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Opting-in to prosocial incentives☆

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ABSTRACT

The design of effective incentive schemes that are both successful in motivating employees and keeping down costs is of critical importance. Research has demonstrated that prosocial incentives, where individuals' effort benefits a charitable organization, can sometimes be more effective than standard monetary incentives. However, most research has focused on the intensive margin, examining effort conditional on participation in the activity. We examine the effectiveness of standard and prosocial incentives on the extensive margin, corresponding to people's decisions to opt-in to an incentivized activity. In addition, we test the effectiveness of *optional* prosocial incentives, where individuals can choose between keeping or donating all or part of their payment. Across four experiments that vary the type and size of incentives, we find that individuals are more likely to avoid activities that involve *any* prosocial incentive. Our results highlight the importance of considering the margin of decisions when designing incentive schemes.

1. Introduction

Designing effective incentives is of critical importance for organizations and managers. Each year, U.S. organizations spend over $90 billion on incentive programs that reward employees for their performance (Intellective Group, 2016). Standard, self-benefiting monetary (hereafter standard) incentives have been used to motivate effort in domains such as education (Angrist & Lavy, 2009; Fryer, 2011; Fryer, Levitt, List, & Sadoff, 2012) and prosocial behavior (Exley, 2017), as well as to prompt behavior change in domains such as weight loss (Volpp et al., 2008), smoking (Donatelle et al., 2004) and exercise (Charness & Gneezy, 2009). However, standard incentives have also been shown to backfire, for example, by "crowding out" intrinsic motivation (e.g., Deci, 1971, 1972; Gneezy & Rustichini, 2000; Schwartz, Bruine de Bruin, Fischhoff, & Lave, 2015) or discouraging cooperative behavior (Ariely, Bracha, & Meier, 2009).[1]

Recent work has proposed implementing prosocial incentives—-where a worker's effort benefits a charitable cause—to circumvent the downsides of standard incentives (Imas, 2014). Prosocial incentives have been shown to be particularly effective, even more so than standard incentives, when the stakes are relatively low.[2] This finding has launched a now sizable literature exploring the motivational effects of prosocial incentives on improving outcomes of interest to organizations and managers (Cassar, 2014; Charness, Cobo-Reyes, & Sánchez, 2016; DellaVigna & Pope, 2017; Dijk & Holmén, 2017; Gosnell, List, & Metcalfe, 2016; Kajackaite & Sliwka, 2017; Koppel, Regner, & Weber, 2015; Tonin & Vlassopoulos, 2015; Yang, Hsee, & Urminsky, 2014). There has also been an increase in the adoption of prosocial incentive schemes by managers and organizations, such that employee bonuses are associated with charitable contributions; a recent study found that in 2017, instead of giving standard bonuses, 38% of firms adopted prosocial bonuses—up from just 7% in 2016 (Accounting Principals, 2017).

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[1] Recent work by Meyer and Tripodi (2018) has shown that the efficiency of standard incentives for prosocial tasks can be improved if potential participants are allowed to turn down compensation.

[2] Consistent with the model of "warm glow" (Andreoni, 1990, 1993), individuals are insensitive to the size of the prosocial incentives compared to standard incentives. This leads to a reversal in the pattern of effort provision as the stakes increase, with people exerting greater effort under standard incentives than prosocial ones at high incentive levels.

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To date, research examining prosocial incentives has largely focused on decisions on the intensive margin: situations where individuals decide how much effort to exert after already agreeing to participate or having been placed in the broader activity (e.g., a lab study).[3] However, an equally important question is whether prosocial incentives are effective on the extensive margin; specifically, to what extent they motivate individuals to participate in such activities in the first place. Prior work has also primarily examined the effectiveness of prosocial incentives when individuals are required to donate their earnings. Such mandatory prosocial incentives may not be feasible in real-world organizational settings, as workers could choose to donate all or part of their bonuses. In this paper, we explore the effectiveness of prosocial incentives on motivating participation and study how making the prosocial element *optional* influences their effectiveness on the extensive margin. By allowing an individual the option to choose whether to work for herself or for a charity, optional prosocial incentive schemes have the potential to "nudge" (Thaler & Sunstein, 2008) participation and effort provision while avoiding the risk of crowding out intrinsic motivation.

Previous work highlights the personal benefits of doing good deeds for others over getting the same benefits for the self (Anik, Aknin, Norton, Dunn, & Quoidbach, 2013; Dunn, Aknin, & Norton, 2014), suggesting prosocial incentives could be useful for motivating employees' effort. However, there is also research suggesting that individuals may be reluctant to select into situations involving prosocial opportunities. For example, research on "moral wiggle room" (Dana, Cain, & Dawes, 2006; Dana, Weber, & Kuang, 2007) suggests that individuals may systematically steer clear of prosocial opportunities, or even information about prosocial opportunities, in order to avoid putting themselves in situations where self-image concerns (Grossman & van der Weele, 2017), guilt (Gneezy, Imas, & Madarász, 2014), negative feelings (Berman & Small, 2012), or social pressure (Dellavigna, List, & Malmendier, 2012) would prompt them to act more prosocially than they would otherwise prefer.[4] For example, studies have found that when asked to divide a sum of money between themselves and an anonymous partner, individuals share 30% of the amount, on average (see Camerer (2003) for a review). Dana et al. (2006) show that a substantial proportion of those parting with 30% of the pie to benefit another are willing to *pay* 10% of the total amount to avoid participating in the interaction—keeping 90% of the pie for themselves and leaving their partner with nothing. Similarly, Dana et al. (2007) show that people choose to not receive information about the consequences of their actions for others, even when this information is free and easy to obtain. However, when the information is forced upon them, the majority of individuals act prosocially. Likewise, Andreoni, Rao, and Trachtman (2017) show that customers avoid supermarket entrances that have a Salvation Army volunteer soliciting donations (see also Knutsson, Martinsson, & Wollbrant, 2013).

Considered in the context of the present research, these findings give rise to the proposition that if permitted, individuals may avoid selecting into jobs that include prosocial incentives. The implications of such avoidance are of paramount importance for organizations looking to implement prosocial incentives and similarly, for policy makers considering using nudge-based interventions to drive behavior change (e.g., resource conservation and peak-hour traffic). If prosocial incentives decrease participation likelihood, managers, organizations and policymakers attempting to use them might be unpleasantly surprised when they backfire.

We test the effectiveness of prosocial incentives for motivating participation (i.e., extensive margin decisions) across four field experiments using distinct, naturalistic settings, in which we provide individuals with an opportunity to perform an effortful activity or job. The first experiment tests the effectiveness of a prosocial "nudge" in the form of an optional prosocial incentive, relative to a standard incentive. Because previous research has shown a differential effect of incentive size on effort (i.e., intensive margin; Imas, 2014), it is essential to test whether incentive size similarly influences participation likelihood.[5] The three experiments that follow also examine the effect of mandatory prosocial incentives on extensive margin decisions.

Our findings make three contributions: first, they address a gap in the literature on prosocial incentives by testing the effectiveness of these incentives on the extensive margin—an individual's decision whether to participate in an activity or job. Second, all experiments were run in naturalistic field settings with activities and jobs common to the respective environments (as opposed to, e.g., squeezing a hand dynamometer in the lab as a measure of effort), further enhancing the external validity of the findings and implications. Third, we provide a more complete picture of the effectiveness of prosocial incentives by comparing optional and mandatory prosocial incentives to standard incentives, while varying incentive sizes and whether people can choose to donate all or only one part of their earnings.

Our first experiment was run in the field as part of a campaign to encourage recycling. We delivered invitations to residents from numerous apartment buildings to participate in a recycling campaign. Residents were randomly assigned to one of seven different incentives to participate: either a standard incentive or a prosocial incentive, varying in size (low, medium, or high). A seventh control condition did not offer a financial incentive. The charitable component of the prosocial incentive was optional—we told residents they could choose to donate the financial incentive if they participated in the campaign.

From the perspective of neoclassical economics, the optional prosocial incentive should be at least as effective as the standard incentive. Compared with either a mandatory prosocial incentive or a standard incentive, the optional prosocial incentive capitalizes on positive selection: it should attract both people who are driven by the charitable incentive and those who are motivated by the self-benefiting gain. Models of warm glow make similar predictions, as they do not predict a difference between extensive and intensive margins (Andreoni, 1990). However, if individuals prefer to avoid situations where they could be prompted to behave more prosocially than they would otherwise want to, they may choose to avoid an activity altogether. This, in turn, would result in lower participation rates under optional prosocial incentives, compared to standard ones. Indeed, contrary to prior studies demonstrating the effectiveness of prosocial incentives when stakes are low, we found that standard incentives do just as well—if not better—in motivating participation at the low incentive levels, and strictly dominate prosocial incentives at all other incentive levels.

Our second experiment tested the effectiveness of prosocial incentives on participation decisions for jobs posted on an online crowdsourcing platform. Crowdsourcing has become a major source of job recruitment for companies in today's economy; many platforms are partnering with large companies to generate a workforce for specific tasks, such as language translation and image tagging (Grewal-Carr &

[3] Including lab studies that are part of a session with multiple tasks; even if participants can make decisions regarding each task, they have already agreed to participate in the session (i.e., they are already present).

[4] Gneezy et al. (2014) show that such behavior represents a dynamic inconsistency in social preferences. In prospect, an individual prefers to contribute x. However, when confronted with the opportunity, guilt or social pressure may prompt her to give more than x. Anticipating this preference reversal, individuals choose to avoid the prosocial opportunity altogether.

[5] Studies using optional prosocial incentives have examined decisions on the intensive margin, finding positive effects (Mellström & Johannesson, 2008; Yang et al., 2014). One quasi-experimental study with recycling machines for bottles allowed people to donate a returnable deposit, instead of keeping it (Knutsson et al., 2013). In a study closest to our research, Lin, Schaumberg, and Reich (2016) asked participants to write about their Thanksgiving in exchange for $0.50 they could donate to charity, though as the authors state, running the study on Thanksgiving may have confounded participants' behavior.

Bates, 2016). In this experiment, we posted a job to populate a database with specific images. Potential workers were randomly assigned to one of six incentive conditions. Our materials provided no indication that workers' decision to participate in the incentivized job was being studied. As in Experiment 1, we included standard incentives and optional prosocial incentives. In addition, we included mandatory prosocial incentives conditions, where all earnings were donated to charity. Each incentive type varied in magnitude (low versus high).

The standard incentive was more effective in motivating participation compared to the optional prosocial incentive at high stakes. And at low stakes, the standard incentive directionally dominated the optional prosocial incentive as well, but this difference was not significant. In contrast to prior work on intensive margin decisions, the standard incentive was significantly more effective than the mandatory prosocial incentives for both lower and higher stakes—i.e., nudging people to participate in an incentivized activity by donating to charity failed to increase participation rates. Consistent with the proposition that optional prosocial incentives should outperform mandatory prosocial incentives due to the opportunity for positive selection, people in the optional prosocial incentive conditions were more likely to opt into the job compared with those in the mandatory prosocial conditions. In fact, mandatory prosocial incentives were least effective in motivating participation than any of the other incentive schemes across both high and low stakes. Using a hurdle model, we do find that conditional on opting-in, effort is higher under prosocial incentives when the reward size is low. This result is consistent with prior work on the effectiveness of prosocial incentives along the intensive margin (e.g., Imas, 2014; Koppel et al., 2015; Tonin & Vlassopoulos, 2015; Yang et al., 2014).

In the remaining two experiments, we examined whether the ineffectiveness of optional prosocial incentives was driven by individuals' concern that upon completing the task, they would donate "too much," compared with their ex-ante preference.[6] Using a similar setup to the one employed in Experiment 2, we included standard, optional, and mandatory incentives. However, in this case the optional and mandatory incentives were designed such that only a small portion of the incentive, rather than the entire amount, would go to charity. The findings were striking: even including a small prosocial component to the incentive significantly decreased participation rates relative to a standard incentive, regardless of whether the charitable contribution was optional or mandatory.

Our core findings replicate across distinct settings and jobs. Combined, these results show that individuals are less likely to opt-in to an activity under prosocial incentives than under standard ones. This effect holds when the prosocial incentives are optional, contradicting the prediction of individuals positively self-selecting into the most preferred incentive type. Our results may help explain why some research has not found prosocial incentives to be more effective than standard incentives (e.g., DellaVigna & Pope, 2017), arguably because participants could easily avoid the prosocial incentive scheme.

Our findings highlight the importance of assessing the effectiveness of prosocial incentive schemes with respect to each of two outcome measures: participation likelihood and effort provision conditional on participation. They also add to recent literature examining the boundary effects of nudges; see Beshears, Choi, Laibson, Madrian, and Skimmyhorn (2017) in the domain of retirement savings and Bolton, Dimant, and Schmidt (2018) in the domain of social image and charitable giving. Lastly, from a practical standpoint, our results have implications for the successful design of contracts in managerial and organizational settings and could further be couched in the broader frame of testing the effectiveness of increasing workers' choice set.

[6] Such dynamic inconsistency has been documented in Gneezy et al. (2014).

2. Experiment 1: recycling campaign in the field

2.1. Design and procedure

Our first experiment incentivized individuals to participate in a recycling campaign. We ran the experiment in a neighborhood with almost no recycling collection, meaning that households wishing to recycle needed to travel to a nearby recycling collection point. Prior to the start of the experiment, we surveyed concierges from 94 buildings to determine the number of apartments in each building (52, on average), whether we would need to obtain permission to drop-off envelopes in residents' mailboxes, and the extent to which there was recycling collection in the building (most apartments did not recycle at all).[7] Using the information obtained in the survey, we selected twenty-five buildings and assigned each to one of two recycling points (ranging from 0.1 to 0.7 miles away). Of the 1202 apartments identified in the 25 buildings, we randomly selected 1000 to participate in our experiment.

We delivered invitations to participate in a recycling campaign—"R-cicla"—to each apartment's mailbox. Envelopes contained a letter inviting the household to bring recycling items to its assigned collection point on a specified recycling collection day (10–14 days after letters were delivered), and a website to contact with any questions. We further indicated that all information would remain confidential and that we would deliver a reminder a few days before the recycling collection day. In addition to the letter, the envelope contained a flyer with a map to the collection point, and a magnet with the campaign's name that participants could use to place the flyer on their refrigerators (this was suggested in the letter). Importantly, the letter and flyer provided information about the incentive offered (see Appendix Fig. A.1). Reminder letters, containing the same message as the original invitation, were delivered to the same mailboxes a couple of days before the recycling collection day.

Using a block randomization procedure by building, we randomly assigned households to one of six conditions varying the type of incentive (standard versus optional prosocial), and incentive level ($2.5, $12.5, or $25).[8] The text of all invitations was identical, including the incentive text ("As a thank you, if you recycle you will receive [amount] in cash"), with the exception of a phrase we added to the prosocial incentive conditions stating, "if you prefer, you can also donate this money to an environmental cause." A seventh Control condition did not offer cash or a donation option ("As a thank you, if you recycle you will receive an acknowledgment and will be able to know about easy ways you can help by recycling").

On collection day, each collection point displayed a large banner with the campaign's name. A research assistant recorded each participant's ID (linked to their address) and the weight of the recyclables delivered.[9] We rewarded participants according to their assigned experimental condition. We further gave participants in the prosocial incentive condition flyers featuring different environmental organizations they could donate to (see Online Appendix).

Forty-nine households still had the initial invitation letter in their mailboxes when we delivered the reminder letter. Because we could not verify they were exposed to our manipulation, we excluded these

[7] Thirty buildings reported having no recycling options, three buildings reported recycling all recyclable items; the remaining buildings reported recycling one or two items, mainly newspapers and glass.

[8] Amounts were in local currency (Chilean Pesos). We show amounts in USD, adjusted by Purchasing Power Parity and using conversion rates at the time of the experiment.

[9] We were unable to weigh all items delivered by each household due to logistical challenges (e.g., individuals placed recyclables directly in the bins, or delivered items in multiple containers).

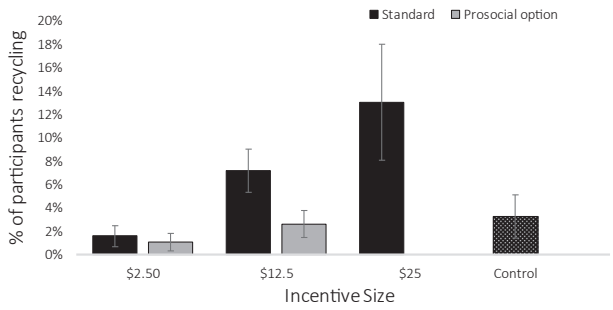

Fig. 1. Participation likelihood, Experiment 1. Error bars represent ±1 SE. (Participation likelihood in the '$25 Prosocial Option' condition was 0%.)

households from our analyses. The analyses were conducted with the remaining 951 households.[10]

2.2. Results

Fig. 1 shows the proportion of households that participated in the recycling campaign. Using a two-sided fisher-exact test, we found that across incentive levels, fewer residents participated in the recycling campaing when offered the optional prosocial incentive (1.64%) compared to those offered the standard incentive (5.32%; $p < 0.01$). A pair-wise comparison analysis indicates that at $25, participation likelihood was *dramatically* lower under the optional prosocial (0%) versus standard incentive (13.0%; $p = 0.01$). For the medium-size ($12.5) incentive, again, people were less likely to participate in the campaign under the optional prosocial than under the standard incentive (2.6% and 7.2%, respectively; $p = 0.06$). There was no significant difference in participation likelihood under the low ($2.5) incentive (Prosocial option = 1.1%, Standard = 1.6%; $p > 0.99$).

Incentive size influenced behavior only in the standard incentive conditions: More households participated when offered $12.5 and $25, compared to a $2.5 incentive ($p = 0.01$ and $p < 0.01$, respectively). The difference in participation likelihood between the $12.5 and $25 standard incentives was not statistically significant ($p = 0.23$). In contrast, analyses of households in the optional prosocial incentive conditions revealed no differences in participation likelihood ($2.5 vs. $12.5, $p = 0.45$; $2.5 vs. $25, $p > 0.99$; $12.5 vs. $25, $p = 0.59$). Note that this pattern is consistent with prior work showing scope insensitivity in the domain of prosocial behavior (DellaVigna & Pope, 2017; Imas, 2014; Jung, Nelson, Gneezy, & Gneezy, 2017). Of households assigned to the Control condition, 3.3% participated, which was only significantly different from participation likelihood in the $25 standard incentive condition ($p = 0.06$).

To further explore the effect of incentive size on participation likelihood, we used regression models treating the incentive as continuous, ranging from $0 to $25. We present the results (Table 1) using a linear probability model (I and II),[11] and a logit regression (III, IV, V and VI), assuming the probability of recycling to be a rare event for our logit estimation. This estimation penalizes the likelihood produced by a potential bias from a small sample (King & Zeng, 2001). Results from the first two models indicate that when offered standard incentives, household were 0.5% more likely to recycle for every dollar increase ($p < 0.01$). In contrast, households assigned to the optional prosocial incentive were *less* likely to recycle as the reward increased ($p < 0.01$). Results from the logit estimation are qualitatively similar to those of the linear probability models (see Online Appendix for results with building fixed effects).

[10] Results did not vary when we included the entire sample in the analyses (see Online Appendix).

[11] We use a linear probability model to provide a direct interpretation for the interaction terms (Ai & Norton, 2003).

The findings from our recycling experiment suggest that prosocial incentives lead to lower engagement on the extensive margin. Notably, these results are inconsistent with neoclassical models of decision-making, which would predict that having an option to donate would lead to positive selection of individuals motivated by both the prosocial opportunity and by self-serving motives.

Building on the results of Experiment 1, we designed Experiment 2 to (a) test the robustness and replicability of our findings in a setting closer to a labor market context, and (b) test our proposition that making the prosocial contribution optional offers a conservative examination of the effectiveness of prosocial incentives on the participation margin.

3. Experiment 2: online labor market

3.1. Design and procedure

Individuals ($N = 1345$)[12] were hired to work on a job using the Prolific Academic online labor market, a UK-based crowdsourcing platform.[13] The job was described as reviewing online image links for a database in exchange for a flat payment of £0.50.[14] The posting did not mention the possibility of being offered an additional job nor of performance-based rewards. We instructed workers (49.7% female; mean age = 32.9, SD = 11.3) to test ten URLs of images and verify they were working properly, allowing us to generate a research dataset of working links. Once completed, workers were informed they had finished the job and received a code to collect their payment. At this point, all workers were offered the opportunity to work on an unrelated paid job that involved providing URL links of 25 images of animals or wildlife that we could add to our existing database. We used this job to test the effectiveness of incentive type and magnitude on participation likelihood. Note that this was an actual job, similar to those often offered on crowdsourcing platforms.

We randomly assigned workers to one of three incentive conditions: standard incentive ("If you complete this bonus task, we will pay you an additional £[0.01/1.00] beyond what you have already earned"), mandatory prosocial incentive where the entire amount earned would be donated to a charity ("If you complete this bonus task, we will donate £[0.01/1.00] to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/)"), or optional prosocial incentive, similar to the one used in Experiment 1, where workers could choose to donate all their earnings to charity ("If you complete this bonus task, we will pay you an additional £[0.01/1.00] beyond what you have already earned and at the end of the task you will have the option to donate this £[0.01/1.00] to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/)"). Including the mandatory prosocial incentive condition allowed us to directly test whether the ineffectiveness of prosocial incentives observed in Experiment 1 was due to their optional nature. Also, similar to Experiment 1, each incentive type varied in incentive size: low (£0.01) and high (£1.00). In total, the experiment consisted of six experimental conditions, in a between-subjects design (Appendix Table A.1).[15] Workers who chose to accept the job were given the

[12] We had 1384 observations, but 39 were excluded because they corresponded to participants who entered to the study more than once.

[13] Peer, Brandimarte, Samat, and Acquisti (2017) analyze and describe this platform showing several advantages of using it for experiments, as compared to other platforms such as Amazon's Mechanical Turk.

[14] See Online Appendix for experimental materials for all experiments, as well as descriptions of additional studies conducted before Experiment 2.

[15] A control group, that would not receive a financial incentive for the extra job, was harder to implement in this setting because people are expecting to earn a wage for this tedious work. We ran this treatment in a separate experiment and found that only 3 workers (out of 81) finished the additional job.

Table 1
Treatment effect on the probability of recycling, Experiment 1.

DV: Pr(Recycling)	I (all)	II (all)	III (all)	IV (all)	V (no donation message)	VI (donation message)
Prosocial option	−0.038***	0.001	−1.210***	−0.324		
	(0.012)	(0.018)	(0.422)	(0.707)		
Incentive size (in USD)	0.003***	0.005***	0.066***	0.081***	0.081***	0.009
	(0.001)	(0.001)	(0.021)	(0.024)	(0.024)	(0.050)
Prosocial option × Incentive size		−0.005***		−0.072		
		(0.002)		(0.055)		
Constant	0.030***	0.015	−3.554***	−3.727***	−3.727***	−4.051***
	(0.010)	(0.011)	(0.315)	(0.354)	(0.354)	(0.612)
N	951	951	951	951	524	427

Models I and II are linear regression models. Models III to VI are logit regressions, considering: $logit(Y_i) = \alpha + \beta X_i + \gamma Z_i + \varepsilon_i$ or $logit(Y_i) = \alpha + \beta X_i + \gamma Z_i + \beta X_i Z_i + \varepsilon_i$, where Y_i is a dichotomous variable indicating if household i participated in the recycling program, X_i indicates whether the household was assigned to an optional donation condition, and Z_i is the incentive level ($0 to $25).
The baseline group is the control condition, considered as a $0 incentive without a donation option.
Note: Standard errors in parentheses.
*$p < 0.10$; ** $p < 0.05$; ***$p < 0.01$.

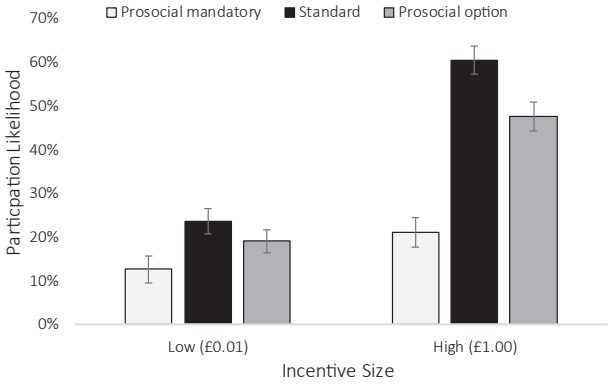

Fig. 2. Participation likelihood, Experiment 2. Error bars represent ±1 SE.

opportunity to quit and forfeit the additional incentive, or to continue searching, after each URL they provided. Once finished, we asked workers assigned to the optional prosocial incentive condition whether they wanted to donate, or keep, their payment.

3.2. Results

Fig. 2 shows the percentage of workers who opted-in to the second job, by incentive type and size. Replicating the results of Experiment 1, our analyses showed that when the incentive was high (£1.00), more workers opted-in when offered a standard (60.5%) versus optional prosocial (47.6%; $\chi^2(1) = 7.75$, $p < 0.01$), and mandatory prosocial (21.1%; $\chi^2(1) = 70.50$, $p < 0.01$) incentive. We further found a significant difference in participation likelihood between the optional and mandatory prosocial incentive conditions, ($\chi^2(1) = 33.71$, $p < 0.01$), supporting our assertion that the former is a conservative test for the effectiveness of prosocial incentives on the extensive margin. Analyses of participation likelihood under the low incentive (£0.01) revealed similar patterns: Workers were more likely to opt-in when offered a standard (23.6%), compared to a mandatory, prosocial incentive (12.6%; $\chi^2(1) = 9.48$, $p < 0.01$). Note that this finding contradicts previous research showing that prosocial incentives dominate standard ones when the stakes are low (e.g., Imas, 2014). The difference in participation likelihood between the standard and optional prosocial (19.0%) incentives was non-significant ($\chi^2(1) = 1.38$, $p = 0.24$). Finally, the optional prosocial incentive was, again, more effective than the mandatory prosocial incentive, with the difference being marginally significant, ($\chi^2(1) = 3.62$, $p = 0.06$).

An analysis of participation likelihood as a function of incentive level showed that participation was greater under the high, than the low, incentive in the standard incentive conditions ($\chi^2(1) = 62.4$, $p < 0.01$). Incentive size did not influence participation likelihood in the mandatory prosocial incentive conditions ($\chi^2(1) = 1.6$, $p = 0.21$). Participation likelihood in the optional prosocial incentive conditions was also sensitive to incentive size ($\chi^2(1) = 41.1$, $p < 0.01$), though to a lesser magnitude than observed under standard incentives. Although speculative, it is plausible that positive selection was more likely to operate when the incentive was high, as a large majority of participants treated the optional prosocial incentive as if it was self-benefiting: conditional on opting-in, a mere 7.2% of participants in the high optional prosocial incentive condition donated their earnings versus 56.0% in the low optional prosocial incentive condition ($\chi^2(1) = 27.05$, $p < 0.01$).

Recall that workers who opted-in could quit before completing the entire job, allowing us to measure effort despite using fixed compensation contingent on completion.[16] While the analysis of behavior conditional on opting-in may be subject to self-selection, it can be informative in comparing the effectiveness of incentives along the participation and effort margins.

To examine decisions concerning both the intensive and extensive margins, we use a truncated-normal hurdle model (Burke, 2009; Cragg, 1971). This model is especially useful in our case because workers deciding to quit mid-task are forfeiting payment (i.e., it is a different decision process than when choosing to participate in the first place). Another benefit of this model is that Tobit models are nested in the hurdle model. Formally, the model is represented by:

$$\begin{aligned} y^*_{i1} &= w_i\alpha + v_i && \text{Opt-in decision} \\ y^*_{i2} &= x_i\beta + u_i && \text{Effort decision} \\ y_i &= x_i\beta + u_i && \text{if } y^*_{i1} > 0 \text{ and } y^*_{i2} > 0 \\ y_i &= 0 && \text{otherwise} \end{aligned}$$

where the latent variable y^*_{i1} represents a decision to do the job, and w_i is a set of factors affecting that decision (in our case, incentive type and size). The latent variable y^*_{i2} represents participants' effort (i.e., whether they stop or continue searching), and x_i is also a set of factors, which now affect effort. The variable y_i is the number of URL searches observed.

Results from our model are shown in Table 2 below. The upper part of the table shows the analysis of participation decisions, as reported above, in a regression framework. As can be seen, relative to a standard incentive, workers in the high incentive condition were less likely to opt-in under optional ($\beta = -0.33$, $p < 0.01$), or mandatory prosocial

[16] We considered all URLs with "http" or "data:image" as part of the link, and subtracted repetitions.

Table 2
Effect of incentives on participation likelihood and exerted effort, Experiment 2.

Opt-in decision Probit model	I (Low incentive)	II (High incentive)	III (all)
High incentive			0.986***
			(0.125)
Prosocial option	−0.159	−0.327***	−0.159
	(0.135)	(0.118)	(0.135)
Prosocial mandatory	−0.429***	−1.071***	−0.429***
	(0.140)	(0.128)	(0.140)
High incentive × Prosocial option			−0.169
			(0.179)
High incentive × Prosocial mandatory			−0.642***
			(0.190)
Constant	−0.719***	0.267***	−0.719***
	(0.94)	(0.083)	(0.094)
Number of searches Truncated regression model			
High incentive			17.387***
			(4.634)
Prosocial option	19.339*	−2.838	13.077**
	(10.381)	(2.408)	(5.403)
Prosocial mandatory	25.615**	−0.872	17.532***
	(11.669)	(0.784)	(5.705)
High incentive × Prosocial option			−16.170***
			(6.102)
High incentive × Prosocial mandatory			−18.480***
			(6.763)
Constant	−21.738	13.310***	−5.507
	(17.372)	(1.956)	(5.014)
Sigma	20.481***	14.229***	15.428***
	(4.311)	(1.096)	(1.131)
N	676	669	1345

The baseline group for all columns is the standard-low incentive condition.
Note: Standard errors in parentheses.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

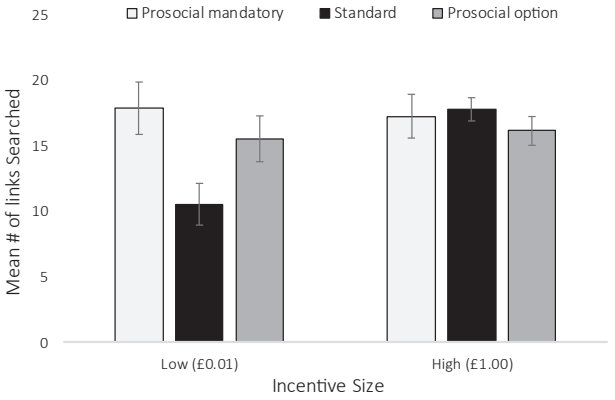

Fig. 3. Mean number of URL links searched, Experiment 2. Error bars represent ±1 SE.

($\beta = -1.07$, $p < 0.01$) incentives. Participation likelihood was significantly higher under the high optional prosocial incentive compared with the high mandatory prosocial incentive condition ($\beta = -0.74$, $p < 0.01$). At the low incentive level, workers were also less likely to opt-in under mandatory prosocial incentives than standard incentives ($\beta = -0.43$, $p < 0.01$). While also negative, the coefficient for the difference between optional prosocial and standard incentives was non-significant ($\beta = -0.16$, $p = 0.24$). Finally, the difference in participation likelihood between the optional and mandatory prosocial incentives was marginally significant ($\beta = -0.27$, $p = 0.06$).

As shown in the lower part of Table 2 and in Fig. 3, the analyses of effort conditional on opting-in reveal that when the incentive was low, workers assigned to both mandatory and optional prosocial incentive conditions worked harder ($M = 17.8$, $SD = 10.9$, and $M = 15.5$, $SD = 11.3$, respectively) than those assigned to the standard incentive condition ($M = 10.5$, $SD = 11.4$) ($\beta = 25.62$, $p = 0.03$ and $\beta = 19.34$, $p = 0.06$, respectively). As previously noted, this result replicates findings showing that prosocial incentives are more effective at motivating effort than standard incentives when the stakes are low. When incentives were high, there were no significant differences in effort between standard ($M = 17.8$, $SD = 10.5$) and mandatory prosocial ($M = 17.2$, $SD = 11.1$; $p = 0.56$) incentives, or between the standard and optional prosocial incentives ($M = 16.1$, $SD = 11.4$; $p = 0.24$). We acknowledge that due to differences in participation likelihood, these results should be treated with caution.[17]

Experiments 1 and 2 show the adverse effect of using prosocial incentives, both optional and mandatory, for encouraging individuals to participate in a job or activity. In Experiments 3a and 3b, we provided workers with an opportunity to donate only a portion of their earnings to examine whether the ineffectiveness of prosocial incentives observed thus far can be attributed to the fact that workers had to donate the *entire* amount earned.

4. Experiments 3a and 3b: online labor market with partial prosocial incentive

4.1. Design and procedure

In Experiments 3a and 3b we examine whether the ineffectiveness of optional prosocial incentive observed thus far is driven by workers having to decide whether to keep or donate the *entire* amount earned. Both experiments followed the same procedure of Experiment 2, but allowed workers to donate a small portion of the payment while keeping the rest. In Experiment 3a, workers ($N = 916$; 54.7% female; mean age = 31.7) were randomly assigned one of four conditions: (1) Standard incentive of £1.00 payment, (2) Standard incentive consisting of a £1.00 payment and an option to donate £0.10 (partial optional prosocial incentive), (3) Standard incentive consisting of a £0.90 payment and a mandatory £0.10 donation (partial mandatory prosocial incentive), and (4) Standard incentive of £0.90. The third condition—offering a partial mandatory prosocial incentive—examines whether workers prefer to avoid choosing whether to donate part of their earnings, while the fourth condition was added to check whether differences are due to an income effect. To examine whether differences between standard and partial prosocial incentives may vary depending on the total amount offered, we also conducted another experiment using £0.70 instead of £1.00. In Experiment 3b ($N = 1208$; 57.1% female; mean age = 34.9), workers were offered one of the following incentives: (1) Standard incentive consisting of a £0.70 payment, (2) Standard incentive consisting of a £0.70 payment and an optional £0.10 donation, and (3) Standard incentive consisting of a £0.60 payment and a mandatory £0.10 donation.[18]

[17] Given research suggesting that guilt and image concerns may affect effort under prosocial incentives (Gneezy et al., 2014; Grossman & van der Weele, 2017), we included exploratory measures intended to assess the extent to which guilt and image concerns influenced behavior. We found that guilt partially mediated opt-in rates under high mandatory and optional prosocial incentives, compared to a high standard incentive. Image concerns did not mediate the effect of the optional prosocial incentive on participation likelihood. Neither image nor guilt concerns mediated behavior under low incentives. See Online Appendix for detailed descriptions of measures and analyses.

[18] We deemed an additional, £0.60 standard incentive condition unnecessary given that we did not observe an income effect in Experiment 3a.

Table 3
Effect of incentive on participation likelihood, Experiments 3a (I) and 3b (II).

Pr(opt-in)	I (Total amount £1.00)	II (Total amount £0.70)	III (Both)
Partial prosocial option	−0.442**	−0.087	−0.214*
	(0.189)	(0.141)	(0.113)
Partial prosocial mandatory	−0.263	−0.266*	−0.260**
	(0.187)	(0.143)	(0.113)
Standard lower	−0.212		
	(0.188)		
Constant	0.160	−0.154	−0.041
	(0.133)	(0.100)	(0.080)
N	916	1208	1894

"Standard lower" represents the £0.90 standard incentive in Experiment 3a, where the standard incentive was £1.00. The baseline group for all columns is the standard incentive condition (£1.00 for Experiment 3a and £0.70 for Experiment 3b).
Note: Standard errors in parentheses.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

4.2. Results

Table 3 shows the results of logit regression models for each experiment (columns I and II). Because the results of the two experiments did not differ meaningfully, we also include a pooled analysis in Column III. Results indicate that workers were more likely to opt-in under a standard incentive (49.0%) than under a *partial* optional prosocial incentive (43.6%; $p = 0.06$) or under a partial mandatory prosocial incentive (42.5%; $p = 0.02$), with no difference across these two ($p = 0.69$). Offering an additional £0.10 did not affect participation likelihood in either the standard or partial prosocial incentive conditions. Among those who opted-in to the partial prosocial option incentive, 48.7% donated the £0.10. Finally, there was no difference in the effort expended (i.e., number of links provided) by workers across conditions, consistent with the results observed in Experiment 2 across the high incentive conditions. These results confirm the proposition that when possible, individuals prefer to avoid prosocial incentives, even when it constitutes only a small fraction of their earnings.

5. Discussion

To better understand how prosocial incentives might perform in real-world contexts, where mandating charitable donations may not be possible and opportunities to avoid the task are often available, we tested the effectiveness of prosocial incentives on individuals' decision to participate in an activity or job. We further examined the effectiveness of a nudge variant of prosocial incentives—an optional prosocial incentive—that arguably leverages the best of both standard and prosocial incentives, by appealing to individuals wishing to keep their earnings as well as those wishing to act prosocially and donate them.

Results obtained across four experiments suggest that standard incentives are often more effective—and are never worse—than prosocial incentives in increasing participation and encouraging individuals to opt-in to an activity. Residents invited to partake in a recycling campaign and individuals invited to complete a job on an online crowdsourcing platform were either just as likely or more likely to participate in the activity that involved standard incentives relative to prosocial ones when the latter was optional. They were substantially less likely to participate across all incentive levels when prosocial incentives were mandatory. Prior work has shown that prosocial incentives can be more effective than standard incentives on the intensive margin—after individuals have already agreed to participate in the activity. Our investigation is unique in that we examine behavior on the extensive margin—situations where the individual can easily avoid the incentivized activity. Future research could explore how the relative ease of avoiding an activity influences the effectiveness of prosocial incentives. For instance, if the option to avoid is made increasingly difficult, individuals may become just as likely to opt-in under prosocial incentives relative to standard incentives.

Notably, making the charitable element of a prosocial incentive optional does not increase participation relative to standard incentives. This finding is in contrast to predictions of standard models, which suggest that by appealing to a broader range of individuals—those interested in working for charity and those interested keeping the payment—optional prosocial incentives should be at least as effective as standard incentives. Instead, we find that optional prosocial incentives are less effective on the extensive margin compared with standard incentives.

Though, in line with research demonstrating that individuals often avoid prosocial opportunities (Andreoni et al., 2017; Dana et al., 2006, 2007), it may be that the mere existence of the prosocial incentive in the optional conditions decreases participation likelihood. A similar dynamic of avoiding the "prosocial" option is offered by research on pay-what-you-want (PWYW) pricing schemes, where individuals choose how much to pay for a good (Gneezy, Gneezy, Nelson, & Brown, 2010).

Inherent in our designs are explicit tradeoffs between self-serving and other-benefiting considerations, which research suggests leads to negative feelings (Berman & Small, 2012). The negative feelings associated with these tradeoffs are one potential explanation for the observed ineffectiveness of prosocial incentives on participation likelihood in our experiments. With optional prosocial incentives, the tradeoff is explicitly between working for others (charity) or keeping money for the self. With mandatory prosocial incentives, individuals are weighing the choice between working for others (charity) and not working at all, presumably using the time saved for some other self-benefiting option. Both of these situations may lead individuals feel uneasy about choosing self-gain over others. Experiments 3a and 3b attempted to mitigate negative feelings associated with making tradeoffs between the self and others by reducing the agency individuals feel over the choice between keeping and donating the incentive. However, this did not increase the opt-in rate. It may be that workers perceived the partial mandatory donation as a loss from their earnings, and they therefore preferred to avoid the job.

Additionally, Experiments 3a and 3b demonstrate that the ineffectiveness of the prosocial incentives as nudges was not because workers offered a prosocial incentive would need to donate the entire amount earned—participation likelihood remained low even when individuals could only donate a small, fixed portion of their earnings. Future work may consider framing the donation differently (similar to a matching bonus). In addition, research may investigate whether different 'partial' donation amounts (e.g., 5% instead of 10% of the earnings) makes a difference in worker's participation decisions.

To date, research has focused primarily on the effectiveness of prosocial incentives on effort, implicitly taking participation for granted. Critically, however, in many intances before deciding how much effort to exert, one needs to choose to engage in it. Consequently, the present research focuses on a question that is of paramount importance to managers and organizations—whether employees would choose to participate in an activity involving prosocial incentives, in the first place. Our results provide a better understanding of the welfare implications of prosocial incentives. By focusing only on intensive margin decisions, prior work (e.g., Imas, 2014) may have masked the negative welfare consequences of being offered the prosocial opportunity in the first place.

In extending the current work, it would be valuable to learn how differentially using the two types of incentives—standard and prosocial—across margins would affect effort and performance. Standard incentives can be used on the participation margin—to encourage individuals to opt-in—and prosocial incentives could be used, conditional on participation, to encourage individuals to expand effort. Our findings suggest that a failure to consider the nuanced, positive and negative, effects of each incentive type would likely undermine the success of incentives-based programs.

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Appendix A

Standard Incentive	Optional Prosocial Incentive	Acknowledgment (no cash)
"We will wait for you in" [place]	"We will wait for you in" [place]	"We will wait for you in" [place]
[Date and schedule]	[Date and schedule]	[Date and schedule]
"As a thank you, if you recycle you will receive CLP$5.000 in cash."	"As a thank you, if you recycle you will receive CLP$5.000 in cash (if you prefer, you can also donate this money to an environmental cause)."	"As a thank you, if you recycle you will receive an acknowledgement and will be able to know about easy ways you can help by recycling"
[Amount varied depending on the experimental treatment]	[Amount varied depending on the experimental treatment]	"*This acknowledgement is for selected households, and it can be received only once"
"*This amount is for selected households, and it can be received only once"	"*This amount is for selected households, and it can be received only once"	[Types of recycling]
[Types of recycling]	[Types of recycling]	

Fig. A1. Sample of recycling flyers (original and translation), Experiment 1.

Table A1
Experimental conditions, Experiment 2.

	Small incentive (£0.01)	Large incentive (£1.00)
Standard incentive	If you complete this bonus task, we will pay you an additional £0.01 beyond what you have already earned.	If you complete this bonus task, we will pay you an additional £1.00 beyond what you have already earned.
Optional prosocial incentive	If you complete this bonus task, we will pay you an additional £0.01 beyond what you have already earned and at the end of the task you will have the option to donate this £0.01 to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/).	If you complete this bonus task, we will pay you an additional £1.00 beyond what you have already earned and at the end of the task you will have the option to donate this £1.00 to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/).
Mandatory prosocial incentive	If you complete this bonus task, we will donate £0.01 to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/).	If you complete this bonus task, we will donate £1.00 to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/).

Table A2
Experimental conditions, Experiments 3a and 3b.

Standard incentive	If you complete this bonus task, we will pay you an additional £[1.00/0.70] beyond what you have already earned.
Partial optional prosocial incentive	If you complete this bonus task, we will pay you an additional £[1.00/0.70] beyond what you have already earned and at the end of the task you will have the option to donate [10%/14%] of this £[1.00/0.70] (£0.10) to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/).
Partial mandatory prosocial incentive	If you complete this bonus task, we will pay you an additional £[0.90/0.60] beyond what you have already earned, and donate an extra £0.10 to the Make-A-Wish Foundation, a major charity organization that grants the wishes of children with life-threatening illnesses (http://wish.org/)

Note: Between brackets are values, separated by "/", used in Experiments 3a and 3b, respectively. In addition, Experiment 3a included an additional, smaller standard incentive (£ 0.90, same text).

Appendix B. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.obhdp.2019.01.003.

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Opting In to Prosocial Incentives

Online Appendix

1. List of environmental organizations featured on the flyer given to participants in the optional prosocial incentive condition on the recycling collection day (Experiment 1).[1]

   - World Wildlife Fund Chile
   - Greenpeace Chile
   - Fundación SNP Patagonia Sur

2. Additional regression analyses for the recycling campaign (Experiment 1)

Table S1 Treatment effect on the probability of recycling. Linear probability models (I) and logit regressions (II, III and IV), assuming the probability of recycling to be a rare event.

DV: Pr(Recycling)	I (all)	II (all)	III (no donation message)	IV (donation message)
Prosocial option (with donation option message)	0.002	-0.326		
	(0.018)	(0.712)		
Incentive size (in USD)	0.005***	0.084***	0.081***	0.007
	(0.001)	(0.024)	(0.024)	(0.047)
Prosocial option × Incentive size	-0.005***	-0.076		
	(0.002)	(0.055)		
Constant	0.018	-3.543***	-3.263***	-4.301***
	(0.022)	(0.640)	(0.638)	(1.494)
Building fixed effects	Yes	Yes	Yes	Yes
N	951	951	524	427

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$. Note: Standard errors in parentheses.

[1] We do not have donation rates for Experiment 1, because we did not track whether people actually donated the money after they received the flyer at the recycling center.

Table S2 Treatment effect on the probability of recycling. Linear probability models including residents whose invitations were in their mailboxes when the reminder was delivered.[2]

DV: Pr(Recycling)	I (all)	II (all)	III (all)
Prosocial option (with donation option message)	-0.036***	0.001	0.001
	(0.011)	(0.017)	(0.017)
Incentive size (in USD)	0.002***	0.004***	0.004***
	(0.001)	(0.001)	(0.001)
Prosocial option × Incentive size		-0.004***	-0.004***
		(0.002)	(0.001)
Constant	0.028***	0.014	0.019
	(0.010)	(0.011)	(0.021)
Building fixed effects	No	No	Yes
N	1,000	1,000	1,000

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$. Note: Standard errors in parentheses.

[2] Results are similar with logit regressions.

3. Experiment 2 materials

- Job posting text.
  Title: “Review online image links for a database”
  Body: “We have been collecting links to images featuring animals or wildlife. We need to verify that the image links we have are working links and that they actually feature animals or wildlife. You will need to verify 10 links.”

- Questions. We used these questions to characterize the sample and conduct exploratory data analysis.
  i. Decision to work on the second job – provided in the main manuscript.
  ii. Independent of the decision to work, all workers were asked the following questions after making their choice:
    a. Demographics (gender and age) – reported in manuscript.
    b. “Please answer the following questions using a 1-5 scale where 1=not at all and 5=very much”[3]
      - (Item 1) “To what extent do you see yourself as a person who is giving and generous?”
      - (Item 2) “Given your decision regarding the bonus task, to what extent do you feel guilty?” – See section 4.
      - (Item 3) “If another individual was observing your decision regarding the bonus task, to what extent do you believe your choices would be judged negatively?” – See section 4.
      - (Item 4) “To what extent did you enjoy the task in which you verified that 10 image links were actually working and that they featured animals or wildlife?”
    c. “On average, how often do you donate money to non-profits/charities?” (Never, Rarely, Once a year, 2-3 times a year, 4-5 times a year, 6 or more times a year)
    d. “Please indicate how much you agree with each of the following statements” (from 1 = “Strongly agree” to 5 = “Strongly disagree)
      - “I have more respect for people who anonymously donate to charity than for those who ask for recognition.”
      - “I think more people would donate to charities if they could be publicly recognized for their donation.”
    e. “Why did you choose (not) to complete the bonus task?” (open ended) – see Section 5.
    f. “Please provide any other comments about this study.”
  iii. Task instructions for those who choose to participate in the second, unrelated job: “Thanks for participating in this bonus task. You must search online for 25 unique images featuring animals or wildlife. IMPORTANT: The webpage address must be a direct link to the actual, singular image (i.e., the image CANNOT be embedded in a blog page, news piece, or be from a search engine URL such as Google). For example: (example of URL).
  Note that you actually have to enter a different link for each image. After each image you will answer whether you want to continue entering more links. If you don't, you will forfeit the bonus. It is very important that you answer every time if you want to continue so you can submit this survey. Press the arrows below to begin pasting the image links.” Then, workers entered the links.

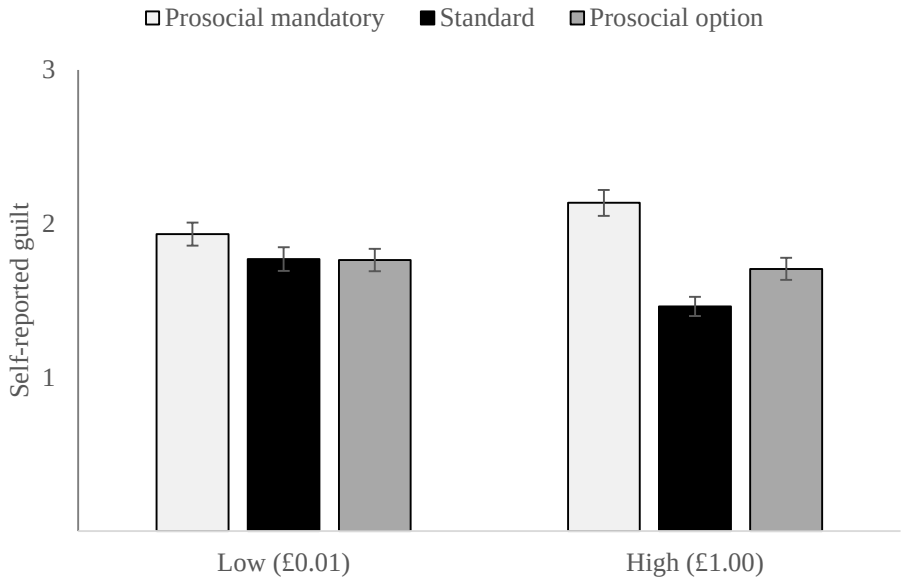
[3] Item 2 and Item 3 measure guilt and image concern, respectively. The remaining two items served as fillers.

4. Analysis for self-reported guilt and image concern (Experiment 2)

We measured the extent to which guilt and image concerns might affect individuals' decisions. Figures S1 and S2 show that at high stakes, workers reported greater guilt ($\beta = 0.67$; $p < 0.01$) and image concern ($\beta = 0.73$; $p < 0.01$) when offered a mandatory prosocial, versus a standard, incentive. Similarly, compared to the standard incentive, workers reported greater guilt when offered an optional prosocial incentive ($\beta = 0.25$; $p = 0.02$), but did not report greater image concerns ($\beta = 0.15$; $p = 0.17$). Under low stakes, reported image concerns were greater only among participants in the mandatory prosocial incentive, compared to standard incentive participants ($\beta = 0.24$; $p = 0.03$).

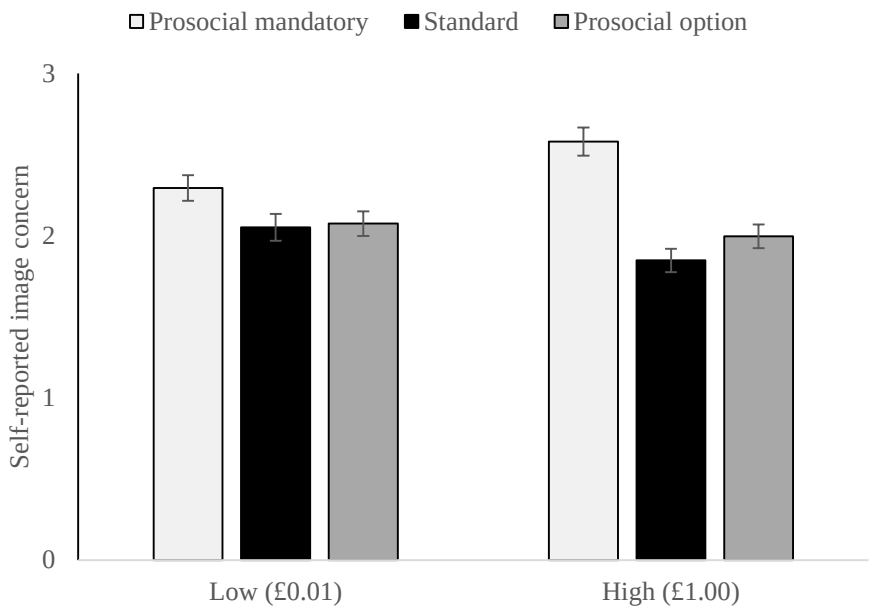
A mediation analysis using a percentile bootstrap procedure with 1,000 replications[4] indicates that guilt concerns partially explained lower opt-in rates when workers were offered a high mandatory or optional prosocial incentive, compared to a high standard incentive, with indirect effects b = -0.057 (95% CI [-0.101,-0.022]) and b = -0.013 (95% CI [-0.040,-0.001]), respectively (none include zero). Image concerns did not mediate the effect of the optional prosocial incentive on participation ($\beta = 0.15$, $p = 0.15$). Finally, image concerns partially mediated the effect of mandatory prosocial (versus standard) incentives under high stakes, with indirect effects b = -0.077 (95% CI [-0.121,-0.042]). Neither image nor guilt concerns affected individuals' decisions when the stakes were low.

Figure S1 Self-reported guilt. Error bars represent ±1 SE.



[4] See Preacher and Hayes (2008).

Figure S2 Self-reported image concern. Error bars represent ±1 SE.



5. Open-ended responses explaining the decision whether to participate, Experiment 2

We conducted an exploratory data analysis using participants' open-ended responses. Reasons were coded by two independent judges unaware of the study's purpose. For example, reasons mentioning having other commitments (e.g., "I have to go out"), or not having enough time (e.g., "I don't have the time right now") were categorized as "being busy" (Kappa = 0.90, $p < 0.01$). Tables S4 and S5 provide a summary of responses given by participants who chose to not participate and those who chose to participate, respectively.

Table S3

Chose to not participate	Prosocial mandatory	Prosocial option	Standard
Being busy	44%	42%	33%
Monetary (not enough money)	29%	36%	44%
Unsure how to search images	3%	3%	6%
Task is tedious	14%	12%	16%
Other	10%	8%	7%
Don't want to donate through the study	5%	3%	0%
Already give to charity	2%	1%	0%
Slow internet	5%	3%	0%
Task is pointless	1%	0%	1%
No Answer	5%	4%	4%

Table S4

Chose to participate	Prosocial mandatory	Prosocial option	Standard
Like wildlife/task	16%	23%	34%
Help researcher	8%	2%	5%
Monetary reasons	5%	45%	48%
Like the charity	36%	13%	2%
Have time to spare	5%	11%	8%
Other	41%	18%	18%
No Answer	7%	6%	7%

6. Experiments 3a and 3b materials

- Initial Job. Same job posting as in Experiment 2.
- Questions. Same questions used in Experiment 2, used to characterize the sample and conduct exploratory data analysis.
    i. Decision to work on the second job – provided in the main manuscript.
    ii. Independent of the decision to work, all workers were asked the following questions after making their choice:
        a. Demographics (gender and age) – reported in manuscript.
        b. "Please rate how you feel for each of the following emotions (Not at all (1) to Very strongly (7))" (Angry; Guilty; Joyous; Trusting)
        c. Same questions about image concerns, donation habits, reasons to complete the study, and comments about the study as asked in Experiment 2
    iii. Same instructions for the second job as in Experiment 2

7. Sample sizes for each experiment

Experiment 1[5]

N	$2.50	$12.50	$25.00	Control	Total
Standard	191	195	46	92	524
Prosocial option	188	191	48		427
Total	379	386	94	92	951

Experiment 2

N	£0.01	£1.00	Total
Standard	216	233	449
Prosocial option	221	227	448
Prosocial mandatory	239	209	448
Total	676	669	1,345

Experiment 3a

N	
Standard	226
Partial prosocial option	228
Partial prosocial mandatory	232
Standard lower	230
Total	916

Experiment 3b

N	
Standard	403
Partial prosocial option	409
Partial prosocial mandatory	396
Total	1,208

[5] Sample is smaller for the largest incentive due to budget limitation (we were also expecting a large effect for the standard incentive).

8. Mean effort by donation decision (for participants in the optional prosocial incentive conditions)[6]

Experiment	Treatment	Difference in URL links searched ($Effort_{Donated}$ compared to $Effort_{Kept\ bonus}$)
Experiment 2	Prosocial option - Low	2.5 more valid URLs for those who donated (p = 0.15)
	Prosocial option - High	0.7 more valid URLs for those who donated (p = 0.73)
Experiments 3a-3b	Partial prosocial option	0.54 more valid URLs for those who kept the bonus (p = 0.26)

[6] We need to be careful with this analysis because several workers who did not finish the task also did not answer the question about whether they wanted to donate their money (as indicated, workers could quit and forfeit their incentive after each URL they provided).

9. Other studies conducted

Before Experiment 1, we conducted a pilot using Amazon Mechanical Turk (mTurk). We invited mTurk workers (N = 872) to sign up for a task that involved searching for 10 wildlife images for a flat payment plus a bonus incentive for each additional set of 10 images they provided. We varied the size (small or large) and the type (mandatory prosocial or standard) of the bonus incentive task. Participants were randomly assigned to one of four incentive treatments and asked if they were interested in the bonus task. The main DV was workers' decision whether to participate in the bonus task. In the mandatory prosocial bonus conditions, those workers who agreed to complete the bonus task simultaneously chose one out of five charity organizations to give their donation. *Results*: individuals were more likely to opt-in to the bonus task under low mandatory prosocial (62.2%) vs. standard incentive (53%; $p = 0.04$), but not under high standard (60.6%) vs. mandatory prosocial incentive (64.1%; $p = 0.46$).

There were a couple issues with this pilot that we became aware of after data collection, which limit our ability to interpret the results: (1) The design allowed workers to continue searching for images, beyond the 10 required for the flat payment, even if they declined the bonus, and a significant percentage of workers did this. In addition, some workers accepted the bonus but did not search for additional images. This created an issue around identifying the DV – it could be those who accept the bonus task regardless of whether they actually started the task or it could be anyone who actually started the bonus task (an implicit acceptance), regardless of whether they explicitly accepted the opportunity. The former is what we used to report the results above, however, if we consider the latter, the results are different. (2) The conditions with a mandatory prosocial bonus incentive presented workers with 7 options when they decided whether to accept the bonus opportunity (the decision whether to participate (or not) in the bonus task and 5 charity options). The standard bonus conditions offered only two options (whether to participate). The difference in choice set size may have created a potential confound. We solved both of these issues in the experiments included in the manuscript.

We also conducted a study in the context of a recycling drive for undergraduate students (N = 846). In 12 classrooms, we announced an upcoming recycling drive. We asked students if they would like to sign up to participate in the drive. In the announcement, we randomly varied whether students were offered a mandatory prosocial or a standard incentive for recycling. We also varied whether they had to sign up by raising their hand and bringing a piece of paper to the front of the classroom indicating their preference (i.e., public decision) or by putting a piece of paper indicating their preference into an envelope and passing it down to a research assistant and (i.e., private decision). Finally, we treated one classroom as control group. The control classroom was similarly told about the recycling drive, but was not offered any incentive and students signed up privately (i.e., put the piece of paper with their preference into an envelope that was passed down). *Results*: Our primary measure was whether students showed up with any recycling (i.e., actual participation in the recycling drive). We ran a logit regression assuming the probability of recycling to be a rare event and added classroom fixed effects. Results show that students were more likely to participate when they were in the prosocial-public condition (7.2%) than in any other experimental condition: prosocial-private (1.8%; $p = 0.08$), standard-public (3.1%; $p = 0.07$), standard-private (1.5%; $p = 0.05$) or control (0%; $p < 0.01$). There were no differences between these four last conditions (all ns). Intention to participate on the day of the announcement was greater for the public prosocial incentive condition (23.9%) compared to the public standard incentive condition (6.8%; $p < 0.01$). There was no difference between prosocial (15.1%) and standard (8.1%) incentives when the decision was made privately ($p = 0.15$). In the control condition, 5.7% of students signed up to participate, which was significantly lower than the private and public prosocial-incentive conditions only ($p = 0.02$ and $p < 0.01$, respectively). One of the issues with this study

was that the peer pressure invoked as a result of sitting side by side in a classroom of peers, which created a situation in which even students in the private conditions did not have much flexibility to opt-out.