

Reggiani, Tommaso; Rilke, Rainer Michael

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# Designing Donation Incentive Contracts for Online Gig Workers

Tommaso Reggiani<sup>1,2,3</sup> · Rainer Michael Rilke<sup>4</sup>

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## Abstract

This study examines the effects of donation incentives on labor supply in an online labor market through a field experiment ( $n = 944$ ). We manipulate the donation purpose of the incentive to be either unifying or polarizing and the size of the donation relative to the workers' wage. Our experimental design allows us to observe the decision to accept a job (extensive margin) and different dimensions of productivity (intensive margin). We predict and show that a unifying donation purpose attracts more gig workers and improves their productivity compared to a polarizing donation purpose. We discuss the implications of these results in order to understand the role of donation incentives and labor supply in online labor markets.

**Keywords** Social incentives · Labor supply · Online gig working · Experiment

**JEL Classification** C93 · D23 · M52

## Introduction

Firms have numerous instruments to design incentives in order to align employee behavior with the firms' interests. Pay increases, performance-based related payments, non-monetary benefits, or promoting a work-life balance are just some of the tools employers use to motivate their employees. In addition to these more traditional methods, research in recent years has focused on social incentives as a means to foster employee motivation (e.g., Cassar & Meier, 2018).

The rise of gig work through online platforms has been a major development in the labor market in recent years. As of today, more than 70% of all gig workers find projects through online platforms (Payoneer, 2020). Some of the most prominent websites that provide gig work are Upwork (with over 15 million gig workers), Fiverr and Toptal. A

variety of factors, including the increasing accessibility of the internet, the growth of the gig economy, and the increasing demand for flexible work arrangements, have driven this trend. According to a recent Deloitte report, a 28% growth in gig work volume in the next two years can be expected (Abbatiello et al., 2018; Fieseler et al., 2017), while other projections show that in 2028 almost half of the US workforce will be gig workers (Statista, 2017). Gig work, characterized by its lack of a traditional employer-employee relationship and a high degree of flexibility and autonomy, presents a challenge for firms seeking to incentivize workers. As gig workers are self-employed and able to choose their own projects on a part-time or project-by-project basis, traditional methods of motivation and reward may be less effective. Companies must therefore find innovative ways to recognize and incentivize gig workers in order to attract the best workers.

At the same time, there has also been a growing demand among workers for jobs that have a social purpose and create positive externalities. More than 70% of workers state that it is imperative to work for an employer where their personal values align (America's Charities, 2017). A variety of factors have fueled this trend, including a growing awareness of social and environmental issues, a desire among people to make a positive impact on the world, and an increasing recognition of the importance of work-life balance. As a result, many workers are now seeking out employment

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✉ Rainer Michael Rilke  
rainer.rilke@whu.edu  
Tommaso Reggiani  
reggianit@cardiff.ac.uk

<sup>1</sup> Cardiff Business School, Cardiff University, Cardiff, UK

<sup>2</sup> MUEEL Lab, Masaryk University, Brno, Czechia

<sup>3</sup> IZA, Bonn, Germany

<sup>4</sup> WHU-Otto Beisheim School of Management, Economics Group, Vallendar, Germany

opportunities that allow them to not only earn a living, but also to make a positive contribution to society.

One way that firms are addressing the demand for jobs with a social purpose is by implementing donation incentives as a form of social incentives. With this approach, companies offer employees the opportunity to donate a portion of their earnings. For example, Credit Suisse substituted a part of its wages with donations. Managers in the US were supposed to donate 2.5% of their yearly bonus (Financial Times, 2011). A survey by Adecco (2017) shows using donation incentives to motivate employees is not an isolated example. According to their 2017 survey of 500 US corporations, fewer companies are giving their workers monetary bonuses at all. Among those not providing conventional monetary bonuses, 38% reported they were instead designing ad-hoc programs based on charitable contributions. As firms develop donation incentives, they must carefully consider numerous factors, including the ideal design for such incentive systems. One critical issue that requires further research is the role of social motivations for online gig workers, who typically work on short-term, task-based contracts. Understanding the importance of these factors is essential in creating effective donation incentives tailored specifically for this workforce.

These recent trends of firms redesigning their incentive schemes and a growing body of experimental literature show that donation incentives have received considerable attention. In this paper, we focus on two key aspects of the design elements: the purpose of the donation and the relative size of the donation, which we argue are the most important due to their direct influence on gig workers' decision-making process. The purpose of the donation speaks to gig workers' sense of social responsibility, i.e., their preference to create a positive externality with their actions, while the relative size of the incentive affects the material benefit. By examining how these core elements interact to shape labor supply, we seek to understand the complex interplay between workers' rewards and their preference to create positive externalities.

We set up a 2 (donation purpose)  $\times$  4 (relative donation size) factorial design + a separate treatment without donation in a field experiment in an online gig labor market. We measure whether workers accept to work for a contract that specifies donation incentives (extensive margin) and how much effort they spend on the job (intensive margin). We hire 944 gig workers online to fill in multiple surveys for a fixed payment of \$0.50. After workers complete the surveys we ask them to process another task. The task is to look at ten pictures and describe them by finding keywords. We inform them that this task is entirely voluntary, and when they accept to do the task, we will bonus them an additional \$[0.45/0.25/0.05/0] individual reward and donate \$[0.05/0.25/0.45/0.5] additional to [the National Rifle Association, NRA / the United Nations International Children's

Emergency Fund, UNICEF]. In a separate treatment, we inform them that we will bonus them an additional \$0.5 with no donation purpose mentioned.

With this experimental setup, we can illuminate the impact of two critical design choices of donation incentive contracts. The first critical design choice of the donation incentive is the donation's purpose. If employers decide to use donations as an incentive, they can also choose the purpose for which employees must donate. Since employers face a variety of options, it is imperative to know for which purpose gig workers are willing to work and exert higher efforts.

The existing literature on prosocial behavior suggests that gig workers may be willing to sacrifice financial rewards when their actions can create positive externalities. However, we hypothesize that this willingness is significantly influenced by the perceived nature of the donation purpose—specifically, whether it is viewed as unifying or polarizing. A charitable cause may be considered unifying if it has broad appeal and is less likely to provoke controversy or debate because it addresses issues on which there is broad agreement among people. Conversely, a charitable cause is considered polarizing if it is associated with divisive or controversial issues that cause disagreement or conflict among individuals or groups.

Specifically, polarizing donation purposes, such as donating to the NRA, differ from unifying ones, such as donating to UNICEF, in at least three ways. First, polarizing charities often have a specific political or ideological agenda that may not be shared by all potential gig workers, making it difficult for people with different values to support the cause.<sup>1</sup> Second, gig workers may feel uncomfortable supporting a cause if they perceive polarizing charities as less neutral compared to unifying charities. This perception could lead them to believe that their donation might be used to advance a particular political or ideological agenda, which could deter them from supporting the cause. Third, polarizing charities may be more likely to generate negative image concerns, which could turn some gig workers off from accepting an incentive related to the charity. Unifying charities that focus on issues that are widely regarded as important, such as helping children in need, and that appeal to a broad range of people are generally more successful in attracting gig workers compared to polarizing charities. Polarizing charities often have a more narrow focus and appeal to a smaller group of people, such as those supporting gun rights. These distinctions can impact the perceived positive externality associated with the donation purpose, and consequently, influence the labor supply decisions of gig workers.

<sup>1</sup> Interestingly, roughly half of Americans (53%) favor stricter gun laws (Schaeffer, 2021).

The second design choice of the donation incentive is the relative size of the donation relative to the worker's individual gain. Previous experiments on donation incentives have typically treated donations as an addition to the worker's wage, meaning that workers received a base salary and an additional donation on top of it. This approach assumes that employers have the additional funds to provide such incentives, but this may not always be the case.

In our study, we investigate situations where employers allocate a constant wage sum of \$0.5 for recruiting gig workers, and must determine the optimal distribution between wage and donation incentives across various treatments. This feature ensures fair comparisons between the treatments with respect to the wage sum and eliminates potential biases from overall efficiency considerations (e.g., Engelmann & Strobel, 2004). As such, donation incentives may come at a direct financial cost to the gig worker and could potentially lower their individual gain, making the size of the donation a critical factor in its motivational effects.

We analyze gig workers' behavior at the extensive margin, i.e., their decision to accept the additional job, and at the intensive margin, i.e., their behavior after accepting the job. We measure gig workers' effectiveness on the job with an index based on the number of keywords provided multiplied by the accuracy of those words, and then dividing the result by the time it took to complete the extra job. First, our results show that polarizing donation purposes negatively affect gig workers' decision to accept the additional job. Specifically, across all treatments, gig workers are about 30% less likely to accept the additional job when the donation purpose is polarizing than when the donation purpose is unifying. The difference between polarizing and unifying donation purposes decreases as the relative size of the donation increases, i.e., labor supply for both donation purposes tends to decrease once the relative size of donations becomes too large. Second, those workers who accepted the additional job for a polarizing donation purpose, tend to be 65% less efficient than those working for a unifying donation purpose. We observe that under polarizing donation incentives, workers perform tasks at a slower pace compared to those who work with contracts specifying a unifying donation purpose. Further analysis reveals that workers who work for unifying donation purposes complete the job much faster than those working for polarizing donation purposes. As a supplemental analysis, we compare the behavior of gig workers under a no-donation contract to those with a donation purpose, holding the wage sum constant. At the extensive margin, we observe that gig workers are just as likely to accept the additional job when no donation purpose is offered as they are when the relative donation size for a unifying donation purpose is small. Job acceptance for polarizing donation purposes is lower for all relative donation sizes than when no donation is offered. Interestingly, however, at the

intensive margin, gig workers who work under a contract with no donations work 60% less efficient than those with a unifying donation purpose (and thus similarly effective than those gig workers with a polarizing donation purpose).

Our paper contributes to the literature on donation incentives at gig work by providing evidence of workers' preferences for different donation purposes. Our findings suggest that the donation purpose can significantly influence workers' labor supply or their decision to take on a job with a donation incentive. While previous research has primarily focused on unifying donation purposes (e.g., Burbano, 2016, 2021b; Cassar & Meier, 2020), polarizing ones have received less attention. This oversight is problematic because employers and potential workers may have different perspectives on the donation purpose's unifying nature, which could lead to design choices that do not align with workers' preferences.

Our experimental design allows us to make a second contribution to the literature by studying gig workers' behavior at both the extensive and intensive margins of labor supply (job acceptance and effort provision, respectively). While previous experiments have primarily focused on how donation incentives impact workers who are already committed to a job (e.g., List & Momeni, 2021), our design enables us to examine how donation incentives influence workers' decisions to accept a job in the first place. This crucial aspect of donation incentives has received little attention in the literature. Thus, we answer Burbano's (2021a) call for research on understanding the self-selection of workers through donation incentives. Additionally, our experiment allows us to measure multiple dimensions of effort on the job, which helps us to more clearly identify the potential sources of behavioral impacts of donation incentives compared to previous experiments.

## Background

Economic theory and experimental evidence suggest that, in addition to monetary incentives, non-monetary motives shape employee behavior. For example, workers' relationships with their co-workers, i.e., social bonds (e.g., Ashraf & Bandiera, 2018) or social comparisons (e.g., Cohn et al., 2014), affect their performance. These non-monetary incentives include social incentives that appeal to workers' relationship to the firm's actions or purpose, i.e., a preference for the meaning of work, a passion for pursuing a social mission, and the more general desire to create positive externalities, benefits enjoyed by a third party, through work (Cassar & Meier, 2018).

Researchers have typically operationalized the desire to create positive externalities through work with donation incentives, where workers create a positive externality, i.e.,

a donation to a charitable cause. Others have operationalized the desire to create a positive externality by informing workers about the positive societal impact of the job itself (i.e., by emphasizing the firm's social mission).

Our study aims to examine the relationship between the decision to accept a job and the underlying purpose of the donation incentive, and how it affects workers' decision to accept a job. Thus, we position our experiment between two recent streams of research: the first stream examines how various donation incentive schemes, in which workers' effort decisions directly influence a donation to a charitable cause, affect workers' effort, while the second stream examines how workers' effort decisions are influenced by information they have about their employer's perceived prosociality. While the connection to the first stream of research is clear, the second stream is relevant to our study because we vary workers' perceptions of their employer's impact on a third party by varying the level of polarization between different charity types.

## Related Literature

We divide our literature review into two parts. In the first section, we review experiments that have examined the effect of different types of donation incentives on the intensity of workers' labor supply. In the second section, we review field experiments that have examined the effect of information about employer characteristics on the likelihood that workers will apply for a job.

### Donation Incentives and Intensive Margin of Labor Supply

In Tonin and Vlassopoulos (2015), students are required to enter bibliographic records into an online repository platform. The researchers introduce donation incentives in the form of a lump sum payment or a piece-rate donation to a self-selected charity, and compare behavior to a baseline treatment in which students receive a piece-rate payment. They find that students work more when they can donate to a charity of their choice. Moreover, the results show that the structure or intensity of the donation incentive does not matter for this increase in effort. Interestingly, in their experiment, donation incentives have no effect on the number of correct entries, i.e., accuracy.

In Imas (2014), participants are asked to squeeze a hand dynamometer to measure their force output in Newtons and are paid based on their performance. They receive either \$0.05 or \$2 individually, or the equivalent amount is donated to the Make-A-Wish Foundation (a major charity that grants the wishes of children with life-threatening medical conditions). The results show that when incentives are low, donation incentives motivate participants to push harder on the

dynamometer than when they are rewarded individually. When incentives are high (\$2), no difference is observed.

Charness et al. (2016) conduct a laboratory experiment in which participants are asked to enter data into a database. Their compensation depends on the number of entries they make and is either given directly to them or donated to a charity of their choice. In their experiment, the authors also control for the size of the workers' compensation and find that when compensation is low, participants work more when it is given to the charity than when it is paid to them individually. This effect is reversed when compensation is high.

Dellavigna and Pope (2018) test the influence of donation incentives on effort in an online experiment on mTurk. They pay workers to perform a task (pressing buttons) for a fixed period of 10 min, and offer incentives in which workers can generate donations to the Red Cross by increasing their effort. These incentives include a treatment in which workers donate 1 cent per 100 button presses and another in which workers donate 10 cents per 100 button presses. However, they find that these incentives do not significantly increase effort relative to the baseline treatments in which workers receive a similar payment directly.

Cassar and Meier (2020) conduct an mTurk experiment in which gig workers create marketing slogans for an Italian company. In the main treatments of the experiment, gig workers are either offered monetary incentives of 75 cents or a donation of the same amount to Doctors Without Borders as an incentive. Gig workers submit more slogans when they are offered monetary incentives than when they are offered donation incentives.

In three experiments, Schwartz et al. (2021) examine the effect of donation incentives on the extent to which individuals participate in a task. In the first experiment, participants are asked to participate in a recycling campaign, and in the second and third experiments, they are asked to rate the accuracy of pictures in an online job market. While in the first and second experiments participants are either given individual incentives or told that all of their wages will be donated to the Make-A-Wish Foundation, in the third experiment only 10% of their wages are donated to the same cause. In both experiments, the researchers find that fewer people participate when donation incentives are offered. In the third experiment, the researchers introduced donation incentives that required gig workers to donate 10% of their wages.

Burbano (2021b) conducted a study to test the influence of information about an employer's social responsibility on gig workers through two online experiments. The gig workers were asked to gather information and were presented with information about the employer's social responsibility. The researchers measured the amount of additional weather information that the gig workers gathered and the accuracy with which it was gathered. The



results showed that providing gig workers with information about their employer's social responsibility led to an increase in the extra work they were willing to do.

In a study by Burbano (2016), researchers investigate the reservation wages of gig workers when they are informed about their employer's philanthropic activities. Gig workers are invited to participate in a survey and then asked to complete a picture description task. The researchers ask gig workers about their reservation wage, but vary the information that gig workers have about the employer's philanthropic actions (donations to multiple charities). When gig workers are informed about the employer's philanthropic actions, their reservation wage decreases. This reduction in reservation wage indicates a higher willingness to work for an employer with philanthropic actions.

Burbano (2021a) examines how taking a political stance on a polarizing political issue influences the behavior of gig workers. The specific issue is the availability of gender-neutral bathrooms, while the task the gig workers perform is a translation job. The results of the study suggest that when a company takes a stance on an issue with which employees disagree, it can have a demotivating effect on them, but when a company takes a stance on an issue with which employees agree, it does not have a statistically significant motivating effect. In other words, the study suggests that it may be more beneficial for a company to remain neutral on certain socio-political issues than to take a stance that could potentially demotivate its employees.

Kajackaite (2015) investigates whether workers who avoid information about the negative externality generated by their work perform better in terms of effort donation. In a laboratory setting, the researchers implement a real effort task (decoding letters into two-digit numbers) and operationalize the negative externality through a subsidized piece-rate donation to the NRA in addition to a conventional individual piece-rate. The results showed that workers significantly increased their effort when their effort did not benefit a recipient perceived as socially undesirable. At the same time, workers who deliberately avoid information about the negative consequences of their actions exert relatively more effort.

In the study conducted by Kajackaite and Sliwka (2017), the authors model a corporate social responsibility setting through a controlled laboratory experiment using a conventional choice-effort protocol. The research aims to determine why and under what conditions a charitable act by a principal, in this case a voluntary donation to Médecins Sans Frontières (ranging from 1 to 20 ECU), leads to a positive effect on the agent's motivation to exert effort that benefits the principal. The results indicate that agents choose significantly higher effort levels after the principal's donation, and this effect remains robust to variations in the treatment,

such as changes in the instrumentality or the magnitude of the charitable act performed by the principal.

Studies generally find that more unifying donation incentives have a positive effect on the intensive margin of labor supply. Interestingly, only one study with a different research question uses a polarizing donation purpose and compares it to a treatment where there is no donation incentive (Kajackaite, 2015). When donations are made to a polarizing cause, workers exert less effort.

### Employer Characteristics and Extensive Margin of Labor Supply

In Bó et al. (2013), the authors use a randomized controlled trial in Mexico to investigate the sorting effect of two different wage rates in the public sector. They document how financial incentives of different magnitudes (a low one compared to a high one) lead to self-selection into local government jobs that are characterized by a prominent pro-social mission. In contrast to the conventional sorting effect based on intrinsic motivations found in adverse selection models of mission-oriented jobs, the results suggest that higher wages attract more capable applicants, as measured by their IQ, personality, and public sector inclination. The study finds no evidence of adverse selection effects on motivational aspects.

In a similar line of research, Ashraf et al. (2020) uses a randomized controlled trial in Zambia to examine whether offering career benefits attracts talent at the expense of prosocial motivation during a nationwide recruitment drive for public health services. Consistent with the conventional literature on the pay gap between prosocial and for-profit organizations and its implications for motivational sorting, the study finds that offering career opportunities attracts a pool of less prosocial applicants. However, this trade-off is only observed at the lower levels of the talent spectrum: applicants in the career treatment are on average more talented and equally prosocial compared to those in the motivational treatment. Moreover, workers hired in the career condition perform better on several outcome measures, such as the provision of sanitary inputs, facility utilization, and improved patient health outcomes.

In a study by Hedblom et al. (2022), the authors compare the selection effects of prosocial information (specifically, information about the employer's corporate social responsibility (CSR) initiatives) and financial incentives. They conduct a field experiment and find that providing detailed information about the employer's CSR initiatives significantly increases the applicant pool by 25%. In addition, the use of CSR information as a recruitment tool has a positive effect on employee productivity and accuracy. The main takeaway from these experiments is that financial incentives and information about an employer's CSR initiatives can

have an impact on the type of candidates attracted to public sector jobs and the performance of those hired. The studies found that higher wages and the provision of career-related benefits in public sector jobs attract more capable and talented applicants. However, providing detailed information about an employer's CSR initiatives can broaden the pool of candidates and positively impact employee productivity and accuracy.

In our review of the literature on donation incentives, we identified several issues that may affect the conclusions drawn from the literature. One of the most important issues is the lack of consideration of employees' preferences for specific charities or causes, as many studies use unifying donation purposes without systematically comparing them to polarizing donation purposes. This is a critical factor to consider, as individuals may be more motivated to participate in incentives that align with their values or beliefs. Another issue is the lack of clear justification for the choice of specific donation amounts, as researchers tend to use a wide range of donation amounts. To address this, we designed an experiment to systematically examine the effects of different donation amounts and to study their interactions. A third issue is the lack of attention to selection effects, or the possibility that certain workers may be more likely to choose donation incentives with a particular donation purpose. This could potentially mask any differences that exist between those who participate in these incentives and those who do not. Finally, the literature on donation incentives often fails to account for the fact that the donation itself must be paid for. This overlooks an important consideration that may affect the perceived value of the incentive and the decision to accept a job.

## Theoretical Considerations

Our theoretical considerations are based on an economic approach to studying the behavior of gig workers when accepting a job offer (Lazear & Gibbs, 2017; Lazear & Shaw, 2007). In this approach, workers evaluate the benefits and costs of accepting or rejecting a job offer. From a purely economic perspective, assuming myopic, self-regarding, and pure money-maximizing preferences, we would expect gig workers to accept a job as long as the expected wage exceeds the expected cost. Therefore, gig workers with these preferences will always accept the contract, making no distinction based on the underlying charitable purpose.<sup>2</sup> A review of the literature suggests that gig workers have preferences that go beyond simple monetary incentives. A significant number of workers have preferences for non-monetary components

of the job and respond to donation incentives. This suggests that, in addition to monetary incentives, other factors may play a role in gig workers' decisions to accept or reject a job offer. In particular, the literature shows that gig workers are willing to sacrifice money, i.e. accept a job with a lower wage, if the workers create a positive externality.

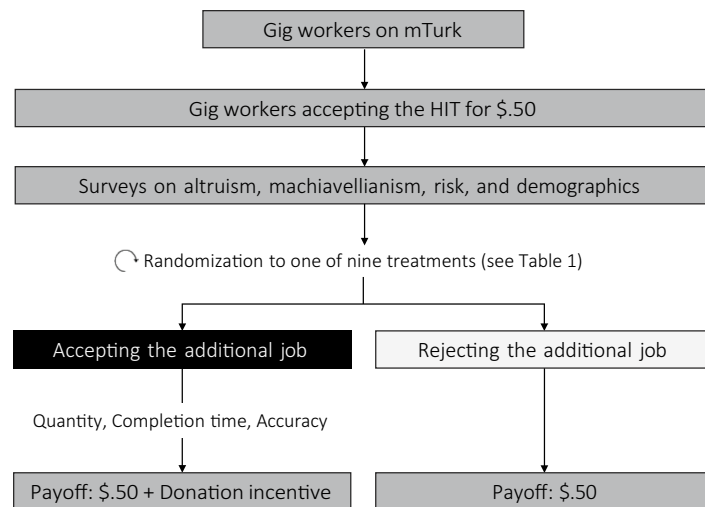
To better understand the potential effects of different treatments, we use the general literature on donation incentives to develop a simple framework. In this framework, gig workers derive utility from the wage they earn and from the positive externalities created by their work. Based on this framework and the previous experimental results cited, we conclude that working at a job that creates a positive externality can compensate for a reduction in one's own wage. In other words, the non-monetary benefits of the job can compensate for a lower wage, and workers may be willing to accept a lower wage in order to work in a job that has a positive impact on others.

In the context of this simple theoretical framework, we can consider the effects of unifying and polarizing donation incentives as an increase in the perceived positive externality of one's work. It is likely that polarizing purposes are perceived as less likely to generate positive externalities. This is because a charity that focuses on a particular political issue or social cause may attract support from those who agree with its mission, but also generate opposition from those who disagree with it. This disagreement may create a perception that giving to a more polarizing social cause will not have a clear and unambiguous positive impact. Therefore, gig workers may be less motivated to accept a job that is associated with a polarizing donation purpose, compared to a job that is associated with a more unifying donation purpose. Gig workers may perceive the latter as being more likely to create positive externalities, which can provide additional non-monetary benefits that can compensate for a lower wage.

**Hypothesis 1** The willingness to accept the additional job for polarising donation purposes is lower than for unifying donation purposes.

Building on the existing literature and this simple framework, we expect that the effect of unifying versus polarizing donation purposes on job acceptance will depend on the relative size of the required donation (Cassar, 2019; Dellavigna & Pope, 2018; Gneezy & Rustichini, 2000). We predict that the worker's decision to accept an additional job will be shaped by her cost–benefit analysis, with the donation serving as the cost and the wage from accepting the additional job serving as the benefit. When the required donation is small, the worker will view it as a minimal cost and the impact of the donation purpose on job acceptance will be stronger. However, as the required donation size increases,

<sup>2</sup> Assuming that effort is costly and not verifiable in our experiment, we can also expect gig workers to exert no effort.

**Fig. 1** Sequence of events

Notes: After the experiment we asked all gig workers *How much do you trust {UNICEF/NRA}?* (1= not at all; 5= very much) and *"Did you know UNICEF/NRA prior to the experiment?"* (1= not at all; 5= very much).

the worker will perceive it as a greater burden and the impact of the donation purpose on job acceptance will decrease. The gig worker will be less likely to be swayed by the purpose of the donation and will consider the larger required donation when deciding whether to accept the additional job.

**Hypothesis 2** The difference in willingness to accept the additional job between unifying and polarising donation purposes will decrease as the relative size of the donation increases.

## Experiment

We approached gig workers on mTurk to participate in multiple surveys in our experiment (see Fig. 1 for the sequence of all events). We only considered workers from the US who have more than 50 approved HITs (Human Intelligence Tasks) and an approval rate above 75%. Our HIT was announced as a “Survey on personality” and we chose this neutral title to avoid attracting workers specifically interested in the study’s subject.<sup>3</sup>

In the description of the HIT, we announced it would take approximately 15 min to complete the survey. Gig workers who wanted to participate were redirected to a homepage

where they were informed about the surveys on personality. For completing all surveys, gig workers received a fixed payment of \$0.50. This wage corresponds to an hourly wage of \$4, which is above the median hourly wage on the platform (Hara et al., 2018).

We administered a series of four surveys. Surveys were presented in randomized order to prevent potential spillover-effects. We planned to stop the HIT once we had collected (in expectation) 100 observations per treatment; when we reached 900 gig workers, we closed the HIT, but still had gig workers active in the survey and ended up with 944 gig workers.<sup>4</sup> In our experiment, 60% of gig workers were female with an average age of 38.1 and an average completion time of 14 min.<sup>5</sup>

<sup>3</sup> Although results from studies on mTurk can not be generalized to the entire US population, there is evidence that people on mTurk look like the US population as a whole. In particular, the gender balance, racial composition, and income of people on mTurk, mirrors the US population (Moss et al., 2020). In this respect, our subject pool is closer to the general population than student samples in laboratory experiments.

<sup>4</sup> This sample size is based on a priori power analysis. We determined our sample size to be large enough to detect a small effect size ( $d=.2$ ) with a power of 80% ( $\alpha=.05$ ). To detect a difference in acceptance decisions between two treatments the power analysis yielded a targeted sample size of 99 workers per treatment.

<sup>5</sup> On average, gig workers spent 10.371 min ( $SD=5.358$ ) completing the survey. Those who accepted the bonus task afterwards spent 10.889 min ( $SD=5.931$ ) on average, while those who rejected the bonus task spent 9.795 min ( $SD=4.577$ ) on average. The survey consisted of a total of 52 questions, including 20 items on altruism, 20 items on Machiavellianism, five items on ethical risk, and five items on financial risk. It also included two questions about gender and age. We believe that the amount of time it took gig workers to complete the survey (about 10 s per question) demonstrates that they are engaged and attentive.



## Treatments and Experimental Task

After the gig workers finished the surveys, we informed them that there was an additional optional job to do.<sup>6</sup> For this additional job, they would receive a bonus  $B$  that would be added to the fixed payment of \$0.50. All of this was displayed on one single screen.<sup>7</sup>

We have implemented this experimental design to address potential concerns about sorting and selection bias when studying the effects of a specific treatment on a group of gig workers (Heckman, 1976). By randomly assigning the treatment to a pre-observed group of subjects and gathering information about the entire pool of subjects that started the survey, we can control for unobservable characteristics that may influence the results of the study. This allows us to compare the treatment outcomes to fully comparable counterfactual groups, both in terms of the extensive and intensive margins. This design neutralizes sorting concerns and avoids latent selection issues because we randomly assign the treatment variations among the subjects.

In the instructions for the additional job, we emphasized that it was voluntary and that gig workers could freely choose to skip it. If they rejected the offer, no bonus was paid, and no donation was made. The instructions also explained the real-effort task, which involved looking at 10 pictures and finding keywords to describe them.<sup>8</sup> Specifically, we asked gig workers to “Look at the picture on the left. Try to think of keywords that describe the picture. Find as many keywords as you can, there is no time limit.” A higher quantity of keywords can be interpreted as a more favorable reaction to the principal’s request.<sup>9</sup>

We chose this real-effort task because it is a common task in online labor markets (Horton & Zeckhauser, 2018; Kässli & Lehdonvirta, 2018). Results from these image-tagging exercises are used to feed algorithms for image-recognition purposes. A standard laboratory real-effort task (e.g., the slider task/encryption task, Gall et al. (2019); Gill and Prowse (2012)) would have been perceived as a rather artificial HIT hosted by mTurk). Furthermore, this task is less ability intensive than for example a calculation exercise or a more creative task such as writing a poem. This task allows

us also to investigate the intensive margin to both observing quantity and quality as well as celerity in accomplishing the task (Fes e al., 2021).

After these instructions—on the same screen—the bonus was explained. Gig workers were randomly assigned to one out of nine experimental conditions in a between-subjects design.<sup>10</sup> We vary the purpose of the donation incentive by designating the beneficiary of the donation as either UNICEF (United Nations Children’s Emergency Fund) or the NRA (National Rifle Association). UNICEF is considered a more unifying social cause, while the NRA is a more polarizing social cause. We chose these two organizations for two main reasons. First, previous research has used UNICEF and the NRA as operationalizations of pro- and antisocial causes (Ariely et al., 2009; Kajackaite, 2015). Second, we wanted to test the borderline conditions of the effectiveness of donation incentives, so we chose organizations that differ to the extreme in participants’ perceptions.<sup>11</sup>

We not only varied the purpose of the donation, but we also varied the relative size of the donation by adjusting the proportion of the gig worker’s wage that was given. This allowed us to explore the effects of both the purpose and the size of the donation on the gig workers.<sup>12</sup> In Table 1, we present an overview of all main treatments. We introduce four different donation sizes. In the treatment 10% (5 cents) are donated, and the gig worker receives 45 cents as an additional monetary bonus. In the treatment 50% (25 cent) are donated, and the gig worker receives 25 cents as an additional individual payment. The treatments 90% and

<sup>10</sup> Table A.1 shows the average values and standard deviation of all observable characteristics and treatments. Since we observe no systematic differences on these observable characteristics our randomization was successful.

<sup>11</sup> After the experiment we asked all gig workers *How much do you trust UNICEF/NRA?* (1 = not at all; 5 = very much) and observe that gig workers trusted UNICEF (3.3) significantly more than NRA (2.55) ( $p < .0001$ , MWU test); which is also in line with the existing literature on social incentives (Ariely et al., 2009; Kajackaite, 2015). Thus, we can safely assume that both organizations are perceived differently. One might also argue that our subjects have different knowledge about the NGOs. When asking “*Did you know UNICEF/NRA prior to the experiment?*” 82% (84%) of our gig workers indicated that they knew UNICEF (NRA) ( $p = .512$ ,  $\chi^2$  test). All donations generated through the decision of the workers were actually made, no deception was involved. In total we donated \$65.05 to UNICEF and \$40.7 to NRA. Total amounts were published on a website and made accessible to all participants when all the data was collected.

<sup>12</sup> To increase the credibility of this statement, we provided subjects with a link to the personal website of the researchers, where we published the total amount donated one week after the end of the study.

<sup>6</sup> DellaVigna et al. (2022) study social preferences at work with a similar design, asking gig workers to do extra work.

<sup>7</sup> See Figures A.1 and A.2 in the Appendix for screenshots of the decision screens.

<sup>8</sup> One example is shown in Figure A.2 in the Appendix.

<sup>9</sup> It is possible that gig workers are motivated to accept low-paying jobs out of fear of not being paid at all if they do not put forth a sufficient effort. This potential issue does not undermine the validity of our inferences between the treatments, as the treatments were randomly assigned and any potential impact of this fear would likely be evenly distributed across all groups.

**Table 1** Treatments, donation incentives, and observations

Treatment	Observations	Total bonus <i>B</i>	Amount of <i>B</i> gig-worker	Given to social purpose
10% UNICEF	101	\$ 0.50	\$ 0.45	\$ 0.05
10% NRA	107	\$ 0.50	\$ 0.45	\$ 0.05
50% UNICEF	103	\$ 0.50	\$ 0.25	\$ 0.25
50% NRA	100	\$ 0.50	\$ 0.25	\$ 0.25
90% UNICEF	113	\$ 0.50	\$ 0.05	\$ 0.45
90% NRA	103	\$ 0.50	\$ 0.05	\$ 0.45
100% UNICEF	108	\$ 0.50	\$ 0	\$ 0.50
100% NRA	98	\$ 0.50	\$ 0	\$ 0.50

The table displays the description of nine experimental conditions with the respective social incentive sizes. Additionally, we ran a without a donation called *No Donation* with 111 gig workers, where no donation was made and the gig worker received \$ 0.50 for accepting the additional job. The results of this treatment will be reported in Sect. “Comparison to a treatment without a donation incentive”

100% are designed accordingly.<sup>13</sup> The first two, 10% and 90%, represent low and high donation sizes, respectively.

The third, 50%, is an intermediate case where the private and social incentives are balanced. The fourth, 100%, represents a large donation size that is more like volunteering for the charity. After reading the instructions and being informed about the bonus, gig workers were asked whether or not they wanted to accept the additional job. If they rejected, they were directed to the end of the HIT otherwise the job started.

## Data Analysis and Variables

We consider the following dependent variables for our analyses.<sup>14</sup> We measure the labor supply of gig workers in two ways: the extensive margin (the decision to accept an additional job) and the intensive margin (the effort put into the job). We are using both quantitative and qualitative measures to assess work effort. For example, we are recording the number of keywords provided, the time taken to

complete the job, and the accuracy of the keywords. We are also combining these three dimensions of effort into a single measure of work efficiency. In order to better understand our measures of accuracy and work efficiency, we provide more detailed explanations below.

To evaluate the accuracy of the keywords submitted by gig workers, we implemented an accuracy rating scheme (Charness & Grieco, 2018). Two raters (one male and one female) were asked to evaluate the accuracy of all the keywords for each of the 10 pictures. To do this, we compiled a list of all the keywords provided for each picture and provided them to the raters, along with the corresponding picture. The raters, who were blind to the research question and treatments, were asked to rate the accuracy of each keyword on a five-point Likert scale (0 = not accurate, 4 = very accurate) after being given an explanation of the gig workers’ task. The raters independently rated the answers to each picture.<sup>15</sup> We observed high consistency between the ratings given by the two raters (Cronbach’s  $\alpha = 0.89$ ). To measure the quality of work provided by each gig worker, we matched the ratings of the keywords to their answers and computed the average rating for each worker. Our procedure ensured that each keyword received the same rating, regardless of the group of keywords it appeared in (e.g., a specific keyword received the same rating regardless of the treatment it was part of).<sup>16</sup>

We measure work efficiency and construct a multidimensional work efficiency index (Fest et al., 2021; Sauermann, 2016):

$$E = Z \left( Quantity \cdot \frac{Accuracy}{Completion\ Time} \right).$$

in which the crude measure of quantity is weighted both by the gradient of accuracy of the delivered output and the time that gig workers took to process the task. This metric captures the multifaceted outcomes of the experiment and is sensitive to potential speed-accuracy trade-offs in multi-dimensional tasks (Förster et al., 2003; Laske & Schroeder, 2017; Hedblom et al., 2022).

## Results

We show descriptive statistics on gig workers’ behavior in our experiment in Table 2. First, we analyze how many gig workers accept the additional job (extensive margin). Second, we explore their behavior once they accept the job

<sup>13</sup> While this amount appears to be relatively low, O’Grady and Vandegrift (2019) show that even for these low amounts, there exists a considerable amount of variability in gig workers’ willingness to donate. The parametrization based on a strict duality between donation and individual gain allows for keeping efficiency constant across variations. As a consequence, all the conditions are fully comparable due to the absence of potential distortions driven by overall welfare considerations.

<sup>14</sup> An overview of all constructs, and their measurements can be found in Table A.3.

<sup>15</sup> We asked raters to rate keywords that matched the picture, but contained typos, with the lowest possible rating.

<sup>16</sup> A post-hoc analysis highlights that these ratings are independent of quantity (Spearman’s  $\rho = -.06$ ,  $p = .186$ ).

**Table 2** Descriptive statistics

Variable	10%		50%		90%		100%		No donation	
	UNICEF	NRA	UNICEF	NRA	UNICEF	NRA	UNICEF	NRA		
Labor supply	0.752 (0.434)	0.589 (0.494)	0.767 (0.425)	0.480 (0.502)	0.442 (0.499)	0.379 (0.487)	0.352 (0.480)	0.163 (0.372)	0.793 (0.407)	
Quantity	56.79 (28.99)	52.14 (25.82)	54.81 (30.07)	53.10 (23.31)	56.34 (42.32)	47.38 (32.89)	59.39 (36.91)	43.19 (18.99)	55.23 (29.05)	
Time needed	255.4 (239.6)	450.2 (271.0)	272.4 (261.2)	478.1 (238.3)	251.1 (231.0)	405.2 (230.9)	496.4 (407.0)	350.9 (130.1)	470.0 (289.1)	
Accuracy	2.511 (0.305)	2.435 (0.350)	2.520 (0.359)	2.375 (0.443)	2.502 (0.302)	2.329 (0.583)	2.483 (0.494)	2.324 (0.318)	2.539 (0.426)	
Work efficiency	0.517 (1.222)	-0.363 (0.204)	0.568 (1.674)	-0.381 (0.236)	0.381 (1.103)	-0.384 (0.264)	-0.321 (0.240)	-0.404 (0.135)	-0.324 (0.251)	

Descriptive statistics of all treatments. Mean values (standard deviations are in brackets). Except work efficiency all variables are unstandardized

(intensive margin). We differentiate between quantity, completion time, accuracy and work efficiency. Third, we supplement our analysis by comparing behavior to a baseline treatment, where no donation purpose was present.

### Extensive Margin: How Does the Purpose of a Donation Incentive Affect Gig Workers' Labor Supply?

Figure 2 displays our main result, which shows differences in job acceptance (measured as the number of gig workers who accepted the additional task) between the treatments.

To test hypothesis 1 we report estimates from a non-linear logistic model in Table 3 that compares the probability of accepting a job under two main treatments: UNICEF and NRA. In model (1) we include a dummy taking the value 1 if the gig worker's contract specified the NRA as a donation purpose and dummies for the respective relative donation sizes (50%, 90%, 100—10% serves as a reference). The negative coefficient shows that the NRA donation has a statistically significant negative impact on labor supply compared to UNICEF. Model (1) further shows that 90 and 100%—*ceteris paribus*—have a significantly lower labor supply. In contrast, a moderate level (50%) does not affect the propensity to accept the job.

In model (2) we include variables interacting the donation purpose with the relative donation size to test hypothesis 2. We find that none of the interaction terms are statistically significant, i.e., the difference between NRA and UNICEF does not change with the relative donation size. In model (3) we additionally include an array of individual control variables. Interestingly, we observe that female and more altruistic people are more likely to accept the additional job.

In conclusion, our analysis reveals that gig workers are less likely to accept a contract that requires them to donate to a polarizing cause (hypothesis 1). There is no evidence to support that the size of the donation moderates this relationship (hypothesis 2).

### Intensive Margins: How do Donation Incentives Affect Gig Workers' Performance on the Job?

We perform four separate two-way ANOVA analyses to evaluate the effect of donation purpose and donation size on quantity, completion time, accuracy, and work effectiveness.

The analysis reveals that there was no statistically significant interactions between the effects of donation purpose and donation size on the quantity ( $F(3, 401) = 0.69, p = 0.5607$ ) and on accuracy ( $F(3, 401) = 0.34, p = 0.7977$ ). In contrast, there is a statistically significant interaction between these factors on completion time ( $F(3, 401) = 5.49, p = 0.0010$ ) and work efficiency ( $F(3, 401) = 2.23, p = 0.0842$ ).

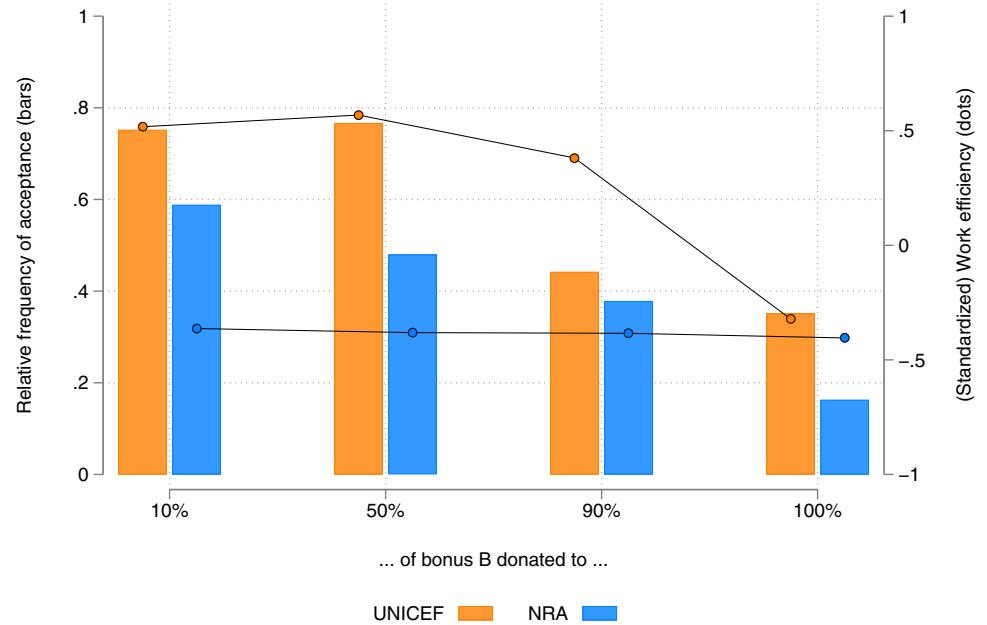
Donation purpose has a statistically significant effect on quantity ( $p = 0.0225$ ), completion time ( $p = 0.0005$ ), accuracy ( $p = 0.0017$ ) and work efficiency ( $p = 0.0000$ ). Donation size does not have a statistically significant effect on quantity ( $p = 0.8905$ ), the time needed to complete the bonus task ( $p = 0.2250$ ), or accuracy rating ( $p = 0.6399$ ). However, donation size does have a marginally statistically significant effect on work efficiency ( $p = 0.0534$ ).

This analysis shows that gig workers, once they decide to accept the additional job, perform worse when working under polarizing donation incentives compared to unifying ones. Specifically, they produce less output, take longer to complete the task, and are less accurate in their work.

### Supplemental Analyses

#### Comparison to a Treatment Without a Donation Incentive

A natural question is how workers in our setting respond to donation incentives relative to a baseline without donation. Note that our theoretical considerations do not cover a comparison between a donation incentive and an incentive without a donation purpose. We, therefore, decided to take an explorative approach in answering this question.

**Fig. 2** Job acceptance and work efficiency

In a separate treatment (henceforth *No Donation*), we offer 111 gig workers a contract that does pay them \$0.5 for accepting the additional job and does not lead to a donation. Of those 111 gig workers 79.3% accept the additional job

(see last column of Table 2 for all descriptive statistics *No Donation*).

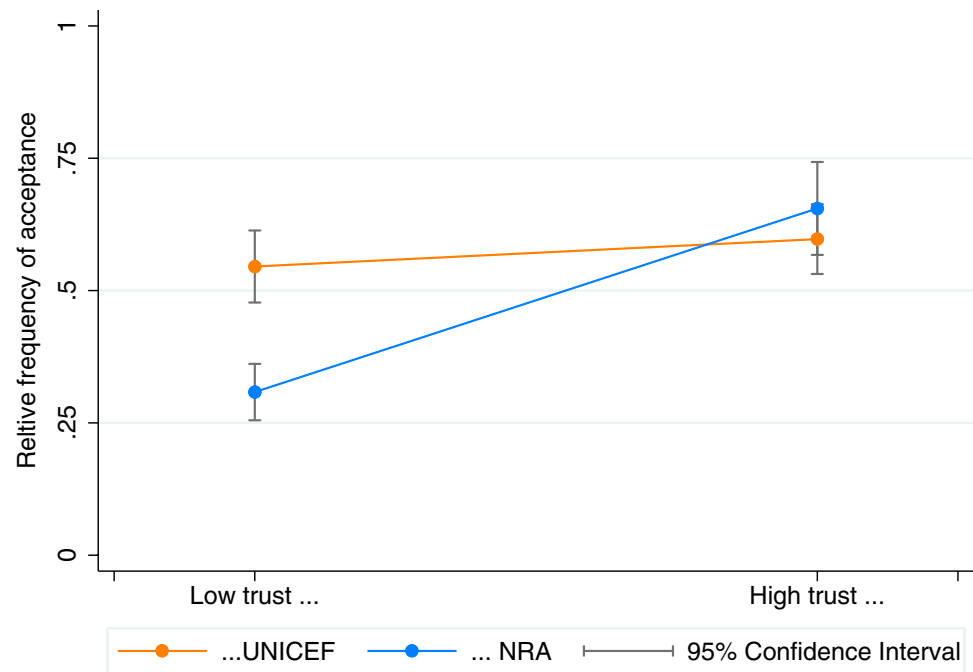
Model (1) in Table A.2 compare gig workers decision to accept the additional job in the *No Donation* treatment with

**Table 3** Job acceptance and donation incentives

Independent variables	Dep. var.: Job acceptance		
	(1)	(2)	(3)
<i>Donation purpose</i>			
1 if NRA	-0.796*** (0.151)	-0.753** (0.303)	-0.863*** (0.327)
<i>Relative donation size</i>			
50%	-0.211 (0.209)	0.080 (0.328)	-0.083 (0.342)
90%	-1.127*** (0.210)	-1.343*** (0.299)	-1.478*** (0.310)
100%	-1.831*** (0.221)	-1.723*** (0.306)	-1.908*** (0.318)
<i>Interaction terms</i>			
NRA X 50%		-0.519 (0.432)	-0.437 (0.451)
NRA X 90%		0.489 (0.411)	0.552 (0.430)
NRA X 100%		-0.270 (0.455)	-0.291 (0.475)
<i>Control variables</i>			
1 if Female			0.710*** (0.170)
Age			-0.004 (0.007)
Risk: financial			0.107 (0.103)
Risk: ethical			-0.077 (0.114)
Altruism			0.386*** (0.087)
Machiavellianism			-0.000 (0.091)
Constant	1.137*** (0.174)	1.112*** (0.231)	0.987*** (0.356)
N	833	833	833
R <sup>2</sup>	0.104	0.110	0.149

Coefficients (robust standard errors in parentheses) of a logistic regression predicting job acceptance. Dependent variable: 1 if gig worker accepts the additional job, 0 if not. Model 3 includes additional control variables: Female, Age, Altruism (z-Score), Risk: financial (z-Score), Risk: ethical (z-Score), and Machiavellianism (z-Score). Significance indicators: \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$

**Fig. 3** Job acceptance and trust rating.



the eight other treatments. As can be seen, both polarizing and unifying donation purposes reduce labor supply when donations are relatively large (100, 90%). When donations are relatively small (50, 10%) polarizing donation purposes reduce labor supply, while unifying donation purposes do not negatively affect gig workers' decision to accept the job. Regarding the measures on the intensive margin, we observe that unifying donation incentives lead gig workers not to provide more keywords relative to the *No Donation* treatment. If anything, polarizing donation incentives (NRA 100%) lead to a decrease in quantity.

### Trust Rating

After conducting the experiment, we asked gig workers to rate their level of trust in UNICEF/NRA on a scale of 1 “Not at all” to 5 “Very much”. In Fig. 3, we show how gig workers' trust in the two organizations affected their decision to accept an additional job. Gig workers who rated their trust in UNICEF as “Not at all,” “A little bit,” or “Somewhat” were classified as having low trust, while those who rated their trust as “Quite a bit” or “Very much” were classified as having high trust.

We find that trust in UNICEF does not significantly impact gig workers' decisions to accept the additional job. Both those with low and high trust in UNICEF are equally likely to accept the job when the donation went to UNICEF ( $\chi^2(1)=1.163$ ,  $p=0.281$ ). However, trust in the NRA does influence gig workers' decisions to accept the additional job. Those with high trust in the NRA are as likely to accept the job as those with high trust in UNICEF, while those with

low trust in the NRA are much less likely to accept the job ( $\chi^2(1)=41.411$ ,  $p<0.001$ ).

An untabulated logistic regression with the decision to accept the additional job as the dependent variable and the donation size ( $\beta = -0.020$ ,  $p=0.000$ ), charity type (“1 if NRA”) ( $\beta = -0.996$ ,  $p=0.000$ ), the trust rating ( $\beta = 0.236$ ,  $p=0.017$ ) and an interaction of charity type and trust rating ( $\beta = 0.497$ ,  $p=0.000$ ) as independent variables confirm this bi-variate comparisons.

### Discussion

In this field experiment, we investigate how two core design elements of donation incentives (i.e., the purpose and the relative size of the donation) interact with and impact labor supply in an online gig labor market. We manipulate the donation incentives by varying the purpose of the donation going either to a unifying or polarizing social cause, and examine how this impacts gig workers' decisions to accept these contracts and the effort they subsequently exert. By analyzing various dimensions of effort provision, we aim to gain insights into the non-monetary motivations of gig workers, who are becoming an increasingly important segment of the labor market. Overall, this study explores the impact of the donation purpose on gig workers' behavior and how it can be used as an alternative to traditional wage incentives.

First, our results show that polarizing donation purposes negatively impact labor supply at the extensive margin focusing on job participation/task acceptance. Gig workers who are offered donation incentives with a polarizing



donation purpose reduce their labor supply as the size of the donation increases. On the other hand, gig workers who are offered donation incentives with a unifying donation purpose tend to have high labor supply, but it decreases once the donations become too large. Second, workers who choose to take a job with a polarizing donation purpose also work less effectively than those working for a unifying donation purpose. Further analysis reveals that workers who work for a unifying donation purpose finish the job much faster than those working for a polarizing donation purpose. When we compare workers' behavior under a contract without any donations to one with a donation purpose, we find that at the extensive margin, a contract without any donations is just as effective as a contract with a unifying donation purpose. At the intensive margin, workers who work under a contract with no donations put in the same amount of effort as those with a polarizing donation purpose.

The effects of donation incentives on labor supply explored in this paper highlight a different mechanism than those observed in recent studies on prosocial incentives and CSR (e.g., Burbano, 2021b; Hedblom et al., 2022). These studies show that mere information about the employer's CSR activities increases labor supply and labor efficiency when the CSR activity is costless for the worker. In this paper, we show that even when workers have to "put their money where their mouth is" and face moderate incentives with unifying donation purposes that reduce their wages, labor supply remains stable but leads to an increase in work efficiency.

What are the potential reasons for the positive effect of unifying donation purposes as opposed to polarizing donation purposes? One possible explanation is that individuals may be motivated by self-image concerns, or a desire to present a positive image of themselves to others (e.g., Tonin & Vlassopoulos, 2013). By participating in a unifying donation campaign, individuals may feel that they are aligning themselves with a cause that is widely viewed as positive and socially desirable, which may enhance their own reputation. If a donation campaign promotes a polarizing cause, even if the individual gig worker supports it, it may not improve their reputation because there are doubts about whether the cause is socially desirable. This desire to enhance their own reputation might lead them to accept the additional job for a unifying donation purpose more likely as compared to a polarizing donation campaign.

Another possibility is that identity concerns may play a role in the effectiveness of unifying donation incentives (e.g., Akerlof & Kranton, 2000, 2005). Individuals may feel a stronger sense of connection to a cause that aligns with their own values and beliefs, and therefore may be more likely to participate in a job that promotes a unifying donation purpose. This stronger sense of connection is

more likely to be absent when the donation purpose is more polarizing.

Reciprocity may also be a factor in the effectiveness of unifying donation incentives (e.g., Fehr et al., 1998). When individuals receive a benefit or favor, they may feel the inclination to return the favor or pay it forward. By participating in a job with a unifying donation purpose, individuals may feel that they are giving back to the community or society in some way, which may be a motivator to take part.

Finally, the concept of the "warm glow" effect may also contribute to the effectiveness of unifying donation incentives (e.g., Imas, 2014). This refers to the positive emotional response that individuals experience when they engage in prosocial behaviors or activities, such as donating to a good cause. By participating in a unifying donation campaign, individuals may experience a sense of satisfaction and happiness that comes from doing something good for others, which may motivate them to take part.

It is likely that a combination of all of these factors contributes to the observed effectiveness of donation incentives for unifying donation purposes relative to polarizing donation purposes. While these potential drivers offer some insight into the underlying mechanisms at play, it will be important for future research to more fully understand the relative importance of each of these factors and how they interact to influence behavior.

## Implications

Our study answers Burbano's (2021a) call for research on understanding how workers select into jobs with different social incentives. In particular, we provide evidence on how workers opt into jobs with different donation incentives and contrast the influence of polarizing and unifying donation purposes.

Our experiment speaks to the literature on mission incentives which suggests that when employees feel that their work is aligned with their personal values and beliefs, they are more likely to be engaged and motivated in their work (Carpenter & Gong, 2016). By donating parts of their wage to a charity, workers in the UNICEF treatments may have felt that their work was contributing to a cause they believed in and that aligned with their personal values. This sense of alignment may have increased their motivation and led to increased work effort.

On the other hand, the workers in the NRA treatment may not have felt the same alignment with the organization's mission, and as a result, may not have experienced the same increase in motivation and work effort. Additionally, it is possible that the polarizing nature of the NRA organization may have caused discomfort among some workers (who in principle dislike NRA, but still accepted the job for their

individual wage), and this discomfort may have reduced their motivation to work.

By examining the differential impact of donation purposes our experiment also speaks to the more general literature on prosocial behavior and charitable giving. As our results indicate the polarizing nature of a charitable cause may impact individuals response towards it. Thus, charitable organizations might rather stress their unifying nature in order to elicit more donations and engagement from potential supporters (e.g., Falk et al., 2021; Shang et al., 2008). Interestingly, when the entire wage is given to the charitable organization (treatment 100%), one would expect to have the most convinced workers in the worker pool. Consequently, one would have expected that their work efficiency increases (relative to the other donation sizes) as they seemingly align very much with the underlying donation purpose. Instead we observe that their work efficiency decreases. This indicates that prosocial outcomes are more likely, when donations are coupled with personal gains. While in our case this pertains to a small share that is given to the worker, for charitable organizations this means that it might be advisable to stress potential individual benefits of helping others in order to achieve more donations.

Our study has implications for the design of donation incentives in practice. Our experiment suggests that the polarizing nature of the donation purpose can lead to differential selection effects among employees. In particular, when a large share of workers is needed, it is advisable to use unifying donation incentives that are not too large (Kajackaite, 2015) accompanied with some personal rewards to attract workers. This finding is particularly relevant for companies that rely on gig workers or temporary staff.

In fact, some firms have already realized the beneficial nature of hybrid donation incentives. As an example, in 2016, Box.com, a tech company, introduced a new employee referral program that rewards employees for successful referrals by giving them the opportunity to donate \$500 to a nonprofit organization and the chance to win a free vacation. This program generated 300 successful referrals in one year, a 40% increase compared to the previous referral program which offered cash bonuses (Breckenridge, 2018; Farah, 2019; Forman, 2019; Huynh, 2017). This example illustrates how a hybrid incentive system that combines the prosocial motivation of donation with a personal reward can effectively increase employee motivation.

Another example is Salesforce, a software company, which has implemented an innovative program that encourages employee volunteerism. The company offers all employees seven paid days off annually to engage in volunteer work. As a reward for their dedication, Salesforce's top 100 volunteer employees receive a \$10,000 grant each to donate to their chosen non-profit organizations. Additionally, the company selects 10 of its top volunteers for an

all-expense-paid trip as further recognition of their efforts (Hart, 2021; Neil, 2018; Salesforce, 2023). This program demonstrates how companies can use donation incentives as a tool to align employees' values with the company's mission, increase employee engagement and motivation, and make a positive impact on the community.

## Limitations

While this study is not without limitations, it does offer opportunities for future research. The online labor market used in this paper is an ideal context for identifying causal relationships of selecting donation incentive contracts. However, it is essential to note that gig workers are entirely anonymous and separate from their employers in these settings. Future work could explore how less anonymous work relationships shape workers' attitudes towards donation incentives. We also note that we consider rather extreme cases of polarizing and unifying donation purposes, either giving a part of the wage from the gig worker to a particularly unifying cause (UNICEF) or a polarizing cause (NRA). In many cases, organizations have multiple and perhaps less extreme beneficiaries of corporate donations. Future research might look into these more intermediate cases.

In our study, we focus on mandatory donations that are deducted directly from gig workers' payments. Thus, it is clear that gig workers' decisions have an immediate impact on their own wages. This immediate impact may be less pronounced in practice, where companies donate cumulative amounts to a charitable cause. However, corporate donations and workers' wages are sometimes in direct conflict, for example when companies have profit-sharing or other forms of performance-based pay. In these cases, the money donated to social causes is taken directly from the company's profits and cannot be used for profit-sharing or performance-based bonuses. Our experiment and results are informative for these cases.

Future research can examine how donation incentives interact with task difficulty. Previous psychological literature has shown that the relationship between the speed at which a person performs a task and the accuracy of their work may vary depending on the level of difficulty of the task. When a task is easy, people tend to be able to complete it quickly and accurately. On the other hand, when a task is difficult, people tend to take longer to complete it and make more mistakes (e.g., Vandierendonck, 2021). Since we observe—if anything—a positive relationship between speed and accuracy, our task of finding keywords related to images may be considered an easy task. Therefore, future studies could use more cognitively demanding tasks to study the impact of donation incentives on labor supply.

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**Data availability** The data that support the findings of this study are openly available at <https://doi.org/10.17605/OSF.IO/25K98>.

## Declarations

**Conflict of Interest** The authors have no relevant financial or non-financial interests to disclose.

**Ethical Approval** This study has received no approval of an institutional ethics committee. The reason is that at the time of the study, the authors institutions had no ethics committee or something similar. The authors confirm that the study still complies with the highest ethical as laid down in the 1964 Declaration of Helsinki and its later amendments.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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