Friends Asking Friends for Charity: The Importance of Gifts and Audience

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Abstract:

We explore the underlying motivations for donors to ask their friends to give to charity and the effectiveness of alternative ways to ask for support. Using data from a field experiment with a global crowdfunding community and over 9,800 unique donors, we find that asking a friend in front of his friends is the most effective way to fundraise. Our estimates show that $1 spent to encourage donors to ask friends pays for itself by returning about $1.60. The social pressure that an audience provides is the primary driver for this result, rather than asking a larger group of individuals. Social pressure is costly, and donors are reluctant to use it with their friends. Providing donors with a "gift" for the friend, however, increases the willingness to ask. Both social context and donor incentives are equally important in explaining giving.

Keywords: fundraising, peer-to-peer solicitation, field experiment, social media, online giving, social pressure, audience

JEL codes: D64, C93

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1. Introduction

Donations to charitable organizations amount to US$350 billion (about 2% of GDP), and 7% came from online giving (Giving USA 2014, Blackbaud Index). There are numerous fundraising web sites that provide information about charities and facilitate secure online donations (e.g. Causes, Crowdwise, Network for Good, GiveGab). Most sites provide a way for donors to conveniently inform friends that they have supported a charity and ask their friends to give to that charity as well. While asking a friend to donate may be a click away, it is not inconsequential to do so. There are social costs for the individual making the request and, potentially, for the friend should she choose to say no. Nonetheless, it might be worth asking, especially if the friend makes a donation. How these benefits and costs affect a donor's willingness to ask, a friend's willingness to comply and the effectiveness of different solicitation approaches (e.g. in private, in front of others, with a gift for the friend) are still open questions. We systematically address these using a field experiment in partnership with a global online crowdfunding community.

Evidence suggests that requests from friends can be beneficial (see Castillo et al, 2014; Sanders et al, 2014; Meer, 2011). However, the reasons why this works are less clear. Our contribution lies in identifying how the mechanism of peer-to-peer solicitation operates. We find that not all manners of asking are useful or used. The context of the solicitation is important. It can trigger social pressure, and in turn generate a donation, but it is not without social costs. We find that donors are more willing to bear these costs when they can pair the request with a gift to their friend. Subsidizing peer-to-peer solicitation by providing a gift for exchange or facilitating requests could be a novel approach for charities to fundraise.

Our field experiment is designed to examine the perceived costs to the donor of asking a member of his online social network (on Facebook) to support his charity and the mechanisms for why friends might respond.[1] In our experiment, we randomly vary the

[1] Social media has obvious informational advantages over other ways of fundraising, and our results suggest that part of its success is likely due to donors' concerns for social image. Businesses and marketing professionals stress the importance of referrals and word of mouth campaigns to promote and sell products and services, and our study examines this phenomenon in the context of charitable giving. Kumar et al (2007) find that while roughly 70% of financial customers say they would refer a friend, only 30% do. Similarly, we

available social context and manner in which a donor can ask friends and compare solicitation rates. We explore three common ways of asking: 1) a general solicitation to many friends to give via a post on the donor's Facebook wall, 2) a direct solicitation to one friend in private via a Facebook private message, and 3) a direct solicitation to one friend in front of his friends via a post on a friend's Facebook wall. To measure the perceived costs of asking, we also randomly "subsidize" the solicitation by offering either no incentive or a small monetary incentive ($1 or $5) to donors to ask their friends. The incentive is applied as an add-on donation made to the donor's chosen charity when the donor completes the solicitation. To avoid potential crowding out of donations, all the treatments in our experiment were implemented after a donation had been completed so that the initial donation decision is unaffected.

We further vary the social context of the add-on donation by randomly positioning the incentive as a "gift" to the friend when making the solicitation. This is done by informing the donor that the add-on donation will either be made in 1) his name, 2) the friend's name but kept secret from the friend, or 3) the friend's name and made known to the friend. An add-on donation in the friend's name and announced to the friend allows the donor to signal his generosity by not only making a donation himself but also one for his friend. Additionally, it could serve as a way for the donor to pay forward for his friend's donation (i.e. thanking the friend in advance, or mitigating future obligations) and could simultaneously place additional pressure on the friend to give. In essence, the "gift" provides the donor a favor he could trade with his friend, if he so desires. Also, the "gift" may help to lessen a reluctance to ask a friend in front of his friends, when social pressure or image costs are highest. Our treatment arms allow us to measure this, and we find that having a gift in this context increases solicitations.

Crucial to our design and measure of effectiveness is that whether the add-on donation is made in the donor's name or the friend's name, the cost to the charity is exactly the same. This allows us to examine what is the most cost-effective way, in this environment, for a charity to spend a fundraising dollar. We then calculate an estimated

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find a difference in the proportion of donors who actually do solicit a friend and those who manifest interest in doing so.

rate of return of the various ask methods, incentive amounts, and ability to favor trade as fundraising strategies.

We have several key findings. First, asking a friend in front of his friends is the most effective at raising additional donations -- the percent of solicitations that result in new donations is 3.5%, roughly 50% more than asking many friends at once (2.3%).[2] On net, it is the most effective fundraising method and returns $1.63 in donations for every $1 spent in add-on donations. Nonetheless, donors are the least likely to use this method when offered as it appears to be the most socially costly. Sending a private message to a friend generated no new donations.

Second, while asking a friend in front of his friends is used the least, providing the donor an add-on donation he can publicly give his friend increases this type of solicitation by almost 50%. Social pressure appears to be an effective mechanism and may be more palatable when sweetened with a "gift." Or, donors prefer the heightened pressure the knowledge of the add-on donation provides. This implies that charities can partially offset the reluctance to ask friends in public by positioning add-on donations in the donor's friend's name.

Finally, behavior is not consistent with donors attempting to maximize the size of the audience exposed to the solicitation. Donors are significantly less likely to ask a friend in front of his friends than ask the friend in private (6.3% compared to 8.1%). This is not because donors do not care about the size of the audience -- the most preferred method is to ask all friends at once in public (13.4%) -- it is that donors prefer asking a friend in front of his friends' friends the least. This suggests that a potential reason for the success of online giving campaigns, apart from information efficiency, is the magnification of audience effects.

Our results make several contributions to the literature. Peer pressure can have strong effects on behavior (Asch, 1951; Manski, 2000), and our results suggest that donors understand those effects when asking friends to give. Having a "gift" available to show good

[2] Donation rates conditional on being asked are typically around 2% for mail campaigns (Huck and Rasul, 2011; Karlan et al, 2011; Karlan and List, 2007; Eckel and Grossman, 2008)

will is important – as friends might ex-ante prefer not to be asked to make a donation.[3] This result adds to the literature on concerns for social image (Karlan and McConnell, 2014; Dellavigna et al, 2012; Bekkers and Wiepking, 2011; Andreoni and Bernheim, 2009; Charness, Rigotti and Rustichini, 2007).[4]

There is a large literature documenting that matching and rebate incentives can affect giving (for examples, see Huck and Rasul, 2011; Karlan et al, 2011; Karlan and List, 2007; Eckel and Grossman, 2008). Our results show that using fundraising dollars instead to offer small subsidies to donors to ask friends to give is cost effective, especially when donors can ask a friend in front of his friends. This new strategy could be of interest for charities.

Our findings complement previous studies showing that asking for a donation, in general, has a strong effect on giving (Andreoni and Rao, 2012; Carmen, 2003; Meer, 2011; Castillo et al, 2014; Sanders and Smith, 2016; Smith et al, 2015).[5] Distinct to this paper is that, by examining the solicitation mechanism itself, we show that not all methods of asking are effective or taken up. Our findings highlight the importance of gifts, audience effects and prestige motives when soliciting donations from friends. That is, social aspects of giving explain as much or more of the variance as monetary incentives. Offering monetary incentives to donors explains 1.2% of the variance in the willingness to ask a friend, but audience effects are as important as they explain another 1.4 percentage points. Prestige motives and gifts explain a much smaller portion (an additional 0.18 percentage points). Our experiments reveal a rich tapestry of social interactions within which decisions to donate take place.

The paper proceeds as follows. The next section describes our research environments. Section 3 elaborates the experimental design. Section 4 discusses what

[3] Previous research has shown that not all donations are necessarily welfare enhancing (DellaVigna et al, 2012; Andreoni et al, 2017).

[4] Social information, networks and solicitation effectiveness are also important (Goel et al, 2012; Fowler and Christakis, 2011; Rand et al, 2011). Allowing individuals to target reciprocity can be effective in raising contributions to a public good (Jacobson and Petrie, 2014).

[5] Asking a friend to give to a particular charity can signal leadership and charity quality or need, which have been shown to affect giving (Scharf, 2014; Rondeau and List, 2008; Vesterlund, 2003). In a social media context, broadcasting a donation pledge has a positive effect on pledges by the user's contacts (Lacetera et al, 2016).

donors might be expected to do in the various treatments. Section 5 presents results, and Section 6 concludes.

2. Research Environments: Facebook and the Online Crowdfunding Community

The research is carried out in two environments that allow us to explore donor motives and the effectiveness of incentivizing friends to ask friends to donate.

2.1 Facebook

Facebook is a popular social networking site, with over 1.96 billion monthly users worldwide, as of March 2017. Almost eight in ten (79%) online Americans have a profile on Facebook (Pew Research Center, 2016). The platform provides a convenient and low-cost way for friends to communicate with friends within their social network (e.g. by sharing information, photos and videos).[6]

There are three communication mechanisms on Facebook that lend themselves well to our research design. First, each Facebook user has a "wall." On the user's wall, he or his friends can post messages, photos, videos or web links that all his friends can see. Second, each user can send a private message to a friend. The private message is a direct message to a friend that only the friend can see. This is similar to a private email. Third, each user can access each of his friend's walls (or timelines). A user can post messages, photos, videos and web links on his friend's wall that all of his friend's friends can see.[7] These three mechanisms provide us different social contexts in which a donor might ask a friend to give.

[6] A donor's Facebook network will most likely not be an exhaustive list of all friends in his life, since not everyone has a Facebook account nor are all friend connected on Facebook. Nonetheless, online social networks are a low-cost mechanism to explore motives and effectiveness of friends asking friends for charity.
[7] The default settings on Facebook are that a user's posts on his wall are viewed by all his friends and his friends can post on his wall, in which case all of a user's friends would see his friend's post. Likewise, a user can post on a friend's wall. A user would need to take action to change these settings. Because of privacy rules on Facebook, we do not know if these settings were altered by individuals in our field experiment. Changes to settings would not impact the mechanics of our treatments (e.g. a friend who blocked a user would still appear on the user's friends list). Because donors were randomly assigned to treatment, the propensity to change Facebook settings should be uncorrelated with estimated effects.

2.2 The Online Crowdfunding Community

We work with a global online crowdfunding community. Here, we systematically vary the manner in which donors can ask their friends via Facebook and the availability and attribution of an add-on donation.

The online crowdfunding community connects donors to charities by hosting a web site with information on projects seeking funding. The organization has an excellent reputation in the giving community for having low administrative costs and conducting proper project screening to make sure charities and projects are legitimate. A donor can easily search the organization's web site for projects (e.g. hurricane relief, girl empowerment, food assistance, etc.) and make a donation through a secure checkout procedure.

After checkout, the donor sees a page with clickable buttons to share information, via either an email message or by posting on Facebook, about the charity that received the donation. Because donors are normally offered the option of sharing information about the charity with their friends on Facebook, this is a natural environment in which to explore our research questions.

3. The Field Experiment

3.1 Design

At the online crowdfunding community's web site, after checkout, a donor is presented with the opportunity to share the fact that he donated to a particular charity with friends and ask them to donate as well. Sometimes the donor is offered a monetary incentive to ask, in the form of an add-on donation to the charity he just gave to. Also, if an add-on donation is offered, it is made either in the donor's name or in the friend's name.[8]

After checkout, a donor is normally presented with a web page confirming the donation (see Figure 1). On the page, he is also given the opportunity to tell friends about

[8] The experimental protocol is similar to Castillo et al (2014), however, it includes one additional solicitation method (posting on a friend's wall) and three different attributions for the add-on donation.

the charity, either by clicking a button to send a pre-filled email or one to send a pre-filled Facebook post for his own wall. Both options include hyperlinks to the landing page for the charity. The donor can add additional text but cannot edit the pre-filled Facebook post.[9]

A donor is randomly assigned to either see the normal post-checkout page or one of 17 treatment pages. The treatments vary on three important dimensions (see Table 1). The first is the method by which the donor can ask friends to donate. The donor can either make a general ask to many friends at once (by posting on his own wall), a private direct ask to one friend (by sending a private message) or a direct ask to one friend in front of an audience (by posting on his friend's wall). A donor is randomly presented one of the three ask methods and can voluntarily choose to ask or not. The panels in Figure 2 show the screens a donor would see for each of the three methods of asking friends to donate.

The second dimension of the treatment is whether or not an add-on donation to the charity is offered to the donor if he completes the post to Facebook. The amount of the add-on donation, if offered, is $1 or $5. The donor is randomly presented one of the three (none, $1, or $5).

The final dimension of the treatments is to whom the add-on donation is attributed. The donation is either in the donor's name, in the friend's name but is not announced to the friend, or in the friend's name and the friend is informed of the donation but not the amount. The three panels of Figure 3 show example screens. The donor is informed that if he posts either "we'll give an extra $1/$5 to [charity name] on your behalf," "we'll give an extra $1/$5 privately to [charity name] on your friend's behalf," or "we'll give an extra $1/$5 to [charity name] on your friend's behalf, which we'll let your friend know came from you." If an add-on donation is offered, the donor is randomly presented one of these three messages.

In treatments in which a donor is asked to post a private message or on a friend's wall, a pop-up window appears asking him to choose a friend.[10] Once he chooses, another pop-up window appears showing the donor the pre-filled in message that will be posted on

[9] Because of privacy rules on Facebook, we do not know if a donor added text or what the content of the text might have been.

[10] The pop-up window populates a drop-down menu with a list of the donor's friends from his Facebook account. The list of friends is displayed in random order. Because of privacy rules on Facebook, we cannot and did not record the names of the donor's friends.

Facebook. If the donor is in a treatment where the message is posted on his own wall, the first pop-up window to choose a friend does not appear.[11] If the donor is not already logged into Facebook or does not have a Facebook account, he is prompted to log in or sign up for one.[12]

There are only two messages that ultimately get posted on Facebook (see panels in Figure 4). The text either reads "I made a donation to [charity name] on [online crowdfunding community]. Join me in donating too." Or in the case the attribution of the add-on donation is in the friend's name and known to the friend, "I made a donation to [charity name] on [online crowdfunding community], along with an additional donation in your name. Join me in donating too." If a friend clicks on the message in Facebook, he will be taken to the landing page for the charity. None of the pre-filled message text can be edited by the donor.

Once a donor clicks the final pop-up window with a preview of the Facebook message, the message is actually posted on Facebook. The donor is thanked for sharing, and if an add-on donation is made, a confirmation message is displayed. If a donor clicks to take up the post but does not complete it, no add-on donation is made.

The donor has several pieces of information available prior to making his decisions. Before a donor clicks to take up posting the message, he is fully informed of the ask method, if there will be an add-on donation and in whose name. Before the donor clicks to complete the post, he is fully informed of the content of the message that will be posted on Facebook. Thus, we observe two decisions made by donors: take-up of the offer to post to Facebook and completion of the post.

In addition, we track donations spurred by the Facebook message posts. Anyone who clicks on the Facebook message will arrive at the charity's landing page. If the person then makes a donation, we can link the donation to the donor who posted the message and

[11] The pop-up windows are not affected by Internet pop-up blockers set by a donor. The windows are internal to the online crowdfunding community's web site. So, if a donor clicks the button to post the message, he sees the pop-up window.

[12] Roughly half of all donors were already logged into Facebook, and this proportion is constant across the 17 treatments. There is a roll off between take-up to post a message and completion of the post (roughly one-third). This might reflect the nuisance of having to log into Facebook or not having an account, however this roll off is constant across treatments. Since we do not know if non-logged in donors have a Facebook account or not, our main results measure intent-to-treat effects. Our findings hold if the sample is restricted to those logged into Facebook at treatment (Table A1 in the Appendix).

the treatment condition the donor was placed in. Our donations spurred measure is a lower bound on the number of donations generated as a function of a donor asking friends. If a friend sees the message post and comes to the online crowdfunding community through any other means than clicking the message (e.g. by typing in the web site address directly) and makes a donation, we cannot link that donation to the message post.

It is important to note that because this is a field experiment, at no time were donors told they were in an experiment. The treatment pages were designed to be consistent with the online crowdfunding community's image and normal post-checkout procedures. Choices reflect a donor's reaction to different information in a naturally-occurring environment. Because of privacy rules on Facebook, we have no data on the sex of the donor, to which friend a message was sent, the names or number of friends, the donor's location, the text of the messages sent, etc. The only data we have on donors are how much they gave at checkout, and the online crowdfunding community provided these.

3.2 Implementation

The field experiment was conducted during two periods in 2013, January-February and June-October, with our partner online crowdfunding community.[13]

After a donor paid for his donation, he was screened to see if he qualified to be in the experiment. Donors who had previously participated were excluded from seeing the treatment again.[14] These donors saw the normal checkout. Additionally, any donor who made a donation with a gift card, made multiple donations, or made a donation to a charity participating in a special promotion campaign were also excluded. These non-qualified donors saw the normal checkout screen.[15]

[13] The data were collected in two phases to accommodate the online crowdfunding community's internal constraints and programming time.
[14] The online crowdfunding community assigns a unique user id to each donor. Once a donor sees a treatment, he is tagged as having participated. If he returns to make another donation during the data collection period, he is then excluded.
[15] These donors were excluded based on the advice of the online crowdfunding community. For practical reasons, we excluded donors who gave to multiple projects because then the donor would need to choose which project/charity to share with friends. Of the non-qualified donors, 70.1% gave to a project in a special campaign, 21.6% were disqualified for multiple reasons (typically previous participant and special

Table 1 shows that, of the qualified donors, 450-500 were assigned to each treatment or the normal post-checkout page, giving a total of 9,814 unique donor observations. Given the rates of completed posts across the treatment conditions, a total of $2,311 of add-on donations were paid out to charities.

4. What we might expect donors and friends to do

We discuss the different motivations donors might have to ask friends for donations and for friends to respond to such solicitations. We illustrate how reputation considerations on the side of the donor and the friend can explain the patterns and effectiveness of the different methods of asking. The key elements of the treatments and hypotheses are summarized in Table 2.[16]

First, donors who are motivated to maximize the charity's earnings might want to reach the largest audience possible to increase the number of friends who learn of the opportunity to give. This produces a strong prediction on the take-up rates by treatments.

Hypothesis 1: If donors are only concerned with maximizing audience size, take-up rates will be higher on own wall and friend's wall relative to sending a private message.

Wall postings reach a larger audience and would presumably generate more donations.[17] Because we do not know whether the donor has more friends than his friend, we cannot rank posting on the donor's own wall relative to posting on a friend's wall.

Second, if donating is prestigious, an individual might prefer add-on donations made in her name and to reveal add-on donations made in a friend's name.[18] This creates

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campaign), 4.0% had donated to multiple projects, 2.3% were previous participants only, 2.0% used a gift card.

[16] A full description of the hypotheses is included in Table A2 in the Appendix.

[17] Assuming that each friend is equally likely to donate, having more friends will generate more money for the charity.

[18] Harbaugh (1998) discusses prestige motives to giving. Benabou and Tirole's (2006) model of giving behavior also highlights how publicity of donations might encourage more prosocial behavior. The charity itself could be an audience. A donor might prefer donations made in her name because they are revealed to the charity as well as others.

additional patterns of behavior. In particular, Hypothesis 2 adds that, given an ask method, take-up rates will be higher when the add-on donation is in the donor's name or in the friend's name and made known to the friend compared to when the add-on donation is in the friend's name but kept secret from the friend. Prestige motives have an ambiguous prediction on the number and size of generated donations since prestige seekers may not necessarily care if the friend donates or not. Prestige could be conferred simply from receiving the add-on donation by asking.

Hypothesis 2: If donors care about prestige, take-up rates would be higher when add-on donations are in the donor's name or in the friend's name and made known to the friend.

Third, asking a friend to make a donation may not be innocuous. By doing so, donors might impose non-pecuniary costs on the friend by making him feel obligated to donate or raising image concerns that if he does not donate his reputation could be damaged. If this is the case, then the friend might prefer not to be asked in the first place.[19] Note that these costs would not exist for altruists. Donations are voluntary and asking provides the friend an opportunity to engage in altruism, so asking for a voluntary donation can only be weakly welfare enhancing.

If non-pecuniary costs exist, this can explain patterns of behavior that are at odds with audience size and donor prestige. A donor might prefer to ask a friend for a donation in private rather than in public if by asking in public the donor risks shaming the friend. However, if the friend himself cares for prestige, he may be more responsive to solicitations made in public than in private. This possible tension from the underlying motives of donors and friends implies that donors will have to balance the benefits from soliciting a friend in public with the potential costs imposed on the friend. If a donor estimates that the costs to asking a friend in public to be on net too high, take-up rates should be lower in public than in private.

[19] DellaVigna et al (2012) empirically estimate the disutility costs to a donor of being asked by a door-to-door fundraiser and find a significant reduction in utility.

Because of the possibility of non-pecuniary costs to the friend overwhelming the benefits of asking for a donation, having a way to reduce those costs would be preferred (i.e. by providing the donor a "gift" for the friend that is paired with the ask). Hypothesis 3 predicts that when asking a friend directly, either in private or in front of his friends, take-up rates are higher when the add-on donation is made in the friend's name and made known to the friend. This, of course, assumes that making a donation in a friend's name is considered to be a positive act. Favor trading would also be consistent with higher take-up rates when the add-on donation to the friend is known.

Hypothesis 3: If there are non-pecuniary costs to the donor of asking, take-up rates will be higher when the add-on donation is in the friend's name and made known to the friend (i.e. a "gift" for the friend). Add-on donations in a friend's name made known to the friend are more effective at generating donations when the costs to the friend of ignoring the request are largest (i.e. when the ask is made in public).

To test the net effect of the presence of an audience on take-up rates, we look at the difference between secret and known add-on donations in a friend's name across the private direct ask and the public direct ask treatments. The difference in take-up rates captures the net effect of the friend's friends knowing of the donation. In this case, we would expect that the difference should be larger when the friend is informed of the add-on donation in front of his friends than when asked privately.

5. Results

5.1 Take-up and Completed Post Rates

We start by presenting some descriptive statistics on the donors. The mean donation at checkout for our sample of donors is $64.91 and is similar across the 17 treatments and for

those in the control treatment who saw the normal checkout.[20] Most donors are donating for the first time (69%).

The main effects for the subsidy, the ask method and the add-on donation attribution are summarized in Table 3 and shown in Figure 5. Panel A in Figure 5 shows the take-up and completed post rates across the three incentives (none, $1, $5). There is about a one-third roll off between take-up and completed post rates, but the general patterns across treatment conditions always remain.[21] Just being asked to post a message to friends yields a 6.1% take-up and a 3.5% completion rate.[22] Offering a $1 incentive to post more than doubles the take-up rate (to 13.7%) and almost triples the completion rate (to 8.9%). Offering an additional $4 (increasing the incentive from $1 to $5) yields a 31% increase (to 17.9%) for take-up and 30% increase (to 11.6%) for completion.[23] So, a small add-on donation of $1 has a large and significant effect on increasing solicitations relative to no subsidy, and adding an extra $4 does significantly raise solicitations further. However, the increase in solicitations with the extra $4 is much smaller than the initial $1. Also, while donors do respond to the size of the incentive, it is interesting to note that it is a minority of donors who are willing to ask friends, even for an additional $5 to their charity. Almost 90% do not ask.

Panel B in Figure 5 shows the take-up and completion rates for the three ask methods. Take-up and completion of a general ask to many friends (posting on a donor's own wall) is most popular, with 19.7% of donors taking up and 13.4% completing the post. Making a private, direct ask (sending a private message) is the second most popular, with 15.0% take-up and 8.1% completion. Asking a friend directly in front of his friends (posting on a friend's wall) is the used the least, with 8.1% take-up and 6.3% completed. The differences across ask methods are significant for both take-up and completion rates (difference in means p-values < 0.01).

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[20] The median donation is $25 across 11 of the 17 treatments, $50 in 5 of them, and $40 in one.

[21] Take-up is defined as whether or not the donor clicked the first button to post a message to Facebook. At that point, the donor knows the ask method, the subsidy amount and the add-on donation attribution. Completion is defined as whether or not the donor clicked the final button to complete the post to Facebook. At that point, the donor sees the text of the message that would ultimately be posted on Facebook.

[22] The completed post rate for the Normal Checkout is 4.22%, and this includes either posting to the donor's own wall on Facebook or sending an email message.

[23] All increases in take-up and completion rates are significant across the three incentives (none, $1, $5) with p-values < 0.01.

Asking a friend in front of his friends appears to be the most socially costly, since donors are the least likely to voluntarily take-up that method of asking, and making a general ask is the easiest to do. These data patterns are only partially consistent with H1 (maximizing audience size). Take up rates are larger for own wall compared to a private message, however, rates are the lowest for a friend's wall. Absent information on the effectiveness of any of the three ask methods, these data patterns could imply that asking a friend in front of his friends is the least effective fundraising method (or the most socially costly). We return to this point in the next section.

The final panel in Figure 5 examines the effects of the attribution of the add-on donation. A donor is less likely to take-up and complete the post when the add-on donation is in the friend's name compared to in his name -- 15.0% when in the donor's name and 11.8% when in the friend's name (9.7% and 7.4% completion rates). These differences are significant (difference in means test p-value < 0.01). Also, donors are more likely to take-up and complete the post when the add-on donation in the friend's name is made known to the friend. Take-up rates are 12.8% when known and 10.7% when secret (8.4% and 6.5% completion rates). These differences are also significant (p-values < 0.01). Donors prefer the add-on donation to be in their name, but when it is not, they prefer the friend knows. This hints that donors care about their social image and is consistent with H2 (prestige motives). A donor who only cares about signaling generosity to herself should be indifferent as to who gets the attribution of the add-on donation.[24]

A simple decomposition of variance illustrates the relative importance of monetary incentives, the presence of an audience when asking a friend, prestige motives and gifts on the willingness to ask a friend to donate. Monetary incentives explain 1.2% of the variance, and audience effects (either posting on one's own wall or a friend's wall) explain an addition 1.4 percentage points. Prestige and gifts contribute a smaller explanation and add an addition 0.18 percentage points.[25]

Turning to the interaction effects of monetary incentives and the ask method, we see similar patterns to the main effects. Table 4 shows regressions of take-up and completion

[24] For a discussion of self-signaling and social-signaling in giving, see Grossman (2015).
[25] We run OLS regressions and examine how the R-squared changes as explanatory variables are added: incentives to post (e.g. $1, $5 add-on), audience (e.g. own wall, friend's wall), prestige (e.g. own name, friend's name), gift (e.g. add-on in friend's name is known to friend).

rates by ask methods, monetary incentives and interaction terms for the add-on donation in the donor's name. Patterns seen in the first two panels of Figure 5 emerge in the regressions as well. Donors are more likely to ask a friend when the size of the add-on donation increases, are most likely to ask many friends at once and are least likely to ask a friend in front of his friends. In addition, we can reject that the increase in completed posts for a $1 subsidy and the marginal increase when increasing the subsidy to $5 are equal when asking many friends at once (p-values=0.0118). However, this cannot be rejected for asking a friend privately or in front of his friends (p-values are 0.1265 and 0.1742). This suggests that, in general, spending an additional $4 for an add-on donation does not substantially increase a donor's willingness to ask and may not be worth the extra cost. To test the robustness of the results in Table 4, we split the sample into donors who were already logged into Facebook at the time of treatment and those who were not. All the main treatment effects still hold, and the coefficients are larger for those already logged into Facebook.[26]

Next, we examine whether donors are motivated to provide the most donation money possible to the charity. When an add-on donation is offered in the donor's name or in the friend's name but not announced to the friend, both the message posted on Facebook (see Figure 4, panel (a)) and the amount of money going to the charity through the add-on donation are identical. Absent other motivations, behavior should be the same in both treatments. Panel A in Figure 6 shows completed post rates for these two treatments. When asking a friend directly (private message), 11.1% of posts are completed when the add-on is in the donor's name, and 7.7% are completed when it is in the friend's name and secret to the friend. These rates are significantly different (difference in means p-value < 0.01). When asking a friend in front of his friends (friend's wall), the rates are 8.0% and 5.2%, respectively (difference in means p-value < 0.10). This difference in willingness to ask shows that donors are not merely motivated by maximizing revenue for the charity.

Favor trading could also be important to donors, especially since they are asking friends to help them out by donating to their charity and this may be costly for the friend

[26] See Table A1 the Appendix. Note that we cannot tell if those not already logged into Facebook have a Facebook account or not, so we cannot attribute the difference in magnitude of coefficients to not having an account or to the nuisance of signing in.

(as outlined in H3). To examine this, we look at completed post rates when the add-on donation is in the friend's name and secret to the friend compared to when it is made known to the friend. In this case, the message posts to Facebook will differ. Figure 4 shows examples of the two posts. Panel (a) shows the post when the add-on is secret, and panel (b) shows the post when the add-on is made known. Favors can only be traded when they are known, and in the latter case, the friend is told about this "gift" of a donation in his name.

Panel B in Figure 6 shows completed post rates across these two treatments. Both for sending a private message and posting on a friend's wall, completed post rates are higher when the add-on donation is made known to the friend. Rates go from 7.7% to 8.4% (a 0.7 percentage point increase) for private messages but the difference is not significant (difference in means p-value=0.5455). For a friend's wall, rates go from 5.2% to 8.3% (a 3.1 percentage point increase) and the difference is significant (difference in means p-value=0.0095). This illustrates that donors are more motivated to ask a friend when they can credibly inform the friend that the add-on donation in his name and provides some evidence of favor trading.[27]

The last part of H3 predicts that if audience effects are important in motivating a donor to ask a friend then the differential increase in posting when the add-on donation in the friend's name and known will be larger with an audience (friend's wall) than when it is private (private message). The 3.1 percentage point increase for a friend's wall is larger than the 0.7 percentage point increase for a private message as predicted by audience effects, but this is not significant (the one-sided p-value = 0.097).[28]

In sum, we find that donors are willing to ask friends to donate, however, not all do, even when their charity would benefit with an additional donation. Providing the donor a "gift" to offer the friend when asking, especially in front of his friends, is important to a donor's willingness to make the solicitation. Our results are most consistent with the existence of non-pecuniary costs to asking friends, prestige motives and some evidence of

[27] A non-parametric test of whether the distribution of completed posts is different by ask method (private message, posting on a friend's wall) and the add-on donation is known to the friend (unknown to friend, known to friend) yields a Fischer exact test p-value of 0.080.

[28] This is tested with a regression of completed post rates in treatments where the add-on donation is in the friend's name on a dummy variable for friend's wall, a dummy variable for a public add-on donation and an interaction term of the two. The p-value on the interaction term is used to test for significance.

favor trading. Donors are not motivated to maximize additional money for the charity if it means they do not get the credit for add-on donation, nor are they seeking to maximize the number of friends asked.

5.2 Efficiency

We now examine the efficiency of the various ask methods, incentives and attributions in terms of generated donations.

If a friend clicked on the Facebook message post (via the hyperlink) and made a donation, we can track this and tie it back to the donor solicitation and experimental treatment. However, if a friend was inspired by the solicitation but went to the online crowdfunding community directly (not through the Facebook post) and made a donation, we cannot tie this to our treatments. So, our measure of effectiveness is a lower bound since donations may have been spurred by our treatments but we cannot measure them.

Of all the completed posts, 1.70% resulted in new donations. This is significantly different than zero (p-value < 0.01), so asking donors to ask their friends increases donations on the extensive margin. This percent return from asking people to give is in line with research using mail campaigns (Huck and Rasul, 2011; Eckel and Grossman, 2008; Karlan and List, 2007). There were 14 donations tracked through Facebook posts, with 7 from posts to the donor's own wall, 7 from posts to a friend's wall, and 0 from private messages. Thus, the percent of asks resulting in a donation from a post to the donor's own wall is 2.28% and 3.50% from a post to a friend's wall. These are not significantly different from each other (p-value = 0.4127), however, posts to own wall or a friend's wall yield significantly more donations than sending a private message.[29] The average donation of the friend was slightly lower ($46.43) than the donor who made the solicitation ($64.91). The total amount of money raised through tracked donations is $650.

[29] Similar results hold if we instead look at efficiency using intent to treat. Of all treated donors, 0.14% of those treated generated new donations (0.31% in own wall, 0.22% in friend's wall). These percentages are significantly different from zero (p-value<0.01). The percent of donations spurred from those in the own wall treatment are not significantly different from the percent in the friend's wall treatment (p-value=0.5415), but they are significantly higher than those in the private message treatment.

How effective was providing donors add-on donations to ask their friends to give? If we look at offering donors a $1 add-on donation (since the $5 add-on donation yielded a small extra return for additional $4), a charity would spend $100 in add-on donations and get 100 posts. Looking first at own wall posts, if we assume that 2.28% of those posts yielded a donation and the donation was on average $46.43, then the charity would get $105.86 in new donations (100 posts x 2.28% x $46.43). Looking at posts on a friend's wall, the charity would get $162.51 in new donations (100 posts x 3.50% x $46.43). This says that the return from spending $1 for an add-on donation would yield a $1.06 return if donors were asked to post to their own wall and $1.63 to post to a friend's wall.

Of course, a charity could choose to not offer add-on donations and merely ask donors to post on their own wall or on a friend's wall. This would cost the charity nothing. We look first at an estimate of the donations generated by asking donors to post on their own wall without an add-on donation. For a charity to spend $100 in $1 add-on donations to get 100 posts, they would have to ask 631 donors. This is because 15.85% of donors completed the post in the $1 add-on donation treatments (100 posts / 0.1585 = 631 donors). If the charity instead asked these 631 donors to post on their own wall without any incentive, this would yield 40 posts (631 donors x 6.3% who post when not given an add-on donation). Given our assumptions outlined above, this would yield $42.34 in new donations (40 posts x 2.28% x $46.43). If instead the charity asked donors to post on their friend's wall without an add-on donation, the charity would raise $24.38 in new donations.[30]

In sum, using our experimental results of the percent of posts that yielded a new donation and assuming the donation would be the average new donation in our data, offering incentives to donors to ask friends by posting on their own wall is not cost effective (the return is $1.06 on the dollar). The charity would do better to simply ask donors to ask their friends and not offer a monetary incentive. However, asking donors to ask a friend by posting on the friend's wall does yield a positive return (the return is $1.63 on the dollar).

[30] The charity would need to ask 1,742 donors to post on a friend's wall with a $1 add-on incentive to spend $100 (1,742 x 5.74% = 100 posts). If instead the charity merely asked those donors to post without a monetary incentive, it would get 15 posts (1,742 x 0.87%). Given our assumptions, this would yield $24.38 in new donations (15 posts x 3.50% x $46.43).

6. Conclusion

Using a field experiment with a global online crowdfunding community and over 9,800 unique donor observations, we examine a donor's willingness and motivation to ask friends in their social network on Facebook to donate to charity. Our research design has the advantage of observing donor behavior in a natural setting, so we can interpret our findings as externally valid. By randomly assigning donors to treatments, we can identify the effects of the private and public nature of ask methods, the impact of an audience and the importance of gifts when asking friends to donate. Our results systematically document the costs and benefits of online peer-to-peer solicitation via social media for both donors and friends. We find that variation in solicitation is explained as much by audience effects as it is by monetary incentives.

We have several key findings. First, asking many friends at once is the most popular solicitation method, but asking one friend in front of his friends is used the least and appears to be the most socially costly. Both methods generate donations, but asking one friend in front of his friends increases the donations resulting from a solicitation by 50%, despite its sparing use. Second, friends asking friends via online social media may be a cost-effective and viable method for charities to consider when seeking to raise donations and find new donors. Our estimates show that offering a donor $1 in an add-on donation to his charity to ask one friend in front of his friends to donate yields $1.63 in new donations.

Third, the manner in which donor incentives are implemented is important. When the attribution of the add-on donation is in the donor's name, rather than the friend's, donors are twice as likely to ask friends to donate. This is important for charities because the fundraising cost to the charity for the add-on donation is the same, but solicitations are higher. Also, providing the donor a gift to offer a friend can double solicitation rates when asking a friend in front of his friends.

Finally, donors do weigh the social costs and benefits of asking friends. The willingness to ask friends seems to be driven by the different costs imposed on friends when asking privately and in public and by the social pressure of asking friends in front of others.

Giving money to charity can be a social activity, and individuals may enjoy donating with and among friends. Friends can provide important information on the existence and quality of charities that might be of common interest. Indeed, friends may have a strong influence on donation behavior, and surveys on why individuals give suggest that being asked and asked by a friend are important (Van Slyke and Brooks, 2005). Our research confirms this and provides insights into motivations for why friends might be willing to ask friends and why friends might then give. We find that it is not merely asking friends that generates new donations. There are ways of asking that are more effective than others. The existence of social pressure, audience and gifts are important to spur friends to ask friends and to induce friends to give.

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Figures and Tables

Figure 1
Normal post-checkout screen – after donor has paid for his donation

Figure 2

Three ask methods – (a) general ask to many friends at once (post to own wall), (b) private direct ask to one friend (send a private message), (c) direct ask to one friend with an audience (post to friend's wall)

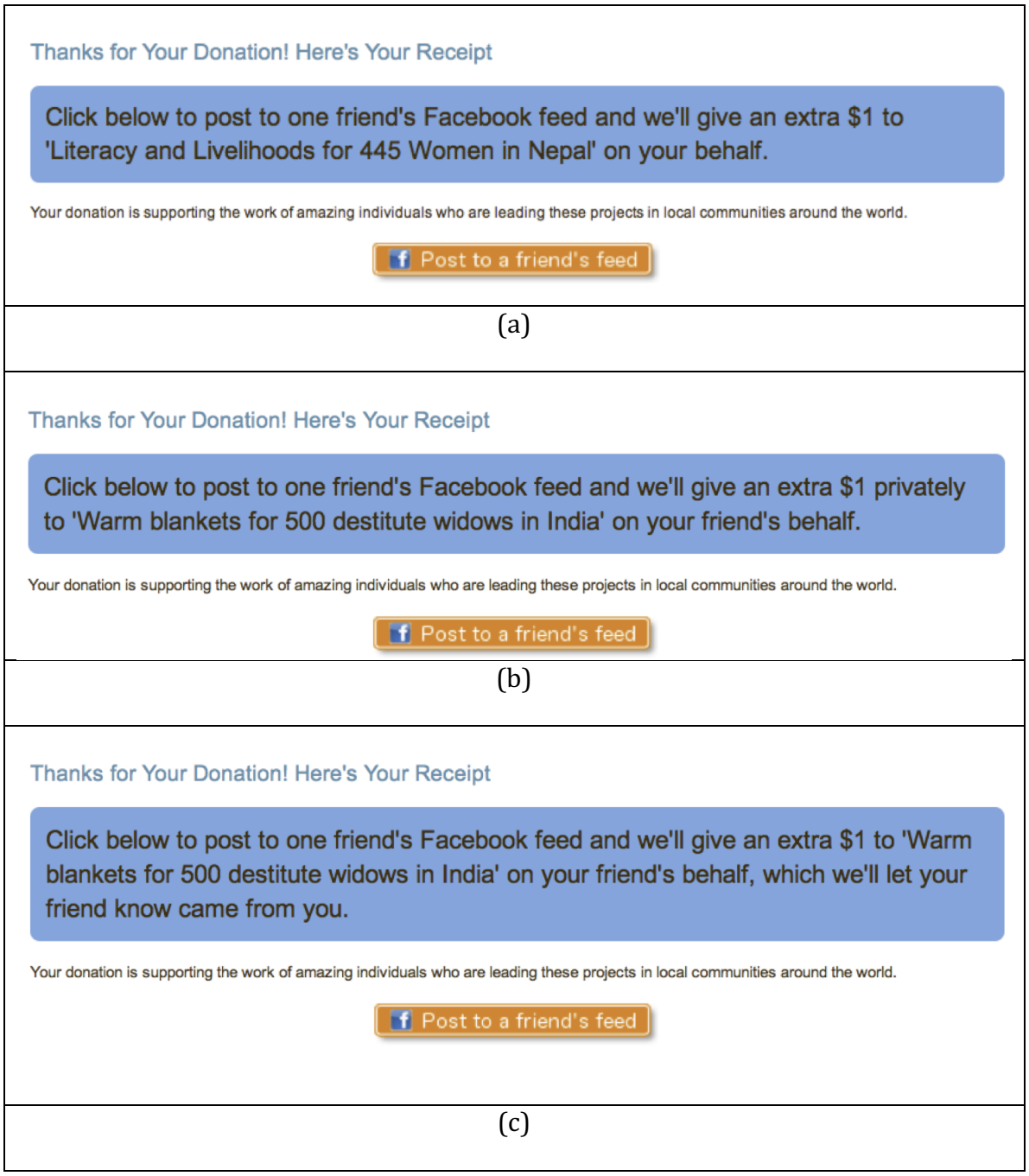
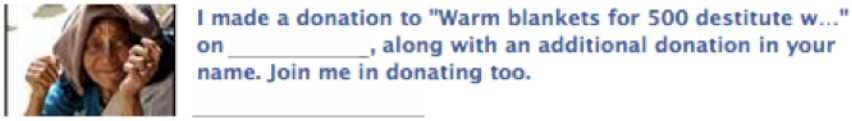


Figure 3

Three attributions of a $1 add-on donation if a donor posts to on a friend's wall (the only difference for the $5 add-on donation is the amount) – (a) add-on donation in donor's name, (b) add-on donation in friend's name but not announced to friend, (c) add-on donation in friend's name and made known to friend

(a)



(b)

Figure 4
Facebook posts

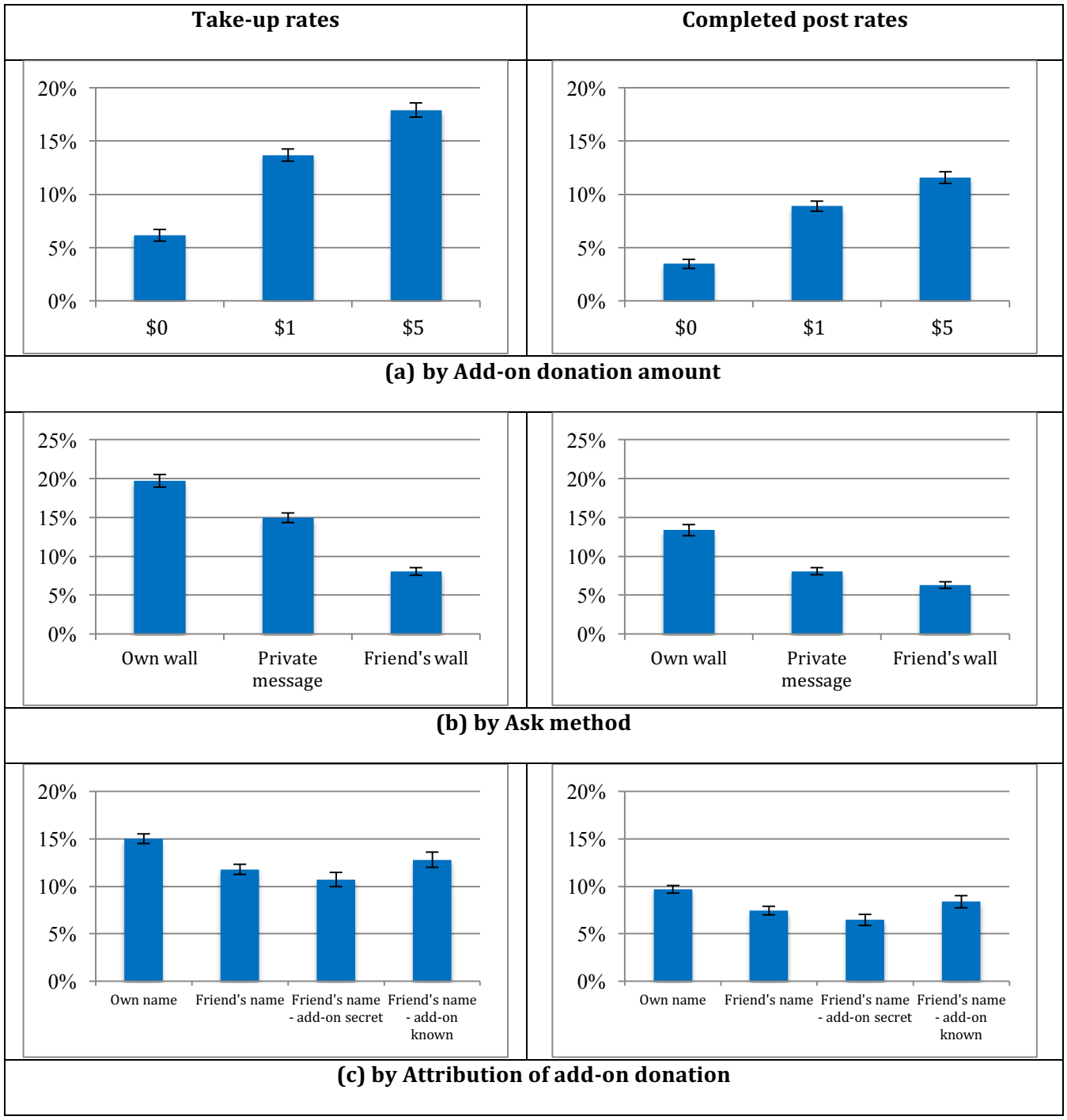
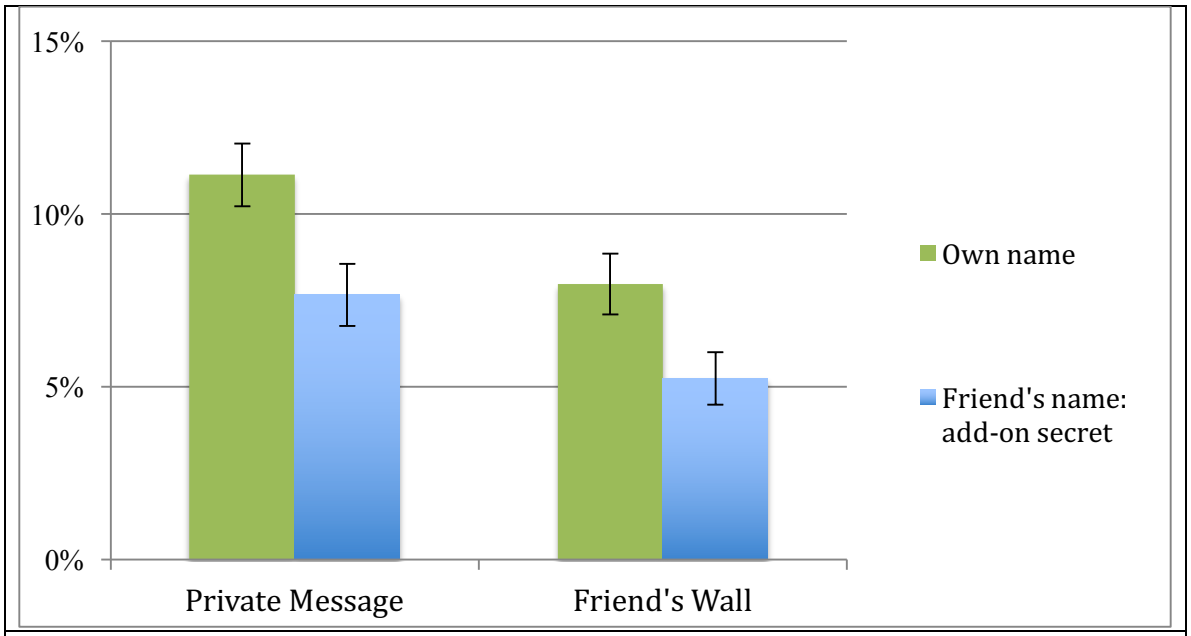
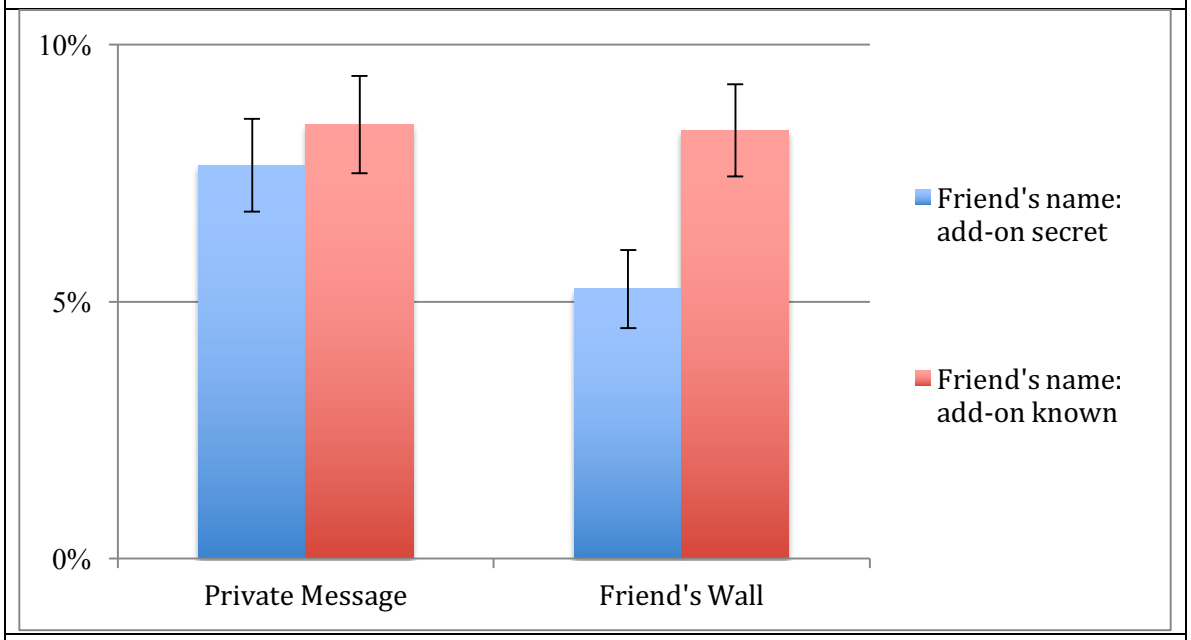


Figure 5

Main Effects of take-up and completed post rates by add-on donation amount (panel a), ask method (panel b) and attribution (panel c).
Error bars are standard error of the mean.



(a) Maximizing money for the charity



(b) Favor Trading

Figure 6
Maximizing money for charity and Favor Trading
Completed post rates by add-on donation attribution.
Error bars are standard error of the mean.

Table 1
Experimental Treatments - Number of observations

Ask Method	Add-on donation amount		
Add-on in donor's name			
	None	$1	$5
General ask (own wall)	796	896	601
Direct ask – private (private message)	583	603	610
Direct ask – audience (friend's wall)	461	435	468
Add-on in friend's name – secret to friend			
		$1	$5
Direct ask – private (private message)		435	427
Direct ask – audience (friend's wall)		421	437
Add-on in friend's name – known to friend			
		$1	$5
Direct ask – private (private message)		437	427
Direct ask – audience (friend's wall)		496	452
Normal checkout	829		
Total number of observations	9,814		

Table 2
Key Elements of Experimental Treatments

	Add-on in donor's name
General ask (own wall)	*General-Own*
Direct ask – private (private message)	*Private-Own*
Direct ask – public (friend's wall)	*Public-Own*
	Add-on in friend's name – secret
Direct ask – private (private message)	*Private-Secret*
Direct ask – public (friend's wall)	*Public-Secret*
	Add-on in friend's name – known
Direct ask – private (private message)	*Private-Known*
Direct ask – public (friend's wall)	*Public-Known*

Hypotheses on take-up rates to ask a friend:	
H1 (max audience size):	Public > Private, General > Private
H2 (prestige motives):	Own > Known > Secret
H3 (non-pecuniary costs to asking):	Public-Known > Public-Secret Private-Known > Private-Secret

Table 3
Percent of Complete Posts by Experimental Treatment
(number of completed posts/number of observations in parentheses)

Ask Method	Add-on donation amount			
Add-on in donor's name				
	None	$1	$5	Total
General ask (own wall)	6.28 (50/796)	15.85 (142/896)	19.13 (115/601)	13.39 (307/2294)
Direct ask – private (private message)	1.72 (10/583)	8.13 (49/603)	14.10 (86/610)	8.07 (145/1796)
Direct ask – audience (friend's wall)	0.87 (4/461)	5.74 (25/435)	10.04 (47/468)	5.57 (76/1364)
Total	3.48 (64/1840)	11.17 (216/1934)	14.77 (248/1679)	9.68 (528/5553)
Add-on in friend's name – secret to friend				
		$1	$5	Total
Direct ask – private (private message)		6.21 (27/435)	9.13 (39/427)	7.66 (66/862)
Direct ask – audience (friend's wall)		4.04 (17/421)	6.41 (28/437)	5.24 (45/858)
Total		5.14 (44/856)	7.75 (67/864)	6.45 (111/1720)
Add-on in friend's name – known to friend				
		$1	$5	Total
Direct ask – private (private message)		7.32 (32/437)	9.60 (41/427)	8.45 (73/864)
Direct ask – audience (friend's wall)		7.86 (39/496)	8.85 (40/452)	8.33 (79/948)
Total		7.61 (71/933)	9.21 (81/879)	8.39 (152/1812)
Total number of observations	9,814			

Table 4

Ordinary Least Squares Regressions on take-up and completed post rates when add-on donation is in donor's name by add-on donation amount and ask method

VARIABLES	(1) Take-up rate	(2) Competed post rate
$1 add-on	0.131***	0.096***
	(0.017)	(0.014)
$5 add-on	0.179***	0.129***
	(0.019)	(0.016)
Private message	-0.055***	-0.046***
	(0.019)	(0.016)
Friend's wall	-0.082***	-0.054***
	(0.020)	(0.017)
$1 add-on*PM	-0.014	-0.032
	(0.026)	(0.022)
$1 add-on*FW	-0.070**	-0.047*
	(0.029)	(0.024)
$5 add-on*PM	0.011	-0.005
	(0.028)	(0.023)
$5 add-on*FW	-0.070**	-0.037
	(0.030)	(0.025)
Constant	0.099***	0.063***
	(0.012)	(0.010)
Observations	5,453	5,453
R-squared	0.056	0.040

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.10

Appendix

Table A1

Table 4 rerun on subsamples of donors who were already logged into Facebook at the time of treatment or were not logged in.

Ordinary Least Squares Regressions on take-up and completed post rates when add-on donation is in donor's name by add-on donation amount and ask method.

VARIABLES	(1) Take-up rate – Already logged into Facebook at time of treatment	(2) Competed post rate – Already logged into Facebook at time of treatment	(3) Take-up rate - NOT already logged into Facebook at time of treatment	(4) Competed post rate - NOT already logged into Facebook at time of treatment
$1 add-on	0.211***	0.170***	0.060***	0.037**
	(0.030)	(0.027)	(0.019)	(0.014)
$5 add-on	0.245***	0.202***	0.111***	0.077***
	(0.033)	(0.030)	(0.022)	(0.016)
Private message	-0.081**	-0.060**	-0.042**	-0.043***
	(0.034)	(0.030)	(0.021)	(0.016)
Friend's wall	-0.108***	-0.078**	-0.066***	-0.043**
	(0.037)	(0.033)	(0.023)	(0.017)
$1 add-on*PM	-0.040	-0.069	0.019	0.012
	(0.047)	(0.043)	(0.030)	(0.022)
$1 add-on*FW	-0.088*	-0.068	-0.050	-0.032
	(0.051)	(0.046)	(0.032)	(0.024)
$5 add-on*PM	0.045	0.020	0.011	-0.017
	(0.049)	(0.044)	(0.031)	(0.024)
$5 add-on*FW	-0.039	-0.035	-0.089***	-0.051**
	(0.052)	(0.047)	(0.033)	(0.025)
Constant	0.145***	0.099***	0.071***	0.043***
	(0.022)	(0.020)	(0.014)	(0.010)
Observations	2,357	2,357	2,704	2,704
R-squared	0.082	0.065	0.044	0.030

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.10

Table A2

Hypotheses of take-up rates across the main elements of the treatments.

Ask methods are General (general ask to many friends at once – post on own FB wall), Private (a direct ask to one friend in private – send a private message on FB) and Public (a direct ask to one friend in front of his friends – post on a friend's FB wall). Add-on donation attributions are Own (add-on in donor's name), Secret (add-on donation in friend's name but kept secret from the friend) and Known (add-on donation in friend's name and made known to the friend). Table 2 describes these key elements. A→B to denotes that option A is preferred to option B, A↔B denotes that option A and B are equally desirable, and A ? B denotes no prediction.

H1: Donors are altruistic and care about maximizing the size of the audience when asking

Public – Own	↔	Public – Known	↔	Public – Secret
↓		↓		↓
Private – Own	↔	Private – Known	↔	Private – Secret
↑				
General – Own				

H2: Donors care about prestige

Public – Own	→	Public – Known	→	Public – Secret
↓		↓		↓
Private – Own	→	Private – Known	→	Private – Secret
↑				
General – Own				

H3: There are non-pecuniary costs to asking. The friend might feel obligated to donate or think his reputation might be damaged by not donating.

Public – Own	?	Public – Known	→	Public – Secret
?		↕		↕
Private – Own	?	Private – Known	→	Private – Secret
?				
General – Own				