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## Defaults in charitable giving

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# Defaults in charitable giving

Jonathan Schulz\*, Petra Thiemann†, Christian Thöni‡

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## Abstract

In an experimental setup we investigate the effect of defaults on charitable giving. In the treatment group, subjects can either specify a charity of their choice, or select one from a default list of five well-known charities; in the control group we do not provide the list. In a sample of 869 subjects we find that offering a list of default charities doubles both the fraction of donors and the aggregate amount of donations. These findings point to the importance of psychological factors like affective reactions in donation decisions.

*JEL-Classification:* C93; D64; H41; L3

*Keywords:* charitable giving; defaults; donation; affective reactions

## 1 Introduction

The determinants of charitable giving receive increasing attention – often with a policy focus on mechanisms that boost donations (Andreoni & Payne, 2013). Matching grants (Karlán & List, 2007), raffles (Morgan & Sefton, 2000), and bundling can increase revenue (McManus and Bennet, 2011; Gneezy et al. 2010). Furthermore, audience effects or social pressure influence the propensity to donate (DellaVigna et al. 2012).

This study shows that a simple change in the elicitation of donations can substantially increase revenue, virtually at no cost. We ask experiment

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participants whether they would like to donate a percentage of their earnings to a charity of their choice. In the treatment group, we provide participants with a list of five widely known charities and a blank field in which subjects can indicate any charity. In the control group, we provide just a blank field. We observe a pronounced treatment effect: Providing a list of five default charities *doubles* donations relative to the control condition.<sup>1</sup> Our study complements the results reported by Altmann et al. 2014, who investigate defaults in the suggested *amount* to donate. They find that changes in default amounts trigger changes in the distribution of donated amounts, but the revenue for charities remains unaffected.

## 2 Design

Our experiment was part of a 20-minute pen-and-paper study conducted at a Swiss university. The experiment was carried out in 38 tutorials of a mandatory undergraduate course, with on average 23 students per tutorial. All tutorials took place on the same day with the exception of two postponed tutorials. In total 869 participants completed the donation question.

The study consisted of financially incentivized experimental tasks (elicitation of risk, time, trust and confidence measures). Participants were informed that, once all participants handed in their sheets, we would draw one participant per tutorial to receive the experimental earnings of one randomly selected task. Selected participants received on average CHF 94 ( $\approx$  \$100). All other participants were not reimbursed.

Before the recipient of the earnings was selected, we asked all participants whether they would like to donate a percentage of their (potential) experimental earnings to a charity of their choice. Conditional on donating they had to indicate a charity. In the control group (*NoList*) the subjects had to fill in a blank field. In the treatment group (*List*), the subjects could choose from a list of five charities (WWF, Red Cross, Doctors without Borders, Amnesty International, and UNICEF)<sup>2</sup>, and a blank field (see appendix A.1).

The randomization into treatment and control conditions took place at the tutorial level and resulted in 19 tutorials per condition. Students were assigned to tutorial groups by university administrators, but could indicate

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<sup>1</sup>Our defaults are slightly different from the defaults discussed in the literature on retirement savings (Madrian & Shea, 2001), where the default is the option which is implemented when the individual remains inactive. Other than providing a default option we provide a default list, still requiring the participants to take an active decision.

<sup>2</sup>We conducted a similar study one year before ( $n = 1081$ , *NoList* only). These were the five most popular charities. The fraction of donors as well as the distribution of donations in the year before was virtually the same as in *NoList* of the present study (20.6% vs. 21.9%,  $p = 0.576$ , Fisher exact test).

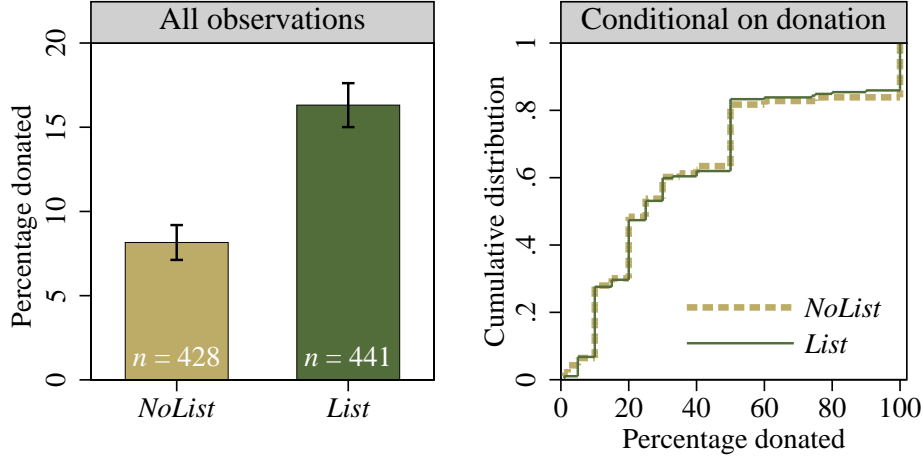


Figure 1: Left panel: Average percentage donated by treatment. Spikes indicate standard errors. Right panel: Distribution of percentage donated conditional on donating.

a preferred time of day.<sup>3</sup> We stratified the randomization according to the time of the tutorial to avoid time of day as a confounding factor. Therefore, we can exclude systematic sorting into treatment and control conditions.

The subjects also took a version of the cognitive reflection test (CRT, Frederick, 2005; see appendix A.2). The CRT assesses individuals' ability to suppress an intuitive and spontaneous wrong answer in favor of a reflective and deliberative right answer, and thus measures to what extent an individual's decision is governed by fast decision heuristics. The CRT measure allows us to test whether individuals who tend to succumb to fast heuristics are particularly vulnerable to a manipulation by defaults.

Furthermore, our data includes an alternative measure for pro-social preferences. Upon enrollment students had the option to donate CHF 12 (approximately \$13) to the university's fund for students in need ("social fund") by clicking a box online. We link their decisions to our experimental data to test for stability in social preferences. In our sample, 12 percent of students donated to the social fund.

### 3 Results

We find a large treatment effect: The fraction of donors doubles from 21.9 percent in *NoList* to 43.9 percent in *List* ( $p < .001$ , Fisher exact test). This sharp increase in the willingness to donate at the extensive margin leads to a doubling of aggregate donations. The left panel of Figure 1 shows that

<sup>3</sup>All tutorials took place on the same weekday.

Table 1: Linear probability models for decision to donate

	Dependent variable: Donate (binary)			
	(1)	(2)	(3)	(4)
List (D)	0.224*** (0.033)	0.215*** (0.037)	0.205*** (0.035)	0.294*** (0.076)
Social fund (D)	0.125** (0.047)	0.087 (0.072)		
List $\times$ social fund		0.073 (0.094)		
CRT score			-0.001 (0.018)	0.023 (0.024)
List $\times$ CRT score				-0.046 (0.035)
Female (D)	0.070** (0.032)	0.070** (0.032)	0.081** (0.034)	0.080** (0.034)
Constant	0.174*** (0.029)	0.179*** (0.030)	0.192*** (0.062)	0.120 (0.079)
$F$ -test	18.6	16.1	12.8	9.9
Prob $> F$	0.000	0.000	0.000	0.000
$R^2$	0.070	0.071	0.056	0.059
$N$	845	845	781	781

*Notes:* OLS estimates. Dependent variable is decision to donate (binary). Independent variables are the treatment dummy (List), contribution to the social fund, the CRT score, interactions, and a gender dummy. Not included are observations where information on covariates are missing. Robust standard errors, clustered on tutorial, in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

the average percentage donated increases from 8.2 percent to 16.3 percent. Consequently, the percentage donated conditional on donating is almost identical in the two treatments (37.5 vs. 37.2 percent). Surprisingly, the cumulative distributions of the percentages chosen by the donors in the right panel of Figure 1 show almost identical results across treatments. Thus, the defaults nudge a larger share of the population into donating, i.e., they influence the extensive margin of the donation decision. By contrast, we do not observe any behavioral changes at the intensive margin.

We use our measures for pro-social preferences and cognitive abilities to investigate the determinants of the probability to donate, using linear probability models (Table 1). Model (1) confirms that the treatment increases the probability to donate by about 20 percentage points on average, controlling for gender<sup>4</sup> and the social fund indicator. Women are 7 percentage points more likely to donate than men, and contributors to the social fund are 13 percentage points more likely to donate than non-contributors. This is tentative evidence for stability in pro-social preferences (cf. Volk et al. 2012). In Model (2) we examine differences in the treatment effect between social fund donors and non-donors. The point estimate of the interaction term suggests a stronger treatment effect for the social fund donors, but the effect is far

<sup>4</sup>38% of the students in our sample are female.

from significant. In Models (3) and (4) we perform the same analysis for the CRT score. In neither Model (3) nor Model (4) we find evidence that cognitive abilities significantly relate to the donation decision or the effect of defaults on donations. The interaction term points, however, in the direction that students scoring high on CRT tend to react less to the introduction of the list. Thus, more reflective participants seem to be stimulated less by the defaults.

## 4 Conclusion

A subtle change in the choice environment leads to a large change in behavior: Providing participants with a list of charities doubles both the fraction of donors and the revenue for charities. Conditional on donating, we observe almost identical distributions of the percentage donated in the two conditions. One explanation for our large treatment effect may be that students willing to donate in the *NoList* do not know any charitable organization. To us this seems unlikely, given that charitable organizations are omnipresent.

More likely, the list may subtly stimulate an emotional response. Subjects in the *List* condition may readily associate concrete pictures of individuals in need with the names of the organizations. By contrast, subjects in the *NoList* condition may refrain from thinking about a specific charitable cause, and thus preclude affective stimuli that would induce them to donate. This is consistent with the findings that affective reactions induce non-selfish behavior. Schulz et al. (2014) find that cognitive load, intended to increase affective decision making, leads to more altruistic choices in mini-Dictator Games. Rand, Greene, and Nowak (2012) show that time pressure increases contributions in a Public Goods Game, whereas reflection decreases contributions. This explanation is also in line with Andreoni and Rao (2011), who find that people avoid situations that trigger non-selfish behavior.

To sum up, our results strongly highlight the importance of ‘choice architecture’ (Thaler & Sunstein, 2008) in donation decisions. A closer investigation of the psychological underpinnings of our treatment effects is left for further research.

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## A Appendix

### A.1 Treatment intervention

Figure A1 displays the elicitation of the donation choices in the *List* condition, while Figure A2 displays the elicitation in the *NoList* condition (translated from German). While both choice sets do not restrict the potential recipients of the donation, the *List* condition displays five widely-known charitable organizations.

17. If your student ID is randomly drawn: Would you like to donate part of your earnings for a charitable organisation of your choice? (This input is binding – a bank transfer will be directly carried out in the pay-out room.)
- ☐ No
- ☐ Yes,    percent directed to:
- ☐ WWF
  - ☐ Red Cross
  - ☐ Mediciens Sans Frontières (Doctors without borders)
  - ☐ Amnesty International
  - ☐ UNICEF
  - ☐ other \_\_\_\_\_

Figure A1: *List* condition. Participants are provided with defaults in addition to the blank field

17. If your student ID is randomly drawn: Would you like to donate part of your earnings for a charitable organisation of your choice? (This input is binding – a bank transfer will be directly carried out in the pay-out room.)
- ☐ No
- ☐ Yes,    percent directed to \_\_\_\_\_.

Figure A2: *NoList* condition. Participants are only provided with a blank field

## A.2 Cognitive Reflection Test

The cognitive reflection test is a widely used measure to assess individuals' ability to suppress an intuitive and spontaneous wrong answer in favor of a reflective and deliberative right answer. It consists of three questions. To minimize the probability that subjects can copy their answer from their neighbor (or obtain the correct answer from participants of earlier sessions), we created six question sets consisting of questions that are very similar or identical to the three questions by Frederick (2005). Each subject answered one question set (three questions). The CRT question sets are balanced across the *List* and *NoList* condition.

In Models (3) and (4) of Table 1, CRT is coded as the number of correct questions. We have the following distributions of CRT: 12% of individuals answered no question correctly, 19% answered one question correctly, 33% answered two questions correctly, and 36% answered three questions correctly. Individuals with missing answers are excluded (10% out of 869 subjects). The treatment effects of Models (3) and (4) in Table 1 are robust to the inclusion of CRT-levels as indicator variables.

### 1. Bat-and-ball-type questions

- A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost? (Set 1)
- A stock and a stock-option cost \$110 in total. The stock costs \$100 more than the stock-option. How much does the stock-option cost? (Set 2)
- A motorist and his car weigh 1100kg in total. The motorist weighs 1000kg less than the car. How much does the motorist weigh? (Set 3)
- A cyclist and his cycle weigh together 120kg. The cycle weighs 100kg less than the cyclist. How much does the cycle weigh? (Set 4)
- A broom and a dustpan weigh 1.1 kg in total. The broom weighs 1 kg more than the dustpan. How much does the dustpan weigh? (Set 5)
- A bottle of wine and a corkscrew cost together 60 CHF. The bottle of wine costs 50 CHF more than the corkscrew. How much does the bottle of wine cost? (Set 6)

### 2. Machine-type questions

- If it takes 10 concrete mixers 10 minutes to mix 10 tons of concrete, how long would it take 100 concrete mixers to mix 100 tons of concrete? (Set 1)

- If it takes 5 bulldozers 5 minutes to level 5  $m^2$ , how long would it take 10 bulldozers to level 10  $m^2$ ? (Set 2)
- If it takes 10 workers 10 minutes to make 10 widgets, how long would it take 50 workers to make 50 widgets? (Set 3)
- If it takes 5 printers 5 minutes to print 5 posters, how long would it take 100 printers to make 100 posters? (Set 4)
- If it takes 10 people 10 minutes to make 10 widgets, how long would it take 100 people to make 100 widgets? (Set 5)
- If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? (Set 6)

### 3. Lily-pad-type questions

- On a corn field vermin are spreading. Every day the affected area doubles in size. If it takes 32 days until the whole field is affected, how long would it take until half of the field is affected? (Set 1, see Frederick (2005))
- In a lake, there are algae. Every day, the affected area doubles in size. If it takes 100 days until the whole lake is affected by algae, how long would it take until half the lake is affected? (Set 2)
- On a wheat field vermin are spreading. Every day the affected area doubles in size. If it takes 60 days until the whole wheat field is affected, how long would it take until half of the field is affected? (Set 3)
- On a lake an oil film is spreading. Every day, the area doubles in size. If it takes 24 days for the oil film to cover the entire lake, how long would it take for the oil film to cover half of the lake? (Set 4)
- In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? (Set 5)
- On a meadow there are primrose. Every year the area where primrose are growing doubles in size. If it takes 10 years for the primrose to cover the entire meadow, how long would it take for the primrose to cover half of the meadow? (Set 6)