

Why Prosocial Referral Incentives Work: The Interplay of Reputational Benefits and Action Costs

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Abstract

Selfish incentives typically outperform prosocial incentives, and customer referral programs frequently use such “selfish” (i.e., sender-benefiting) incentives to incentivize current customers to recruit new customers. However, in two field experiments and a fully incentivized lab experiment, this research finds that “prosocial” (i.e., recipient-benefiting) referral incentives recruit more new customers. Five subsequent experiments test a process account for this effect, identifying two key psychological mechanisms: reputational benefits and action costs. First, at the referral stage, senders (existing customers) anticipate reputational benefits for referring recipients (potential new customers), who receive a reward for signing up. These reputational benefits render recipient-benefiting referrals just as effective as sender-benefiting referrals at the relatively low-cost referral stage. Second, at the uptake stage, recipient-benefiting referrals are *more* effective than sender-benefiting referrals: recipient-benefiting referrals directly incentivize recipients to sign up, providing a clear reward for an otherwise costly uptake decision. The preponderance of selfish, or sender-benefiting, referral incentives in the marketplace suggests these effects are unanticipated by marketers who design incentive schemes.

Keywords

incentives, judgment and decision making, prosocial behavior, referral rewards

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From evolutionary biology to neoclassical economics, many theories of human behavior posit that humans are driven primarily by self-interest. The most effective incentives should therefore be those that maximize material payoff to the decision maker. Indeed, self-benefiting incentives outperform prosocial (or “other-benefiting”) incentives in many contexts: for most reward magnitudes, people exert more effort when offered selfish incentives compared with equally sized prosocial incentives (DellaVigna and Pope 2018; Imas 2014; Schwartz et al. 2019).

People also frequently display significant other-regarding behavior, however. In dictator games, for example, even when there is no consequence for selfish behavior, people share on average about 25% of a given endowment (Forsythe et al. 1994). Consumers often also pay more for charity-linked products compared with standard products (Elfenbein and McManus 2010; Jung et al. 2017) and choose brands that make a donation over those that provide equivalent discounts (Strahilevitz 1999).

A desire to appear generous is one important driver of such prosocial acts. People are more likely to give when generous behavior is public compared with when it is

private (Andreoni and Petrie 2004; Bereczkei, Birkas, and Kerekes 2007), and anonymous donations are rare (Glazer and Konrad 1996). Reputational benefits for generous behavior have the potential to loom largest within one’s social network. People are more generous in contexts involving their close social connections (Moore 2009; Small and Simonsohn 2008), potentially in part because one’s reputation is most important among the people who know them well.

In this project, we examine how social dynamics alter the outcomes of incentivized behavior. For important theoretical reasons, academic research typically examines prosocial incentives by offering rewards that aid anonymous individuals or charities (DellaVigna and Pope 2018; Eckel and Grossman 1996; Imas 2014; Yang, Hsee, and Urminsky 2014). However, when people consider prosocial acts in the real world, the

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benefits often go to people they know. In this research, we propose that the reputational benefits that come from being generous to one's friends, as well as consumers' considerations of decision costliness, substantially influence decisions in ways that are not obvious to incentive architects. We focus on the context of customer referral programs in which companies incentivize customers to refer members of their social network to become new customers.

Customer Referral Incentives

In customer referral programs, companies typically offer incentives to existing customers to encourage those customers to recruit new customers. For example, Google Apps currently offers \$15 to current customers for each new user they recruit, and the video game *World of Warcraft* recently offered users a free month of gaming if they successfully referred their friends to buy a subscription (Gains 2017). Customer referral programs can be a cost-efficient method for gaining new customers because these referral programs not only recruit new customers (Ryu and Feik 2007), but referred customers tend to be particularly valuable (Schmitt, Skiera, and Van den Bulte 2011). Customers feel greater trust and a stronger bond with firms when a friend or acquaintance is already a customer (Castilla 2005; Fernandez, Castilla, and Moore 2000; Schmitt, Skiera, and Van den Bulte 2011).

A critical feature to consider when designing referral incentive programs is that a new customer conversion involves two separate decisions. First, there is a referral decision when the original customer (i.e., the "sender") decides whether to refer. Second, there is an uptake decision when the potential customer (i.e., the "recipient") decides whether to become a new customer.

At a surface level, sender-benefiting incentives may appear superior in this context because they directly incentivize the first decision maker, and the process has no chance of beginning if no referral occurs (Bapna et al. 2014). Indeed, many firms focus on incentivizing the referral stage. As part of this research, a hypothesis-blind research assistant searched for approximately 300 current referral incentive programs online and then categorized each one on the basis of its incentive structure (i.e., who received the reward). Of the 351 existing referral incentive programs located, 40.5% offered sender-benefiting rewards while only 2.6% offered recipient-benefiting rewards (55% offered rewards that were shared between the sender and recipient).¹

The current popularity of sender-benefiting referral programs indicates that incentive architects tend to focus on encouraging current customers to refer through self-interested incentives. However, we posit that this strategy ignores two critical aspects of the psychology of incentive design and prosocial behavior: reputational benefits and action costs.

First, people care about their reputation (e.g., Fehr 2004). Recipient-benefiting referrals, which allow senders to offer recipients a reward, may confer valued reputational benefits to the referrer. Second, action costs matter; all else equal, material incentives are particularly effective at prompting action when behavior is effortful (Beshears et al. 2019). In the context of customer referrals, action costs are particularly high at the uptake stage: to follow through on a referral, a recipient must typically buy a product, download an app, or join a service.

We therefore posit that recipient-benefiting referral programs, by addressing these two important elements of the psychology of incentives and prosocial behavior, will outperform sender-benefiting referral programs. Specifically, we propose that recipient-benefiting referrals are effective because they directly incent the party facing the highest action costs—the recipient of the referral—while providing sufficient reputational incentives to the sender, who makes the initial referral decision.

Prosocial Incentives Offer Reputational Benefits

There are numerous examples of self-benefiting financial incentives that effectively motivate behavior. Self-benefiting financial incentives increase gym attendance (Acland and Levy 2015), improve immunization coverage (Banerjee et al. 2010), and motivate weight loss (John et al. 2011). In direct comparisons, selfish incentives (particularly those above \$2) more effectively motivate effort than equivalent prosocial incentives that benefit charity (Imas 2014; Schwartz et al. 2019). Similarly, people report greater happiness when they receive a selfish incentive compared with when an equivalent donation is made in their name (i.e., when they receive a prosocial incentive; Berman and Small 2012).

However, as Miller (1999) states, "Homo economicus, it should not be forgotten, inhabits a social world." When people behave generously, they may sacrifice at a material level, but they often receive social rewards in return such as higher status or respect (Berman et al. 2015; Flynn 2003; Flynn et al. 2006; Price 2006). Reputational rewards motivate people to behave generously due to a strong desire for social approval (Ariely, Bracha, and Meier 2009; Grant and Gino 2010) and a fundamental human need to belong and maintain close personal relationships (Baumeister and Leary 1995).

Considerable experimental evidence suggests that prosocial behavior is frequently driven by such reputational concerns (Fehr and Fichbacher 2002). Charitable appeals that emphasize benefits to others are more effective when concerns about one's reputation are high (White and Peloza 2009), and generosity increases when donors are promised recognition (Alpizar, Carlsson, and Johansson-Stenman 2008; Andreoni and Petrie 2004; Fisher and Ackerman 1998; Lacetera and Macis 2010). Church donations increase when anonymity is reduced, for example, by replacing closed donation bags with open baskets (Soetevent 2005). These

¹ While we are primarily interested in comparing the recipient-benefiting and sender-benefiting incentives because they offer a clean conceptual separation, we also test the effectiveness of the shared incentive in two of our studies due to the popularity of this incentive in the marketplace.

findings potentially help explain why anonymous donations are rare (Glazer and Konrad 1996). Moreover, the burgeoning literature on referral rewards has findings consistent with the idea that reputational benefits play a role in customers' willingness to refer: in one hypothetical scenario study, participants reported greater willingness to refer close (vs. distant) social ties when offered a recipient-benefiting reward as opposed to a sender-benefiting reward (Ryu and Feick 2007). This finding fits with the current perspective: senders are more likely to receive valuable reputational rewards from close friends relative to distant others.

In this research, we predict that at the referral stage, recipient-benefiting referrals will outperform what would be expected based on prior research, in which prosocial incentives fare worse than selfish incentives. We expect that recipient-benefiting referrals will perform well at this stage because senders anticipate reputational benefits from offering their friends a reward. Consistent with this account, we also predict that the ability for recipient-benefiting referrals to spur referrals will be tempered when referrals are made anonymously; in such circumstances, the sender cannot expect reputational benefits because the recipient will not know the source of the referral.

Asymmetric Action Costs at Referral and Uptake Stages

A distinctive feature of the two-step customer referral process is that there is an asymmetry in action costs between the referral and uptake stages. We define action costs as the monetary or nonmonetary (e.g., effort or time) costs necessary to complete a task or request. For the sender, this is the cost of making the referral, and for the recipient, this is the cost of following through on the referral. The act of referring tends to be low effort and low cost: the sender simply sends their friend a code or enters an email address. Recipients, however, tend to incur higher costs: to complete a referral, recipients must typically spend money on a product, download an app, or join a service (and receive the accompanying emails, notifications, etc.).

This difference in action costs has implications for how incentives perform at the two decision stages. Logically, the incentive structure of a referral program is likely to affect the extent to which senders and recipients (1) anticipate reputational benefits and (2) are directly incentivized to act. Specifically, in recipient-benefiting referral programs, senders may anticipate that recipients will like them more for providing the opportunity to receive a reward. Likewise, in sender-benefiting referral programs, recipients may anticipate that the sender will like them more for following through on the referral (thereby enabling the sender to realize the reward). However, we predict that high action costs at the uptake stage may overwhelm the potential reputational benefits that recipients anticipate receiving for following through on sender-benefiting referrals, thereby rendering sender-benefiting incentives ineffective at the uptake stage.

Indeed, previous research shows that there are typically limits to the sacrifice individuals are willing to make to behave prosocially, even when reputational benefits might be earned. For example, consumers are typically only willing to pay small premiums for brands that support good causes (Barone, Miyazaki, and Taylor 2000; Strahilevitz 1999). Similarly, valuing prosocial norms does not lead to prosocial behavior when the prosocial behavior is sufficiently costly (Schwartz 1977; Tyler et al. 1982). Because of these limits on the costs individuals are willing to accrue to behave prosocially, we expect other-benefiting incentives to perform better at the referral stage, when action costs are low, than at the uptake stage, when action costs are high.

In summary, unlike sender-benefiting incentives, recipient-benefiting incentive programs provide the recipient with a direct financial incentive sufficient to offset the relatively high action costs that recipients typically face. Thus, we posit that recipient-benefiting incentives will be more effective than sender-benefiting incentives at spurring uptake. Drawing on this logic, we also predict that when action costs are increased—whether it be at the referral stage or at the uptake stage—the relative effectiveness of self-benefiting incentives will also increase.

The Current Research

While selfish incentives have proven highly effective at motivating behavior across many contexts, we predict that offering senders a prosocial incentive (i.e., in a recipient-benefiting referral structure) will result in more new customers than offering senders a selfish incentive (i.e., in a sender-benefiting referral structure; see also Bapna et al. [2014]).

The present research is, to our knowledge, the first to investigate anticipated reputational benefits as a driver of prosocial behavior in referral programs, and to explore their limits when action costs are high. As such, the present research is poised to add not only to the topic of referral incentives, but to the broader prosocial behavior literature as well. The present research is also of practical import, for it provides guidance to marketers about how to structure referral programs to maximize new customer conversions. Such practical insight seems timely, given that incentive architects tend to focus on incentivizing current customers to refer, as opposed to referral recipients to act.

We test our account in eight experiments (plus five additional studies in the Web Appendix). The first three studies document that recipient-benefiting referrals outperform sender-benefiting referrals. Study 1 is a field experiment with a mobile app company that varies incentive structure and measures new customer conversions. Study 2 is another field experiment, this time with a video game rental company. Study 2 replicates the findings from Study 1 and also tracks behavior at each decision stage (i.e., at both referral and uptake stages), showing that recipient-benefiting incentives perform as well as sender-benefiting incentives at the referral stage, and substantially outperform sender-benefiting incentives at the uptake

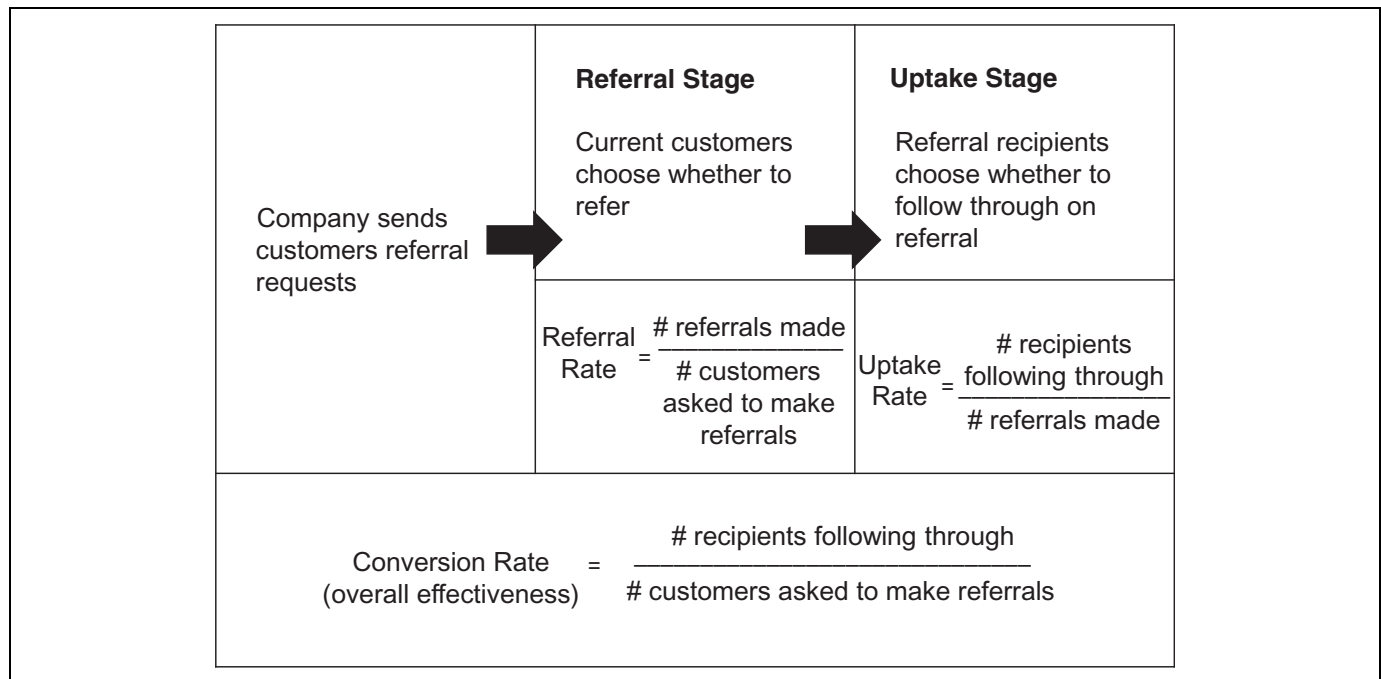


Figure 1. Referral process and measures of effectiveness.

stage. Study 3 examines the full referral process with participants randomly assigned to either the sender or recipient role. This study also begins to establish the role of asymmetric action costs in the process account, by demonstrating that when senders perceive action costs to be low, other-benefiting incentives perform as well as self-benefiting incentives, but when action costs are high (i.e., in the uptake stage) self-benefiting incentives are more effective.

Next, five subsequent experiments explain when and why recipient-benefiting referrals outperform sender-benefiting referrals by decomposing the referral process into its two constituent phases: the referral stage and the uptake stage. Studies 4a–4c focus on the first stage of the process—where action costs are typically low—illustrating that recipient-benefiting programs lead senders to anticipate reputational benefits. Studies 5a and 5b manipulate action costs, demonstrating that when action costs are low, other-benefiting incentives are just as effective as self-benefiting incentives. However, when action costs are high, participants are less likely to act when the incentive benefits others compared with when it benefits themselves.

Across our experiments, we measure the effectiveness of various parts of the referral process: the referral rate (i.e., whether current customers decide to refer someone), the uptake rate (i.e., whether referral recipients decide to take up the referral), and the conversion rate (i.e., the number of recipients taking up the referral as a function of the number of referral requests the firm made) (see Figure 1). Following recommendations from Simmons, Nelson, and Simonsohn (2012), we report all manipulations, all measures, and all data exclusion criteria for all studies.

Study 1: Recipient-Benefiting Referrals Increase Conversions

Study 1 was a field experiment with a startup called GiftAMeal. The company partners with restaurants, encouraging diners to take pictures of their meals and share them on social media; GiftAMeal then donates a meal to a food bank each time a customer does so. Study 1 was a five-condition between-subjects experiment testing the effect of different incentive structures on new customer conversions (i.e., GiftAMeal app downloads). We predicted that a recipient-benefiting incentive would produce the highest conversion rate.

Methods

GiftAMeal emailed 6,364 current customers, requesting that these customers refer their friends to download the app. Customers were randomly assigned to one of five experimental conditions: (1) control: no monetary incentive,² (2) sender-benefiting: customers received a \$5 Amazon gift card for each friend who downloaded the app, (3) recipient-benefiting: referred friends received a \$5 gift card if they downloaded the app, (4) shared: senders and their friends each received a \$2.50 gift card if the friend downloaded the app, or (5) donation: GiftAMeal donated \$5 to the charity Feeding America for each download.

² While there was no explicit monetary incentive, in the control condition, the company donated a meal to someone in need. This is their standard reward for referrals.

Current customers received a unique promotional code that they could send to their friends. All emails also offered a suggestion for what customers could email or text their friends when sending the referral (stimuli for all experiments appear in Web Appendix A). The promotion lasted two weeks, during which time referred individuals could download the app using their friend's code. The company was unable to track how many referrals were made at the referral stage, nor how many sign ups came from any individual link, but they could track the new customer downloads by condition. As a result, the outcome measure of interest in this study is the new customer conversion rate. (Because we could receive data on the key intermediary step—the number of referrals made—we could not assess individual referral or uptake rate in this study. Study 2 addresses this limitation.)

Results

Table 1 summarizes the results of this and all subsequent studies. Overall, the conversion rate was low in this study (<1%), not uncommon for referral programs. Nevertheless, we detected significant differences between experimental conditions. In modest support for our hypothesis, the conversion rate was marginally higher in the recipient-benefiting condition relative to the sender-benefiting condition (recipient-benefiting = .94%, sender-benefiting = .39%; $\chi^2(1) = 2.92$, $p = .09$). In addition, the recipient-benefiting condition produced a significantly higher conversion rate relative to both the no-incentive control condition (.08% conversion rate; $\chi^2(1) = 9.41$, $p = .002$) and the donation incentive condition (.08%; $\chi^2(1) = 9.29$, $p = .002$), but not relative to the shared referral condition (.94%; $\chi^2(1) = .002$, $p = .96$). By contrast, the sender-benefiting condition produced a conversion rate that was marginally significantly better than the control condition ($\chi^2(1) = 2.69$, $p = .10$) and the donation incentive condition ($\chi^2(1) = 2.67$, $p = .10$) and marginally significantly worse than the shared incentive condition ($\chi^2(1) = 2.89$, $p = .09$).

Discussion

The results from Study 1 support the prediction that recipient-benefiting referrals can increase conversions compared with offering either (1) no incentive or (2) a sender-benefiting referral. It is also noteworthy that the recipient-benefiting condition outperformed another version of an other-benefiting referral—a donation incentive, whereby an incentive is given to a charity rather than a member of one's social network. This result is consistent with prior research (Imas 2014; Schwartz et al. 2019) as well as our proposed process account: recipient-benefiting referrals are not necessarily successful because they offer individuals a chance to be altruistic but, rather, because they offer some kind of benefit to the sender (reputational in this case) and recipient (financial in this case). Finally, it is interesting to note that the shared incentive—the reward most commonly offered in the marketplace—did not outperform the recipient-benefiting incentive. Study 2 is another field

experiment, aiming to replicate and extend these findings by tracking behavior at both the referral and uptake decision stages in addition to measuring customer conversions.

Study 2: Sender-Benefiting and Recipient-Benefiting Incentives at Referral and Uptake Stages

Study 2 was a three-condition between-subjects field experiment in which we partnered with a video game subscription company called Game Access. As in Study 1, the basic prediction was that recipient-benefiting referrals would yield more new customers than sender-benefiting referrals. However, because Game Access tracked both referral and uptake behavior, Study 2 could pinpoint the point in the referral process at which recipient-benefiting referrals fully outperform sender-benefiting referrals: at the uptake stage.

Methods

Game Access randomly assigned 1,500 customers to receive one of three referral offers: (1) control: no incentive, (2) sender-benefiting: one month free for the current customer, or (3) recipient-benefiting: one month free for the new customer. The firm successfully delivered 1,438 emails (4.1% bounced back). Current customers received an email requesting that they refer a friend to buy a membership to Game Access.

If a current customer chose to refer one or more friends, they clicked a link in the email labeled "Tell your friends about Game Access" and then entered the name and email address of as many friends as desired. Game Access then sent an email to each referred friend with the subject line "I just joined a cool new service." By sending emails directly to referral recipients, the company could track both how many customers sent referrals and how many recipients followed through on those referrals.

Results

Referral stage. The referral rate was just as high in the recipient-benefiting condition (28.22%) as it was in the sender-benefiting condition (25.91%; $\chi^2(1) = .64$, $p = .42$). Both of these rates were significantly higher than the control condition (17.79%, $\chi^2(1) = 9.24$, $p < .01$ and $\chi^2(1) = 14.91$, $p < .001$, respectively).

Because customers could make as many referrals as they wished, one might wonder whether this result is driven by a few overzealous senders. Supplementary analysis suggests that this is not the case; the same pattern is observed when assessing the proportion of customers who made a referral (i.e., number of customers who made at least one referral divided by the number of customers asked to make referrals): in the recipient-benefiting condition, 21.37% of customers made at least one referral—equivalent to the 23.77% who did so in the sender-benefiting condition ($\chi^2(1) = .78$, $p = .38$). Both of these percentages are significantly higher than the control

Table 1. Clinical Characteristics of Livers and Lobectomy Donors.

Study 1: New Customer Conversions by Reward Type for Photo-Sharing App (N = 6,364, Field Experiment)			
	Referral Rate	Uptake Rate	Conversion Rate
Control			.08%
Sender-benefiting			.39%
Receipt-benefiting			.94%
Shared			.94%
Donation			.08%
Main finding	Recipient-benefiting incentives increased conversions compared with a sender-benefiting incentive or no incentive.		
Study 2: Full Referral Process by Reward Type for Video Game Rental Company (N = 1,438, Field Experiment)			
	Referral Rate	Uptake Rate	Conversion Rate
Control	17.79%	3.45%	.61%
Sender-benefiting	25.91%	6.61%	1.71%
Receipt-benefiting	28.22%	16.91%	4.77%
Main finding	No difference in choice to refer between recipient-benefiting and sender-benefiting incentives. However, uptake increases for recipient-benefiting incentives, leading these incentives to increase customer conversions (vs. sender-benefiting or no incentive).		
Study 3: Randomized Referral and Recipient Stages for Amazon Loyalty Program (N = 816, MTurk)			
	Referral Rate	Uptake Rate	Conversion Rate
Sender-benefiting/referral role	82.21%		
Recipient-benefiting/referral role	88.83%		
Sender-benefiting/recipient role		51.74%	
Recipient-benefiting/recipient role		62.19%	
Main finding	Randomizes both roles and again finds no difference in choice to refer between recipient-benefiting and sender-benefiting incentives. However, uptake increases for recipient-benefiting incentives.		
Study 4a: Full Referral Process by Reward Type for Personality Quiz (N = 369, Lab)			
	Referral Rate	Uptake Rate	Conversion Rate
Control	26.37%	24.00%	6.52%
Sender-benefiting	64.84%	28.07%	17.58%
Recipient-benefiting	58.06%	69.81%	39.79%
Shared	56.99%	64.71% ^b	35.48%
Main finding	Replicates the full referral process findings from Study 2 in a fully incentivized lab experiment. Also finds that the shared and recipient-benefiting incentives perform similarly at all stages. Initial evidence that reputational benefits play a role in referral choice.		
Study 4b: Referral Choice for Anonymous Versus Identified Senders for Amazon Loyalty Program (N = 805, MTurk)			
	Referral Rate	Uptake Rate	Conversion Rate
Sender-benefiting/named	85.29%		
Recipient-benefiting/named	87.32%		
Sender-benefiting/anonymous	86.50%		
Recipient-benefiting/anonymous	74.49%		
Main finding	Moderates the referral effect by manipulating anticipated reputational benefits. When senders are identified (i.e., anticipate reputational benefits), there is no difference in referral choice incentives. When senders are anonymous (i.e., do not anticipate reputational benefits), sender-benefiting incentives are more effective at increasing referrals.		
Study 4c: Referral Likelihood and Reputational Concern for Amazon Loyalty Program (N = 583, MTurk): Average Likelihood (not %)			
	Referral Rate	Uptake Rate	Conversion Rate
Sender-benefiting	5.22 (1.97)		
Recipient-benefiting	5.42 (1.79)		
Main finding	Provides additional evidence for the role of reputational benefits at the referral stage: consumers with a higher concern for their reputation are more likely to send recipient-benefiting (vs. sender-benefiting) referrals.		

(continued)

Table 1. (continued)

Study 5a: Referral Choice and Action Costs for Food Delivery Service (N = 824, MTurk)			
	Referral Rate	Uptake Rate	Conversion Rate
Sender-benefiting/low cost	72.38%		
Recipient-benefiting/low cost	81.52%		
Sender-benefiting/high cost	73.63%		
Recipient-benefiting/high cost	63.82%		
Main finding	Moderates the referral effect by manipulating action costs. When referral costs are high, senders are more likely to refer for a self-benefiting incentive. When referral costs are low, senders are (marginally) more likely to refer for an other-benefiting incentive.		
Study 5b: Randomized Referral and Recipient Stages (N = 740, MTurk)			
	Referral Rate	Uptake Rate	Conversion Rate
Sender-benefiting/high cost		15.59%	
Recipient-benefiting/high cost		32.20%	
Sender-benefiting/low cost		54.40%	
Recipient-benefiting/low cost		55.90%	
Main finding	Moderates the uptake effect by manipulating action costs. When uptake costs are high, recipients are more likely to follow through for a self-benefiting incentive. When uptake costs are low, there is no difference in uptake choice by referral incentive.		

condition (16.36%; vs. recipient-benefiting: $\chi^2(1) = 3.98, p = .046$; vs. sender-benefiting: $\chi^2(1) = 8.20, p = .004$).

Uptake stage. The uptake rate was higher in the recipient-benefiting condition (16.91%, 23 out of 136 referral recipients) compared with both the sender-benefiting condition (6.61%, 8 out of 121 referral recipients, $\chi^2(1) = 6.38, p = .01$) and the control condition (3.45%, 3 out of 87 referral recipients, $\chi^2(1) = 9.29, p < .01$). The uptake rate in the sender-benefiting condition was not significantly different from the control condition ($\chi^2(1) = 1.00, p = .32$).

Conversion rate. Replicating patterns from Study 1, the conversion rate was significantly higher in the recipient-benefiting condition (4.77%) compared with both the sender-benefiting condition (1.71%, $\chi^2(1) = 7.03, p = .008$) and the control condition (.61%, $\chi^2(1) = 16.12, p < .001$; see Figure 2). The conversion rate in the sender-benefiting condition was not significantly different from that of the control condition ($\chi^2(1) = 2.55, p = .11$).

One-month follow-up. Follow-up subscription renewal data showed that the conversion rate patterns remained one month after the intervention. That is, the company had a greater rate of new customers that remained customers a month later in the recipient-benefiting condition (3.52%) compared with the sender-benefiting condition (1.07%, $\chi^2(1) = 6.29, p = .01$) and the control condition (.35%, $\chi^2(1) = 9.41, p < .01$). There continued to be a nonsignificant difference between the sender-benefiting and control conditions ($\chi^2(1) = 1.78, p = .18$).

Discussion

Study 2 provided additional support for the hypothesis that recipient-benefiting referrals outperform sender-benefiting

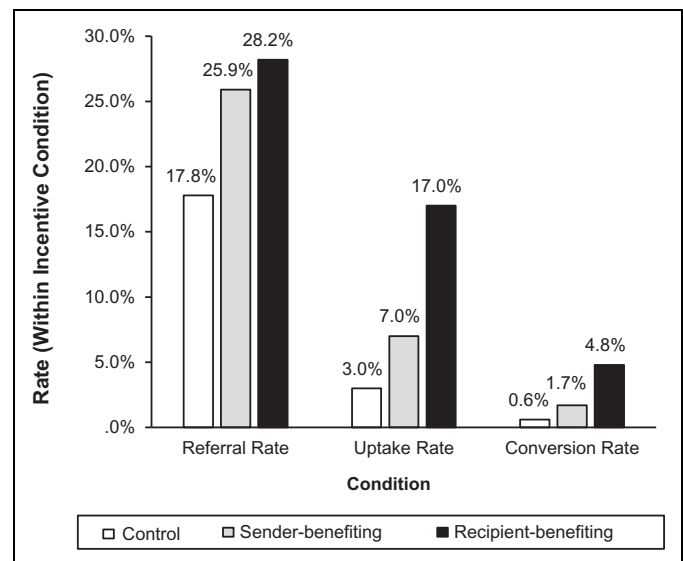


Figure 2. Study 2: referral rate, uptake rate, and conversion rate by condition.

Notes: At the referral stage, recipient-benefiting incentives perform as well as sender-benefiting incentives (and both outperform the control condition in which no incentives were offered). At the uptake stage, recipient-benefiting incentives outperform both sender-benefiting incentives and the control. Overall, recipient-benefiting referrals lead to the most new customer conversions

ones. This field experiment showed that, despite the tendency for selfish incentives to outperform prosocial incentives in most settings, the prosocial (recipient-benefiting) incentives perform as well as selfish (sender-benefiting) incentives at the referral stage. However, at the uptake stage, recipients are more likely to act when there is a selfish (recipient-benefiting) incentive offered.

Study 3: Comparing Referral Versus Recipient Stages

Studies 1 and 2 found that recipient-benefiting referrals outperform sender-benefiting ones. However, because participants were not randomly assigned to a role (i.e., of sender vs. recipient) recipient-benefiting rewards may have been effective, at the uptake stage in particular, because customers select different recipients when offered a self-benefiting versus other-benefiting reward. Therefore, Study 3 was a 2×2 between-subjects experiment in which we randomized participants to role (sender vs. recipient) and incentive structure (self-benefiting vs. other-benefiting), enabling us to isolate the causal effect of reward structure on customer conversion.

In Study 3, we also began to test our process account. Specifically, we measured action costs, which we define as the effort, time, and/or payment required to follow through on an action. We predicted that recipients would perceive higher action costs relative to senders, and that recipients in the other-benefiting condition (who would not receive an incentive for taking up the product) would perceive the action costs as particularly high.

Methods

The study was preregistered (<https://osf.io/bpr3k>). Participants ($N = 816$ Amazon Mechanical Turk [MTurk] workers; $M_{\text{age}} = 35.40$ years; 61.81% female) provided their first name and that of a close friend, then read about a (fictitious) food delivery service called Food2Me that delivers from local restaurants and charges \$50 for a one-year subscription.

First, we manipulated whether participants were in the role of sender or recipient. Specifically, participants assigned to the role of sender were told to imagine the following: “You joined a food delivery service called Food2Me which delivers food from your favorite local restaurants for \$50/year. Food2Me sends you an email, asking if you would like to refer a friend to join the service. If you choose to refer your friend, [friend’s name], Food2Me would send [friend’s name] the following email.” Participants assigned to the role of recipient were told to imagine: “You receive the following email stating that your friend, [friend’s name], referred you to try a new food delivery app called Food2Me.” Participants were then shown the email from Food2Me.

Second, we manipulated the incentive structure to be either self-benefiting or other-benefiting. The incentive was a free year of Food2Me. Senders assigned to the self-benefiting incentive were told that they would receive the incentive if the person they referred signed up for the service (and that this person would not receive any incentive for signing up). Referrers assigned to the other-benefiting incentive were told that they would not receive any incentive for making a referral, but that the person they referred would receive a free year for signing up. Similarly, recipients assigned to the self-benefiting incentive were told that they would receive a free year if they signed up (and that the friend who referred them

would not receive any incentive); those assigned to the other-benefiting incentive were told that they would not receive any incentive for signing up, but that the person who referred them would receive a free year.

Next, participants were required to correctly identify who would receive an incentive (themselves or their friend) before moving forward to their decision. This comprehension check was used in all hypothetical studies in this article. Then, we assessed our primary outcome measure: action choice. Specifically, referrers were asked, “Would you refer [friend’s name] to sign up for the Food2Me delivery service?” and recipients were asked, “Would you sign up for the Food2Me delivery service?” (Yes/No). Finally, we also measured perceived action costs using a three-item scale: “Referring my friend to Food2Me [Subscribing to Food2Me] would be . . .” “effortful,” “burdensome,” and “costly” (1 = “Not at all,” and 7 = “Very much so”; $\alpha = .78$).

Results

Action choice. A logistic regression revealed a significant interaction between role and incentive ($\chi^2(1) = 7.67, p = .006$). Marginally significantly more referrers chose to refer when their friend received the reward (other-benefiting referral; 88.83%) than when they themselves received the reward (self-benefiting referral; 82.21% ($\chi^2(1) = 3.61, p = .058$)). However, significantly fewer recipients chose to sign up when their friend received the reward (other-benefiting referral; 51.74%) compared with when they themselves received the reward (self-benefiting referral; 62.19%; $\chi^2(1) = 4.46, p = .035$).

Action costs. As expected, there was a main effect of role: recipients perceived the cost of taking action as higher than referrers ($F(1, 812) = 108.72, p < .001$). There was no main effect of incentive ($F(1, 812) = .004, p = .95$), but there was a significant interaction between role and incentive ($F(1, 812) = 19.40, p < .001$). Consistent with our account, recipients perceived the actions costs to be significantly higher in the other-benefiting condition (i.e., in which they received no financial compensation for costly uptake) relative to the self-benefiting condition ($M_{\text{other}} = 3.72, SD = 1.43$ vs. $M_{\text{self}} = 3.28, SD = 1.49$; $t(398) = 3.06, p = .002$). Interestingly, referrers perceived the actions costs to be significantly higher in the self-benefiting condition relative to the other-benefiting condition ($M_{\text{self}} = 2.67, SD = 1.46$; $M_{\text{other}} = 2.24, SD = 1.31$; $t(411) = 3.17, p = .002$).

Discussion

Study 3 replicates the pattern found in the prior field experiment in a fully randomized design—that is, in a setup where participants were randomized to role as well as incentive structure. Study 3 also provides preliminary evidence for the importance of action costs in the effectiveness of other-benefiting versus self-benefiting incentives.

In an additional study (Web Appendix C, Study 1), we conceptually replicated this pattern of referral and uptake. We also measured both action costs and anticipated reputational benefits. We again found that recipients perceived higher action costs relative to referrers and that recipients in the other-benefiting condition (in which referrers, and not recipients, receive a reward) perceived action costs to be particularly high. As for anticipated reputational benefits, consistent with our account, both referrers and recipients believed they would receive higher reputational benefits for taking action when offered an other-benefiting incentive compared with a self-benefiting incentive.

Next, we isolate the roles of reputational benefits (Studies 4a–4c) and action costs (Studies 5a and 5b) in the performance of sender-benefiting and recipient-benefiting referral incentives.

Studies 4a–4c: The Role of Reputational Benefits

In Studies 4a–4c, we tested the role of anticipated reputational benefits in the performance of prosocial (i.e., recipient-benefiting) incentives at the referral stage; thus, each of these studies focuses on participants' propensity to refer. Study 4a is an incentive compatible lab experiment in which we track both referral and uptake decisions. We predicted that anticipated reputational benefits would mediate referrers' propensity to refer.

Study 4a tested two additional, alternative explanations for why recipient-benefiting incentives perform as well as sender-benefiting incentives at the referral stage. The first is a psychological costs account: in the sender-benefiting condition, referrers might feel guilt or discomfort for gaining a reward when the recipient gains no material reward, decreasing referral likelihood. The second is a social imposition account: in the sender-benefiting condition, referrers might feel that they are imposing on the recipient by sending the referral because they are not offering those recipients a material incentive. Both of these explanations suggest that the decreased conversion rates observed with sender-benefiting rewards relative to recipient-benefiting rewards is a product of depressed referral rates with sender-benefiting rewards. So far, however, we have found no such pattern, and in Study 2, referral rates were significantly higher in the sender-benefiting condition relative to control. Nonetheless, in Study 4a we measured both psychological costs and anticipated social imposition and tested to what extent reputational benefits emerged as a mediator alongside these alternative accounts.

Study 4a

Methods

Participants (369 undergraduate students; $M_{\text{age}} = 19.64$ years; 47.97% female) were randomly assigned to one of four referral incentive conditions: control, sender-benefiting, recipient-

benefiting, or shared. Participants provided their first name then completed the Ten-Item Personality Inventory (Gosling, Rentfrow, and Swann 2003). Participants were then given their (real) extraversion/introversion scores (Web Appendix A) and told that they could enter another student's university email address to refer them to take the personality quiz. Participants in the incentive conditions were further told that if their friend took the survey, (1) they themselves would receive a \$3 electronic gift card to Starbucks (sender-benefiting), (2) their friend would receive a \$3 Starbucks gift card (recipient-benefiting), or (3) they would each receive a \$1.50 Starbucks gift card (shared incentive).

Participants then viewed the email that their friend would receive if they chose to refer. In the control and sender-benefiting conditions, the email subject line was "[Friend's First Name] thought you would enjoy this survey!" In the recipient-benefiting and shared conditions, the subject line stated, "[Friend's First Name] thought you would enjoy this survey (plus get a Starbucks gift card)!" In all conditions, the email explained that their friend had taken a brief personality quiz and wanted to share the link with them. In the recipient-benefiting and shared conditions, it also stated that they would receive an electronic Starbucks gift card (and the value of this card—\$3 or \$1.50, depending on the experimental condition).

Referral choice. We then asked participants, "Would you like to refer a friend to take this personality quiz?" and told them that if they wished to do so, they would have to provide their own student ID (requested for accounting reasons), their own student email address, and one friend's student email address, which they could look up in the online directory. Participants chose either "Yes, I would like to refer a friend" or "No, I would not like to refer a friend." Participants who said no proceeded to the process measures; those who said yes provided the necessary referral information before continuing to the follow-up questions.

Process measures. To measure anticipated reputational benefits we asked, "How would your friend view you if you made this referral?" ("Generous," "Helpful," "Friendly," "Well-Intentioned," "Trustworthy," "Warm," "Good-Natured," "Likeable," and "Sincere"; 1 = "Not at all," and 7 = "Very much"; $\alpha = .96$) To measure psychological costs, we asked, "How would you feel if you made this referral?" ("Selfish," "Deceitful," "Guilty," "Uncomfortable," "Sneaky," and "Conflicted"; 1 = "Not at all," and 7 = "Very much"; $\alpha = .89$). To measure perceived social imposition, we asked, "How much would you feel like you are imposing on [friend] by sending this referral?," "How annoyed would [friend] be about receiving this referral?," and "[Friend] would feel that I am taking advantage of him/her" (1 = "Not at all," and 7 = "Very much so"; $\alpha = .72$).

Referral recipients ($N = 186$) were then emailed the invitation to complete the survey, along with the message about the incentive, as applicable. One week after sending out the emails,

participants—both referrers and recipients—were compensated according to incentive condition.

Results

Referral stage. There was no significant difference in referral rates between the sender-benefiting (64.84%), recipient-benefiting (58.06%), and shared (56.99%; $\chi^2(2) = 1.38, p = .50$) conditions—all three of these rates were significantly higher than that of the control (no-incentive) condition (26.37%; all $ps < .001$).

Referral process items. The reputational benefits of referring were perceived to be higher in the recipient-benefiting condition ($M = 4.41, SD = 1.33$) relative to the sender-benefiting condition ($M = 3.69, SD = 1.34; t(182) = -3.64, p < .001$). Psychological costs were perceived to be higher in the sender-benefiting condition ($M = 2.48, SD = 1.32$) relative to the recipient-benefiting condition ($M = 1.75, SD = 1.17; t(182) = 3.98, p < .001$); and social imposition was perceived to be marginally significantly higher in the sender-benefiting condition ($M = 2.98, SD = 1.34$) relative to the recipient-benefiting condition ($M = 2.65, SD = 1.36; t(182) = 1.68, p = .096$). Participants reported no difference in psychological costs or anticipated reputational benefits between the no-incentive control condition and the sender-benefiting condition ($ps > .30$).³

Although the total effect of referral incentives on referral choice is not detectably different from zero (the sender- and recipient-benefiting incentives lead to equal referrals), mediation can still be present (Hayes 2009; Zhao, Lynch, and Chen 2010). While the direct financial incentive is likely increasing referrals for those in the sender-benefiting condition compared with the recipient-benefiting condition, there may be an opposing influence of reputational benefits increasing referral choice for the recipient-benefiting condition.

Therefore, using methods prescribed by Hayes (2009), we tested for mediation by simultaneously testing the significance of all three measured mediators, calculating standardized indirect effects for 10,000 bootstrapped samples. Reputational benefits mediated the effect of referral incentive on referral choice. Specifically, there was a statistically significant indirect effect of reputational benefits (.34; 95% CI = [.11, .71]). The indirect effect of psychological costs was not significant (.09; 95% CI = [-.45, .14]), nor was the indirect effect of social imposition (.25; 95% CI = [-.03, .64]).

Uptake stage. Uptake rates were significantly higher in the recipient-benefiting condition (69.81%) compared with the sender-benefiting (28.07%; $\chi^2(1) = 41.74, p < .001$) and control (24.00%; $\chi^2(1) = 14.23, p < .001$) conditions. There was a nonsignificant difference in uptake between the recipient-

benefiting and shared conditions (64.71%; $\chi^2(1) = .30, p = .58$). There was also a nonsignificant difference in uptake between the sender-benefiting and control conditions ($\chi^2(1) = .15, p = .70$); recipients in the control and sender-benefiting conditions received identical emails in this study, so this null difference is unsurprising.

Conversion rate. Consistent with Studies 1 and 2, the conversion rate was significantly higher in the recipient-benefiting condition (39.79%) than the sender-benefiting condition (17.58%; $\chi^2(1) = 12.91, p < .001$). There was no difference between the recipient-benefiting and shared conditions (35.48%; $\chi^2(1) = .38, p = .54$). Finally, the conversion rate in the control condition was significantly lower than the incentive conditions (6.52%; $\chi^2(3) = 35.78, p < .001$).

Discussion

Consistent with Studies 1–3, the recipient-benefiting referral was more effective than the sender-benefiting referral; it produced significantly higher uptake and conversion rates. Also consistent with Studies 2 and 3, sender-benefiting and recipient-benefiting incentives were equally effective at the referral stage. In support of our process account, the reputational benefits that referrers anticipated mediated their propensity to refer. Although other potential process constructs such as psychological costs and social impositions vary between sender-benefiting and recipient-benefiting referral conditions, they do not appear to account for the influence of referral type on referral choice (they did not mediate the effect). While this self-reported mediation study shows initial support for the role of anticipated reputational benefits in our account, we seek additional evidence, through moderation, in Studies 4b and 4c.

Study 4b

In Study 4b we tested the role of anticipated reputational benefits at the referral stage through moderation. The study was a 2×2 between-subjects design in which we manipulated both the referral incentive (sender-benefiting vs. recipient-benefiting) and whether the referral was made anonymously, such that the recipient did not know who referred them (and would-be referrers knew this when deciding whether to refer). Thus, relative to when referrers are identified to recipients, anonymity should decrease referrals in recipient-benefiting incentive schemes because it removes the possibility of receiving reputational benefits.

Methods

The study was preregistered (i.e., we committed to the sample size and measures before running the study; <https://osf.io/h6rx5>). Participants ($N = 805$ MTurk workers; $M_{\text{age}} = 36.75$ years; 53.18% female) were asked to give their first name and the first name of a close friend. Next, they imagined the following: “Amazon has released a new, free loyalty program called Amazon BOLD that showcases new products to program

³ Due to space constraints, we report only the process results that directly test our account (which centers on comparing the recipient-benefiting vs. sender-benefiting conditions); process results for all conditions are in Web Appendix B.

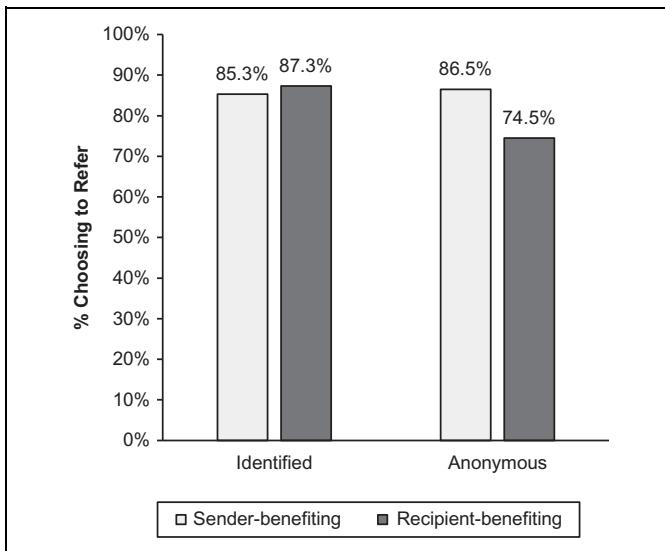


Figure 3. Study 4b: referral choice by referral type and anonymity.

Notes: Sender-benefiting and recipient-benefiting incentives lead to equal referral choice when the referral is not anonymous. When the referral is anonymous, sender-benefiting incentives lead to more referrals.

members. You joined the program and think it has been great.” Participants were further told that Amazon has a referral program; we manipulated whether participants were told that the referral program gives (1) a sender-benefiting incentive, whereby they would receive a \$10 Visa gift card for each person they successfully referred to Amazon BOLD or (2) a recipient-benefiting incentive, whereby each referred person would receive a \$10 Visa gift card upon joining. We also manipulated whether the referral would be anonymous: half the participants were told that the referral would be anonymous and their friend would not be told who sent it; those in the identified condition were not given this information. Finally, we asked participants, “Would you refer your friend to Amazon BOLD”? (Yes/No).

Results

A logistic regression revealed a significant interaction between referral type and anonymity on referral choice ($\chi^2(1) = 6.00, p = .014$; Figure 3). When the referral was identified, the referral rate was equivalent across the recipient-benefiting (87.32%) and the sender-benefiting (85.29%; $\chi^2(1) = .35, p = .55$) conditions. However, when the referral was anonymous, the referral rate was higher in the sender-benefiting condition (86.50%) relative to the recipient-benefiting condition (74.49%; $\chi^2(1) = 8.87, p = .003$; Figure 3).

Discussion

Study 4b finds that prosocial referrals become less effective when the ability to inform friends of one’s prosocial act are reduced, providing evidence that reputational benefits are a key motivator at the referral stage. By contrast, if psychological

costs (e.g., guilt from profiting from a friend with a selfish referral incentive) or concerns about social impositions (e.g., imposing a selfish request on one’s friend) drove the performance of prosocial incentives at the referral stage, anonymity should not matter. Furthermore, if either purely altruistic motivations (i.e., the desire to help others without any concern for personal benefit, reputational or otherwise) or vicarious value motivations (i.e., the desire to help others because we feel that we gain value when others gain value) drive the propensity to refer in the recipient-benefiting condition, then referral rates in this condition should be just as high as those of the sender-benefiting condition even when referrals are made anonymously; this pattern is not what we found.

Further attesting to the reputational benefit explanation of referrer behavior, Web Appendix C (Study 3) offers a conceptual replication of Study 4b in which we manipulated reputational benefits by varying whether the referral recipient was a friend (allowing for high reputational benefits) or a stranger (allowing for minimal reputational benefits). Consistent with Study 4b, when referrers could anticipate reputational benefits (i.e., when asked to refer their friends) recipient-benefiting incentives were as effective as sender-benefiting incentives. However, when asked to refer strangers, recipient-benefiting incentives were less effective than sender-benefiting incentives.

Study 4c

In Study 4c we tested whether, consistent with our account, recipient-benefiting incentives are particularly likely to spur referral among people who tend to be chronically concerned about their reputation. There were therefore two independent variables: referral incentive (sender-benefiting vs. recipient-benefiting, manipulated between-subjects) and trait reputational concerns (measured).

Method

The study was preregistered (<https://osf.io/fsn7j>). Participants ($N = 583$ MTurk workers; $M_{age} = 36.48$ years; 62.89% female) were randomly assigned to a referral incentive condition: sender-benefiting versus recipient-benefiting. They then viewed the same referral scenario used in Study 4b (Amazon BOLD loyalty program) and were told that if they made a successful referral, either they would receive a \$10 Visa gift card (sender-benefiting) or their friend would receive a \$10 Visa gift card (recipient-benefiting). Participants then moved to a referral likelihood question, which asked “Would you refer your friend [friend’s name] to Amazon BOLD?” (1 = “I definitely would not refer my friend,” and 7 = “I definitely would refer my friend”).

Participants then completed a short distractor task in which they were asked to mentally rotate figures. Following this task, participants completed a trait measure of concern for reputation (the seven-item Concern for Reputation Scale; De Cremer and Tyler 2005; $\alpha = .85$), consisting of the items (1) “I am rarely

concerned about my reputation” (reverse-scored), (2) “I do not consider what others say about me” (R-scored), (3) “I wish to have a good reputation,” (4) “If my reputation is not good, I feel very bad,” (5) “I find it important that others consider my reputation as a serious matter,” (6) “I try to work hard on my reputation (in my relationships with others),” and (7) “I find it difficult if others paint an incorrect image of me” (1 = “Not at all characteristic for me,” and 7 = “Extremely characteristic for me”).

Results

Referral likelihood. Referral likelihood was just as high among participants in the recipient-benefiting condition relative to those in the sender-benefiting condition ($M_{\text{recipient}} = 5.42$, $SD = 1.79$; $M_{\text{sender}} = 5.22$, $SD = 1.97$; $t(581) = 1.24$, $p = .22$).

Reputational concern. As expected, trait reputational concern did not differ between conditions ($M_{\text{sender}} = 4.78$, $SD = 1.05$; $M_{\text{recipient}} = 4.87$, $SD = 1.02$; $t(581) = 1.01$, $p = .31$). To test for moderated mediation, we examined referral likelihood as a function of referral type, trait concern for reputation, and their interaction. The interaction was marginally significant ($\beta = .12$, $t(579) = 1.72$, $p = .086$). To identify the range of reputational concern for which the simple effect of referral type was significant, we used the Johnson–Neyman technique (floodlight analysis; Spiller et al. 2013). This analysis revealed a significant positive effect of referral type on referral likelihood for any participants with reputational concern scores greater than 6.14 ($\beta = .24$, $SE = .12$, $p = .05$).

Discussion

Study 4c found additional evidence for the role of reputation on the effectiveness of recipient-benefiting incentives; recipient-benefiting incentives were particularly likely to spur referrals among those scoring high in trait concern for reputation.

Studies 5a and 5b: The Role of Action Costs

Studies 5a and 5b tested the role of action costs in the performance of self-benefiting versus recipient-benefiting incentives. We have posited that at the referral stage, recipient-benefiting incentives perform as well as sender-benefiting incentives because (1) senders expect to receive reputational benefits when making a referral with recipient-benefiting rewards and (2) referring is a low-cost action. If this is the case, then increasing referrers’ action costs should render recipient-benefiting incentives less effective relative to self-benefiting incentives at the referral stage. We tested this proposition in Study 5a. The study was a 2×2 between-subjects design in which we measured participants’ willingness to make a referral as a function of referral incentive (sender-benefiting vs. recipient-benefiting) and action costs (low vs. high).

Study 5a

Methods

The study was preregistered (<https://osf.io/7pb3q>). In the same referral scenario used in Study 4b, participants ($N = 824$ MTurk workers; $M_{\text{age}} = 36.47$ years; 47.69% female) imagined that they were part of the Amazon BOLD loyalty program and could refer a friend to try it. Also as in Study 4b, participants provided their first name and the first name of a close friend and were told that a successful referral would either earn themselves (sender-benefiting) or the person they referred (recipient-benefiting) a \$10 Visa gift card.

We manipulated action costs by varying the effort required to make a referral. Specifically, participants in the low-cost condition read, “To verify that only one person uses this offer, you will need to click on the provided link and simply type in your friend’s email address.” Those in the high-cost condition read, “To verify that only one person uses this offer, you will need to print out this email and mail it along with your friend’s email address.” To make the effort required in the high-cost condition even more salient, we also had these participants click through a step-by-step process of what would be required to refer a friend to the loyalty program.

Participants then answered the question, “Would you refer your friend, [friend’s name] to Amazon BOLD?” Participants could respond either “Yes, I would refer my friend” or “No, I would not refer my friend.” We also measured reputational benefits ($\alpha = .97$) and, as a manipulation check, we measured action costs using the same action costs scale used in Study 3: “Referring my friend to Amazon BOLD would be . . .” “effortful,” “burdensome,” and “costly” (1 = “Not at all,” and 7 = “Very much so”; $\alpha = .88$).

Results

Manipulation check. As expected, the high-cost condition was perceived as having higher action costs than the low-cost condition ($F(1, 823) = 53.28$, $p < .001$). Furthermore, there was a nonsignificant effect of referral incentive type on action costs ($F(1, 823) = .52$, $p = .47$). There was, however, a significant interaction of action cost and incentive type ($F(1, 823) = 9.23$, $p = .002$). For comparisons between conditions, see Web Appendix B.

Referral rate. As we predicted, a logistic regression revealed a significant interaction between referral incentive and action costs ($\chi^2(1) = 6.24$, $p = .013$; Figure 4). Specifically, when action costs were low, the referral rate was marginally significantly higher in the recipient-benefiting condition (81.52%) compared with the sender-benefiting condition (72.38%; $\chi^2(1) = 2.88$, $p = .09$). However, when action costs were high, the referral rate was marginally significantly higher in the sender-benefiting condition (73.63%) compared with the recipient-benefiting condition (63.82%; $\chi^2(1) = 3.45$, $p = .06$). There were no main effects.

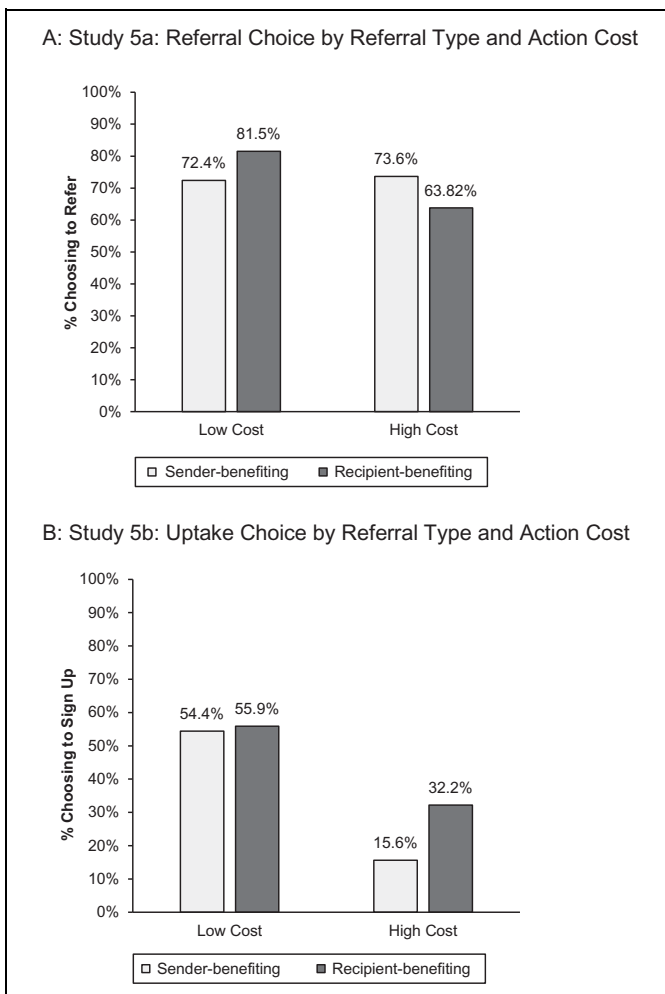


Figure 4. Studies 5a and 5b.

Notes: When action costs are low, other-benefiting incentives are as effective as self-benefiting incentives (sender and recipient-benefiting rewards are both equally effective). When action costs are high, self-benefiting incentives are more effective (sender-benefiting incentives are more effective at the referral stage; recipient-benefiting incentives are more effective at the uptake stage).

Reputational benefits. As in previous studies, there was a main effect of referral incentive on reputational benefits: participants expected higher reputational benefits for sending their friend a recipient-benefiting referral versus a sender-benefiting referral ($F(1, 824) = 58.11, p < .001$). Action costs had no significant main effect on reputational benefits ($F(1, 824) = .003, p = .96$). There was also a significant interaction ($F(1, 824) = 9.23, p < .01$); in the low-cost condition, reputational benefits were higher for the recipient-benefiting referral than the sender-benefiting referral ($M_{\text{recipient}} = 5.22, SD = 1.33$ vs. $M_{\text{sender}} = 4.63, SD = 1.53; t(414) = 4.23, p < .001$), and this effect was even stronger in the high-cost condition ($M_{\text{recipient}} = 5.40, SD = 1.27$ vs. $M_{\text{sender}} = 4.46, SD = 1.64; t(406) = 6.51, p < .001$).

Discussion

Study 5a finds that sender-benefiting incentives increase referrals over recipient-benefiting incentives when action costs are

high. However, when action costs are low, as is more typical at the referral stage, there is no reliable difference between the two referral incentives (in this study, recipient-benefiting incentives were marginally significantly *more* effective).

Study 5b

According to our account, at the uptake stage, recipient-benefiting incentives outperform sender-benefiting incentives because recipients typically face high action costs and therefore need direct incentives to act. If this is the case, then decreasing recipients' action costs should increase the relative effectiveness of sender-benefiting incentives. We tested this proposition in Study 5b. The study was a 2×2 between-subjects design in which we measured participants' willingness to take up a referral invitation as a function of referral incentive (sender-benefiting vs. recipient-benefiting) and action costs (low vs. high).

Methods

The study was preregistered (<https://osf.io/68sgy>). We recruited 800 MTurk participants; 740 met our preregistered criteria of both completing the dependent variable and using a unique location (the latter criterion was in place to protect against repeat-participation; $M_{\text{age}} = 35.95$ years; 56.22% female).

Participants were asked to provide their first name and that of a friend. Next, they imagined that their friend had sent them an email asking if they would like to try Food2Me (the same fictitious food delivery service used in Study 3). They were told that if they signed up, either they themselves would receive a \$20 Amazon gift card (recipient-benefiting) or their friend who had referred them would receive a \$20 Amazon gift card (sender-benefiting).

We manipulated action costs by varying the effort required to sign up for the service. Similar to Study 5a, participants in the low-cost condition read, "This is an exclusive offer—to verify that only one person uses this offer, simply click this unique link to sign up: Food2Me.com/xyq6msp204." Those in the high-cost condition read, "This is an exclusive offer—to verify that only one person uses this offer, print out the attached documents, fill them out, and mail them to the Food2Me headquarters with your unique code: [xyq6msp204](https://Food2Me.com/xyq6msp204)."

Participants then answered the question, "Would you sign up for the Food2Me delivery service?" Participants could respond either "Yes, I would sign up for the Food2Me delivery service" or "No, I would not sign up for the Food2Me delivery service."

Note that, as in Study 2, we told participants (recipients) in the sender-benefiting referral conditions that the friend who referred them would receive a reward if they chose to follow through on the referral. We informed participants of this benefit to their friend to examine whether, even when recipients know that their friend would receive an incentive (which is not always the case in these incentive designs), prosocial sender-

benefiting referrals will have a minimal positive effect at the uptake stage due to the higher burden of follow-through. We also measured reputational benefits using the items from previous studies to test whether participants expect to receive higher reputational benefits for following through on a sender-benefiting referral (that rewards their friend) as opposed to a recipient-benefiting referral (that rewards themselves). Finally, as a manipulation check, we measured action costs using the same action costs scale used in Studies 3 and 5a ($\alpha = .81$).

Results

Manipulation check. As we expected, the high-cost condition was perceived as having higher action costs than the low-cost condition ($F(1, 739) = 311.40, p < .001$). There was also a main effect of referral incentive ($F(1, 739) = 5.26, p = .022$). There was a nonsignificant interaction of action cost and referral incentive ($F(1, 739) = .19, p = .67$). For comparisons between conditions, see Web Appendix B.

Uptake rate. As predicted, a logistic regression revealed a significant interaction between referral incentive and action costs ($\chi^2(1) = 9.21, p = .002$, Figure 4). Specifically, when action costs were high, the uptake rate was higher in the recipient-benefiting condition (32.20%) than the sender-benefiting condition (15.59%; $\chi^2(1) = 21.42, p < .001$). However, when action costs were low, the uptake rate was statistically indistinguishable in the sender-benefiting condition (54.40%) relative to the recipient-benefiting condition (55.90%; $\chi^2(1) = .86, p = .77$).

Reputational benefits. There was a main effect of referral incentive: participants expected higher reputational benefits for following through on a referral that benefited their friend (sender-benefiting) versus one that benefited themselves (recipient-benefiting; $F(1, 739) = 19.90, p < .001$). The action cost manipulation also had a marginally significant main effect ($F(1, 739) = 3.64, p = .057$). There was a nonsignificant interaction for cost and referral incentive ($F(1, 739) = 2.35, p = .13$).

Discussion

Study 5b finds that recipient-benefiting incentives increase uptake over sender-benefiting incentives only when action costs are high, as is typical at the uptake stage. However, the referral incentives types become equally effective when action costs are low, as is typical in the referral stage. We conceptually replicated this pattern in a study in which we operationalized action costs by manipulating the monetary cost of uptake (a \$2 service vs. a \$100 service; Web Appendix C, Study 4).

General Discussion

People commonly believe that behavior is strongly influenced by self-benefiting incentives (e.g., monetary incentives; Miller and Ratner 1996, 1998), and research has shown that such incentives can indeed motivate behavior (Schwartz et al. 2019). Much of the research demonstrating the effectiveness of selfish (vs. prosocial or other-benefiting) incentives compares self-benefiting incentives with a contribution to a charity or unknown individual (e.g., Eckel and Grossman 1996; Imas 2014). We find that in the context of customer referrals, which directly involve one's social ties, prosocial incentives can be as effective as selfish incentives at spurring referral behavior. The key to this pattern is that in the case of prosocial referrals, both the cost of referring is low and the reputational benefits from acting generously are high.

Theoretical and Practical Implications

In this article, we provide experimental evidence of the surprising effectiveness of recipient-benefiting referral rewards compared with sender-benefiting referral rewards when observing real behavior at both decision stages of the referral process. Moreover, we provide a comprehensive account for *why* this effect occurs. Building on prior work suggesting that shared or recipient-benefiting incentives become more effective when the recipient is a strong social tie (Hong et al. 2017; Ryu and Feick 2007), we examine the specific role of reputational benefits in motivating action at the referral stage; we find that customers are motivated to refer because they want their social network to view them favorably.

However, anticipated reputational benefits are only part of the explanation for the superiority of recipient-benefiting incentives compared with the more common sender-benefiting incentives: action costs also contribute. Specifically, when action costs are high (i.e., at the uptake stage), incentives that benefit social network members become relatively less effective than equivalent selfish incentives. By directly testing mechanisms at both stages of the referral process, we add to the understanding of the complex referral process.

Our work also builds on research exploring people's concern for their own versus others' outcomes (Andreoni, Rao, and Trachtman 2017; Berman and Small 2012; Dana, Weber, and Kuang 2007; DellaVigna, List, and Malmendier 2012). We find that when it comes to decisions to refer a friend to a new product or service, people are just as likely to act when offered recipient-benefiting (i.e., prosocial) incentives as they are when offered sender-benefiting (i.e., selfish) incentives. However, our research suggests that this effectiveness of the prosocial incentive is tenuous; for it to emerge, the following conditions must be met: the costs of acting prosocially must be low (Studies 5a and 5b); the recipient must be someone for whom the sender's reputation is important (Web Appendix Study 3); and this friend must be aware that the sender has acted prosocially (Study 4b).

On the one hand, this fragility of prosocial preferences is dispiriting, in that it illustrates potentially stark, self-serving boundaries of human generosity. On the other hand, in the context of referrals, the recipients have demonstrated no clear need for help. Recipient neediness is often cited as individuals' highest prosocial priority (Cryder, Botti, and Simonyan 2017) and is likely to be particularly motivating when it occurs within one's social circle (Small and Simonsohn 2008). Therefore, although we find prosocial preferences to exist only narrowly in this context, and potentially with minimal "pure" altruism (Andreoni 1988; Batson, Early, and Salvarani 1997), we expect prosocial preferences to be more robust in other contexts when a clear need for help exists.

In Studies 2 and 3, we also examine the effectiveness of an incentive that is shared between the referrer and the recipient. In these studies, shared incentives performed equally as well as purely other-benefiting incentives at both the referral and uptake stages. Because multiple features change at once when offering a shared incentive, it remains unclear what drives the performance of the shared incentive. One possibility is that, at the referral stage, including any incentive component that rewards the recipient is sufficient to achieve the performance of the recipient-only incentive, even if the size of the recipient's incentive is small. Another possibility is that the smaller incentive size for the recipient decreases performance of the shared incentive, but offering individuals an opportunity to have a shared experience (a shared incentive, in this case) with a member of their social network exerts a positive force back upward. Additional processes could contribute to the performance of the shared incentive as well, and future research could attempt to understand exactly what drives the strong performance of the shared incentive.

Open Questions and Opportunities for Future Research

Referral marketing allows companies to use customers' social network to target new individuals that might be particularly interested in a product or service. It is possible that customers adjust whom they refer (better customer-product fit, stronger social ties, etc.) on the basis of the referral incentive they are offered. Although we rule out that this possibility accounts for the current findings by randomizing recipients' incentive condition across multiple studies (Studies 3, 5b, and Web Appendix C Study 4), it is still possible that referrers commonly make these adjustments in their referral decisions. Future work might explore, for example, whether there are any systematic differences in the type of person that referrers target when offered a sender-benefiting or recipient-benefiting referral reward.

Although we find consistent results across a range of reasonable incentive sizes (e.g., a \$3 Starbucks gift card, a \$50 food delivery service), future research might also test whether recipient-benefiting incentives continue to outperform sender-benefiting incentives at extreme incentive magnitudes. Interestingly, previous research has found that reward magnitude moderates the effect of incentive type on effort; other-benefiting incentives are more effective than self-benefiting

incentives when stakes are low (i.e., \$.50) but less effective when stakes are high (i.e., \$2; Imas 2014). We use incentive magnitudes that this previous work would categorize as large; therefore, using very small incentives might further improve the relative performance of recipient-benefiting incentives at the referral stage. Analogously, it is also possible that at magnitudes much larger than we currently study (e.g., tenants receiving a free month of rent for making a referral), sender-benefiting incentives may dominate recipient-benefiting incentives at the referral stage. Future work might further test the role of incentive magnitude on the effectiveness of these referral incentives.

We also test our theory across a range of consumer products and services (i.e., a photo-sharing app, video game rentals, and a food delivery service) and consistently show that recipient-benefiting referral incentives yield a higher conversion rate than sender-benefiting incentives. However, we acknowledge that this article does not cover all consumer contexts and that there may be other important moderators for companies to consider. Recipient-benefiting incentives may be even more effective at the referral stage—for example, in social consumer contexts where the referrer has an additional incentive to get their friends to join (e.g., team sport leagues, collaborative online gaming). The present studies also primarily focus on positive consumer experiences, but it would be interesting to explore referral choice for other consumption experiences. For example, do recipient-benefiting incentives continue to outperform sender-benefiting incentives when the referrer had a bad experience with the product or when a company has received negative press? We tested the latter in an initial study and do not find an interaction of referral incentive and negative press on the choice to refer (Web Appendix C, Study 5). However, future work might further explore the boundaries of both incentive size and consumer context on the effectiveness of recipient-benefiting (vs. sender-benefiting or shared) referral incentives.

Finally, this work suggests that customers choose to refer their friends when offered a recipient-benefiting referral incentive because they *anticipate* that they will receive reputational benefits for making this type of referral. Future studies might examine *actual* responses to receiving these referrals—that is, do recipients truly view their friends more favorably when they send recipient-benefiting referrals?

In conclusion, this research suggests that companies looking to get the largest possible return on their referral investment may want to ensure that referral programs include an incentive for the referral recipient. Despite consistent findings in this research that recipient-benefiting referrals outperform their sender-benefiting counterparts, sender-benefiting referral offers are more common in marketing practice (see the "Customer Referral Incentives" section). These patterns suggest that incentive architects may not have clear insights into the interplay of reputational benefits and action costs in this context. Future research could work to uncover the reasons why marketers do not accurately predict incentive dynamics in this and other related contexts (e.g., competitor referrals;

Blanchard, Hada, Carlson 2018), providing both conceptual and practical insights about areas in which incentive design can be improved.

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