically, overhead coverage fundraising models conflate PDE with other constructs (e.g., organizational credibility; Arpan & Roskos-Ewoldsen, 2005) and open up possibilities for reverse causality (i.e., that consumers adjust efficacy perceptions to justify prior donation behavior; Radley & Kennedy, 1992). The service fundraising model as executed in our experiments avoids both confounds. In the next section, we review the literature on PDE and its related constructs to establish its broad nature and to outline the logic for introducing the service fundraising model. Hypothesizing that the service fundraising model will enhance both PDE and giving, we then present a field study and three online experiments, which introduce the service fundraising model, test its relationships with PDE and charitable giving, and rule out potential confounds. Importantly, the initial field study establishes the effectiveness of the service fundraising model in yielding actual charitable gifts. Finally, we discuss the implications for research on charitable giving, applications for nonprofit organizations, as well as limitations and ideas for future research.

## 2. Conceptual background and hypotheses

Charitable giving has been extensively studied and reviewed in fields across the social sciences. We adopt Bekkers and Wiepking's (2010) cross-disciplinary definition of charitable giving as “the donation of money to an organization that benefits others beyond one's own family” (p. 925). As those authors note, this definition is within the context of, but distinct from, the individual fields in which charitable giving has been studied in specific disciplines. In social psychology, for instance, charitable giving is often studied as a form of *helping behavior*, but the helping behavior paradigm often puts the beneficiary of the help in the proximity of the helper (Baron & Bell, 1976). In contrast, charitable gifts are usually given in absence of the beneficiary. Thus, charitable giving is related to, but distinct from, helping behavior. Likewise, economists often study charitable giving in the context of *altruism*, or care for the consequences of donations for beneficiaries (Andreoni, 2006). While concern for bottom-line outcomes is certainly part of what drives charitable giving, it is a markedly different construct. This is exemplified by an outcome of altruism that economists call “crowding out,” wherein a donor becomes less likely to give when beneficiaries are brought closer to their goals by other donors (Kingma, 1989).

It is well established that a successful way to motivate consumers to support good causes is to appeal to their sense of impact on broad or distant outcomes. Sargeant, Ford, and West (2006) found that donor trust in a charity – a strong driver of giving – is created by the extent of the perceived impact that the charity has on a cause. Michele and Rieunier (2012) demonstrated that the perceived efficiency of a nonprofit brand influenced intentions to give. In refining Michel and Rieunier's work, Michaelidou, Micevski, and Cadogan (2015) show specifically that the perceived effectiveness and helpfulness of nonprofit brands impacted intentions to give. Walker and Kent (2013) found that the impact of corporate philanthropy efforts on consumer responses was mediated by consumers' perceptions of the organization's credibility. More specifically, consumers' willingness to pay premiums or to advocate on behalf of an organization engaged in corporate philanthropy depended on consumers' perceptions that the organization could and would make good on its philanthropic promises. In other words, consumers' willingness to pay more or advocate depended on their belief that those actions would actually result in benefits for a distant party. Finally, trait gratitude, a “generalized tendency to recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains” (McCullough, Emmons, & Tsang, 2002, p. 112), has been linked to charitable giving intentions (Xie & Bagozzi, 2014). The basis for this effect is that individuals with high trait gratitude are motivated to have an especially positive impact on benefactors and others (Bock, Eastman, & Eastman, 2016); higher motivation for impact yields higher charitable giving.

### 2.1. PDE and charitable giving

In the context of charitable giving, the notion of impact is captured by perceived donation efficacy (PDE), which is defined as the degree to which donors believe their contributions will make a difference to the cause they are supporting (Bekkers & Wiepking, 2010). PDE is a form of perceived *response efficacy*, which is distinct from *self-efficacy* – a distinction that has been drawn in prior research (e.g., Basil, Ridgway, & Basil, 2008). Where self-efficacy reflects one's beliefs about his/her ability to perform a behavior (Bandura, 1986), response efficacy reflects beliefs that a behavior will result in certain outcomes (Rogers, 1975). As a perception of response efficacy, PDE reflects a belief that a behavior (donating) will result in an outcome (making a difference to the supported cause). PDE is similar to, but distinct from, other means of appealing to consumers' sense of impact to motivate them to contribute to good causes. Newell and Goldsmith (2001) define organizational credibility as a specific form of source credibility – where “... *source credibility* refers to the ability of a *spokesperson* to favorably or unfavorably affect a receiver's acceptance of the information presented in a formal communication,” organizational credibility is “the perceived expertise and trustworthiness or truthfulness of a *firm*,” (p. 237, emphasis added). Organizational credibility is a global evaluation of an organization's capability to uphold its promises, and has been shown to influence donation amounts but not donation choice (Fajardo, Townsend, & Bolander, 2018). PDE, however, is not a global evaluation of a source, but rather a perception of a specific action – the donation being considered. Like organizational credibility, perceived consumer effectiveness is a global evaluation, but of oneself rather than of an organization. Where perceived consumer effectiveness reflects general beliefs about how one's consumption choices across contexts affect broad social or natural environmental outcomes (Antonetti & Maklan, 2014), PDE reflects a specific belief about how an individual donation action will affect a specific cause. Finally, while trait gratitude's impact on charitable giving is the result of a desire for impact (Bock et al., 2016), its nexus is in the individual's disposition rather than in the charitable solicitation or offer as with PDE. Taken together, PDE is uniquely characterized by the extent of impact offered in a specific charitable solicitation. Thus, compared with consumer dispositions

such as perceived consumer effectiveness or trait gratitude, PDE can more directly be influenced by nonprofit organizations via their fundraising model choices. Likewise, through fundraising model choices, PDE is also more immediately actionable than organizational credibility, which can take significant time to meaningfully establish or change.

A number of theoretical bases suggest that greater levels of PDE should result in greater charitable giving, but subsequent empirical testing has fallen short of providing conclusive evidence of the relationship. Building on [Schwartz's \(1967\)](#) theorizing that gifts generate identity for the giver, [Radley and Kennedy \(1992\)](#) proposed that charitable donations similarly confer identity. [Fajardo et al. \(2018\)](#) demonstrated a similar effect – encouraging people to “show your generosity” increased the likelihood of donating. In their qualitative study, [Radley and Kennedy \(1992\)](#) found that concerns about lack of PDE were often associated with a lower likelihood of giving. They showed that two of the three market segments they studied expressed a preference for giving to local, rather than national or overseas, organizations, with the two segments citing concerns about how their gift would be used by the organization. These participants said things like, “I like to keep it local. I don't like to see the money go down the drain... (I)t's these where you don't know where it's going and it's all chewed up by administration and things like that,” ([Radley & Kennedy, 1992, p. 121](#)). As they further note though, if the outcome of giving to distant organizations was made visible or tangible to interviewees, then these concerns about PDE were mitigated but behaviors and intentions did not necessarily change. The exploratory, qualitative design of the research allows for reverse causality. From [Schwartz's \(1967\)](#) theoretical perspective, it could have been that the part of the donors' identities that predisposed them to not want to give resulted in biased PDE.

[Diamond and Kashyap \(1997\)](#) examined the link between efficacy and charitable giving with a large-scale survey aimed at understanding alumni support for a university. They built on the broader helping behavior literature that suggested a link between efficacy and positive outcomes. [Midlarsky \(1971\)](#), for example, demonstrated that perceptions of one's own competence (a form of self-efficacy) were positively linked to altruistic behaviors. Similarly, ([Schwartz & Ben-David, 1976](#)) demonstrated that people were more likely to help another in distress when they had greater perceptions of their own relevant ability to help. Expanding on these findings from helping behavior research, [Diamond and Kashyap \(1997\)](#) conceptualize efficacy as both the individual giver's competence (a form of self-efficacy) and as the financial efficiency of the gift itself (more closely related to response efficacy and PDE). Using a path model, they found that efficacy was positively associated with a sense of obligation to help, intentions to donate directly, and intentions to help with fundraising events. However, the authors point out that, “this connection may result from the relationship between perceived efficacy and the amount of money one can contribute,” ([Diamond & Kashyap, 1997, p. 924](#)). In other words, though the theoretical reasoning was sound this early test of efficacy did not go as far as to disentangle self-efficacy (driven by greater financial resources) from PDE (the impact offered by the appeal).

[Smith and McSweeney \(2007\)](#) conducted a longitudinal survey to test the underpinnings of intentions to make a charitable gift. Working from the theory of planned behavior ([Ajzen, 1985](#)), they proposed that people's beliefs about charitable giving would influence their intentions to give in a particular fundraising appeal and, in turn, their subsequent actual donations. According to the theory of planned behavior, more positive beliefs about action (e.g., greater PDE) should result in more favorable intentions to perform the behavior (i.e., to donate). They found that certain beliefs distinguish between those with a high intention to donate and those with a low intention to donate. In one echo of [Diamond and Kashyap \(1997\)](#), they found that those with low intentions to give (vs. those with high intentions to give) indicated a greater individual concern about having less money for oneself. In tandem, they found that those with low intentions to give (vs. those

with high intentions to give) indicated greater concern that their gift would not reach the needy (i.e., low PDE). Thus, while [Smith and McSweeney \(2007\)](#) replicate [Diamond and Kashyap \(1997\)](#) using a more robust longitudinal design, the specter remains that greater means to give – in this case, less concern with having money for oneself – can cause enhanced PDE and giving.

To summarize, the role of charitable giving on self-identity ([Schwartz, 1967](#)), theories of helping behavior ([Midlarsky, 1971](#); [Schwartz & Ben-David, 1976](#)), and the theory of planned behavior ([Ajzen, 1985](#)) all suggest that PDE should be positively related to charitable giving, but their subsequent empirical tests (respectively, [Radley & Kennedy, 1992](#); [Diamond & Kashyap, 1997](#); [Smith & McSweeney, 2007](#)) allow for interpretations of reverse causality and/or conflate self-efficacy with PDE.

## 2.2. Fundraising models and PDE

Prior research has attempted to clarify the relationship between PDE and charitable giving with experimental tests of different fundraising appeals. In particular, [Parsons \(2007\)](#) and [Gneezy et al. \(2014\)](#) manipulated the disclosure of financials by nonprofit service organizations to potential donors. While PDE was not measured in either study, it should be the case that the greater the percentage of donation dollars that reach the intended target (vs., nonprofit organization overhead), the greater the PDE. [Parsons' \(2007\)](#) emphasis was not on PDE per se, but on disclosure itself. Parsons sought to examine the influence of nonprofits' financial disclosures through the lens of the “lemon problem” ([Akerlof, 1970](#)), in which information asymmetry causes offerings, regardless of actual quality, to clear the market at an average price. This encourages low quality or inefficient offerings, because customers overpay for them, and discourages high quality or efficient offerings, because customers underpay for them. To that end, [Parsons' \(2007\)](#) experiment didn't aim to vary levels of PDE, but did vary potential donors' ability to form PDE and restore information symmetry by disclosing or not disclosing the financial information of the nonprofit organization. The findings revealed that some people who previously donated to an organization do rely on financial disclosures in making their charitable gift decisions. [Gneezy et al. \(2014\)](#) also take an economic perspective on the issue, proposing that the utility potential donors receive by donating depends on the degree of impact the donation has on the beneficiaries rather than charity overhead. Indeed, they manipulate levels of overhead and found that charitable gifts improved when donors were assured that less of their donation dollars would go to overhead. The results of both [Parsons \(2007\)](#) and [Gneezy et al. \(2014\)](#) suggest that fundraising models influence charitable giving through their influence on PDE. However, because of some inherent properties of the financial efficiency (or overhead coverage) fundraising model and since PDE was not measured in either, it remains unclear if the impact of the fundraising model on participants' gifts was due to PDE or some other factor. From an internal validity perspective, the mere act of proactive disclosure introduces confounds with other constructs such as organizational credibility ([Arpan & Roskos-Ewoldsen, 2005](#)) that weaken inferences about the relationship between PDE and charitable giving. From an external validity perspective, such disclosures lack realism since actual organizations with large overhead costs wouldn't disclose so in a charitable ask. Finally, as a construct PDE is a broader concept than sheer dollar efficiency, encompassing the totality of outcomes from a given donation. In sum, the design of different fundraising models should impact charitable giving, but it is yet to be conclusively shown that PDE is responsible for these outcomes.

Therefore, we sought to propose a new fundraising model that would remain within the conceptual bounds of PDE as the degree to which donors perceive that a charitable gift would make a difference, while also broadening its execution beyond financial disclosure and enhancing both internal and external validity in an empirical context. Instead of pure dollar efficiency, we propose that PDE can be more

precisely influenced by what fundraising solicitors do in exchange for a charitable gift. As in the real world, solicitors can engage in a standard financial contribution request, where they simply ask for a gift. Alternatively, common fundraisers may ask donors to agree to give an amount per unit of activity the solicitor completes – e.g., the donor agrees to give \$10 for every mile the solicitor walks in a walk-a-thon. The activity to be completed is quite fungible; for example, elementary schools run “math-a-thon” fundraisers in which the donation depends on the number of math problems students complete. To better influence PDE, we took this common model and inserted community service hours as the activity. In this scenario the donor’s impact is not just the dollars (s)he contributes to the cause, but also the service hours that the solicitor works, which should result in greater charitable giving based on PDE. This service fundraising model introduces a number of advantages over prior studies on fundraising models, PDE, and charitable giving. First, because it is not a direct action by the nonprofit organization as in the disclosure of financial or overhead information, it should be less apt to influence alternative mechanisms (e.g., organizational credibility) that elicit greater donations; thus it should be more internally valid. Second, because it is a simple twist on a popular fundraising method, it should be more readily applied than financial disclosures in the real world, thus enhancing the model’s external validity. Third, by adding greater possible impact of a given donation, the service fundraising model broadens the narrow scope of raw dollar efficiency used in prior studies while remaining consistent with the conceptualization of PDE as described by Bekkers and Wiepking (2010). Bekkers and Wiepking noted the likely role of PDE in “modeling effects” in donor behavior (e.g., Lincoln, 1977), in which observing another’s donation increased the likelihood of donating oneself. The observed donation signals confidence in the ability of the charity. Similarly, third-party matching offers – such as those offered by employers – not only increase the amount donated, but the action by the third-party makes potential donors more confident that a charity will have a positive impact on its cause. The service model adopted here avoids the aforementioned conflations that come with pure dollar efficiency, but retains the signaling and legitimizing aspects of PDE in the solicitor’s commitment to service hours.

Taken all together, we predict that:

**H1.** Service fundraising (vs. traditional fundraising models) will elicit greater charitable giving.

**H2.** Service fundraising (vs. traditional fundraising models) will elicit greater perceived donation efficacy (PDE).

**H3.** The influence of service fundraising (vs. traditional fundraising models) on charitable giving is mediated by perceived donation efficacy (PDE).

We conducted four studies – a field study and three online experiments – to test these hypotheses.

### 3. Study 1A

#### 3.1. Participants and procedure

Working with a nonprofit organization in the northeast U.S., we set-up a field study to test the real world effect of a service solicitation on charitable giving. For pragmatic considerations of our field partner, this study employed a one-shot case study design; the service fundraising model would be administered and the resulting donations would be compared to the average donation (\$77) given on one of the leading peer-to-peer fundraising platforms in the U.S. (Chisolm, 2017).

One of the authors created a website that enabled individuals to raise funds by soliciting donations for the nonprofit organization based on service hours they would perform. The nonprofit organization maintains a network of chapters at high schools and colleges, of which four were randomly selected to participate in this project. From these

four chapters, eighty-four individuals aged 16–22 each created their own fundraising page on the website. Each individual indicated the number of service hours they expected to complete during the fundraising period – September 1 to November 30, 2016. Potential donors could choose to donate either a one-time amount upfront (i.e., pre-paid), or to donate an amount based on the actual number of service hours the solicitor had logged on the platform by the end of the fundraising period (i.e., post-paid). In the latter case, donors were shown in real time what their maximum gift would be if the solicitor completed all of his or her pledged hours. Examples of pre- and post-paid donation pages are shown in the appendix. Each individual fundraiser had a target goal of raising \$750. The service hour commitments ranged from 15 h to 200 h of service with an average of 69 h. Each individual fundraiser was asked to add to their page a personal photo and a brief description of why they were raising money for this nonprofit. Once their pages were complete, they were instructed to email friends and family or post on their social media pages requesting charitable gifts for their service time. A total of 422 donations were received. Thirty-four (8.0%) were removed from analysis for being made to a page that did not comply with photo and/or description instructions, resulting in a usable sample of 388 donations.

#### 3.2. Results

Supporting Hypothesis 1, a one sample *t*-test revealed that the average donation amount in this study, \$99.29, was greater than the reported average of \$77 ( $t(387), p = .000$ ) given on one of the leading peer-to-peer fundraising platforms (Chisolm, 2017). Further, post-paid donations based on actual service hours performed were higher than pre-paid donations based on the expected amount of service (\$115.44 vs. \$87.21,  $t(386) = 2.66, p = .008$ ), even though the average number of service hours pledged by each individual fundraiser was not significantly different whether the donor pre-paid (67.0 h) or post-paid (64.9 h;  $t(81) = 0.248, p = .805$ ). This study suggests that a service fundraising model is a viable option for enhancing actual charitable giving. However, because we could not deploy a control condition in this field study we also conducted an online experiment as part of our initial assessment of the service-based fundraising solicitation.

### 4. Study 1B

#### 4.1. Participants and procedure

An online experiment was designed to further assess the impact of a service-based fundraising solicitation, on outcomes such as charitable giving intentions. Data were collected from 405 U.S. participants recruited from Amazon Mechanical Turk (AMT) who completed an online survey in exchange for a cash payment. Sixteen questionnaires were removed from the study for failing to properly answer a quality check question resulting in a total usable sample of 389. The resulting data has been submitted with this article. The experiment employed a single factor between-subjects design in which a fundraising solicitation was manipulated to be either a standard financial contribution request (control condition) or a service-based solicitation (treatment condition), the latter of which is described in detail in the ‘Stimuli’ section. Participants were randomly assigned to one of the two conditions and asked to evaluate a charitable gift solicitation from a friend on social media. This solicitation included the experimental treatments, where the solicitor offered details on the fundraising effort. After reading the solicitation, participants were asked if they would do any of the following:

- donate money (yes/no)
- share their friend’s request on social media (yes/no)
- do nothing (yes/no)

The measures for Studies 1B through 3 are presented in the appendix.

#### 4.2. Stimuli

In this study, participants were asked to imagine they were on Facebook and received a message from a friend. This message contained the fundraising solicitation manipulation, with participants randomly assigned to one of the two conditions. In the control condition, the message began, “Please help me support Action Against Hunger Organization by donating money to Action Against Hunger. Over the next couple of months I will be asking for donations.” In the treatment (service solicitation) condition, the message began, “Please help me support the Action Against Hunger Organization by donating money to Action Against Hunger for every hour I volunteer. Over the next couple of months I will be volunteering service hours.” In both conditions, following the manipulation, the message concluded with, “The process is fast, easy, and secure. I truly appreciate any support you can provide. It will benefit a great cause! If you can't make a donation at this point, help me reach my goal by sharing this page on Facebook and Twitter! Or, even better, send an e-mail to friends you think might be interested in contributing and include a link to my page! Thanks so much for your generosity!” Each version is presented in full in the appendix.

#### 4.3. Results

To test the main effect of the fundraising solicitation on charitable giving intentions, z-tests of two proportions were conducted to compare responses in the control versus treatment. A greater proportion of participants were willing to give money in the treatment (36%, or 71/200) versus the control (26%, or 50/189) condition ( $z = 1.93, p = .054$ ), offering marginally significant support of Hypothesis 1. Additionally, there was a significant difference in the proportion willing to share on social media in the treatment (49%, or 97/200) versus control (37%, or 70/189) conditions ( $z = 2.28, p < .05$ ), and a significant difference in the percentage not willing to do anything in the control (48%, or 91/189) versus treatment (37%, or 74/200) conditions ( $z = -2.22, p < .05$ ). These results are depicted in Fig. 1.

The results of Study 1B offer evidence that a fundraising solicitation with greater potential impact, and hence PDE, leads to more favorable donor responses. These results are consistent with prior research using an overhead coverage treatment, but avoid certain confounds related to such treatments. While promising, these studies do not account for some factors. First, in the online experiment in the service treatment the solicitor engages in some activity while in the control the solicitor does

not. It could be the case that what we presume to be caused by high PDE is simply a reflection of the solicitor committing to any type of activity, even if it doesn't enhance PDE. Donors may simply want to support whatever activity it is that their friends desire to do. Second, in the service treatment the donor may experience some uncertainty since the donation amount depends on the number of service hours the solicitor performs, which may drive differences in responses. For example, the donor may underestimate the total (s)he will have to donate if (s)he underestimates the number of service hours the solicitor will perform. Therefore, we designed Study 2 to further assess the validity of the service fundraising model, including the addition of a measure for PDE to better understand the role it plays in forming charitable giving intentions.

### 5. Study 2

#### 5.1. Participants and procedure

Similar to Study 1B data were collected from 245 U.S. participants recruited from AMT who completed an online survey in exchange for a cash payment. Nineteen questionnaires were removed for failing a quality check question, nine for speeding or lagging (completion time under 1 min or over 10 min), and four for straightlining positively or negatively (e.g., all responses of 1 or all responses of 7) across even a reverse-scored item. This yielded 213 usable responses (38% female, average age 40 years (S.D. 11.8), 39% married and 50% never married). All data, including screened responses, have been submitted with this article. As in Study 1B, here we used a single factor between-subjects design. Where the first experiment manipulated the fundraising solicitation at two levels, here we manipulated the fundraising solicitation at three levels, including the same manipulations as Study 1B, plus an additional charity walk treatment where the critical sentences that begin the solicitation message read, “Please help me support Action Against Hunger Organization by donating money to Action Against Hunger for every mile I walk. Over the next couple of months I will be walking miles.” In this study we continue to refer to the standard financial contribution appeal as the control condition; the service appeal the “service treatment” condition; and the charity walk appeal the “walk treatment” condition. Both the service treatment and the walk treatment include solicitor activity and some donor uncertainty about the gift total, thus ruling out potential confounds present in Study 1B. Participants were randomly assigned to read one of the three fundraising solicitation messages. After reviewing the solicitation message, as in Study 1B respondents were asked whether or not they would donate money.

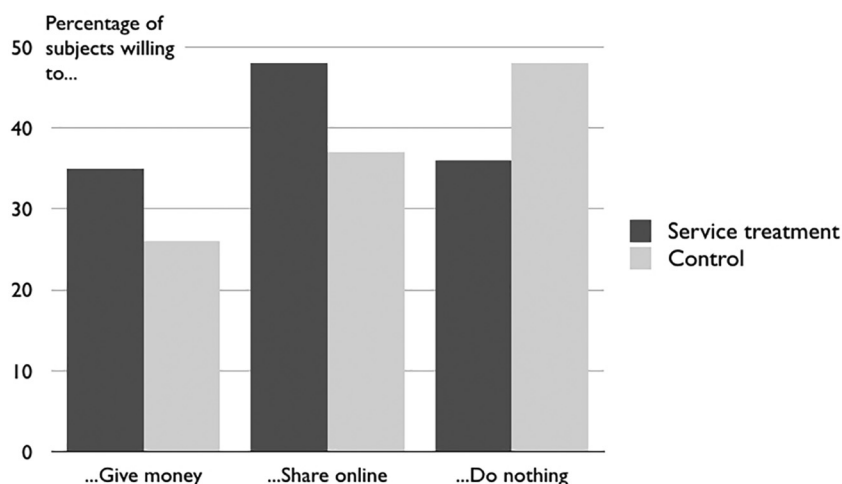


Fig. 1. Study 1B fundraising solicitation and behavioral intentions.

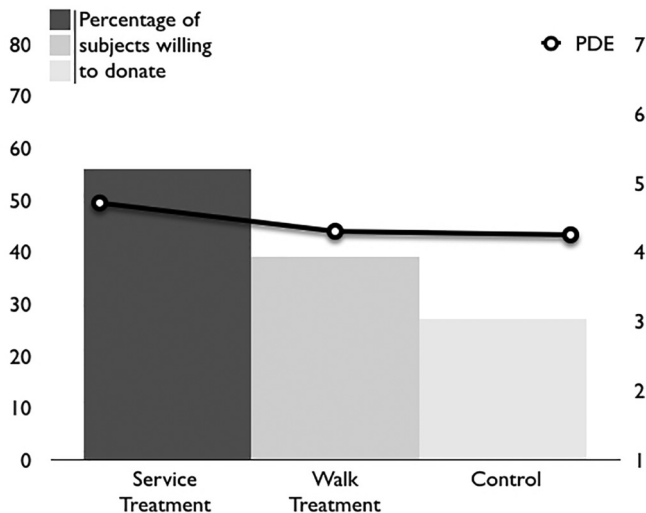


Fig. 2. Study two perceived donation efficacy (PDE) and charitable giving intentions.

Additionally, we created a PDE measure based on its conceptualization as a belief about the effectiveness of a specific action or tactic. Specifically, returning to Bekkers and Wiepking's (2010) and Gneezy et al.'s (2014) conceptual descriptions of PDE, three key properties emerge. First is a *focus on the donation*, and not dispositions of the potential donor. Second is *relative impact*: "...individuals might feel that they made a greater impact when they know they are helping the cause directly as opposed to when their contribution pays the salary of a charity's staff members" (Gneezy et al., 2014, p. 633; emphasis added); and "...when people perceive that their contribution will not make a difference, they are less likely to give" (Bekkers & Wiepking, 2010, p. 942). Third is *ownership* of the specific contribution and impact: "Donors are motivated by the opportunity to personally make a difference" (Gneezy et al., 2014, p. 633; emphasis added); and "Efficacy refers to the perception of donors that their contribution make a difference to the cause they are supporting," (Bekkers & Wiepking, 2010, p. 942; emphasis added). Note that this notion of ownership is still distinct from self-efficacy. People's beliefs about attribution for the outcome of an action (the ownership part of PDE) are distinct from their beliefs about their abilities to perform an action (as in self-efficacy). We attempted to capture these themes in three items. While each item has elements of each of these three themes, each was written to emphasize a particular theme. The items are: (1) "My donation to this fundraiser would not produce the desired results" (emphasis on donation; reverse scored) (2) "If I were to contribute \$10 to this fundraiser, I would be making a greater impact than if I contributed \$10 to other fundraisers I have seen" (emphasis on relative impact); (2) "If I made a donation to this fundraiser, I would personally make a difference to the supported cause" (emphasis on ownership of contribution and its effects). Responses to each of these items were elicited on a seven-point scale anchored by strongly disagree (1) and strongly agree (7). The three items showed high internal consistency ( $\alpha = 0.84$ ), and so were averaged together to form a composite PDE measure ( $M = 4.39$ ). While the aims of this research were not scale development per se, we nonetheless wanted to ensure the validity of our PDE measure. Therefore, to assess convergent validity, or relationships to theoretically related constructs, we included Sargeant et al.'s (2006) performance of the organization measure ("This nonprofit is the nonprofit most likely to have an impact on this cause;" 1 = Strongly Disagree/7 = Strongly Agree) and Bekkers' (2006) charitable confidence measure ("How much confidence do you have in this charity;" 1 = No confidence at all/7 = Very much confidence), found our PDE measure significantly correlated with each ( $r = 0.72, p < .001$ , and  $r = 0.74, p < .001$ , respectively). To assess

discriminant validity, or lack of relationship with theoretically unrelated constructs, we included the short, ten-item form of the Marlow-Crowne social desirability scale (Strahan & Gerbasi, 1972), and found our PDE measure not significantly correlated ( $r = 0.10, p = .14$ ). In addition to evidence of discriminant validity, this also suggests socially desirable responding did not drive variations in PDE.

## 5.2. Results

Based on our theorizing and resulting hypotheses, we do not conceptually treat fundraising model as a multi-level variable across which we would expect a certain systematic pattern. Because we theorized and hypothesized that – pairwise – service fundraising would outperform traditional fundraising models, we analyzed the data using  $z$ -tests for the binary "willing to donate" choice and  $t$ -tests for the scaled PDE measure. Consistent with Studies 1A and 1B, there was a significant difference in the proportion of respondents willing to donate money in the service treatment (56%, or 38/68) versus control (27%, or 20/74) conditions ( $z = 3.49, p < .001$ ), thus replicating support for Hypothesis 1. Also, there was a significant difference in the proportion willing to donate money in the service treatment (56%, or 38/68) versus walk treatment (39%, or 28/71) conditions ( $z = 1.94, p = .05$ ), again supporting Hypothesis 1 that service fundraising (vs. traditional fundraising models) would elicit greater charitable giving. There was not a significant difference in the proportion willing to donate money in the control (27%, or 20/74) versus walk treatment (39%, or 28/71) conditions ( $z = 1.59, p = .11$ ).

To test Hypothesis 2, we conducted independent samples  $t$ -tests for differences in mean PDE between conditions. There was a significant difference in PDE between the service treatment (4.69) and control (4.23) conditions ( $t(240) = 2.18, p < .05$ ). There was also a significant difference in PDE between the service treatment (4.69) and walk treatment (4.28) conditions ( $t(137) = 2.06, p < .05$ ). Thus, Hypothesis 2 is supported; service fundraising elicited greater PDE than either traditional fundraising method. There was not a significant difference in PDE between the control (4.23) and walk treatment (4.28) conditions ( $t(143) = 0.21, p = .84$ ). These results are summarized in Fig. 2.

### 5.2.1. Mediation analysis

To further examine the link between PDE and charitable giving intentions and to test Hypothesis 3, we used Hayes' (2013) bootstrap procedure. Since the control and walk treatment did not significantly differ in PDE or willingness to donate, we collapsed the two conditions into a single category coded as 1. We coded the service treatment coded as 2. The indirect effect of fundraising solicitation on willingness to donate was 0.48, with a 95% confidence interval between 0.10 and 0.94; because the confidence interval did not include zero, this also suggests that PDE mediates the impact of the fundraising solicitation on willingness to donate. These results support Hypothesis 3 and are summarized in Table 1.

This study demonstrates that fundraising solicitations that elicit greater PDE in turn yield greater charitable giving intentions. Study 2 eliminates the possibility that donors respond more favorably when the solicitor engages in any kind of activity; the activity must enhance PDE. The walk treatment proved to solicit less favorable PDE and less favorable charitable intentions compared to the service treatment. On these outcome measures, the walk treatment proved no better than a standard financial contribution request. The mediating effect of PDE between the fundraising solicitation and willingness to donate further corroborates this overall pattern of results.

While Study 2 ruled out two potential confounds, another remains. Specifically, the service fundraising solicitation may enhance donors' feelings of control over the outcome of a charitable gift. Thus control, rather than PDE, may drive greater giving. Further, even though it couldn't account for the differences in PDE, it still may be the case that participants estimated a lower total donation for participants in the

**Table 1**  
Mediation analyses for effects of fundraising model and perceived donation efficacy (PDE) on willingness to donate.

Predictors	Study 2 - willing to donate <sup>a</sup>	Study 3 -willing to donate
Constant	−6.55 (1.02)	−7.38 (1.16)**
Fundraising model <sup>b</sup>	0.80 (0.34)*	0.58 (0.34)
PDE	1.11 (0.19)**	1.36 (0.21)**
Indirect effect of fundraising model on willingness to donate via PDE	0.48 (0.21)	0.59 (0.24)
95% confidence interval for indirect effect	0.10–0.94***	0.17–1.12***
Cox-Snell R <sup>2</sup>	0.26	0.27
n	213	236

\*  $p < .05$ , \*\*  $p < .001$ , \*\*\* Non-zero confidence interval indicating mediation.

<sup>a</sup> Standard error in parentheses.

<sup>b</sup> Study 1: Control/Walk = 1 and Service = 2. Study 2: Control = 1 and Service/Past Service = 2.

service treatment condition compared to those in the walk treatment condition. Study 3 addresses these possibilities, and offers additional replication of Studies 1 and 2.

## 6. Study 3

### 6.1. Participants and procedure

Data were collected 263 U.S. participants recruited from AMT who completed an online survey in exchange for a cash payment. Eighteen questionnaires were removed for failing a quality check question, two for speeding or lagging, and seven for straightlining positively or negatively across the reverse-scored item in the new PDE scale. This yielded 236 usable responses (43% female, average age 35 years (S.D. 10.6), 43% married and 48% never married). All data, including screened responses, have been submitted with this article. Again we used a single factor between-subjects design where the fundraising solicitation was manipulated at three levels. The same control and service treatments from Studies 1 and 2 were used. The third treatment in this study was “past service,” in which the solicitor’s service had already been performed, thus eliminating the donor’s sense of influence over the solicitor’s service activity as well as uncertainty over the number of hours that would be performed. The “past service” solicitation opened with, “Please help me support Action Against Hunger Organization by donating money to Action Against Hunger for every hour I volunteered. Over the last couple of months I volunteered service hours.” It is presented in the appendix with the stimuli from Studies 1 and 2. Participants were randomly assigned to read one of the three fundraising solicitations, after which they completed measures identical to those used in Study 2. Again, the three-item PDE scale had high internal consistency ( $\alpha = 0.66^1$ ) and the individual items were averaged together to form a composite ( $M = 4.44$ ).

### 6.2. Results

Consistent with Hypothesis 1 and again replicating Studies 1 and 2, there was a significant difference in the proportion of respondents willing to donate money in the service treatment (56%, or 50/89) vs. control (30%, or 25/82) conditions ( $z = 3.38, p < .0001$ ). There was significant difference in the proportion willing to donate money in the past service treatment (49%; or 45/92) vs. control (30%, or 25/82) conditions ( $z = 2.47, p < .05$ ). There was not a significant difference in the proportion willing to donate money in the service treatment (56%, or 50/89) vs. past service treatment (49%; or 45/92) conditions

<sup>1</sup> This is slightly below the commonly used 0.7 threshold. A two-item version of the scale, eliminating “If I were to contribute \$10 to this fundraiser, I would be making a greater impact than if I contributed \$10 to other fundraisers I have seen,” shows consistency ( $\alpha = 0.71$ ) above the common threshold and replicates all results. However, for consistency with Study 2 we detail the results using the three-item version of the PDE scale.

( $z = 0.98, p = .33$ ).

Again, Hypothesis 2 was tested with independent samples *t*-tests for differences in PDE between conditions. There was a significant difference in PDE between the service treatment (4.61) and control (4.14) conditions ( $t(150) = 2.53, p < .05$ ), as was the difference in PDE between the past service treatment (4.54) and control (4.14) conditions ( $t(155) = 2.31, p < .05$ ), thus supporting Hypothesis 2. Service fundraising (vs. a traditional charitable request) elicited greater PDE regardless of whether the service was performed already or was to be performed in the future. The difference in PDE between the service treatment (4.61) and past service treatment (4.54) was not significant ( $t(161) = 0.40, p = .69$ ). These results are summarized in Fig. 3.

#### 6.2.1. Mediation analysis

Again we tested Hypothesis 3 by using Hayes’ (2013) bootstrap procedure. Since the “service” and “past service” treatments did not significantly differ in PDE or willingness to donate, we collapsed them into a single category coded as 2, and compared it to the control, coded as 1. The indirect effect of fundraising solicitation via PDE on willingness to donate was 0.59, with a 95% confidence interval between 0.17 and 1.12; because the confidence interval did not include zero, this also suggests that PDE mediates the impact of the fundraising solicitation on willingness to donate. These results replicate support for Hypothesis 3 and are summarized in Table 1.

Taken together, Studies 1 through 3 offer controlled evidence that PDE can be influenced by means other than overhead coverage, thus exhibiting that PDE – as conceptualized but heretofore untested in the literature – is broader than sheer financial efficiency. Studies 1 through 3 also offer evidence of a causal chain from fundraising solicitation to PDE to charitable giving intentions, ruling out confounds such as solicitor activity, donor control, and donor uncertainty.

## 7. Discussion and implications

In this article we identified perceived donation efficacy (PDE) as an important, broadly defined, and understudied driver of charitable giving. We sought to investigate whether the broadly defined construct of PDE could be influenced by means other than the narrow tactic of financial efficiency disclosure or overhead coverage, which confound the role of PDE with other possible mechanisms and which may be impractical for nonprofit organizations to implement. We also sought to empirically establish a causal chain from fundraising solicitations to PDE to charitable giving, which had been lacking in prior related research. Guided by the interdisciplinary conceptualization of PDE as the degree to which donors believe their contributions will make a difference (Bekkers & Wiepking, 2010), we designed a fundraising model that took a common model – the walk-a-thon – and substituted service hours for walking in order to enhance the potential impact of a donation. The overall results of our studies are summarized in Table 2.

In the field in Study 1A, we observed the effectiveness of the service fundraising model in real charitable gifts compared to the average

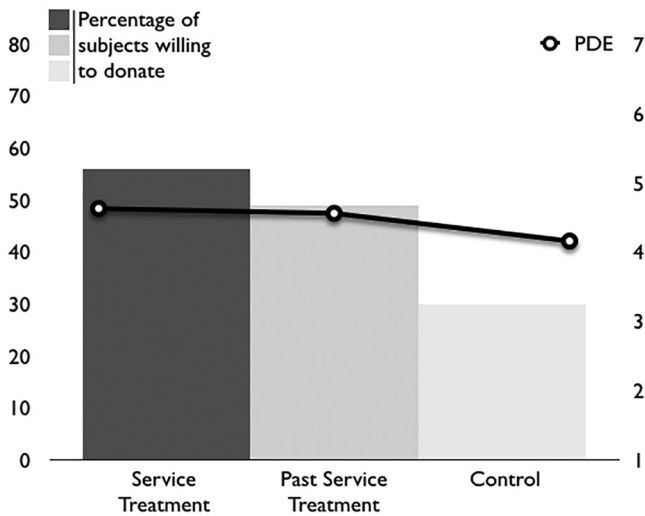


Fig. 3. Study three perceived donation efficacy (PDE) and charitable giving intentions.

donation amount on a leading peer-to-peer fundraising platform. In Study 1B, we used a proper control group not available to us in the field, and found evidence that the service fundraising model yielded greater charitable giving intentions than a standard financial contribution request. In Study 2, we found that the service fundraising model yielded greater intentions to charitably give than both the walk-a-thon model on which it was based or a standard financial contribution request. Notably, both the service fundraising model and the walk-a-thon fundraising model include solicitor activity and donor uncertainty about the amount to be donated, which rules out two important potential confounds. Study 2 also included the first empirical demonstration of the mediating influence of PDE between fundraising solicitation type and charitable giving intentions. In Study 3 we offered two variations of the service fundraising model, one in which the service was promised and one in which the service had already occurred, and compared them to each other and to a standard financial contribution request. The variations of the service fundraising models performed equally, ruling out any role that a potential donor's sense of control over the solicitor might play, and each eliciting greater charitable giving intentions compared to the standard financial contribution request. Also in Study 3, we replicated study two's finding that PDE mediates the relationship between fundraising models and charitable giving intentions.

This research makes important contributions to the understudied role of PDE in charitable giving. Prior qualitative research offered evidence that PDE and charitable giving were linked (Radley & Kennedy, 1992), but could not do so conclusively. Subsequent survey research (Diamond & Kashyap, 1997) more conclusively linked them, but could not resolve issues related to causality, particularly issues related to potential confounds. More recent experimental tests (Gneezy et al., 2014; Parsons, 2007) demonstrate that one means of presumably enhancing PDE – disclosing financial efficiency or overhead coverage – has a positive impact on charitable giving, but could neither rule out confounds associated with such models (e.g., organizational credibility; Arpan & Roskos-Ewoldsen, 2005) nor establish an empirical causal chain from such models to PDE to charitable giving. As a result, prior work left a number of gaps that the present research comprehensively covers. First, we conclusively establish and replicate the association between PDE and charitable giving. Second, by measuring PDE in our experimental studies, we were able to establish causality from fundraising models to charitable giving through the mediating influence of PDE. Third, and relatedly, we were able to experimentally rule out potential confounds with the service fundraising model, including

Table 2  
Summary of hypothesis test results\*.

Hypothesis	Study 1A (field)	Study 1B	Study 2	Study 3
H1: Service fundraising (vs. traditional fundraising models) will elicit greater charitable giving.	Higher average donation for service fundraising (\$99) than for benchmark peer-to-peer fundraising platform (\$77).	More participants willing to give for service fundraising (36%) than for standard financial contribution request (26%). **	More participants willing to give for service fundraising (56%) than for walk-a-thon or standard financial contribution request (27%).	More participants willing to give for service fundraising (56%) and past service fundraising (49%) than for standard financial contribution request (30%).
H2: Service fundraising (vs. traditional fundraising models) will elicit greater perceived donation efficacy (PDE).			Service fundraising PDE (4.69) greater than walk-a-thon PDE (4.28) or standard financial contribution request PDE (4.23).	Service fundraising PDE (4.61) and past service fundraising PDE (4.54) greater than standard financial contribution request PDE (4.14).
H3: The influence of service fundraising (vs. traditional fundraising models) on charitable giving is mediated by perceived donation efficacy (PDE).			95% confidence interval for indirect effect of fundraising model on willingness to donate is nonzero (0.10–0.94).	95% confidence interval for indirect effect of fundraising model on willingness to donate is nonzero (0.17–1.12).

\* All hypotheses supported between  $p < .001$  and  $p < .05$ , except \*\*  $p = .05$ .



uncertainty and solicitor activity in Study 2 and donor control in Study 3. In sum, this research resolves a number of issues raised by prior research on the role of PDE in charitable giving.

The present findings fit within and extend the theoretical bases that drove those prior studies that implicated PDE. Building off of Schwartz (1967), Radley and Kennedy's (1992) findings suggested that the appeal of PDE was in what it reflected back on to the donor. This fits neatly with Gneezy et al.'s economic theoretical perspective that greater donation impact yields greater utility for the donor. In both the rates that people were willing to donate and in their actual donation amounts, our results suggest that greater PDE yields greater value or utility for the donor, which could be in the form of an enhanced concept of oneself. Smith and McSweeney (2007) built off of Ajzen's (1985) theory of planned behavior to suggest that the positivity of people's beliefs about a donation should result in greater intentions to donate. Where Smith and McSweeney's (2007) work confounds abilities and beliefs, though, we conclusively show a causal relationship between PDE specifically and donation intentions, and verify that the effects carry through to actual donations. In the context of Ajzen's (1985) theory of planned behavior, we show that fundraising models influence beliefs (i.e., PDE), which in turn influences behavioral intentions and actual behaviors.

This research also bridges a gap between the broadly defined conceptualization of PDE and its narrowly defined antecedents suggested by prior work. Where PDE is broadly defined as the degree of difference that a particular charitable gift will make, prior survey (Diamond & Kashyap, 1997; Smith & McSweeney, 2007) and experimental (Gneezy et al., 2014; Parsons, 2007) research has distilled that to only refer to the raw dollar efficiency of a charitable gift, which leaves a significant gap in our understanding of the nature of PDE. In the present research, we examined a different means by which donors might believe that their contributions will make a difference. By making service hours part of a fundraising solicitation, donors' dollars both fund the cause and commensurate service. Our findings indicate that PDE is operationally as broad as it is conceptualized, an important insight for researchers working in this area.

This work also helps to paint a more complete picture of how individuals' desire for impact is connected to charitable giving and prosocial behaviors more generally. Prior research largely focused on the roles of relatively stable dispositions of individuals and organizations in these relationships. Consumer personality traits such as gratitude (McCullough et al., 2002) and personal effectiveness (Antonetti & Maklan, 2014) have been positively linked to prosocial behaviors because of their connection with a desire for impact. In a similar vein, prior research showed that relatively stable perceptions of organizations, such as nonprofit brand image, influenced consumer responses to charitable appeals (Michaelidou et al., 2015; Michele & Rieunier, 2012). Fajardo et al. (2018) found that donor-related information affects donor choice and organization related information affects donation amount, while we found that the type of fundraising model affects both donation choice (studies 1, 2, and 3) and amount (study 1A) via PDE, which is a form of response efficacy. Because response efficacy reflects beliefs about the outcomes of a behavior, it encapsulates the actions of the donor and the organization in the context of a single action without sending mixed messages about the dispositional characteristics of the donor or the organization, which Fajardo et al. (2018) found to be problematic. Thus, PDE can drive positive outcomes while being more malleable than donor personality traits or enduring consumer perceptions of organizations.

### 7.1. Practical implications

From an applied perspective, appeals to PDE are more immediately actionable than attempts to segment donor markets based on hard-to-track personality traits like perceived consumer effectiveness or to change stable donor perceptions like organizational credibility. While this in part explains the rapid success of an organization like Charity:

Water, the present research opens the door for more varied means of appealing to PDE. This is important because many under-resourced nonprofit organizations may lack the means to secure large corporate donations to cover overhead costs. Also, accepting resources from large corporate donors may be incompatible with some nonprofit organizations' missions or values. For such organizations, the specific service fundraising model introduced here offers a viable way to enhance PDE. Rather than pursue high-risk/high-resource efforts to reel in a large corporate sponsorship, nonprofit organizations can mobilize the dozens to thousands of individuals participating in their fundraisers to enhance the PDE of their donation solicitations. Being based on the well-established walk-a-thon model, the service fundraising model should also be readily applicable by actual nonprofit organizations. Further, since this research helps establish the breadth of PDE beyond dollar efficiency, nonprofit organizations should consider other potential means for enhancing PDE. For example, many nonprofit organizations offer some type of token gift (e.g., address labels) to donors. The present research suggests that it may be worth shifting the resources for the token gifts to other add-ons that directly impact their cause and enhance PDE.

### 7.2. Limitations and future research

One limitation of this research is that our dependent variables in Studies 1B through 3 are binary, which didn't enable us to capture magnitudes of differences in charitable giving intentions across various fundraising models. Our results held in the real world with a ratio-scaled measure of charitable giving (i.e., actual dollars given), but that also brings into focus one of the limitations of the binary measures used in the online experiments. Specifically, with our measures in Study 3, we cannot completely describe the compatibility of the results of Studies 3 and 1A. In Study 3, relatively equal proportions of participants indicated intentions to give whether the service hours were done already or had yet to be performed. In Study 1A, the amount of the charitable gift was higher when it was post-paid (i.e., based on actual service hours performed) versus pre-paid (i.e., an upfront sum based on hours expected to be performed). At first glance, one might suggest that these results are incompatible, but the distinction between the dependent variables in each study offers critical insight. The service fundraising model was successful in eliciting gifts and intentions to give regardless of the variation used (pre- vs. post-paid) in each study, which is in line with the scope of this research. However, Study 1A suggests that the magnitude of that success may depend on pre- vs. post-payment. We expect that the numerical cognition process may be different for those who chose pre- vs. post-payment. Specifically, even though those who chose post-payment could see their maximum potential contribution, those individuals likely anchored on the per hour figure they had to manually enter. As a result, they may have been more considerate of things like what they considered to be a fair "wage" per hour of service work, and in general engaged in more deliberative processing. In contrast, those who chose pre-payment likely anchored on what their total gift would be and used some sort of heuristic to arrive at that total. This explanation would be consistent with prior research on multi-dimensional pricing (Estelami, 2003), wherein consumers adopt cognitive strategies based in part on the format of the price presentation. With PDE now established as the mechanism by which the service fundraising model impacts charitable giving, future research should investigate how differences in the magnitude of charitable gifts across variations of the service fundraising model are influenced by various cognitive processes.

This research also opens several additional lines of inquiry. Here we introduced service fundraising as an alternative to the overhead coverage model that avoids confound in the study of PDE and that can be more readily used by nonprofit organizations. While explicitly comparing the two was beyond the scope of this research, future research should systematically compare and contrast the two. Further, while this research complements studies on the effect of individual traits on

prosocial behaviors, future research should investigate the interaction of tactical and dispositional influences on PDE and charitable giving. For example, while PDE is a tactical form of response efficacy (Rogers, 1975), it may be worth investigating the nature of causality between PDE and dispositional self-efficacy (Bandura, 1986). It could be that individual self-efficacy enhances PDE; that offering a donation with high PDE increases one's self-efficacy; or perhaps both in a virtuous cycle. Parsing out those mechanisms would be valuable for both theory and practice. In a similar vein, our studies used samples only from the United States. It is possible that the notion of personal impact may be more appealing in individualist (vs. collectivist) cultures. Future research should test how enduring cultural values affect the relationship among fundraising models, PDE, and charitable giving. In another vein, while this research was in part motivated by the possibility of affecting PDE by fundraising models other than overhead coverage, future research should investigate what happens when multiple appeals to PDE are combined. For example, if a charity secured overhead coverage from a large corporate donation and its individual fundraising efforts were based on the service fundraising model, would it face diminishing returns? If so, would it simply be the result of diminishing marginal utility for the donor, or would other mechanisms come in to play? Conversely, must organizations meet some minimum characteristics or standards to effectively appeal to PDE? It might be useful, for example, to study whether a minimum level of organizational credibility (Newell & Goldsmith, 2001) is required for an appeal to PDE to have a positive impact on actual giving. Finally, since this research establishes that appeals to PDE are not limited to sheer charitable gift efficiency, future research should explore the myriad possibilities for enhancing PDE and charitable giving.

#### Declaration of interest

In addition to holding a full-time academic position, Ryall Carroll is co-founder of the company (raiserve) that built the website and partnered with the nonprofit organization in Study 1A. Luke Kachersky holds a full-time academic position at a different university and has no such conflict of interest.

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#### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jbusres.2019.02.051>.

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