

# Intentions for Doing Good Matter for Doing Well: The Negative Effects of Prosocial Incentives\*

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## Abstract

Many firms consider prosocial initiatives to be an effective tool to motivate workers. However, despite some initial supportive evidence, little is known about when and how prosocial incentives work. We argue that if prosocial incentives are used instrumentally, i.e., firm's perceived motive is to extract more effort from the workers, they can be perceived as unkind and, thus, can backfire. We test our predictions in a field experiment where we varied whether a charitable donation made by the firm was conditional or unconditional on workers' performance. Consistent with our theory we find that performance-based donations, which are, by construction, more instrumental than unconditional donations, lead to lower effort. As predicted, the negative effect is particularly strong for workers who do not care about charities and, thus, who do not face the countervailing effect of working harder in order to benefit the charity. Finally, we also find that the donations backfire even compared to a baseline with no incentives. These findings highlight some serious limitations of prosocial incentives: firms' perceived motives and pool of employees will be crucial for their effectiveness.

**Keywords:** prosocial incentives, Corporate Social Responsibility, monetary incentives, effort, experiment

**JEL:** D03, C93, M52

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# 1. Introduction

Prosocial incentives and Corporate Social Responsibility (CSR) initiatives are becoming important wide-spread tools within firms' HR strategies (Kitzmueller and Shimshack, 2012; Cassar and Meier, 2018). 67% of CEOs think that prosocial incentives are crucial in motivating and attracting top talent (PricewaterhouseCoopers, 2016, p. 13). A number of early findings seem in line with these positive expectations: prosocial incentives and CSR initiatives have been found to increase, for example, effort and productivity (e.g., Tonin and Vlassopoulos, 2015, 2010; Gosnell et al., 2016; DellaVigna and Pope, 2016; Hedblom et al., 2016; Cassar, 2017a)—sometimes even more than monetary incentives (Imas, 2014; Charness et al., 2014)—lower reservation wages (e.g., Nyborg and Zhang, 2013; Burbano, 2016), and increase retention (e.g., Bode et al., 2015; Carnahan et al., 2016). The theoretical argument (e.g. Brekke and Nyborg, 2008; Bénabou and Tirole, 2010; Cassar, 2017b) behind these empirical results is that workers who are motivated by the underlying social cause of the prosocial incentives, e.g., a donation to a charitable foundation, work harder or lower their reservation wage in order to support the cause.<sup>1</sup> Importantly, according to this argument, prosocial incentives should never lower effort and potentially harm the firm. Worst case, these incentives will be ineffective if workers do not care enough about the social cause. Not surprisingly then, a large number of companies are engaged in CSR by, for example, having charitable foundations that donate a percentage of the firms' profit to good causes. And many more are considering instrumentally adding prosocial incentives (i.e., doing good) to the mix of HR tools in order to reap the economic benefits (i.e., doing well) (see, e.g. Bhattacharya et al., 2008).

In this paper, we present evidence from a field experiment that illustrate the limits and potential negative effects of prosocial incentives. At the core of the argument is the idea that prosocial incentives and CSR activities can affect workers' effort not only because workers may want to contribute to the social cause underlying the incentives but also because the employer's

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<sup>1</sup>For additional theoretical contributions on the desirability of CSR see Bagnoli and Watts (2003); Kotchen (2006); Besley and Ghatak (2007).

choice of these incentives can be perceived as a kind (or unkind) action by the workers. Workers behave more nicely towards employers that are *genuinely* kind towards them and generous in general (for similar theoretical arguments, see, e.g. Levine, 1998; Ellingsen and Johannesson, 2008; Dur, 2009) for at least two reasons: i) intrinsic reciprocity (Sobel, 2005), i.e., because workers may derive intrinsic utility from benefiting (harming) a kind (unkind) employer; and/or ii) instrumental/extrinsic reciprocity (Sobel, 2005), i.e., because the employer’s kindness may determine how the workers will be treated in the future and, thus, how much the workers value the contract.<sup>2</sup>

Whether the employer’s choice of prosocial incentives is perceived to be kind by the workers depends then critically on the *perceived motives* of the employer for choosing those incentives, and not just on the impact that the incentive has for the social cause. In particular, if prosocial incentives are used instrumentally, i.e., firm’s perceived motive is to extract more effort from the workers, they can be perceived as less kind (or unkind) and thus backfire. Consistent with this view, evidence suggests that prosocial acts with an instrumental benefit are indeed perceived as being less kind (e.g. Newman and Cain, 2014; Berman et al., 2015). Similarly, Orhun (2018) shows that the same beneficial action in an interpersonal interaction triggers lower positive reciprocal action when the counterparts’ action is more likely to be motivated by strategic rather than altruistic motives. That perceived motives matter for reciprocal behavior is not only recognized by economists (see, e.g., Sobel, 2005; Cabral et al., 2014; Johnsen and Kvaloy, 2016) but also by biologists: “there is ample evidence to support the notion that humans respond to altruistic acts according to their perception of the motives of the altruist. They tend to respond more altruistically when they perceive the other as acting ‘genuinely’ altruistic” Trivers as cited in (Sobel, 2005, p. 424).<sup>3</sup> Crucial for our predictions, while the negative effect of

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<sup>2</sup>Even for simple jobs, e.g. micro jobs on M-Turk, workers depend on firms treating them nicely by paying baseline payment as promised (i.e. approving their work at all and in a timely fashion), being honest about required time and effort to complete job, and rewarding them potentially with bonuses.

<sup>3</sup>Relatedly, there is a well-established literature in economics that emphasizes the role of intentions in reciprocal behavior (Rabin, 1993; Dufwenberg and Kirchsteiger, 2004; Falk and Fischbacher, 2006, see, e.g.). According to this literature the extent to which one’s action induces reciprocal behavior depends on the perceived kindness of one’s intentions, where the perceived kindness typically depends on the voluntariness of the action and/or on the person’s expectations of the consequences of that action. We discuss how intentions can differ from motives in the next section.

the strategic use of prosocial incentives might be offset by a positive motivating effect for agents who want to contribute to the social cause, the effect is expected to be particularly negative for workers who do not care about the social cause. Using prosocial incentives strategically can therefore backfire – especially for non-motivated agents.

The experiment is run in collaboration with an Italian firm. The firm hires around 3,000 workers on Amazon Mechanical Turk (M-Turk) to create taglines for products of the firm that they want to use for their English website. Workers are asked to come up with three slogans as the baseline. The treatments vary the nature of the incentives for an additional three slogans on two dimensions:

First, we vary whether incentives are private, monetary bonuses or prosocial in the form of a donation to charity. Second, we vary whether incentives (monetary or prosocial) are more or less instrumental for the firm. The difference between a more or less instrumental incentive has to do with the perceived motive of the firm for using such incentive, i.e, the extent to which the choice of the incentive is clearly driven by the firm’s desire to increase effort and profitability. In our experiment, we vary whether the incentives (monetary or prosocial) are performance-based or not. That is, we vary whether the extra incentive is conditional or unconditional on workers doing three more slogans.<sup>4</sup> Given that conditional incentives are paid if and only if they lead to higher effort, it is pretty clear that the firm’s choice of offering this type of incentives is driven by instrumental motives. On the contrary, given that unconditional incentives are paid independently on their effects on effort and, thus, on the firm’s profit, workers can not rule out that this choice was also, at least partly, motivated by the genuine altruistic desire of supporting the charity. Exactly as a social mission is “a concrete goal or objective for the firm that reaches beyond profit maximization” (Henderson and Van den Steen, 2015, p. 327), the unconditional incentives are less instrumental than conditional incentives because they risk being not profitable.<sup>5</sup>

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<sup>4</sup>Throughout the paper, we will call the extra bonus/transfer “incentive” – whether it is conditional or unconditional on performance.

<sup>5</sup>We want to emphasize once more that we are not claiming that unconditional incentives cannot be instrumental. Also unconditional incentives can be driven by purely selfish motives if they are offered mainly because the firm expects that the workers will react positively to them. In fact, according to our story, unconditional

Note that this 2-by-2 design allows to compare the effect of charitable incentives that are more or less instrumental against a benchmark, namely, monetary incentives that are also more or less instrumental. The presence of a benchmark allows to control for any effect that is specific to the environment or type of subjects. In fact, while the employer's choice of performance-based monetary incentives can also be perceived as less kind by the workers than the choice of unconditional monetary incentives, we expect that the motivation of earning more money by performing better will largely dominate the negative effect on the employer's perceived motives. Hence, contrary to charitable incentives, for monetary incentives we predict the standard result, namely, that performance-based monetary bonuses lead to higher effort than unconditional monetary bonuses.

The results of the experiment are as follows. First, consistent with our predictions, we find that charitable incentives work very differently from monetary incentives. While making monetary incentives conditional on performance increases effort substantially, conditioning the donation on performance marginally backfires. The proportion of workers who do more than three slogans increases by 11 percentage points if monetary incentives are made performance-based ( $p < 0.01$ ). On the contrary, the proportion of workers who do more than the basic three slogans actually *decreases* by 5 percentage points when charitable incentives are made performance-based compared to unconditional ( $p = 0.10$ ). These findings unequivocally prove that the negative effect of performance-based incentives on effort is specific to prosocial incentives and not true in general. We show that even in an environment in which conditional monetary incentives substantially increase effort, a charitable incentive of the same size can backfire.

Second, as we predicted, the effect of performance-based compared to unconditional charitable incentives highly depends on the workers' charity-motivation. For charity-motivated incentives could even turn out to be more profitable than conditional incentives if they are perceived to be more kind than conditional incentives. We are just stating that compared to unconditional incentives, conditional incentives provides a stronger signal that the firm is driven by instrumental motives. Finally, note that in this paper we only investigate the agent's behavior while abstracting from the principal's behavior (given that we exogenously manipulate the behavior of the firm in the experiment) and, thus, from any equilibrium or optimality analysis.

workers, for whom the two countervailing effects might cancel each other out, making charitable incentives performance-based has only a marginally positive effect. However, for workers who are not charity-motivated, the effect of making charitable incentives performance-based is clearly negative. The proportion of workers that create more than three slogans decreases by 11 percentage points ( $p < 0.01$ ). Using a similar IV approach as in (Haggag and Pope, 2016), we then show that, consistent with our story, workers are significantly less satisfied with the employer’s choice of offering performance-based donations than with the choice of offering unconditional donations and that this relative dissatisfaction is the mechanism behind the backfiring effect for non-motivated workers.

Third, we compare charitable and monetary incentives to a baseline without any extra incentives for more slogans. Note that we did not make any prediction on the effectiveness of charitable incentives relative to no incentives because our baseline treatment was very uninformative about the employer’s actions and motives. Workers in our baseline treatment did not observe whether the “no-incentive” was the result of the firm choosing not to make charitable donations or whether the firm was actually making charitable donations but just not revealing it in this context (e.g., for fear of being perceived as strategic Carlos and Lewis, 2017). The (perceived) motives behind each of these potential actions can be very different and, thus, have opposite implications on how kind or unkind the action is perceived to be by the workers. As a consequence, we decided to take an explorative approach in answering this question.

Again, we find that monetary and charitable incentives work very differently. While monetary incentives increase effort compared to the baseline, charitable incentives backfire. The proportion of workers doing more than three slogans increases by 23 percentage points when the monetary private incentive is conditional on performance ( $p < 0.01$ ) and by 9 percentage point when it is unconditional ( $p < 0.01$ ). On the contrary, the proportion of workers doing more than three slogans decreases by 12 percentage points when the charitable incentive is conditional on performance ( $p < 0.01$ ) and by 8 percentage point when it is unconditional ( $p < 0.05$ ). Hence, our experiment shows that even unconditional prosocial incentives can negatively affect workers’ motivation and thus be detrimental for the firm. This result should not

be seen as too surprising given that, as we already stated, even unconditional incentives can be used instrumentally by an employer to increase workers' effort. Making an unconditional donation can be driven by purely profit-maximizing motives if the employer believes that the worker will react to it with higher effort. This argument is all the more valid in our setting where the size of the extra incentive (namely, the bonus or the donation) was half the baseline pay and, therefore, it was cheaper than to hire a new worker, pay the baseline pay and get three slogans this way. Finally, it could also be that the workers in the unconditional donation treatment perceived the employer's choice of donating to a charity as unkind because they would have preferred if the firm gave this extra money to them. While this argument cannot explain the difference between the conditional and unconditional donation treatment, it can explain the difference between the unconditional donation and the baseline treatment (where the workers were unaware that the firm had this extra-budget available).

These findings shed light on the serious limitations of prosocial incentives as a tool to motivate workers. Prosocial incentives that are used strategically to increase profit can not only be ineffective, they can actually harm the firm. The negative effect is particularly strong for performance-based prosocial incentives, which are, by construction, more instrumental than unconditional incentives. Our findings also highlight the importance of taking into account the firm's pool of employees when choosing whether to offer performance-based prosocial incentives: while for mission-motivated agents the negative effect of the instrumental nature of performance-based prosocial incentives might be offset by a positive motivating effect, for workers who do not care to support the social cause, the overall effect will be particularly negative.

The paper proceeds in the following: Section 2 highlights the differences from previous studies and the contribution to the related literature. Section 3 presents our theoretical framework and derives the behavioral predictions. Section 4 provides details about the experimental setting and design. Section 5 presents the main results. Section 6 concludes.

## 2. Contribution to related literature

The paper makes contributions to several strands of literatures. First, a fast growing experimental literature investigates, both in the lab and in the field, the effect of prosocial incentives on workers' effort and productivity (for a review, see Cassar and Meier, 2018). As in our paper, the prosocial incentives in these studies take the form of charitable donations linked to work activity, where the financial reward is not paid to the worker but rather donated to a charity. However, differently from our paper, the results of these studies have been mainly positive. For example, in an online real-effort experiment, Tonin and Vlassopoulos (2015) finds that prosocial incentives lead to a 13 percent rise in productivity, regardless of their form (lump sum or related to performance) or strength. A positive effect of charitable donations on workers' effort is also found in Imas (2014); Charness et al. (2014); Gerhards (2015); Cassar (2017a); DellaVigna and Pope (2016). In particular, Imas (2014); Charness et al. (2014) also show that when stakes are low, prosocial incentives lead to higher performance than standard monetary incentives schemes. The only exception to these positive findings are the studies by Fehrler and Kosfeld (2014) and List and Momeni (2017). Fehrler and Kosfeld (2014) finds in a lab experiment that charitable donations only increase effort of subjects that self-select into a more prosocial environment, while they have a null effect on aggregate. List and Momeni (2017) is the only other experiment we are aware of, that shows *negative* effects of charitable donations on workers' behavior. Consistent with a moral licensing story, the authors find in a field experiment on MTurk that prosocial incentives lead to more cheating.

We contribute to this literature by showing that prosocial incentives do not only impact workers' effort through the standard channel of prosocial motivation, but also through their effect on workers' perception about the employer's motives and thus on their willingness to reciprocate. We thereby reveal previously unknown limitations and negative effects of prosocial incentives as an instrumental tool to motivate effort. Naturally, in our context the presence of a real employer—i.e, a real company rather than the experimenter—that hires the workers becomes crucial for the predictions. In fact, the lack of a real employer in all the previous

studies (with the exception of List and Momeni (2017) which also finds a negative result) and the consequent awareness of being in an experiment is likely to explain why we find different results from the previous literature. Finally, one other difference compared to the previous studies which could partially account for the difference in results is the nature of the effort task. Our task consisted of creating new slogan for the firm’s product and, therefore, could be considered as more intellectually stimulating than the tasks used in previous studies, where subjects had to enter data (Tonin and Vlassopoulos, 2015; Charness et al., 2014), squeeze a hand dynamometer (Imas, 2014), alternately press the “a” and “b” buttons on their keyboards as quickly as possible (DellaVigna and Pope, 2016) or where their effort costs took the form of a monetary investment (Gerhards, 2015; Fehrler and Kosfeld, 2014; Cassar, 2017a). In particular, the high level of engagement in our task—as it was also reported by many workers in the survey at the end of the experiment—could explain the already high level of effort in the baseline, and therefore, the relative small effect of the additional “mission motivation” generated by the charity, which was then outweighed by the negative perception effect.

Second, while there is a substantial literature on the detrimental effects of monetary incentives (for a review, see Gneezy et al., 2011), our results show that non-monetary incentives are even more problematic (if not more delicate) if used the wrong way. Gneezy and Rey-Biel (2014) show that small monetary incentives can lower effort compared to no incentives when made conditional on effort. Our paper is able to compare monetary and non-monetary incentives. We show that even in an environment in which conditional *monetary* incentives substantially increase effort, a charitable incentive of the same size can backfire. Comparing monetary and non-monetary incentives allows to control for general aversion to being controlled (e.g. Gneezy and Rustichini, 2000; Carpenter and Dolifka, 2013; Falk and Kosfeld, 2006), and illustrate the difference between the two types of incentives.

Third, our paper draws from the large and well-known literature on reciprocity. This literature has identified at least three determinants of reciprocal behavior: distributional concerns or outcome-based preferences (Fehr and Schmidt, 1999; Bolton and Ockenfels, 2000), perceived kindness of one’s intentions (Rabin, 1993; Dufwenberg and Kirchsteiger, 2004; Falk and Fis-

chbacher, 2006) and, although much less prominently, perceived motives behind one’s action (Sobel, 2005; Cabral et al., 2014; Johnsen and Kvaloy, 2016; Orhun, 2018). Motives differ from intentions in that, while the latter refers to what an individual meant his or her action to yield as a consequence, motives refer to why the individual wanted to achieve the intended consequence (Orhun, 2018).<sup>6</sup> Note that in our setting this distinction is irrelevant because the employer’s choice of offering conditional rather than unconditional incentives can vary both her perceived intentions and her perceived motives. We nevertheless contribute to this literature by showing, for the first time, that an employer’s intentions/motives for using prosocial incentives are crucial for their effect on effort, even more than for monetary incentives. Furthermore, the paper informs the more specific literature on gift-exchange in job settings (Akerlof, 1982; Fehr et al., 1993). While the evidence from laboratory studies show quite strong reciprocity to monetary gifts, the evidence from the field is rather mixed (e.g., Gneezy and List, 2006; Hennig-Schmidt et al., 2010; Esteves-Sorenson, 2017). The results in our paper provide supportive evidence for gift exchange in the field. We do find that an unconditional monetary bonus, i.e. a gift, increases effort significantly compared to a baseline with no bonus. This is all the more remarkable given that the baseline pay was already very generous – compared to the wage paid on average on M-Turk – and that workers also enjoyed very much the task given their comments to us. While, as we already claimed, we cannot disentangle whether this positive effect of gift was driven by intrinsic or extrinsic reciprocity, it speaks clearly in favor of reciprocal relationships in the workplace.

Fourth, our paper contributes to the growing literature on the importance and functioning of CSR in motivating and selecting workers (for a review about the management literature on CSR as a HR tool, see, e.g., Flammer and Luo, 2017).<sup>7</sup> Our findings contribute to this literature by suggesting that the intention behind any CSR activity is very important – and not just the

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<sup>6</sup>The same intent can be driven by different motives. For example, a firm can invest in CSR with the intent of making its workers happier because happier workers work harder (strategic/instrumental motive) or because it genuinely cares about the well-being of its workers (altruistic motive).

<sup>7</sup>There is a also related literature about the effect of CSR on consumers (e.g. Elfenbein et al., 2012; Bartling et al., 2015; Singh et al., 2016). There is also a literature that looks at the negative effect of using CSR to hide other problems, like “greenwashing” (see, e.g., Delmas and Burbano, 2011).

outcome as in how much good in the world they achieve. If CSR is used instrumentally in order to increase a firm’s profit, it may negatively affect workers’ perception about the firm’s kindness and the positive effect of CSR will diminish (if not backfire). Our result point to a substantial limitation of CSR and what types of firms can effectively enjoy the benefits of it: firms cannot use CSR as another traditional HR tool, but have to think about how it affects their perceived motives. If CSR is not perceived as genuine and sincere, the benefits will disappear. In fact, a small literature points out—consistent with our results—that certain firms are reluctant to measure the impact of CSR or even publicize its initiatives (e.g. Carlos and Lewis, 2017) in order to avoid being seen as strategic. For firms that are not genuinely interested in socially responsible behavior, instrumental CSR can be worse than ineffective—it can backfire.

### 3. Behavioral Predictions

Consider the following environment, which closely follows the design of our experiment. An agent (he) is employed by principal (she). The employment contract specifies the task to be executed and the fixed wage  $w$  paid to the agent. Furthermore, the principal can use monetary or charitable incentives to motivate the agent to put extra effort  $e$  into the task. In our experiment, the monetary incentives take the form of a financial bonus  $b$  paid to the agent, while the charitable incentives take the form of a donation  $d$  made to a charity. Both types of incentives can have either of the following two characteristics: they can be unconditional on the agent’s performance (i.e.,  $b = \bar{b}$  and  $d = \bar{d}$ ), or they can be performance-based, namely conditional on the agent’s effort (i.e.,  $b = b(e)$  and  $d = d(e)$ ).<sup>8</sup> At the core of our model is the idea that the employer’s choice of the incentive can be perceived as a more or less kind action by the agent and, thus, affects if and to what extent, he wants to reciprocate the employer with higher or lower effort. More specifically, the agent’s preferences can be represented by the

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<sup>8</sup>Note that while for sake of illustrative simplicity here we assume the functions  $b(e)$  and  $d(e)$  to be continuous, in our experiment they take the following form:  $b = \bar{b}$  and  $d = \bar{d}$  iff  $e \geq \bar{e}$  and  $b = d = 0$  iff  $e < \bar{e}$ . However, this minor difference does not have any fundamental effect on our predictions.

following utility function:

$$U^a = w + b + \theta d + \lambda k^p(b, d)\Phi(e) - C(e) \quad (1)$$

In words, the agent’s preferences are characterized by three elements: i) his monetary payoff, given by  $w + b$ ; ii) the donation made to the charity, captured by the term  $\theta d$ , where  $0 \leq \theta < 1$  measures the agent’s charity-motivation, and iii) a reciprocal term,  $\Phi(e)$ , which is an increasing function of the agent’s effort.<sup>9</sup> The extent to which the agent cares to reciprocate depends on an exogenous parameter  $0 \leq \lambda < 1$  and, crucially for our model, on the perceived kindness of the employer’s actions,  $k^p$ , which we assume to lie in the interval  $[-1, 1]$ . A more kind action is associated with a higher positive value of  $k^p$  and, thus, with a higher willingness to positively reciprocate. Note that  $k^p$  can also take negative values if the employer’s actions are perceived as unkind, leading the worker to reduce his effort. In our experiment, the only action of the employer that we vary is the type of incentives offered to the worker. Hence, we assume  $k^p$  to be a function of  $b$  and  $d$ .

According to this utility function, the agent will exert more effort when working for a principal who acted more kindly. Hence, crucial for our predictions, is how different forms of incentives influence  $k_p$ . We conjecture that the motives of an employer who offers performance-based rather than unconditional incentives are perceived as being more instrumental by the agent, with a consequent negative effect on the perceived kindness of the employer’s choice. Formally, we expect:

$$k_{|d=d(e)}^p < k_{|d=\bar{d}}^p \quad (2)$$

$$k_{|b=b(e)}^p < k_{|b=\bar{b}}^p \quad (3)$$

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<sup>9</sup>There are at least two potential microfoundations for  $\Phi(e)$ . If the workers are intrinsically reciprocal (Sobel, 2005),  $\Phi(e)$  could capture the principal’s revenue. Workers derive intrinsic value from increasing or decreasing the principal’s revenue based on the perceived kindness of her actions. If the workers reciprocate for extrinsic reasons (Sobel, 2005)—because they expect future interactions with the employer—then  $\Phi(e)$  could capture the agent’s future utility derived from the contract. For the remaining of analysis we abstract from this distinction as there is no way to disentangle intrinsic from extrinsic reciprocity in the experiment.

The main intuition behind this conjecture is that while the employer’s motives for offering unconditional incentives are less clear (i.e., the employer may be doing so strategically to increase effort but she may very well do so because she cares about the agent or about society), performance-based incentives give a stronger signal that the employer’s main motive is to extract higher effort from the agent given that the bonus or the donation is paid if and only if it increases effort and, thus, profit. In other words, the strategic side of performance-based incentives is more salient than the one of unconditional incentives. As a consequence, the principal’s choice of offering performance-based incentives is perceived as less kind than the choice of offering unconditional incentives.

We now use conjectures (2) and (3) to make predictions about the agent’s effort under different types of incentives. Given the focus of the paper, we start by looking at the different effects of conditional versus unconditional charitable incentives. We will then compare these predictions with the ones for monetary incentives.

Consider the FOCs of the agent’s problem when the principal offers the unconditional donation and when she offers the performance-based donation, respectively:

$$\lambda k_{|d=\bar{d}}^p \Phi'(e^*) = C'(e^*) \tag{4}$$

$$\theta d'(e^*) + \lambda k_{|d=d(e)}^p \Phi'(e^*) = C'(e^*) \tag{5}$$

The comparison between equation (4) and equation (5) clearly depends on the parameter  $\theta$ , the agent’s charity-motivation. As a consequence of conjecture (2), agents with  $\theta$  close to zero (whom we define as “non-motivated”) will exert lower effort under the performance-based donation than under the unconditional donation. For agents with positive  $\theta$  (whom we define as “charity-motivated”), however, the prediction is less clear because it depends on which of the two countervailing effects dominates: On the one hand, via the reciprocity channel, a performance-based donation reduces the incentive to exert effort compared to the unconditional donation. On the other hand, it creates the incentive of generating a higher donation to

the charity. Hence, two of our main predictions that will be tested in the experiment can be summarized as follows:<sup>10</sup>

**Prediction 1** *Performance-based charitable incentives decrease the effort of non-motivated agents compared to unconditional charitable incentives.*

$$e_{|d=d(e)}^* < e_{|d=\bar{d}}^* \quad \forall \theta = 0 \quad (6)$$

**Prediction 2** *The difference in the effort of charity-motivated agents when offered unconditional rather than performance-based charitable incentives is smaller (or even negative) than the respective difference in the effort of non-motivated agents:*

$$e_{|d=\bar{d},\theta>0}^* - e_{|d=d(e),\theta>0}^* < e_{|d=\bar{d},\theta=0}^* - e_{|d=d(e),\theta=0}^* \quad (7)$$

Next, we compare these predictions with the predictions about the effects of different types of private monetary incentives. The FOCs of the agent's problem when the principal offers the unconditional bonus and when she offers the performance-based bonus, are, respectively:

$$\lambda k_{|b=b}^p \Phi'(e^*) = C'(e^*) \quad (8)$$

$$b'(e^*) + \lambda k_{|b=b(e)}^p \Phi'(e^*) = C'(e^*) \quad (9)$$

Equations (8) and (9) look very similar to equations (4) and (5) with one crucial difference: because of the assumption that  $\theta < 1$ , individuals care more about the private financial bonus than about the charity donation, which means that for any type of agent we expect the effort

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<sup>10</sup>It is worth pointing out that while the theoretical analysis treats  $\theta$  and  $\lambda$  as being independent, empirically they could be found to be positively correlated. In fact, one might conjecture that people who care about charities are also more likely to have stronger (intrinsic) reciprocity preferences. While we think that the correlation must be far from perfect—there are certainly workers who do not care about the charity but who are intrinsically reciprocal—note that a positive correlation would only make it harder to find support for our predictions.

difference between performance-based incentives and unconditional incentives to be larger (and most likely positive) for monetary incentives than for charitable incentives. Formally, we test the following theoretical prediction in the experiment:

**Prediction 3** *The effect on effort of performance-based incentives relative to unconditional incentives is higher when the incentives are monetary rather than charitable:*

$$e_{|d=d(e)}^* - e_{|d=\bar{d}}^* < e_{|b=b(e)}^* - e_{|b=\bar{b}}^* \quad (10)$$

Finally, note that any other standard model of workers' preferences cannot generate all of our three predictions. It is straightforward to show that if agents are purely profit-maximizers, they will exert the same (minimum) amount of effort under any of the charitable incentives. On the contrary, they will react positively to the monetary performance-based incentives by exerting more effort than under the unconditional bonus. Hence, Predictions 1 and 2 would not hold. Similarly, if the agents were only motivated by the charity but not by reciprocity, Prediction 1 would not hold.

## 4. Study Design

### 4.1. Description of Intervention

We designed an experiment in collaboration with an Italian company, named PharmaGIC S.R.L, which distributes pharmaceutical products in Italy and abroad. PharmaGIC is looking for suggestions on how to improve their English website. We partnered with them to recruit workers on Amazon Mechanical Turk (henceforth, M-Turk)<sup>11</sup> with the task of generating marketing

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<sup>11</sup>M-Turk is an online platform where companies and researchers can recruit cheap labor force to perform quick and easy tasks, called Human Intelligence Task (HIT). This platform is being increasingly used by economists (see, e.g., DellaVigna and Pope (2016); Ambuehl et al. (2015)). Goodman et al. (2013); Imas (2016); Imas et al. (2016) discuss that M-Turk participants behave very similarly to other samples in many (classical) decision-making tasks and differ little on many other dimensions. Interestingly for our study, M-Turkers apparently do

slogans for the products sold by PharmaGIC. These slogans are then considered for potential use in the English version of their website. All communication with the workers came from PharmaGIC.<sup>12</sup> Workers were directed to a webpage that informed them about the company and the main task (see Appendix A.2 for all the instructions).

*Task and base payment:* The main task of workers was to create slogans for different products. We explained what a slogan or tagline is and that they have to create at least three slogans (but that we would appreciate more). It was clearly explained that the task is considered completed if they create at least three slogans and that they would receive a fixed wage of \$1.50.

*Treatments:* After reading the basic information about the firm and the task, workers were randomly assigned to different treatments which varied the type of incentives to motivate them to create more than three slogans. More specifically, in addition to a baseline treatment where no additional incentive was offered, we had a  $2 \times 2$  between-subjects design which varied:

1. *Nature of incentive:* We varied whether workers were offered a) a private monetary incentive that was a financial bonus of 75 cents, or b) a charitable incentives that was a donation of 75 cents made to the charity “Doctors without Borders”.<sup>13</sup>
2. *Performance-based:* Additionally, we varied whether the incentive was i) conditional on performance, namely it was given if and only if the worker would create a least three more slogans (for a total of six slogans), or ii) unconditional on performance, namely it was given independently on whether the worker would create three more slogans. Importantly, to keep the reference-point of expected slogans fixed across treatments, also within the unconditional treatments we mentioned that we would appreciate if they could do at least three more slogans.

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not differ in their attitudes about money compared to a student sample, but they care more about money than a community sample (Goodman et al., 2013).

<sup>12</sup>We also got permission from IRB to waive the typical consent form.

<sup>13</sup>We chose this specific charity because it was rated as one “the ten best charities everyone has heard of” by Charity Navigator, the American largest and most utilized charity evaluator. For more details visit <https://www.charitynavigator.org/>. Last time accessed: 21 June 2018. Furthermore, it was the charity that was most frequently chosen by subjects in previous studies (Cassar (2017a), Koppel and Regner (2015)).

We also created two versions for each of those treatments that varied whether the workers were given an explanation for the choice of the incentives or not. In the conditional incentives treatments the explanation emphasized the instrumental nature of the conditional incentive by adding the following sentence: “Why do we give you (make) the bonus (donation)? The bonus (donation) is profitable for us: you doing at least three extra slogans for a wage (donation) of 75 cents is less costly for us than hiring another worker to do at least three slogans for a wage of \$1.50.”<sup>14</sup> In the unconditional incentives treatments the explanation emphasized a non-instrumental reason for offering an unconditional incentive: “Why do we give you (make) the bonus (donation)? We are strongly committed to be an employee-friendly company (socially responsible company—e.g. helping the larger community), even if this implies sacrificing some profit.”<sup>15</sup> In the no-explanation treatments nothing was stated regarding the motive why the company offered a bonus or a donation.

Table 1 summarizes the nine treatments that vary whether the treatment had a monetary or charitable incentive, whether the incentive was conditional on performance or not and whether an explanation for the choice of incentive was provided. In most of the analysis, we pool the treatments with and without explanation together. However, we do explore whether giving an explanation makes a difference.

After seeing the description of the task and the incentive scheme, workers started working on the slogans. The products were shown in sequence and only if workers finished one slogan, they were shown the next product. After they had created three slogans we thanked them for completing the task and, depending on the treatment, we summarized the payments (plus the bonus or donation) and then we asked everybody: “Would you like to do any more slogans? We would really appreciate if you could create at least three more slogans. Yes OR No” If they clicked “yes” in the previous page, they were shown again the slogans in sequence. After each new slogan created, they were shown a screen with sentence: “Thank you for creating this extra

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<sup>14</sup>It might seem unnatural (and unwise) for a firm to explain an action as profit-maximizing. Some firms not even publicize their efforts (e.g. Carlos and Lewis, 2017). However, such an open communication strategy could also be seen as very transparent and potentially minimizing suspicion (Johnson et al., 2016).

<sup>15</sup>Note, however, that the explanation is pure cheap talk and, therefore, it cannot rule out that even unconditional incentives can be perceived as instrumental.

slogan. Would you like to create one more?” Once they clicked “No” the experiment was over. The participants in the charitable incentives treatments received a link in which we uploaded the receipt of the donations generated during the intervention. We ended with a questionnaire in which we elicited their perceptions about the firm and few personal characteristics.<sup>16</sup> The subjects only got paid after we approved the tasks. This feature made sure that workers actually entered real slogans related to the products. On average, workers used 81 seconds per slogan.<sup>17</sup>

Table 1: Summary of Treatments

Treatments	Monetary	Charitable	Conditional	Explanation	Number of Observations	
					Treated	Completed
Baseline					334	300
1	✓				335	317
2	✓			✓	335	306
3	✓		✓		334	299
4	✓		✓	✓	334	309
5		✓			334	301
6		✓		✓	333	307
7		✓	✓		334	287
8		✓	✓	✓	331	293
Total Number of Observations					3,004	2,719

*Notes:* Table shows the feature of the nine treatments. The column “Treated” shows the number of workers assigned to the different treatments. Column “Completed” shows the number of workers who completed the task (including the questionnaire).

## 4.2. Sample size and Attrition

We pre-registered the design of the experiment on the AEA RCT Registry as AEARCTR-0001962 (“Response to variation in prosocial incentives”) where we also specified the rule for the sample size. We aimed at recruiting ideally 2,700 subjects and at least 1,800 subjects based on a power analysis which is part of the registration.

The study was launched on a Monday in January, 2017 and was open from 9am to 9pm EST each day. We specified on M-Turk that we want to collect 2,700 observations and we were

<sup>16</sup>See Appendix A.2 for all the questions in the questionnaire

<sup>17</sup>It is worth mentioning that we find no significant difference across treatments in the amount of time spent by the workers for each slogan.

able to collect 2,719 in less than two full days. Important for our study is the process of how workers are recruited and remain in the task: Workers see the advertisement for the job on M-Turk. When they ‘accept’ the job, the workers gets re-directed to a Qualtrics survey which explains the task and then randomizes workers into the different treatments so that there is the same number of observation per treatment. After they are informed about all the details (especially the incentive schemes) of the job, workers start working or stop doing it. We record who started seeing the instructions and who worked and completed the task.

Table 1 shows that 3,004 workers started the job and saw the treatments. Not surprisingly, Qualtrics is able to randomize workers equally into the nine treatments. 285 (9.49 %) of workers decide not to complete the task (they either did no slogan or stop after a couple of slogans without completing the survey or submitting a completion code on M-Turk) after seeing the instructions and the incentive schemes. While the attrition rate is relatively low, it is important to realize that there is differential attrition by treatment. Most striking is the fact that attrition is higher in the two treatments with conditional charitable incentives, (12.78%), than in the treatment with unconditional charitable incentives (8.85%). The difference is significant in a Mann-Whitney test ( $Z = -2.312$ ,  $p < 0.05$ ). For monetary incentives, there is no significant difference between conditional, 8.98%, and unconditional incentives, 7.01%, ( $Z = -1.326$ ,  $p = 0.185$ ). Consistent with our story about instrumental use of prosocial incentives, this selected attrition already suggests that conditional charitable incentives may harm the firm by making it less attractive to potential employees.

In most of the analysis we include all the 3,004 workers that were treated, i.e., that saw the incentive scheme and then decided to put in either no effort or a positive effort. For some of the analysis, however, we do not have important information from workers that leave the job. We discuss how this attrition can affect our results.

### **4.3. Outcome variables and sub-group definition**

We will focus on two main outcome variables: 1) The main outcome variable is the proportion of workers who created more than three slogans (the extensive margin). 2) We also analyze the

number of created slogans (intensive margin). On average, 64.2% of workers create more than three slogans and the average number of slogan is 5.11 (s.d. of 2.89).

Finally, we elicited worker’s charity-motivation. The literature has shown that people typically contribute to the social good by making donations and/or by volunteering, and that both dimensions capture workers’ prosociality. In fact, some people will have a preference for donating money, other for volunteering, and others still will prefer a bit of both (see, e.g., Dur and Lent, 2016). Therefore, we asked subjects a) “How often do you donate money to a charitable organization?”, and b) “How often do you volunteer for a good cause?” To both questions, subjects could answer with “never”, “rarely”, “sometimes”, “often” and “regularly”. Table 2 shows the distribution of answers to these two questions.

Table 2: Workers’ charity-motivation

		Volunteer			Total
		“never or rarely”	“sometimes”	“often or regularly”	
Donation	“never or rarely”	706	251	<b>50</b>	1,007
	“sometimes”	372	<b>694</b>	<b>153</b>	1,219
	“often or regularly”	<b>84</b>	<b>196</b>	<b>213</b>	493
Total		1,162	1,141	416	2,719

*Notes:* The table shows the number of workers in terms of their volunteering (“How often do you volunteer for a good cause?”) and donating (“How often do you donate money to a charitable organization?”). The workers indicated in bold are labeled “charity-motivated” workers and the rest are “non-motivated”.

We used the answers to these questions to divide workers into two categories: “non-motivated” and “charity-motivated”. In order to ensure an approximately equal number of people in each category, we categorized as charity-motivated all subjects who either donate or volunteer “often-regularly” or who both donate and volunteer “sometimes” (bold in Table 2).

This categorization leads to 1,390 charity-motivated types and to 1,329 non-motivated.<sup>18</sup>

<sup>18</sup>The results are robust to another categorization of workers into “non-motivated” and “charity-motivated”, which only categorizes workers who either donate or volunteer “often-regularly” as charity-motivated, while the 694 workers who both donate and volunteer sometime were now categorized as non-motivated.

## 5. Results

We present the results in three steps: first, we investigate the effect of performance-based versus unconditional incentives for both monetary and charitable incentives. In doing so, the section explores a) the impact on effort, b) whether providing an explanation for the choice of incentive has a differential effect, and c) how satisfied were the workers with the different types of incentives. Second, we explore whether non-motivated and motivated workers react differently to the two types of incentives as predicted by our model. Third, we compare the two types of incentives to a situation in which we do not offer any incentive at all.

### 5.1. Conditional vs. Unconditional (Charitable and Monetary) Incentives

Figure 1 shows the effect of performance-based (“Conditional”) and not performance-based (“Unconditional”) incentives (both monetary and charitable incentives) on effort. Panel A shows the effect on the proportion of workers who do more than three slogans and Panel B shows the effect on the average number of slogans.

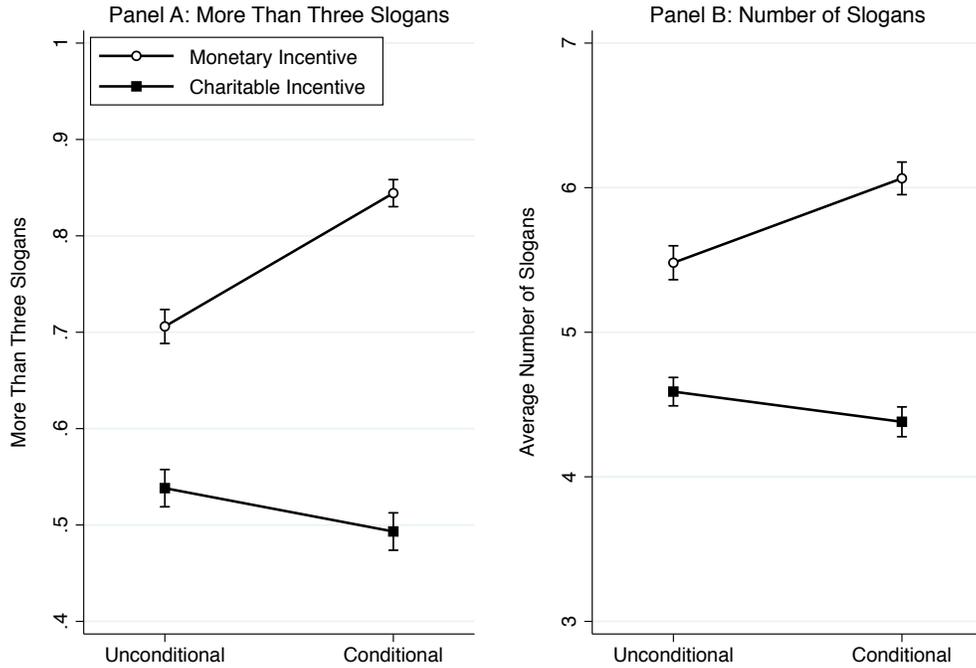
Figure 1 clearly shows that making incentives conditional on performance has very different effects on effort depending on whether the incentive is private and monetary or charitable. As expected, making monetary incentives conditional on performance significantly increases effort: the proportion of workers who are willing to create more than three slogans increases 13 percentage points when monetary incentives are made conditional on effort. The difference is statistically significant in a Mann-Whitney test ( $Z = -6.06$ ,  $p < 0.01$ ).<sup>19</sup> Also, the average number of slogans increases around 11 percent when monetary incentives are conditional on effort compared to when monetary incentives are unconditional ( $Z = -6.67$ ,  $p < 0.01$ ).

The effect of making charitable incentives performance-based is quite different from the results for monetary incentives. Making charitable incentives performance-based *lowers* effort: The proportion of workers who are willing to do more than three slogans decreases from 54 percent to 49 percent ( $Z = 1.64$ ,  $p = 0.10$ ). It also has a slight negative effect on the number

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<sup>19</sup>We will use Mann-Whitney tests to compare means – unless otherwise noted.

Figure 1: Difference between Charitable and Monetary Incentives



*Notes:* The graph shows the effect of making monetary or charitable incentives performance-based (“Conditional”) or not performance-based (“Unconditional”). Proportion of workers who did more than three slogans (in Panel A) and average number of slogans (in Panel B). Bars shows standard errors of the mean.

of slogans ( $Z = 1.46, p = 0.14$ ).

Table 3 confirms the results from Figure 1 in a regression framework. The regressions control for whether the incentive was charitable or monetary, whether the incentive was conditional on effort or not, and for the interaction of the two, i.e., whether the effect of ‘conditional’ is different for charitable incentives. The dependent variable is a dummy for whether the worker does more than three slogans in column (1) and the number of slogans in column (2). The results show: a) Charitable incentives result in lower effort compared to monetary incentives (based on the negative and significant coefficient of “Charitable Incentive”). This is consistent with Imas (2014); Charness et al. (2014) for high incentives. b) Making monetary incentives conditional on effort increases effort as seen in the positive and statistically significant coefficient of the dummy “Conditional”. c) Making charitable incentives conditional on effort has a lower effect on effort than when monetary incentives are made performance-based. In both models (in

Table 3: Monetary and Charitable Incentives

Dependent Variable:	(1)	(2)	(3)	(4)	(5)
	> 3 slogans	# slogans	> 3 slogans	# slogans	Satisf. incent.
Charitable Incentive (=1)	-0.168*** (0.026)	-0.891*** (0.153)	-0.198*** (0.037)	-1.154*** (0.218)	-0.375*** (0.083)
Conditional Incentive (=1)	0.138*** (0.023)	0.584*** (0.163)	0.107*** (0.032)	0.331 (0.239)	-0.484*** (0.088)
Charitable Incentive×Conditional	-0.183*** (0.035)	-0.793*** (0.216)	-0.131*** (0.050)	-0.469 (0.311)	-0.140 (0.136)
Explanation (=1)			-0.039 (0.035)	-0.364 (0.234)	
Explanation×Charitable Incentive			0.061 (0.052)	0.525* (0.306)	
Explanation×Conditional			0.063 (0.045)	0.505 (0.325)	
Explanation×Charitable×Conditional			-0.105 (0.071)	-0.647 (0.433)	
Constant	0.706*** (0.018)	5.481*** (0.117)	0.725*** (0.024)	5.663*** (0.169)	9.056*** (0.055)
<i>F</i> -test: “Cond.”+“Charit.×Cond.”=0	<i>p</i> =0.10	<i>p</i> =0.14	<i>p</i> =0.54	<i>p</i> =0.49	<i>p</i> <0.01
Adj. <i>R</i> <sup>2</sup>	0.084	0.055	0.083	0.055	0.023
Observations	2,670	2,670	2,670	2,670	2,418

*Notes:* OLS regressions with robust standard errors. In regressions (1) and (3) the dependent variable is a dummy variable equal 1 if the worker created more than 3 slogans, whereas in regressions (2) and (3) the dependent variable is the number of created slogans. Column (5) has as dependent variable the answers to the question: “How satisfied were you with the incentives that we provided for this task?” The dummy variable “charitable incentives” takes value 1 for the treatments with charitable incentives and 0 for the treatments with monetary incentives; the dummy variable “conditional” takes value 1 for the treatments with conditional incentives and 0 for the treatments with unconditional incentives; the dummy variable “explanation” takes value 1 for the treatments with explanation and 0 for the treatments without explanation. Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

column (1) and (2)) the coefficient of the interaction is highly statistically significant ( $p < 0.01$ ). Hence, conditional incentives work much better for monetary incentives than for charitable incentives. If anything, the size of the effects indicate that conditional “charitable” incentives may actually backfire: in both models the coefficient of “Conditional” minus the coefficient of “Charitable×Conditional” is negative. For example, the results in column (1) shows that workers are 4 percentage points less likely to generate more than three slogans when offered a conditional than an unconditional prosocial incentive. However, in both models the joint effect is at most statistically significant on the 10%-level (F-test:  $p = 0.10$  in Column (1) and  $p = 0.14$  in Column (2)).<sup>20</sup>

The results support Prediction 3 in Section 3: While performance-based monetary incentives are very powerful to increase worker’s effort, performance-based charitable incentives are not effective and may even backfire. The negative effect is specific to charitable incentives and cannot be explained by workers generally reacting negatively to conditional incentives.

In the following, we investigate whether the above result depends on whether the firm provides an explanation for the choice of incentive. In particular, we are interested whether explicitly explaining that offering a conditional incentive is in the best interest of the firm, has a stronger (negative) effect on effort. Directionally the effect of explaining the rationale behind offering conditional charitable incentives does lower effort more than without explanation (see Figures A.1 in the Appendix for a graphical representation). For charitable incentives, the proportion of workers decrease by 7% when giving an explanation ( $Z = 1.71$ ,  $p = 0.09$ ) and decreases by 3% ( $Z = 0.62$ ,  $p = 0.54$ ) without giving an explanation. The difference between the difference is, however, not statistically significant. Regression results presented in Column (3) and (4) of Table 3 support that providing an explanation, “Explanation (=1)” has a limited and insignificant effect on effort.

Next, we use the answers to the questionnaire at the end of the experiment to test how the firm’s choice of offering conditional rather than unconditional incentives (both monetary

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<sup>20</sup>We find the same results in terms of the sign and significance of the coefficients if we use a logit regression for the models with a dummy for whether the worker has done more than three slogans as the dependent variable (see Table A.2 in the Appendix).

and charitable) was perceived by the workers. The questionnaire asked workers “How satisfied were you (from 1 to 10) with the incentives that we provided for this task?”. Consistent with our argument that conditional incentives are likely to be perceived as less kind than unconditional incentives, we find that the workers were significantly less satisfied with the employer’s choice of offering performance-based than the choice of unconditional incentives ( $p \leq 0.014$  for both monetary and charitable)<sup>21</sup>. Column (5) in Table 3 show a model with the answers to the question about the satisfaction with the incentive as dependent variable. The results confirm that the workers are less satisfied with the firm’s choice of offering conditional incentives ( $p < 0.01$ ).<sup>22</sup> This finding supports equations (2) and (3), which are at the core of our model.

In sum, while performance-based monetary incentives are very powerful to increase worker’s effort, performance-based charitable incentives are not effective and may even backfire. The negative effect is specific to charitable incentives and cannot be explained by workers generally reacting negatively to conditional incentives. We also find empirical support for the mechanism predicted by our theory, namely, that workers are less satisfied with performance-based incentives than with unconditional incentives. Hence, consistent with our behavioral predictions, it seems that performance-based incentives have two countervailing effects. On the one hand, they motivate workers to exert higher effort in order to earn more money as a bonus or to increase the donation for the charity. On the other hand, they discourage effort because they are perceived as being less kind. While the motivating effect clearly dominates for monetary incentives, for charitable incentives the negative effect only marginally dominates. Hence, if our theory is correct, we should expect heterogeneous effects of performance-based charitable incentives depending on the charity-motivation of the workers. We investigate this question in the next section.

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<sup>21</sup>See Figure A.1 for a graphical representation.

<sup>22</sup>Table A.3 show the results for the other relevant survey questions. Throughout, the results show that workers who were offered performance-based incentives i) see the company as being less attractive for a potential employee; ii) see the company less socially responsible and iii) perceive the motives behind the choice of the incentives as being more “calculated”.

## 5.2. Non-motivated vs. Charity-motivated Workers

Our model makes clear predictions in how performance-based incentives should affect non-motivated and charity-motivated workers. Workers who care about charities (who we label ‘charity-motivated’) face the two countervailing effects of a performance-based charitable incentives: performance-based charitable incentives make them work harder because they want to give to charity. However, also for them the conditionality of the incentive is perceived as being less kind. The net effect will be unclear. However, the positive motivating effect should be largely absent for workers who do not care about charities (who we label ‘non-motivated’). Hence, according to our theory, for non-motivated workers conditional charitable incentives should unambiguously reduce effort compared to unconditional charitable incentives.

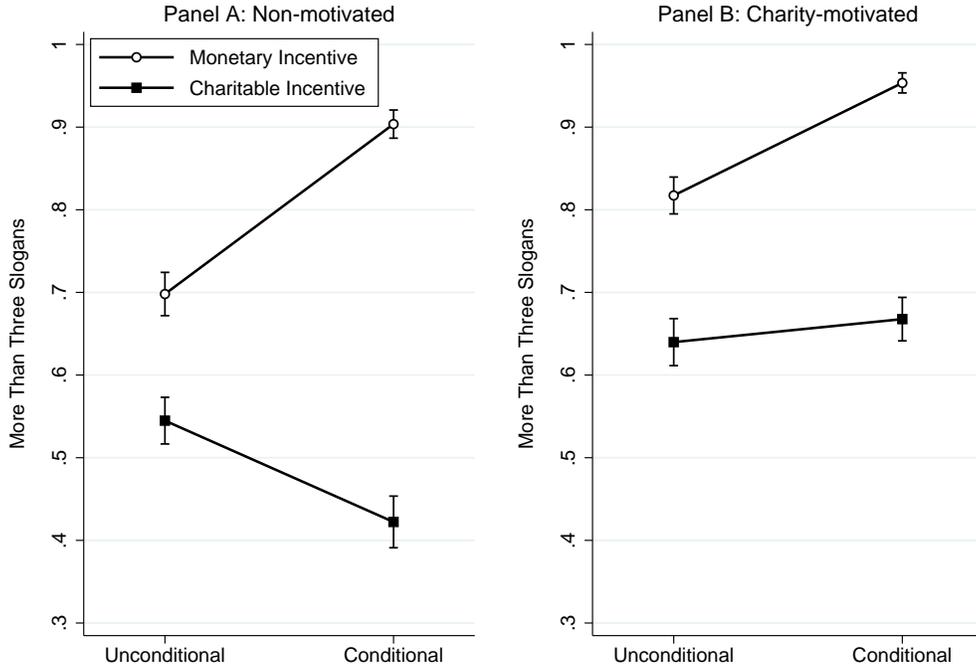
Figure 2 shows the effect of charitable and monetary incentives on the proportion of non-motivated (Panel A) and charity-motivated (Panel B) workers who create more than three slogans. The Figure shows that consistent with our model prediction, the effect of conditional compared to unconditional charitable incentives largely depends on the charity-motivation of the workers. Non-motivated workers are 11 percentage points *less* likely to write more than three slogans under conditional than unconditional pro-social incentives ( $Z = 2.62, p < 0.01$ )<sup>23</sup>, whereas motivated workers are 3 percentage points *more* likely to write more than three slogans under the conditional donation than under the unconditional donation treatment but the difference is not significant ( $Z = -0.79, p = 0.43$ ). The effect is also reflected in the average number of slogans: Motivated workers create on average 2 percent more slogans under conditional than unconditional charitable incentives, although not significantly so ( $Z = -1.02, p = 0.31$ ). On the contrary, non-motivated workers create on average 6 percent fewer slogans under conditional than unconditional charitable incentives. This difference is statistically significant ( $Z = 2.18, p < 0.05$ ).<sup>24</sup>

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<sup>23</sup>Even when analyzing just treatments without explanation, the proportion of non-motivated agents doing more than three slogans decreases by 7 percentage points ( $p < 0.05$ ).

<sup>24</sup>Note that Figure 2 also shows that more charity-motivated workers (64%) are creating more than three slogans than non-motivated agents (54%) ( $Z = -2.56, p = 0.01$ ) in the unconditional charitable donation treatment. This is not surprising if we think, as we discussed in the theory section, that  $\theta$  and  $\lambda$  may be positively correlated. Workers who care about more about charities may also care more about benefiting an

Figure 2: Non-motivated vs. Charity-motivated Workers



*Notes:* The graph shows the effect of making monetary or charitable incentives performance-based (“Conditional”) or not performance-based (“Unconditional”) on the proportion of workers who created more than three slogans. The panels show the effect for non-motivated workers in Panel A and charity-motivated workers in Panel B. Bars shows standard errors of the mean.

Table 4 show the results for the two subsamples in a regression framework. Columns (1) and (3) focus on non-motivated workers while columns (2) and (4) focus on the charity-motivated workers. As can be seen, for the non-motivated workers the interaction between the conditional and the charitable incentive treatment in each regression is negative and highly significant ( $p < 0.01$  in both regressions). Furthermore, an F-test shows that the proportion of workers who create more than three slogans is significantly lower under conditional than unconditional charitable incentives—the coefficient of the interaction term is significantly higher in absolute terms than the coefficient on the conditional variable—revealing an overall significant negative effect (F-test:  $p < 0.01$ ).

The results in Column (2) and (4) show that the effect is different for charity-motivated workers. The interaction term “Charitable Incentives  $\times$  Conditional” is negative but only significant in regression (2) ( $p = 0.02$ ). F-test additionally show that the probability and the number employer who acted kindly. But, despite this positive correlation, we find evidence supporting our predictions.

of slogans are the same for conditional and unconditional charitable incentives (F-test:  $p = 0.43$  and  $0.60$  respectively). Column (5) and (6) show the difference between non-motivated and charity-motivated workers in a single model for each outcome variable. The important coefficient on “Motivated×Charitable Incentive×Conditional” is highly significant – indicating that charity-motivated workers react quite differently to the conditionality of charitable incentives than non-motivated workers.

Table 4: Charity-motivated versus Non-motivated workers

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variables:	> 3 slogans	> 3 slogans	# slogans	# slogans	> 3 slogans	# slogans
Subsample:	Non-motivated	Motivated	Non-motivated	Motivated	All	All
Charitable Incentive (=1)	-0.168*** (0.038)	-0.171*** (0.036)	-0.611*** (0.165)	-1.100*** (0.234)	-0.168*** (0.038)	-0.611*** (0.165)
Conditional Incentive (=1)	0.199*** (0.031)	0.140*** (0.026)	1.073*** (0.184)	0.474** (0.227)	0.199*** (0.031)	1.073*** (0.184)
Charitable Incentive×Conditional	-0.309*** (0.052)	-0.109** (0.046)	-1.368*** (0.248)	-0.372 (0.301)	-0.309*** (0.052)	-1.368*** (0.248)
Motivated Type (=1)					0.105*** (0.034)	1.049*** (0.221)
Motivated×Charitable					-0.003 (0.052)	-0.489* (0.287)
Motivated×Conditional					-0.059 (0.040)	-0.599** (0.292)
Motivated×Charit.×Cond.					0.200*** (0.069)	0.996** (0.390)
Constant	0.706*** (0.026)	0.811*** (0.022)	5.345*** (0.124)	6.394*** (0.183)	0.706*** (0.026)	5.345*** (0.124)
<i>F</i> -test:						
“Cond.”+“Charit.×Cond.”=0	$p < 0.01$	$p = 0.43$	$p = 0.08$	$p = 0.60$		
Adj. $R^2$	0.136	0.082	0.107	0.058	0.126	0.096
Observations	1,191	1,228	1,191	1,228	2,419	2,419

*Notes:* OLS regressions with robust standard errors. In regressions (1), (2) and (5) the dependent variable is the number of created slogans, whereas in regressions (3), (4) and (6) the dependent variable is a dummy variable equal 1 if the worker created more than 3 slogans. The dummy variable “donation” takes value 1 for the treatments with charitable incentives and 0 for the treatments with monetary incentives; the dummy variable “conditional” takes value 1 for the treatments with conditional incentives and 0 for the treatments with unconditional incentives; the dummy variable “motivated” takes value 1 if the worker was categorized as charity-motivated depending on the frequency with which he donates or volunteers. Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

The analysis in this section is based on workers who answered the survey questions at the end of the task (as only for those we know whether they are “charity-motivated” or not). As we discussed in Section 4.2, about 9.5% of workers did not complete the task. We do not have information about whether those workers are charity-motivated or non-motivated, but we do know that they put in very little effort (if at all). While attrition is relatively low, the analysis could be slightly biased because of differential attrition by treatment. Table A.1 in the

Appendix shows that differential attrition lead to different distribution of charity-motivated and non-motivated workers in the different treatments. It looks like that more non-motivated agents decided not to work after being informed about the conditional charitable incentives (there is no significant difference between all the other treatments). Therefore, if we assume that all the workers who decided not to work are non-motivated, the effects that we report are biased downwards. However, even if we assume that all of them are charity-motivated, our results still hold that non-motivated workers react negatively to conditional prosocial incentives (see Table A.4 in the Appendix).

As a final piece, we try to directly test if workers' satisfaction with the incentives explains why conditional charitable incentives backfire for non-motivated workers. For these agents, we can use the treatment as an instrument for their satisfaction with the incentive and then estimate its effect on their effort (for a similar approach, see Haggag and Pope, 2016). For charity-motivated agents, we cannot use the treatment as an instrument as effort is directly affected by conditional charitable incentives. Those agents work harder because this will increase the donation to a cause they support. Therefore, the exclusion restriction is only met when  $\theta$  is close to zero. The results reported in Table 5 confirms our theory that making charitable incentives conditional on performance are less satisfying for non-motivated workers. Using the instrumented satisfaction variable indicates that an 1-point reduction in the satisfaction with the incentive reduces the probability of doing more than three slogans by 0.276 points ( $p = 0.03$ ) and the number of slogans by 0.815 ( $p = 0.06$ ).

In sum, our results support our Predictions 1 and 2 that performance-based charitable incentives have heterogeneous effects on effort depending on the charity-motivation of the worker. For charity-motivated workers we observe a net effect of two countervailing forces: an incentive effect that increases workers motivation to work more (and donate more as a result) and the negative effect on effort because performance-based charitable incentives are perceived as less kind. In our setting, the two effects seem to cancel each other out. For non-motivated workers, however, the positive incentive effect is largely absent. The negative effect of making charitable incentives performance-based dominates. As a result, performance-based charitable incentives

Table 5: IV Regressions

	(1)	(2)
First-stage regression:	DV=Satisfaction choice incentive	
Conditional Charitable Incentive	-0.444***	-0.444***
	(0.15)	(0.15)
Constant	8.631***	8.631***
	(0.09)	(0.09)
First-Stage $R^2$	0.0151	0.0151
First-Stage F-Stat	8.17	8.17
Instrumental variables (2SLS) regression	> 3 slogans	# slogans
Satisfaction with choice of incentives	0.276**	0.815*
	(0.12)	(0.44)
Constant	-1.837*	-2.28
	(1.05)	(3.70)
Wald $\chi^2$	4.90	3.45
Observations	563	563

*Notes:* Table shows results of a 2SLS Regression for non-motivated agents in the charitable incentives treatments. Dependent variable is 1 if worker did more than three slogans and 0 otherwise (in Column 1) and the number of slogans (in Column 2). Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

backfire.

### 5.3. Comparison to Baseline

Finally, a natural question is how workers react to performance-based and unconditional incentives relative to a baseline with no additional incentives. Note that our model in section 3 was not developed to make predictions on how, in our experiment, charitable incentives would perform compared to a baseline with no incentives. One reason is that the workers in our baseline treatment do not observe whether the “no-incentive” is the result of the firm choosing not to make charitable donations or whether the firm is actually making charitable donations but just not revealing it to the workers. These two possible scenarios can have almost opposite implications on how workers perceive the firm’s motives and thus the kindness of the choice. Another reason is that even unconditional incentives can be used instrumentally by an employer to increase workers’ effort. Making an unconditional donation can be the result of a pure profit-maximizing strategy if this was done only because the employer expects that the

worker will react to it with higher effort. This argument is all the more valid in our experiment where the size of the extra incentive (namely, the bonus or the donation) was half the baseline pay and, therefore, it was clearly profit maximizing for the firm to get three more slogans with the donation than to hire a new worker, pay the baseline pay and get three slogans this way. Because of these arguments, it was not clear to us ex-ante how workers would react to charitable incentives, especially if unconditional, compared to no incentives. We, therefore, decided to take an explorative approach in answering this question.

Table 6 compares effort in the baseline treatment to the four other treatments (pooling treatments with and without explanation).<sup>25</sup> As can be seen, the proportion of workers doing more than three slogans increases by 23 percentage points when the monetary incentive is conditional on performance ( $p < 0.01$ ) and by 9 percentage point when it is unconditional ( $p < 0.01$ ). Similarly, the number of created slogans increases by approx. 22 percent when the monetary incentive is conditional on performance ( $p < 0.01$ ), by 10 percent when the monetary incentive is unconditional on performance ( $p < 0.01$ ). Hence, in our experiment, both conditional and unconditional monetary incentives have a positive and significant effect on workers' effort.

Interestingly, we find the opposite result for charitable incentives. The proportion of workers doing more than three slogans *decreases* by 12 percentage points when the charitable incentive is conditional on performance ( $p < 0.01$ ) and by 8 percentage point when it is unconditional ( $p < 0.05$ ). Similarly, the average number of slogans decreases by about 10 percent when the charitable incentive is conditional on performance ( $p < 0.01$ ) and by 7 percent when it is unconditional ( $p < 0.1$ ). Hence, these findings show pretty clearly that prosocial incentives, even if unconditional, can backfire compared to the baseline and that workers react very differently to prosocial incentives compared to monetary incentives. The backfiring of prosocial incentives is contrary to previous results (see Cassar and Meier, 2018, for a review of the literature). It indicates that the use of prosocial incentives is much more delicate than the use of monetary

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<sup>25</sup>Table A.5 shows comparisons between all the treatments—broken up in treatments with and without explanations. The fundamental results do not change: adding the explanation does not seem to affect effort significantly.

incentives and that firms should be careful in using prosocial incentives with the instrumental goal of increasing effort.

Table 6: Comparison to Baseline

	(1)	(2)
Dependent Variables:	> 3 slogans	# slogans
Constant (Baseline)	0.614*** (0.027)	4.934*** (0.166)
Unconditional Monetary	0.092*** (0.032)	0.546*** (0.203)
Conditional Monetary	0.231*** (0.030)	1.130*** (0.200)
Unconditional Charitable	-0.076** (0.033)	-0.345* (0.193)
Conditional Charitable	-0.121*** (0.033)	-0.554*** (0.195)
Adj. $R^2$	0.074	0.048
Observations	3,004	3,004

*Notes:* OLS regressions with robust standard errors. Dependent variables: dummy variable equal 1 if the worker created more than 3 slogans and 0 otherwise in (1), and the number of created slogans in (2). Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

## 6. Conclusions

This paper investigates the limits of prosocial incentives by providing a mechanism through which prosocial incentives can backfire. The important ingredient of our argument is that workers' response to prosocial incentives is not only based on the social cause underlying the incentives but also on the employer's perceived motive for offering those incentives. The employer's motives matter because they affect how kind or unkind the choice of the incentive is perceived to be, which, in turn, affects workers' intrinsic or extrinsic incentive to reciprocate. In particular, when prosocial incentives are used instrumentally, they are perceived as being less kind by the workers and can, therefore, backfire. This is especially true for performance-based

prosocial incentives that are by construction more instrumental than unconditional incentives, and for non-motivated workers who do not care to support the social cause underlying the prosocial incentive.

We test these predictions in an experiment with around 3,000 workers, where we varied whether the firm offered a private monetary bonus or a donation to a charity, and whether these incentives were conditional or unconditional on workers' performance. Consistent with our theory we find that i) monetary and charitable incentives work very differently: while performance-based monetary incentives increase effort compared to unconditional incentives, the opposite is true for charitable incentives; ii) charitable incentives have heterogeneous effects depending on the charity motivation of the workers: performance-based charitable incentives largely backfire for agents who do not care about the charity; iii) workers are less satisfied with the employer's choice of offering conditional rather than unconditional incentives and this relative dissatisfaction explains why performance-based donations backfire for non-motivated agents. Finally, we also find that contrary to monetary incentives, conditional and unconditional charitable incentives backfire even compared to a baseline with no incentives.

These findings reveal that prosocial incentives are much more delicate than previously thought and firms cannot just instrumentally use prosocial incentives or CSR initiatives as another tool in their HR strategy. According to our results, the argument that firms should align their CSR strategy with their business interest (e.g. Porter and Kramer, 2007) or use CSR instrumentally to motivate workers (e.g. Bhattacharya et al., 2008), misses the negative impact this will have on their perceived motives. This is especially true for CSR initiatives that are directly linked to employees' effort, such as charitable giving as a reward for high performance or as a share of firms' sales and revenues. The benefits of CSR are likely to disappear when used strategically. For firms that are not genuinely interested in socially responsible behavior, instrumental CSR can be worse than ineffective—it can backfire.

The effect of prosocial incentives will depend on the pool of workers in a firm. Past research stressed rightly so that the presence of prosocial workers is crucial for the effectiveness of prosocial incentives (see, e.g., Nyborg, 2014). Past studies, however, disregarded the role of

non-motivated agents as they expected no effect of prosocial incentives for those workers. We show that focusing only on mission-motivated agents can be misleading for our understanding of how prosocial incentives work, as it is missing that non-motivated agents react most negatively to the instrumental use of prosocial incentives. Our experiment did not allow for sorting. Selection by mission-motivated and non-motivated workers into different firms is, however, an important issue that should be explored further.

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## A. Online Appendix

### A.1. Additional Tables and Figures

Table A.1: Non-motivated and Charity-motivated Types by Treatment

Treatment	Non-motivated	Charity-motivated	Total
Unconditional Monetary	163	154	317
	51.42%	48.58%	
Unconditional Monetary w/ Explanation	153	153	306
	50%	50%	
Conditional Monetary	149	150	299
	49.83%	50.17%	
Unconditional Monetary w/ Explanation	155	154	309
	50.16%	49.84%	
Unconditional Charitable	154	147	301
	51.16%	48.84%	
Unconditional Charitable w/ Explanation	162	145	307
	52.77%	47.23%	
Conditional Charitable	127	160	287
	44.25%	55.75%	
Conditional Charitable w/ Explanation	128	165	293
	43.69%	56.31%	
Baseline	138	162	300
	46%	54%	
Total	1,329	1,390	2,719
	48.88%	51.12%	100%

Table A.2: Logit Regressions

Sample:	All	Non-motivated	Charity-motivated
Corresponding Table & Column:	3 (1)	4 (1)	4 (2)
Charitable Incentive (=1)	-0.723*** (0.115)	-0.722*** (0.167)	-0.880*** (0.190)
Conditional Incentive (=1)	0.815*** (0.136)	1.375*** (0.231)	1.501*** (0.302)
Charitable Incentive $\times$ Conditional	-0.995*** (0.175)	-1.819*** (0.287)	-1.367*** (0.347)
Constant	0.876*** (0.085)	0.875*** (0.123)	1.457*** (0.146)
<i>F</i> -test:			
“Cond.” + “Charit. $\times$ Cond.” = 0	$p = 0.10$	$p < 0.01$	$p = 0.43$
Pseudo $R^2$	0.0690	0.1169	0.0903
Observations	2,670	1,191	1,228

*Notes:* Coefficients of Logit regressions with robust standard errors in parenthesis. Dependent variable is 1 if worker did more than three slogans and 0 otherwise. Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

Table A.3: Self-Reported Perception of Firm and Incentives

	Soc. resp.	Attractive	Satisfied	Calculated
Charitable Incentive (=1)	0.405*** (0.102)	-0.255** (0.104)	-0.375*** (0.083)	-0.131 (0.114)
Conditional Incentive (=1)	-0.343*** (0.105)	-0.074 (0.105)	-0.484*** (0.088)	0.139 (0.116)
Charitable Incentive× Conditional	-0.003 (0.149)	-0.099 (0.151)	0.140 (0.136)	-0.266 (0.168)
Constant	7.239*** (0.072)	7.482*** (0.073)	9.056*** (0.055)	7.741*** (0.083)
<i>F</i> -test:				
“Cond.” + “Charit.×Cond.”=0	$p < 0.01$	$p = 0.11$	$p < 0.01$	$p = 0.29$
Adj. $R^2$	0.020	0.007	0.023	0.004
Observations	2,418	2,420	2,418	2,418

*Notes:* Coefficients of OLS regressions with robust standard errors in parenthesis. Dependent variables are answers on 10-point scale to four questions about the firm (see Section A.2 for details). “Soc. resp.”: *Please rate PharmaGIC on a scale from 0 “Not at all socially responsible” to 10 “Very socially responsible”*; “Attractive”: *How attractive would our company be as a potential employee?*; “Satisfied”: *How satisfied were you with the incentives that we provided for this task?*; “Calculated”: *How calculated do you think was our choice of incentives?*. Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

Table A.4: Non-motivated vs. Charity-motivated Workers – Robustness

	(1)	(2)	(2)
Classifying workers who drop out:	excluded	all non-motivated	all charity-motivated
Charitable Incentive (=1)	-0.168*** (0.038)	-0.158*** (0.036)	-0.168*** (0.038)
Conditional Incentive (=1)	0.199*** (0.031)	0.138*** (0.034)	0.199*** (0.031)
Charitable Incentive $\times$ Conditional	-0.309*** (0.052)	-0.274*** (0.050)	-0.309*** (0.052)
Motivated Type (=1)	0.105*** (0.034)	0.194*** (0.034)	0.001 (0.035)
Motivated $\times$ Charitable	-0.003 (0.052)	-0.012 (0.051)	-0.000 (0.052)
Motivated $\times$ Conditional	-0.059 (0.040)	0.001 (0.043)	-0.111** (0.045)
Motivated $\times$ Charitable $\times$ Conditional	0.200*** (0.069)	0.164** (0.068)	0.217*** (0.071)
Constant	0.706*** (0.026)	0.617*** (0.026)	0.706*** (0.026)
<i>F</i> -test:			
“Cond.” + “Charit. $\times$ Cond.” = 0	$p < 0.01$	$p < 0.01$	$p < 0.01$
Adj. $R^2$	0.126	0.145	0.089
Observations	2,419	2,670	2,670

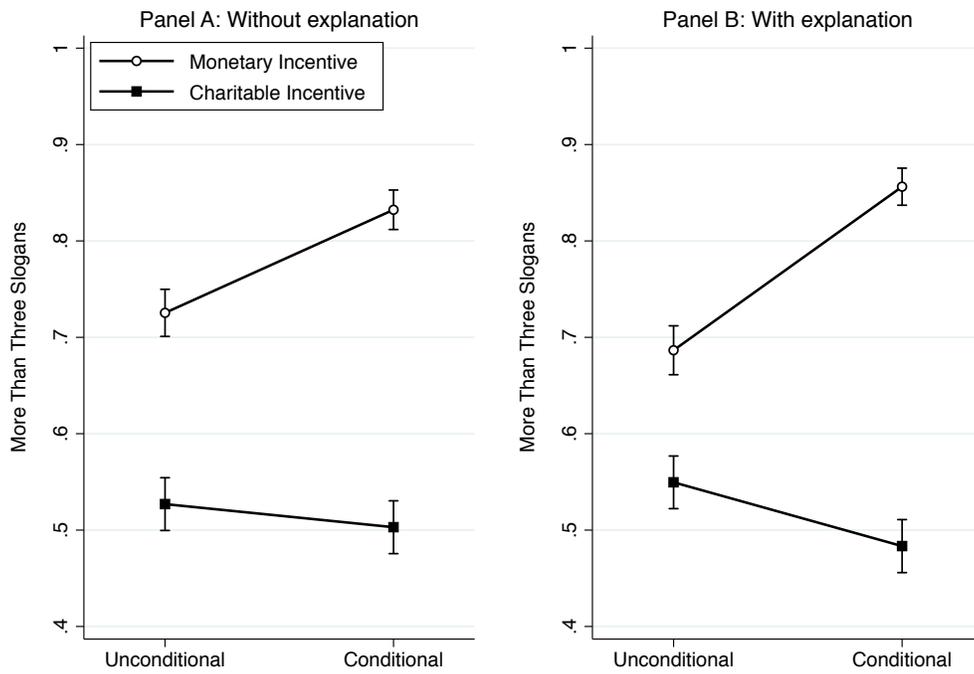
*Notes:* Table shows the robustness of our results to different classifications into charity-motivated and non-motivated workers for workers who dropped out before indicating their charity-motivation. Column (1) shows the main result in the paper that excludes those workers from the analysis. Column (2) assumes that all workers who drop out are non-motivated. Column (3) assumes that all workers who drop out are charity-motivated. Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

Table A.5: Comparison to Baseline

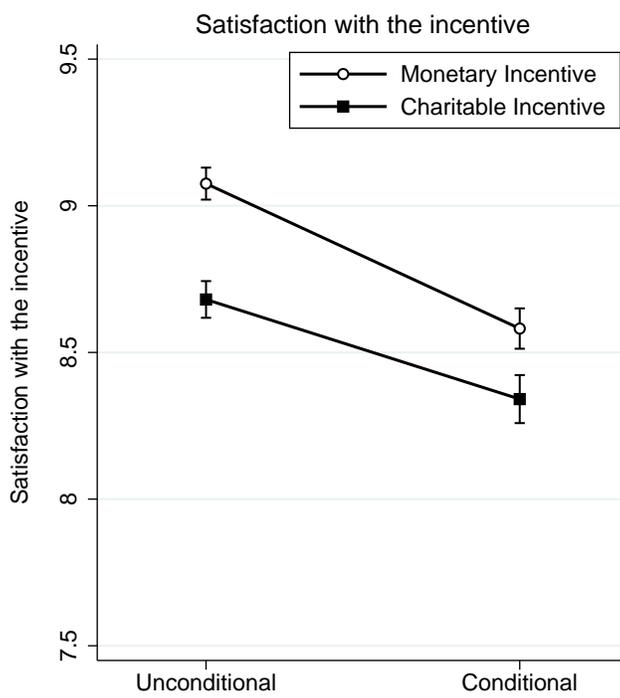
	(1)	(2)
Dependent Variables:	> 3 slogans	# slogans
Baseline	Reference Group	
Unconditional Charitable	-0.087** (0.038)	-0.425** (0.216)
Unconditional Charitable with Explanation	-0.064* (0.038)	-0.264 (0.217)
Conditional Charitable	-0.111*** (0.038)	-0.563** (0.220)
Conditional Charitable with Explanation	-0.130*** (0.038)	-0.544** (0.222)
Unconditional Monetary	0.112*** (0.036)	0.729*** (0.237)
Unconditional Monetary with Explanation	0.073** (0.037)	0.364 (0.232)
Conditional Monetary	0.219*** (0.034)	1.060*** (0.236)
Conditional Monetary with Explanation	0.243*** (0.033)	1.201*** (0.224)
Constant	0.614*** (0.027)	4.934*** (0.166)
Adj. $R^2$	0.074	0.048
Observations	3,004	3,004

*Notes:* OLS regressions with robust standard errors. Dependent variables: dummy variable equal 1 if the worker created more than 3 slogans and 0 otherwise in (1), and the number of created slogans in (2). Significance levels: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ .

Figure A.1: With and Without Explanation



*Notes:* The graph shows the effect of making monetary or charitable incentives performance-based (“Conditional”) or not performance-based (“Unconditional”) on the proportion of workers creating more than three slogans. The panels show the effect for the treatments without explanation (Panel A) and with explanation (Panel B). Bars shows standard errors of the mean.



*Notes:* The graph shows the effect of making monetary or charitable incentives performance-based (“Conditional”) or not performance-based (“Unconditional”) decrease the workers’ satisfaction. Bars shows standard errors of the mean.

## A.2. Instructions

### A.2.1. Introduction text

Thanks for working for us. We are an Italian company, named PharmaGIC srl, that distributes pharmaceutical products. We operate in Italy and abroad. We are currently working on a new English version of our website, through which we promote our products. For this purpose, we collect ideas on possible marketing slogans (taglines) for some of our products in the pharmacy division (mainly childcare products, cosmetics, hygiene, and so on). Slogans typically convey a message about the product, which can be implicit or explicit. A slogan can be a few simple words or an entire phrase. The aim of a slogan is to catch the audiences attention and to make the product more attractive at the eyes of the consumer. Examples of famous slogans include: ‘Just do it’ (Nike), ‘Think different’ (Apple), ‘I’m lovin’ it’ (MacDonald), ‘Connecting people’ (Nokia), ‘The best a Man can get’ (Gillette), ‘Because you’re worth it’ (LOreal) For more information about us please visit our website: [www.pharmagic.net](http://www.pharmagic.net)

We have in total 21 products. Your task is to create at least three slogans. One slogan for each of three different products. But of course, we appreciate if you decide to create slogans for more than three products. The products will be shown to you in sequence. The next product will be shown to you only after you created the slogan for the previous product. For each product you will see a detailed description and a picture. Underneath the product description you will find a blank box. In that blank box you can write the slogan(s). Once you are sure about the slogan please select ‘submit’.

### A.2.2. Treatment Text

- *Treatment 1 (money; unconditional, no explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, you will receive a bonus of 75 cents. This bonus is given unconditionally on whether you create any extra slogans. However, we would really appreciate if you could create at least 6 slogans.
- *Treatment 2 (money; unconditional, explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, you will receive a bonus of 75 cents. This bonus is given unconditionally on whether you create any extra slogans. However, we would really appreciate if you could create at least 6 slogans.

Why do we give you the bonus? We are strongly committed to be an employee-friendly company, even if this implies sacrificing some profit.

- *Treatment 3 (money; conditional, no explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, if you create (at least) 6 slogans instead of 3, you will receive a bonus of 75 cents. This bonus is given conditionally on you creating at least three extra slogans. Indeed, we would really appreciate if you could create at least 6 slogans.
- *Treatment 4 (money; conditional, explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, if you create (at least) 6 slogans instead of 3, you will receive a bonus of 75 cents. This bonus is given conditionally on you creating at least three extra slogans. Indeed, we would really appreciate if you could create at least 6 slogans. Why do we give you the bonus? The bonus is profitable for us: you doing (at least) three extra slogans for a wage of 75 cents is less costly for us than hiring another worker to do (at least) three slogans for a wage of \$1.50.
- *Treatment 5 (charitable; unconditional, no explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, we will make a donation of 75 cents to Doctors without Borders (US). This donation is made unconditionally on whether you create any extra slogans. However, we would really appreciate if you could create at least 6 slogans. We will post the receipt of the donation online for you to verify 14 days after we collected all the slogans (and donations). Totally anonymous.

- *Treatment 6 (charitable; unconditional, explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, we will make a donation of 75 cents to Doctors without Borders (US). This donation is made unconditionally on whether you create any extra slogans. However, we would really appreciate if you could create at least 6 slogans. We will post the receipt of the donation online for you to verify 14 days after we collected all the slogans (and donations). Totally anonymous.

Why do we make a donation? We are strongly committed to be a socially responsible company (e.g. helping the larger community), even if this implies sacrificing some profit.

- *Treatment 7 (charitable; conditional, no explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, if you create (at least) 6 slogans instead of 3, we will make a donation of 75 cents to Doctors without Borders (US). This donation is made conditionally on you creating at least three extra slogans. Indeed, we would really appreciate if you could create at least 6 slogans. We will post the receipt of the donation online for you to verify 14 days after we collected all the slogans (and donations). Totally anonymous.
- *Treatment 8 (charitable; conditional, explanation)*: The task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. Furthermore, if you create (at least) 6 slogans instead of 3, we will make a donation of 75 cents to Doctors without Borders (US). This donation is made conditionally on you creating at least three extra slogans. Indeed, we would really appreciate if you could create at least 6 slogans. We will post the receipt of the donation online for you to verify 14 days after we collected all the slogans (and donations). Totally anonymous.

Why do we make the donation? The donation is profitable for us: you doing (at least) three extra slogans for a donation of 75 cents is less costly for us than hiring another worker to do (at least) three slogans for a wage of \$1.50.

- *Treatment 9 (baseline)*: The Task is considered completed if you create 3 slogans. Upon completion of the task, you will be paid the pre-announced wage of \$1.50. However, we would really appreciate if you could create at least 6 slogans.

How many slogans would you like to create? 3 Slogans or 6 Slogans

### A.2.3. Example Product

**SLOGAN 1**

**Nippes - Teel tools made in Solingen since 1923**

High range manicure and pedicure steel tools.

Nippes still enhances traditional methods of production and uses only the highest quality materials, taking care of the entire production process through rigorous testing quality system. Nippes uses only hot forged steel to ensure maximum durability of its instruments.



**Dim.: 35x29x3cm**

Enter your slogan:

### A.2.4. Survey Questions

In order to understand your experience with us, we kindly ask you to fill a short survey.

- What is your gender?  
*Male, Female, Other*
- How attractive would our company be as a potential employee?  
*“Not attractive at all” 0- 10 “Very attractive”*
- Please rate PharmaGIC on a scale from 0 “Not at all socially responsible” to 10 “Very socially responsible”  
*“Not at all socially responsible” 0- 10 “Very socially responsible”*
- How satisfied were you with the incentives that we provided for this task?  
*“Not at all satisfied” 0- 10 “Very satisfied”*
- What do you think:
  1. How many other M-Turkers did more than 3 slogans? (0% - 100%)
  2. How many other M-Turkers did more than 6 slogans? (0% - 100%)

3. How many slogans did the others do on average?

- How satisfying are the incentives for other M-Turkers?  
*“Not at all satisfied” 0- 10 “Very satisfied”*
- How calculated do you think was our choice of incentives?  
*“Not at all calculated” 0- 10 “Very calculated”*
- How often do you donate money to a charitable organization?  
*Never, Rarely, Sometimes, Often, Regularly*
- How often do you volunteer for a good cause?  
*Never, Rarely, Sometimes, Often, Regularly*
- Let us know your opinion about our task and our incentives: