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**Working Paper**

## Charitable giving: Framing and the role of information

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# Charitable Giving: Framing and the Role of Information

*Claudia Keser, Maximilian Späth*



# Charitable Giving: Framing and the Role of Information

Claudia Keser & Maximilian Späth\*

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## Abstract

*We study the impact of information on the effectiveness of a taking frame in the context of charitable giving. In our laboratory experiment, either the decision maker (giving frame) or the recipient (taking frame) receives an endowment. In both cases, the decision maker can freely decide the final allocation of the money. In addition to the frame, we vary the level of information that we provide about the worthiness of the receiving charity. In keeping with our theoretical prediction, participants donate significantly more, when the decision is framed as taking rather than as giving. However, this framing effect is smaller, the more information we provide on the charity.*

**Keywords:** Information, Giving, Taking, Charity, Experiment

**JEL classification:** C91, D64, D80

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## 1. Introduction

Decades of research have shown the impact of framing on decision making. In particular, whether a decision is framed positively or negatively seems to have an effect on decisions and the perception of situations (e.g., Tversky and Kahneman 1981, Andreoni 1995, Liberman et al. 2004, Dufwenberg et al. 2011). Also, in the context of charitable giving, it apparently makes a difference how messages are framed (Chang and Lee 2009, Das et al. 2008). Charitable giving can be related to giving in a dictator game, where the recipient is a charity (e.g., Eckel and Grossman 1996). A frame change in the dictator game can be created by moving from a giving to a taking frame. This implies a switch of property rights, while keeping the full decisional power of the dictator untouched. Under a *giving frame*, the decision maker initially holds the property rights, and any action by this individual to change the initial allocation is framed positively as giving. Under a *taking frame*, it is the other person or institution that holds the property rights, and any change of the allocation of resources is framed negatively as taking.

Previous experimental studies have shown an ambiguous picture concerning the effect of moving from the giving to a taking frame on (charitable) giving in the dictator game. Grossman and Eckel (2015) observe no effect. However, Zarghamee et al. (2017) and Korenok et al. (2018) find higher donations to charities under the taking frame. Similarly, some studies with student participants as recipients report no frame effect (Dreber et al. 2013, Kettner and Cecatto 2014, Smith 2015, Chowdhury et al. 2017), while other studies find higher transfers to the recipient under the taking frame than under the giving frame (Oxoby and Spraggon 2008, Krupka and Weber 2013, Korenok et al. 2014, Brosig-Koch et al. 2017).<sup>1</sup> Alt et al. (2018) report that the impact of the frame depends on the relation between dictator and recipient: only in the case that the recipient belongs to the dictator's ingroup do they observe higher transfers to the recipient under the taking frame.

The goal of our study is to deepen the understanding of what determines the impact of the taking frame (relative to the giving frame) on charitable giving. To this end, we take into account results from another strand of the donation literature originating in Eckel and Grossman (1996), who

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<sup>1</sup> Note that the literature that we consider is different from the one originating in List (2007) and Bardsley (2008), where the action space of the dictator varies with the frame. It is also different from studies such as by Goswami and Urminsky (2016) and Fiala and Noussair (2017), where the default donation but not the frame is altered.

assert that altruistic giving needs context. Brañas-Garza (2006) and Bachke et al. (2017) find that information about the poor third world recipients or the charity increases donation. Aguiar et al. (2008) claim that the provision of this information may lead to a reduction of moral distance, which in turn increases the degree of moral obligation to donate and thus the actual donation level. They argue that giving out of a sense of moral obligation is one potential facet of kindness.

Thus, in our study, we investigate the interaction of a reduction of moral distance (by increasing the information about the relevance of the charity) and the move from a giving to a taking frame. Our conjecture is that this interaction might explain the observed differences in the frame effects. From a simple utility-maximization model presented in the next section, we derive three testable hypotheses with respect to the individual and joint effects of the interventions. We anticipate (1) higher donations under the taking than under the giving frame, (2) higher donations the more information is provided and, our main hypothesis, (3) a smaller effect of the frame the more information is provided.

In our laboratory experiment, we follow Grossman and Eckel (2015) and apply a design that is based on a dictator game (Kahneman et al. 1986, Forsythe et al. 1994). In this game, we compare the donations under a giving frame to those under a taking frame. The recipient in our experiment is the *International Federation of the Red Cross and the Red Crescent* (IFRC), a charity which is rather unknown among German students. In a 3 x 2 design, we vary the (positive) information that we provide about the charity (*noinfo*; *someinfo*; *muchinfo*) and the frame (GIVE; TAKE).

As hypothesized, we find that the impact of the taking frame decreases with the amount of information provided about the charity. This main result is driven by three findings. First, in all three information regimes, we find significantly higher donations under the taking than the giving frame. Second, increasing the information level from *noinfo* to *someinfo* or *muchinfo*, we find a significant increase in donations under the giving frame. Third, under the taking frame, we find no significant differences in donations between the information regimes.

## **2. Utility-maximization model**

Consider, with a slight modification, a theoretical utility-maximization framework defined by Konow (2010). It considers a mix of conditional altruism that relates to moral norms on the one

hand and some feature of unconditional altruism (the feeling of kindness or a warm glow as postulated by Andreoni 1989) on the other hand. An individual donor's utility  $U$  is given by

$$U = u(e - x) - f(x - \varphi) + \alpha g(x) \quad (1)$$

where  $e$  is the dictators endowment, and  $x$  is the amount that the dictator gives to the charity. The first term is  $u(e - x)$ , which is the dictator's material utility, with  $u'(\cdot) > 0$ ,  $u''(\cdot) < 0$ . The second term  $f(\cdot)$  represents the disutility of a deviation of the dictator's donation from the giving norm,  $\varphi$ . Assume that  $-f(\cdot)$  is strictly concave in  $x$  (with  $f''(\cdot) > 0$ ) and taking its maximum where the dictator is giving the norm.<sup>2</sup> The third equation relates to a warm glow or moral satisfaction of donating, with  $g'(\cdot) > 0$  and  $g''(\cdot) < 0$ , and a parameter  $\alpha \geq 0$ , capturing the level of warm glow, depending on the moral distance to the recipient of the donation (see also DellaVigna et al. 2012).

Following Krupka and Weber (2003), we assume that the (taking versus giving) frame impacts the giving norm  $\varphi$ .<sup>3</sup> In a dictator game, the typical assumption is an equity norm of giving 50 percent of the endowment in the case that the recipient has no own endowment (Andreoni and Bernheim 2009). If the recipient is a charity, a neediness norm might request to donate more than that. However, whatever the norm of giving (as long as it is below 100 percent) in a giving framework, we assume that the giving norm is higher in a taking framework (Krupka and Weber 2003).

Furthermore, we assume context dependence of the warm glow of giving, which is represented in the parameter  $\alpha$ . This parameter can be increased by a reduction of the moral distance via the provision of information about the charity (see, Aguiar et al. 2008).

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<sup>2</sup> The assumption here is that norm compliance can be associated with positive feelings and violation of norms with negative feelings.

<sup>3</sup> In their seminal paper, Krupka and Weber (2003) find that an allocation that leaves the recipient (in their case another subject) with less than half of the endowment is perceived as less socially appropriate under the taking frame than under the giving frame.

It is easy to demonstrate in our model (see, Konow 2010, Proposition 4 and Appendix A) that a utility-maximizing dictator's donation changes in direct relationship to, though by less than, any change in the giving norm:

$$0 < \frac{dx^*}{d\varphi} < 1 \quad (2)$$

where  $x^*$  is the solution to the dictator's utility-maximization problem. Since

$$\frac{dx^*}{d\varphi} = \frac{-f''}{u'' - f'' + \alpha g''} \quad (3)$$

it is also straightforward to see that if we increase the warm-glow factor  $\alpha$  from  $\alpha^L$  to  $\alpha^H$ , the effect of the norm change is reduced:

$$\frac{-f''}{u'' - f'' + \alpha^H g''} < \frac{-f''}{u'' - f'' + \alpha^L g''} \quad (4)$$

Similarly, applying the implicit function theorem to solve for  $x = x^*(\alpha)$ , substituting this into the first-order condition for utility maximization and differentiating with respect to  $\alpha$ , we get for the effect of the warm-glow factor:

$$\frac{dx^*}{d\alpha} = \frac{g'}{f'' - u'' - \alpha g''} > 0 \quad (5)$$

From this we can derive the following hypotheses.

Hypothesis 1: *Ceteris paribus*, donations will be higher under the taking frame than under the giving frame.

This is due to our assumption that moving from a giving to a taking frame increases the norm  $\varphi$  and equation (2) implying that the optimal donation  $x^*$  increases in  $\varphi$ .

Hypothesis 2: Ceteris paribus, donations will be higher, the more (positive) information about the charity is provided.

This is due to our assumption that information about the charity increases the warm-glow factor  $\alpha$  and equation (5) implying that the optimal donation  $x^*$  increases in  $\alpha$ .

Hypothesis 3: The more detailed information about the charity is provided, the smaller will be the impact of the taking frame relative to the giving frame on donations.

This directly follows from equation (4).

### 3. Experimental Design

We conduct a dictator game experiment (Kahneman et al. 1986, Forsythe et al. 1994) with a charity as the recipient (Eckel and Grossman 1996). Donations in our experiment go to an organization that is rather unknown among students in Germany: the *International Federation of the Red Cross and Red Crescent* (IFRC). This differs from Grossman and Eckel (2015) and Korenok et al. (2018) in two aspects. First, in their studies, participants could choose the recipient of the donation from a list of well-known charities. Second, even though the *German Red Cross* is part of the IFRC and the two share common goals, our participants have significantly less knowledge about the IFRC than about the well-known *German Red Cross*.<sup>4</sup> Thus, we have created a vague context, in which we can vary the information about the worthiness of the organization.

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<sup>4</sup> We elicited the self-reported knowledge of the IFRC and the knowledge of the *German Red Cross*, based on a Likert scale from 1 (very little knowledge) till 7 (very much knowledge). We found significantly different averages of 1.91 for the IFRC and 3.59 for the German Red Cross (Wilcoxon signed-rank test:  $N = 239$ ,  $p = 0.000$ ).



Our treatment variation follows a 3x2 between-subjects design. In the first dimension, we vary the information regarding the charity that we give to the participants (and thus supposedly the  $\alpha$  of the warm-glow component in our utility model). In the second dimension, we vary the frame between GIVE and TAKE (and thus supposedly the norm  $\varphi$  in our utility model). While the participants are still sitting in the waiting room, we instruct them about some general rules of conduct for the experiment together with the information that, depending on the outcome of the experiment, money might be transferred to a charity after the experiment. Depending on the treatment, we provide more or less information on the charity. In the treatments GIVE-*noinfo* and TAKE-*noinfo*, we inform participants exclusively about the name of the charity and state that the *German Red Cross* is part of this organization. In the treatments GIVE-*someinfo* and TAKE-*someinfo*, we provide some additional positive information. This information is taken from the official website of the IFRC and includes the size of the organization, the URL of its website, their key areas of work, and their function. An experimenter reads the information aloud to the participants. In the treatments GIVE-*much* and TAKE-*much*, we provide the name of the charity, read the information and, additionally, show a video to the participants.<sup>5</sup> The video was produced by the *Austrian Red Cross*. It presents the seven fundamental principles of the IFRC, both in a written form and read aloud in German language. The video includes some background music and seven pictures that display typical activities of the IFRC. The presentation of both the additional information and the video significantly increased the participants' self-stated knowledge of the IFRC.<sup>6</sup> A transcript of all instructions and charity information provided in the waiting room can be found in Appendix A.

Then, we guide the participants to their randomly assigned private cubicles, where they find their endowments of ten euros. On a computer screen we present further instructions (Appendix A). One half of the participants in a session is privately informed that the money is intended for themselves (giving frame: GIVE-*noinfo*, GIVE-*someinfo*, GIVE-*muchinfo*). They can freely decide to decrease their initial amount and thus increase the amount going to the charity. Choosing the default option by typing in '0' leads to a zero donation. The other half of the

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<sup>5</sup> Title: "Rotkreuz-Grundsätze". URL: <https://www.youtube.com/watch?v=rVfOdY30miI>. Uploaded by "Markus Hechenberger" on Jan 20<sup>th</sup>, 2014. Duration of 3:20 minutes. 8.075 views on April 8<sup>th</sup>, 2020.

<sup>6</sup> The self-reported knowledge of the IFRC (consider Footnote 4 for the elicitation method) increased from the *noinfo* (1.68) over the *someinfo* (1.87) to the *muchinfo* environment (2.13). The difference between the *noinfo* and *muchinfo* environment is statistically significant (Wilcoxon rank-sum test: N = 161, p = 0.003).

participants is informed that the money is intended for the charity (taking frame: TAKE-*noinfo*, TAKE-*someinfo*, TAKE-*muchinfo*). The participants can freely choose to decrease the initial amount of the charity in order to increase their own. Choosing the default option by typing in ‘0’ leads to a donation of the full endowment.

The donation decision is embedded into a questionnaire to be filled in at a computer. Irrespective of their decision to donate or not, participants have to wait thirty seconds until they can exit the decision stage. This strongly diminishes differences in transaction costs between treatments. Participants are aware of the fact that only once they have the chance to donate. The questionnaire is longer than a usual post-experimental survey in order to extend the experiment to a duration of about 45 minutes. Critical inquiries, which might potentially prime prosocial behavior, are placed after the decision. We do not use words such as ‘taking’, ‘giving’ or ‘donation’, neither before nor during the decision process.

The donation process is double blind in the sense that neither the charity nor other participants can observe the amount contributed by an individual person. The experimenters are unable to relate donations to names or faces of the participants. Curtains make sure that the participants’ decision making is unobserved. Payment is conducted by the participants themselves. No show-up fee is included in the payment. Participants find the endowment split into several coins.<sup>7</sup> Photos of a private cubicle and a typical presentation of the money can be found in Appendix B. To reduce sounds, the money is placed upon a matting. After the experiment, participants take the money that they assigned to themselves. Donated money is left on the table. Participants fill in a receipt, fold it and put it into a box. Instructions make clear that only persons unfamiliar with the purpose and the design of the experiment will handle the receipts for accounting.

We conducted our experiment in 2017 till 2019 at the University of Göttingen. We used zTree (Fischbacher 2007) and ORSEE (Greiner 2015). In total, 239 participants took part in 22 sessions. On average there were 40 participants in each treatment. Within each session, the treatments varied in the frame dimension. The variation regarding the information dimension took place between sessions. The average share of females was 54 percent. The average age of participants was 24 years of age. No significant differences between treatments with respect to

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<sup>7</sup> Participants receive three 2 euro, two 1 euro, five 0.20 euro and ten 0.10 euro coins. Between zero and 10 euros every amount in increments of 0.10 euro is feasible.

these characteristics can be detected.<sup>8</sup> In a few cases, the indicated donation did not coincide with the amount of money left in the cabin. If the participant mentioned having made a mistake in the donation decision stage, we base the analysis on the actual donation (amount of money left in the cabin). Otherwise, we continue working with the donation decision.

## 4. Results

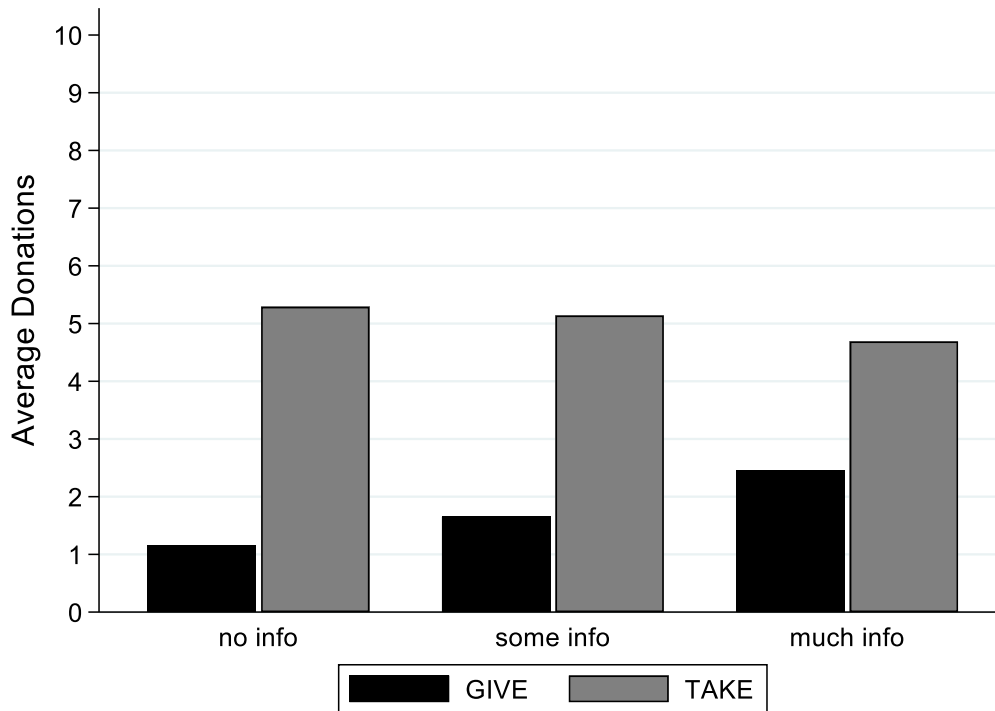
We denote the Wilcoxon rank-sum test as *rank-sum test* and the Fisher's exact test as *exact test*. All tests are two-sided and we require  $p = 0.05$  for significance.

### 4.1. Average donations

The average donations to the IFRC vary substantially between treatments. In *GIVE-noinfo*, participants on average donate 11.6 percent of their endowment of ten euros, while they donate 52.9 percent in *TAKE-noinfo*. In *GIVE-someinfo*, they donate 16.5 percent of the endowment and in *TAKE-someinfo* 51.4 percent. Finally, they donate 24.6 percent of the endowment in *GIVE-muchinfo*. In *TAKE-muchinfo*, they donate 46.9 percent. Fig. 1 visualizes the average donations.

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<sup>8</sup> We find no significant differences between treatments for gender (Fisher's exact test,  $p = 0.208$ ) and age (Kruskal-Wallis test,  $p = 0.855$ ).



**Fig. 1** Average donations in euros by frame (GIVE / TAKE) and information (*none, some, much*)

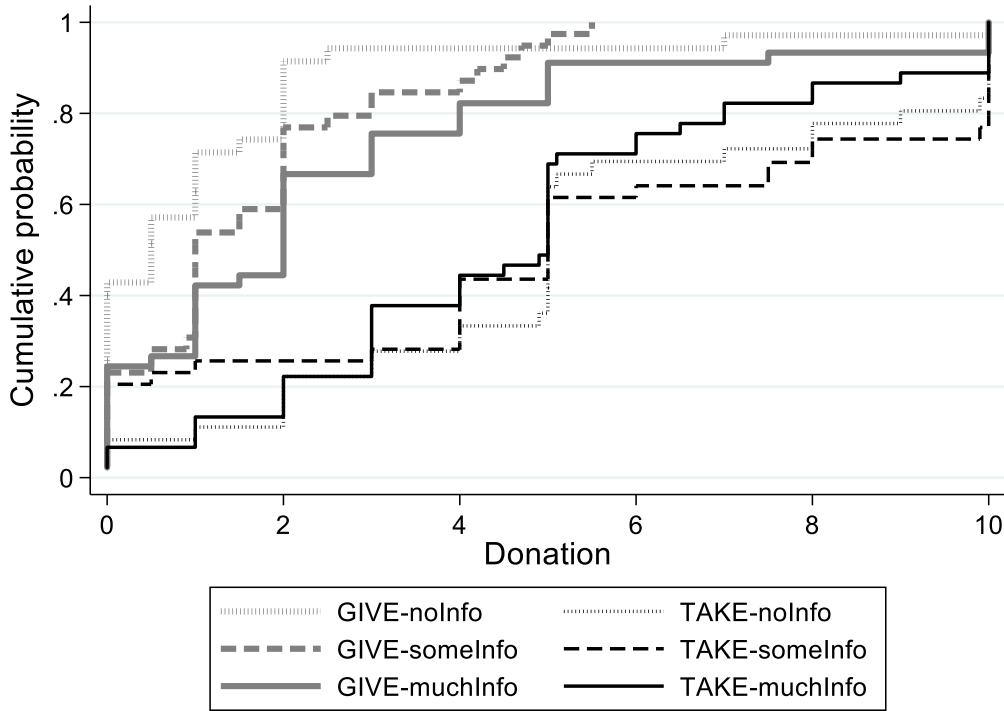
Based on rank-sum tests, we observe that, irrespective of the information environment, donations are significantly higher under the taking than the giving frame.<sup>9</sup> Likewise, the cumulative distribution function presented Fig. 2 shows a first-order stochastic dominance of the taking frame relative to the giving frame for all three information domains. These findings support Hypothesis 1. We find no statistical evidence that the variation in information would affect donations under the taking frame (Kruskal-Wallis test:  $p = 0.685$ ). This result is confirmed by pairwise comparisons.<sup>10</sup> Under the giving frame, however, we find some statistical evidence of information effects (Kruskal-Wallis test:  $p = 0.011$ ): donations increase when *some* information and when *much* information is provided (in comparison to the *none* information domain).<sup>11</sup> The difference in donations between *much* information and *some* information is statistically

<sup>9</sup> Rank-sum tests: GIVE-*noinfo* vs TAKE-*noinfo*:  $p = 0.000$ ; GIVE-*someinfo* vs TAKE-*someinfo*:  $p = 0.000$ ; GIVE-*muchinfo* vs TAKE-*muchinfo*:  $p = 0.001$ .

<sup>10</sup> Rank-sum tests: TAKE-*noinfo* vs TAKE-*someinfo*:  $p = 0.788$ ; TAKE-*noinfo* vs TAKE-*muchinfo*:  $p = 0.603$ ; TAKE-*someinfo* vs TAKE-*muchinfo*:  $p = 0.380$ .

<sup>11</sup> Rank-sum tests: GIVE-*noinfo* vs GIVE-*someinfo*:  $p = 0.032$ ; *none*-GIVE vs GIVE-*muchinfo*:  $p = 0.005$ .

insignificant.<sup>12</sup> Hence, we find support for Hypothesis 2 on the positive impact of information on donations for the giving frame but not for the taking frame.



**Fig. 2** Cumulative distribution of donations by frame (GIVE / TAKE) and information (*none, some, much*)

We find some evidence that the impact of the taking frame decreases with the information provided. The taking frame (in comparison to the giving frame) increases donations by 41 percentage points (of the endowment) in the *none* information environment, by 35 percentage points in the *some* information domain, and by only 22 percentage points in the *much* information environment. We run two ordinary least-squares regression presented in Table 1 for which we adopt the difference-in-difference approach to our setting. In a model without interaction, exhibited in Column (1), we find a positive coefficient of the taking frame dummy ( $p < 0.001$ , baseline is the giving frame). The dummies for both types of additional information (pooled over both frames) are not statistically different from zero (baseline is no information). The regression

<sup>12</sup> Rank-sum test: GIVE-*someinfo* vs GIVE-*muchinfo*:  $p = 0.279$ .

results presented in Column (2) exhibit that the coefficient of the interaction term between *some* information and the taking frame is not significantly different from zero. Importantly, we find the interaction between *much* information and the taking frame to have a significantly negative coefficient ( $p = 0.032$ ). This suggests that providing *much* information decreases the impact of the frame on donation giving. This is supporting evidence for Hypothesis 3.

**Table 1** Ordinary least-squares linear regression on donation.

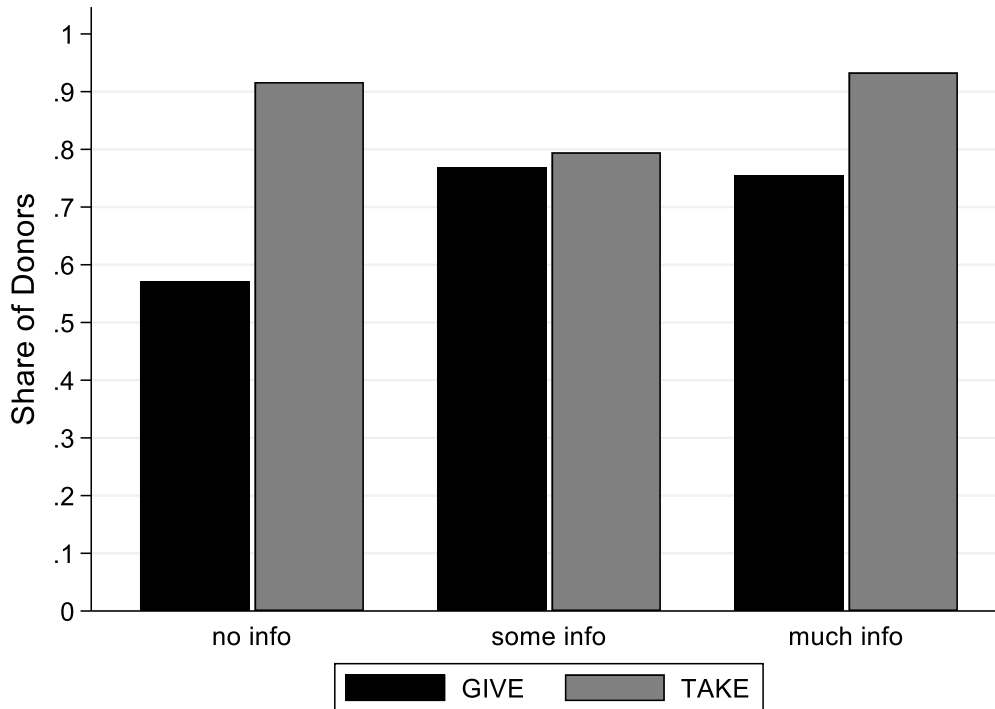
Donor	(1)	(2)
Taking frame	3.207*** (0.359)	4.132*** (0.657)
<i>Some</i> information	0.164 (0.456)	0.492 (0.644)
<i>Much</i> information	0.342 (0.442)	1.298* (0.623)
<i>Some</i> information x taking frame		-0.642 (0.907)
<i>Much</i> information x taking frame		-1.898* (0.878)
constant	1.626*** (0.377)	1.157* (0.467)
N	239	239
R <sup>2</sup>	0.254	0.269

Note: Standard errors in parentheses. Reference category for the taking frame: giving frame. Reference category for *some* information jointly with *much* information: *no* information. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

#### 4.2. Share of donors

Since the decision whether to donate or not is most likely altered only for those who are at the threshold, it comes to no surprise that we find a less clear picture with respect to the interaction between framing and information at the extensive margin (see Fig. 3). Nevertheless, the results point in the same direction as those for average donations. In the *none* information environment, we find a share of donors of 0.57 under the giving frame and a share of 0.92 under the taking frame. In the *some* information domain, the share of donors is 0.77 under the giving and 0.79

under the taking frame. In the *much* information environment the impact of the frame is stronger than in the *some* information domain. In the *much* information environment, we observe a share of 0.76 under the giving and of 0.93 under the taking frame.



**Fig. 3** Share of donors by frame (GIVE / TAKE) and information (*none, some, much*)

Based on non-parametric statistics, we find a significantly higher share of donors under the taking than under the giving frame when considering the *none* information and the *much* information environment.<sup>13</sup> In the *some* information domain, no significant effect of the frame is detectable.<sup>14</sup> We find no significant effect of information on the share of donors under the taking frame (exact test:  $p = 0.151$ ).<sup>15</sup> Similarly, we find no significant effect of information on the share of donors under the giving frame (exact test:  $p = 0.118$ ).<sup>16</sup> The two probit regressions on the share

<sup>13</sup> Exact tests: GIVE-*noinfo* vs TAKE-*noinfo*:  $p = 0.001$ ; GIVE-*muchinfo* vs TAKE-*muchinfo*:  $p = 0.039$ .

<sup>14</sup> Exact test: GIVE-*someinfo* vs TAKE-*someinfo*:  $p = 1.000$ .

<sup>15</sup> Binary exact tests confirm this result: TAKE-*noinfo* vs TAKE-*someinfo*:  $p = 0.195$ ; TAKE-*someinfo* vs TAKE-*muchinfo*:  $p = 0.103$ ; TAKE-*noinfo* vs TAKE-*muchinfo*:  $p = 1.000$ .

<sup>16</sup> Binary exact tests confirm this result: GIVE-*noinfo* vs GIVE-*someinfo*:  $p = 0.085$ ; GIVE-*someinfo* vs GIVE-*muchinfo*:  $p = 1.000$ ; GIVE-*noinfo* vs GIVE-*muchinfo*:  $p = 0.096$ .

of donors presented Table 2 follow the same logic as the regressions presented in Table 1 on average donations. The results exhibited in Column (1) confirm that information does not affect the share of donors, while the taking frame (pooled over all information level) has a significantly positive impact ( $p = 0.001$ ). Table 2, Column (2) shows that providing *some* information decreases the impact of the frame on the decision to donate ( $p = 0.022$ ). The difference in difference between the *much* and the *none* environment points in the same direction but is statistically not significant.

**Table 2** Probit regression on donating a positive amount.

Donor	(1)	(2)
Taking frame	0.659** (0.194)	1.203** (0.368)
<i>Some</i> information	0.094 (0.232)	0.556 (0.308)
<i>Much</i> information	0.364 (0.235)	0.512 (0.295)
<i>Some</i> information x taking frame		-1.116* (0.486)
<i>Much</i> information x taking frame		-0.394 (0.510)
constant	0.380 (0.184)	0.180 (0.213)
N	239	239
Pseudo R <sup>2</sup>	0.060	0.083

Note: Standard errors in parentheses. Reference category for the taking frame: giving frame. Reference category for *some* information jointly with *much* information: *no* information. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

## 5. Conclusion

This study analyzes the impact of information on the take-vs-give-framing effect in the domain of charitable giving. In our theoretical framework, individuals derive utility from the warm glow of



giving and can avoid disutility by giving an amount equal to a norm. We assume that information increases the warm glow and that moving from the giving to the taking frame increases the giving norm. Building on the utility framework, we derive our main hypothesis that information reduces the effect of the frame.

Our experiment provides clear evidence for this hypothesis. The difference in donations between the taking and the giving frame is smaller, the more information about the charity we provide to our participants. Reading aloud information on the key tasks of the charity instead of just stating the name (the *International Federation of the Red Cross and Red Crescent*) leads to a decrease of the impact of the frame on average donations, although this effect is statistically not significant. The additional presentation of video with the main principles of the organization leads to a significant decrease in the power of the taking frame.

This main result is grounded on three pillars. First, we find that the taking frame leads to higher donations irrespective of the information provided. Second, we find that information increases donations under the giving frame. Third, the analysis shows that participants do not react to the information when the decision is presented under the taking frame. For our theoretical framework, the last result implies that either the norm effect strongly outweighs the warm glow effect, or that the taking frame is to some extent a substitute to information. We leave this question open to future research.

Our findings can potentially be applied to three domains, where the comparison between taking and giving frames seems particularly relevant. First, following the speculation by Korenok et al. (2014), our study might contribute to the discussion on the impact of Opt-In versus Opt-Out systems in organ donations (Johnson and Goldstein 2003, Abadie and Gay 2006, Coppens et al. 2008, Rudge and Buggins 2012, and Ugur 2017). In an Opt-In system (giving frame), individuals are non-donors until they opt-in to register as a donor. In an Opt-Out system (taking frame) agents are considered to be donor until they opt-out. The second domain is online privacy (Johnson et al. 2002), where users either are asked to allow their personal data to be collected (giving) or must request that their data is not collected (taking). The third domain is church taxation. In Germany, for example, individuals have to leave their religious group, which they mostly entered by birth, to stop paying the tax (taking). In most other countries like the US, an

individual may decide to enter a religious group and start to pay church tax or to voluntarily begin donating (giving).

The results imply that the taking frame, in the various settings, might increase the number of organ donor registrations, the share of individuals allowing their personal data to be collected, or the share of citizens paying church taxes. Yet, we need to consider three critical points. First, the increasing effect of the frame might be smaller in a well-informed society. Second, the strong effect of the frame in a *noinfo* environment causes doubt that a donation under a taking frame may be seen as an informed consent. Third, a taking frame decreases the effectiveness of other strategies to promote prosocial behavior such as the provision of information.

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## Appendix

### A. Instructions and inquiries

General instructions to be read aloud in the waiting room (English/German):

#### English

You are participating in an economic experiment on decision-making. You can earn money dependent on your decisions. You make your decisions anonymously and isolated from the other participants. From now on, we ask you not to speak to any other participant until the experiment is over. Please switch off your mobile phones and put them away.

In the course of the experiment, you will be asked to complete a survey. Please complete the survey as thoroughly as possible. The survey will be displayed to you in a computer in the neighboring room. If you have a question while completing the survey, please come forward individually.

After the experiment, money might be transferred to the *International Federation of the Red Cross and Red Crescent* (IFRC). The *German Red Cross* among others belongs to this organization.

#### German

Sie nehmen an einem wirtschaftswissenschaftlichen Entscheidungsexperiment teil. Abhängig von Ihren Entscheidungen können Sie bares Geld verdienen. Sie treffen dazu Ihre Entscheidungen anonym und isoliert von anderen. Ab jetzt, bitten wir Sie nicht mehr mit anderen zu kommunizieren, bis das Experiment beendet ist. Bitte schalten Sie zudem Ihre Mobiltelefone aus und stecken Sie sie weg.

Im Laufe des Experiments werden Sie gebeten einen Fragebogen auszufüllen. Füllen Sie den Fragebogen bitte so gewissenhaft wie möglich aus. Der Fragebogen wird Ihnen an einem Computer im Nachbarraum angezeigt. Falls Sie während des Ausfüllens eine Frage haben, so kommen Sie bitte einzeln nach vorne.

Nach dem Experiment wird gegebenenfalls Geld an die *Internationale Rotkreuz- und Rothalbmond-Bewegung* (IFRC) transferiert. Zu dieser Organisation gehört unter anderem das *Deutsche Rote Kreuz*.

**<some information and much information environment only:>**

[The *International Federation of the Red Cross and Red Crescent* (IFRC) is the world's largest humanitarian network. Their website is accessible via [www.ifrc.org](http://www.ifrc.org). Together with its 190 national societies they are focusing their work in three key areas: 1) disaster response and recovery, 2) development and 3) promoting social inclusion and peace. Their task is to coordinate in the case of an international catastrophe, the promotion of the cooperation between the national societies and the representation of the national societies in the international context.]

We are not connected to the organization. However, you can be sure that the transferred money actually reaches the organization. A receipt will be posted on the bulletin board of the chair of microeconomics after the conclusion of the experiment.

**<much information environment only:>**

[We are now showing you a video, that points out the fundamental principles of the *International Federation of the Red Cross and Red Crescent*. The video is freely available on [www.youtube.com](http://www.youtube.com).]

We now ask you to go to the computer with your participant number. Please close the curtain and keep it close until the end of the experiment. This ensures that you are not observed during the survey. To start the survey, you must click the Next button. Thank you for your participation!

[Die *Internationale Rotkreuz- und Rothalbmond-Bewegung* ist das weltweit größte humanitäre Netzwerk. Ihre Internetpräsenz ist unter [www.ifrc.org](http://www.ifrc.org) erreichbar. Zusammen mit ihren 190 nationalen Gesellschaften fokussiert sie sich auf drei Kernbereiche: 1.) Hilfe und Wiederaufbau bei Katastrophen. 2.) Entwicklungsarbeit und 3.) Förderung von Frieden und sozialer Inklusion. Ihre Aufgabe ist die Koordination im internationalen Katastrophenfall, die Förderung der Kooperation zwischen den nationalen Gesellschaften und die Repräsentation der nationalen Gesellschaften im internationalen Kontext.]

Wir stehen in keiner Verbindung zu dieser Organisation. Sie können sich jedoch sicher sein, dass das transferierte Geld die Organisation tatsächlich erreicht. Eine Quittung wird nach Abschluss des Experiments am Schwarzen Brett der Professur für Mikroökonomik ausgehängt.

[Wir zeigen Ihnen nun ein Video, das die Grundsätze der *Internationale Rotkreuz- und Rothalbmond-Bewegung* aufzeigt. Das Video ist auf [www.youtube.com](http://www.youtube.com) frei verfügbar.]

Wir bitten Sie nun, sich zu dem Computer mit Ihrer Teilnehmernummer zu begeben. Bitte schließen Sie den Vorhang und halten Sie ihn bis zum Ende des Experiments geschlossen. Dies gewährleistet, dass Sie während Ihren Entscheidungen unbeobachtet sind. Um mit dem Fragebogen zu beginnen, müssen Sie auf die <Weiter>-Taste klicken. Vielen Dank für Ihre Teilnahme!



Transcript of the video (English/German):

**English**

Humanity

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavors, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect human life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all people.

Impartiality

It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavors to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality

In order to continue to enjoy the confidence of all, the movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

**German**

Menschlichkeit

Die internationale Rotkreuz- und Rothalbmond-Bewegung, entstanden aus dem Willen, den Verwundeten der Schlachtfelder unterschiedslos Hilfe zu leisten, bemüht sich in ihrer internationalen und nationalen Tätigkeit, menschliches Leiden überall und jederzeit zu verhüten und zu lindern. Sie ist bestrebt, Leben und Gesundheit zu schützen und der Würde des Menschen Achtung zu verschaffen. Sie fördert gegenseitiges Verständnis, Freundschaft, Zusammenarbeit und einen dauerhaften Frieden unter allen Völkern.

Unparteilichkeit

Die Rotkreuz- und Rothalbmond-Bewegung unterscheidet nicht nach Nationalität, Rasse, Religion, sozialer Stellung oder politischer Überzeugung. Sie ist einzig bemüht, den Menschen nach dem Maß ihrer Not zu helfen und dabei den dringendsten Fällen den Vorrang zu geben.

Neutralität

Um sich das Vertrauen aller zu bewahren, enthält sich die Rotkreuz- und Rothalbmond-Bewegung der Teilnahme an Feindseligkeiten wie auch, zu jeder Zeit, an politischen, rassischen, religiösen oder ideologischen Auseinandersetzungen.

### Independence

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

### Voluntary service

It is a voluntary relief movement not prompted in any manner by desire for gain.

### Unity

There can be only one Red Cross or one Red Crescent Society in any one country. It must be open to all. It must carry its humanitarian work throughout its territory.

### Universality

The International Red Cross and Red Crescent Movement. In which all Societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

### Unabhängigkeit

Die Rotkreuz- und Rothalbmond-Bewegung ist unabhängig. Wenn auch die Nationalen Gesellschaften den Behörden bei ihrer humanitären Tätigkeit als Hilfsgesellschaften zur Seite stehen und den jeweiligen Landesgesetzen unterworfen sind, müssen sie dennoch eine Eigenständigkeit bewahren, die ihnen gestattet, jederzeit nach den Grundsätzen der Rotkreuz- und Rothalbmond-Bewegung zu handeln.

### Freiwilligkeit

Die Rotkreuz- und Rothalbmond-Bewegung verkörpert freiwillige und uneigennütige Hilfe ohne jedes Gewinnstreben.

### Einheit

In jedem Land kann es nur eine einzige Nationale Rotkreuz- oder Rothalbmond-Gesellschaft geben. Sie muss allen offen stehen und ihre humanitäre Tätigkeit im ganzen Gebiet ausüben.

### Universalität

Die Rotkreuz- und Rothalbmond-Bewegung ist weltumfassend. In ihr haben alle Nationalen Gesellschaften gleiche Rechte und die Pflicht, einander zu helfen.

On screen instructions (English/German):

**English**

You will find 10 euros on the mat. These are destined for you [for the IFRC]. On this mat there are three 2 euro coins, two 1 euro coins, five 20 cents coins and ten 10 cent coins. Please count the money and put it back on the mat.

While filling in the survey, you will have once the opportunity to reduce your initial endowment in order to increase the amount dedicated to the IFRC. [... to reduce the IFRC's initial endowment in order to increase the amount dedicated to you.] No other participant will know how you decided. Regardless of how you decide, you will have to wait 30 seconds to complete the survey.

**German**

Auf der Matte vor Ihnen finden Sie 10 Euro. Diese sind für Sie [für die Internationale Rotkreuz- und Rothalbmond-Bewegung] bestimmt. Auf dieser Matte befinden sich drei 2 Euro Münzen, zwei 1 Euro Münzen, fünf 20 Cent Münzen und zehn 10 Cent Münzen. Bitte zählen Sie das Geld nach und legen es anschließend zurück auf die Matte.

Während des Ausfüllens des Fragebogens werden Sie 1x die Möglichkeit erhalten, den für Sie vorgesehenen Betrag auf Matte zu reduzieren, um damit den Betrag für die Internationale Rotkreuz- und Rothalbmond-Bewegung zu erhöhen. [... den für die Internationale Rotkreuz- und Rothalbmond-Bewegung vorgesehenen Betrag auf Matte zu reduzieren, um damit den Betrag für Sie zu erhöhen.] Kein anderer Teilnehmer wird erfahren, wie Sie sich entschieden haben. Unabhängig davon, wie Sie sich entscheiden, müssen Sie 30 Sekunden warten, bis Sie den Fragebogen weiter ausfüllen können.

Decision stage (English/German):

**English**

You have now the opportunity to reduce your endowment in order to increase the amount dedicated to the IFRC. [... to reduce the endowment of the IFRC in order to increase the amount dedicated to you.]

Before your decision:

The amount dedicated to you in EUR: 10.00 [0.00]

The amount dedicated to the organization in EUR: 0.00 [10.00]

Please enter how much you would like to transfer from your initial endowment to the account of the organization. [... from the charity's initial endowment to your account.] Enter an amount between 0 euros and 10.00. Choose an amount rounded to 0.10 euro.

Transferred amount (in EUR): \_\_\_\_\_

After the 30 seconds, you can confirm the amount by clicking OK.

**German**

Sie haben nun die Möglichkeit den für Sie bestimmten Betrag zu reduzieren, um damit den Betrag für die Internationale Rotkreuz- und Rothalbmond-Bewegung zu erhöhen. [... den für die Internationale Rotkreuz- und Rothalbmond-Bewegung bestimmten Betrag zu reduzieren, um damit den Betrag für Sie zu erhöhen.]

Vor Ihrer Entscheidung:

Der für Sie bestimmte Betrag in Euro: 10.00 [0.00]

Der für die Organisation bestimmte Betrag in Euro: 0.00 [10.00]

Bitte tragen Sie ein, wie viel Sie von dem für Sie bestimmten Betrag zu dem für die Organisation bestimmten Betrag übertragen möchten. [... wie viel Sie von dem für die Organisation bestimmten Betrag zu dem für Sie bestimmten Betrag übertragen möchten.] Tragen Sie dazu einen Betrag zwischen 0 Euro und 10.00 Euro ein. Wählen Sie einen auf 0,10 Euro gerundeten Betrag.

Übertragener Betrag (in Euro): \_\_\_\_\_

Nach Ablauf der 30 Sekunden können Sie den Betrag mit einem Klick auf OK bestätigen.

## B. Photos



Cubicle with computer, keyboard, mouse, money, a pen and the receipt.



Presentation of the money.