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How to Design the Ask? Funding Units vs. Giving Money

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Abstract

Unit donations are an alternative fundraising scheme in which potential donors choose how many units of a charitable good to fund, rather than just giving money. Based on evidence from an online experiment with 8,673 participants, we demonstrate that well-designed unit donation schemes can significantly boost giving above and beyond the standard money donation scheme. A decomposition of the underlying mechanisms shows patterns consistent with the conjecture that unit donations increase impact salience and leverage donors' cognitive biases by changing the metric of the donation space. The potential increase in donations likely outweighs the complications of designing a unit scheme, but requires expert handling of the choice of unit sizes.

JEL Classifications: D64, H4, L31

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1 Introduction

Charities traditionally "simply ask for money" (Landry et al., 2010): Potential donors are presented with a charitable cause and then asked what monetary contribution they would like to make. The fundraising landscape, however, also sees charities employing an alternative solicitation form, namely "unit donation" schemes. There, potential donors are asked how many units of a charitable good they wish to fund. A prominent example with global presence is the United Nations World Food Program that conducted unit-based fundraising drives to provide food to children in need. Through an app called ShareTheMeal, donors were informed that feeding one child for a day cost \$0.80 and then asked to indicate the number of feeding days ("meals") that they would like to fund ("share"). Over 160 million meals have been provided through the organization's app so far.

The unit donation scheme is common in humanitarian aid. For example, UNICEF Canada provides a whole online shop for specific charitable goods, such as a set of measles vaccines for C\$18, a reusable sanitary kit for girls for C\$38, or a water pump for C\$455. Similar shops are implemented by other large organizations, including World Vision and the Catholic Relief Services. The scheme is also used by environmental charities. For instance, in the Monarch Butterfly Habitat Exchange program of the Environmental Defense Fund, donors have been offered the option to sponsor acres of milkweed habitat for \$35 per acre. In the Plant A Tree program of the Jewish National Fund, donors are asked to choose the number of trees to be planted at \$18 a tree.

In each of the examples, the charities could also have "simply asked for money" to provide meals or protect areas of habitat. The choice in favor of a unit donation scheme must therefore reflect a belief among fundraising practitioners that, given the right circumstances, they perform better than traditional "money donation" schemes. This difference in performance has to justify, for the charity, the complications that asking for units typically adds to the task. These complications stem from at least three features along which the typical unit scheme differs from money schemes: It (i) provides information about the cost per unit of the charitable good, (ii) frames the choice in terms of physical units instead of money, and (iii) imposes a "donation grid" (Adena and Huck, 2020) in which donors can only choose multiples of full units. The first of these three features, providing cost-per-unit information, is a prerequisite for framing the donation decision in physical units of the charitable good and ensures that potential donors can calculate the money equivalent

of their donation. It complicates the ask because it requires the fundraiser to determine these costs with sufficient accuracy. The second, unit framing, forces the fundraiser to designate the charitable good(s) and decide what constitutes a unit: Should donors be asked to donate trees or acres of woodland? Should it be individual meals or a week of nutrition? The third dimension, the donation grid, is not necessarily a complication, but reflects that some charitable goods are indivisible as a matter of nature (planting half a tree or donating half a coat) or of choice (offering half a meal). In the field, donation grids are common for unit schemes, even when doing so is not strictly necessary. For example, donors to UNICEF can donate neither half an (indivisible) water pump nor half a (divisible) dozen measles immunizations. For the practitioners' belief that unit donations can outperform traditional schemes to be correct, not each of the three features has to individually increase average donations, but the total effect of cost-per-unit information, a unit frame, and a donation grid has to be a net positive.

In this paper, we compare the performance of unit and money donation schemes, with three main research objectives in mind. In light of limited guidance by theory and cognate empirical evidence, we first test whether employing a unit instead of a money donation scheme affects giving. Second, we investigate whether this effect depends on the size of the physical unit of the charitable good. Third, we identify which features of unit donation schemes drive the effect. To aid future theory-building, we also conduct exploratory analyses to better understand the mechanisms behind the effects induced by certain features.

To address our research objectives, we conduct a pre-registered online experiment with individuals that have completed an online real-effort task. These individuals can donate some or all of their effort reward of $90 to a charity. Before making their decision, participants learn that donations will always fund one specific activity of the charity, namely providing high-calorie pediatric nutrition rations to children in developing countries.[1] To test the conjecture on relative performance, participants are randomly assigned to one of three conditions that parallel donation schemes in the field. One is a conventional money donation scheme: Donors are asked to give money without further information about the cost of the nutritional rations. There is also no framing in terms of rations

[1] A related, but distinct question is whether donors have a preference for earmarking donations to a certain cause, thus restricting the charity's freedom to operate (see, e.g., Jacobsson et al., 2007; Hildebrand et al., 2017; Gangadharan et al., 2018; Fuchs et al., 2020). In the present case, donors know that they always give to the same cause, irrespective of scheme.

and no restrictive donation grid. The other two are unit schemes, one with a small unit size (a daily ration at \$1) and another with a large unit size (a monthly ration at \$30). Both unit schemes inform donors about the cost of the nutritional ration, ask for the funding of rations (rather than giving money), and do not allow fractions of rations to be donated. The random assignment of potential donors to the three conditions results in a horse race between the three "pure" donation schemes and allows us to address the first two research objectives.

To better understand the mechanisms behind the relative performance of the two schemes, we also implement (for each unit size) two intermediate schemes not typically seen in the field. One is the same as the money donation scheme, but provides cost-per-unit information. The second scheme moves another step closer to the unit donations by not only providing cost information, but also explicitly framing the ask in terms of units. The only feature that distinguishes this scheme from the pure unit donation scheme is that donors are not restricted to a donation grid: Fractions of units are acceptable, thus retaining the quasi-continuous donation space of the money donation scheme. With the help of these intermediate schemes, the total differential between money and unit donation schemes can be decomposed into a succession of incremental effects as the fundraiser takes on board successive features of the unit donation scheme.

On the basis of the decisions of $8,673$ subjects, we establish our main result: Unit donation schemes significantly affect giving behavior and can outperform money donation schemes, given the right circumstances. Average donations under the monthly ration scheme (\$42.35), i.e., the large unit size, were 57% higher than those under the money scheme (\$26.94). This provides strong supporting evidence for practitioners' beliefs that despite their complications, unit donation schemes have substantial additional fundraising potential above and beyond the standard approach. At the same time, determining the optimal unit size is a challenge: Average donations under the daily ration scheme (\$24.25), the small unit size, were around 10% lower than under the money scheme. Unit size therefore matters greatly.

Decomposing the main result into the incremental effects of moving from money to unit donation schemes offers insights into individual giving behavior and its drivers. Simply providing cost-per-unit information negatively affects average donations: Augmenting a money donation scheme with information about the unit cost significantly decreased the average donation by \$3 (large unit size) to \$5 (small unit size). Adding the unit frame on top, however, substantially raises average

donations: For the large unit size, the average donation significantly increased by around $18 and for the small unit size by $3. The final step of adding a donation grid has little measurable impact on average donations. The total effect is therefore composed of the positive effect of unit framing net of the negative effect of information provision and the absence of a donation grid effect.

Based on the observed effects and additional analyses of the data, we conjecture that the total effect is jointly driven by an increased salience of the donation impact and various cognitive biases. In particular, we find suggestive evidence that providing the cost-per-unit information serves as an anchor or creates the perception among donors that the charity expects a certain donation, drawing individuals towards donating exactly the cost of one unit (Lewis and Small, 2019). Adding the unit frame appears to set into motion two distinct mechanisms. First, it changes the metric of the donation space, thereby potentially interacting with accessibility bias – a heuristic of choosing numbers that easily come to mind (Converse and Dennis, 2018) – and left-digit bias – the tendency to focus on the left-most digit in numbers (DellaVigna, 2009; Lacetera et al., 2012; Pope and Simonsohn, 2011). This can explain why individuals adhere to donations of full units once a unit frame is introduced even though giving fractions is explicitly feasible. In our experiment, such adherence induces treatment effects only when the unit size is large because the metric of the donation space is the same when the unit size is small (one dollar equals one unit). As a side effect, the distribution of donations is already "gridded" such that adding the donation grid to the ask has no further impact on patterns of giving. The second mechanism that appears to be set into motion is an increased salience of the donation impact (e.g. Cryder et al., 2013). Such a salience can explain why a unit frame increased donations substantially beyond what could be explained by a simple adherence to full units. It is consistent with the idea that pointing to the output of giving (units of charitable goods) rather than its inputs (money) leads to a higher marginal utility of giving.

Our findings contribute to and have relevance for three important strands of the charitable giving literature. First, the main result adds fresh insights to the rapidly expanding literature on how seemingly small changes to the choice situation of charitable giving can affect donations (e.g., List and Lucking-Reiley, 2002; Zarghamee et al., 2017; Kessler and Milkman, 2018; Schulz et al., 2018; Adena and Huck, 2020).[2] Our results are the first to show that properly designed unit donation

[2]It of course also relates to studies focusing on the impact of larger changes like providing subsidies (e.g., Karlan

schemes are a promising design alternative to the standard money donation scheme and have significant potential to boost charity receipts. This potential likely outweighs the complications of designing a unit scheme, but requires expert handling of the choice of unit sizes.

These potentials and dangers of unit donation schemes add important nuance to a second literature, which has studied pro-social giving in unit schemes (Löschel et al., 2013; Diederich and Goeschl, 2014; Kesternich et al., 2016; Diederich et al., 2022). These contributions highlighted the unit scheme, but lacked the ability to compare the performance of a unit-based ask with alternatives. Our results offer such a comparison and show that earlier results of unit schemes merit additional attention given its fundraising potential.

Third, the evidence on the incremental effects of information, framing, and the donation grid that turn the money into a unit donation scheme contributes to an increasingly rich body of knowledge on efficacy information (e.g. Lewis and Small, 2019; Exley, 2020), framing (e.g. Chou and Murnighan, 2013; Grossman and Eckel, 2015), and discrete choice effects (e.g. Barbieri and Malueg, 2014; Cartwright and Mirza, 2019) in charitable giving. Our experiment is the first to provide specifically a comparison between a pure money donation scheme without and one with cost-per-unit information. This comparison returns a negative effect, giving additional weight to findings that information provision can backfire on the fundraiser (Metzger and Günther, 2019; Lewis and Small, 2019). We also contribute to research on framing in charitable giving, such as suggested donation amounts (Weyant and Smith, 1987; Fraser et al., 1988; Adena et al., 2014; Edwards and List, 2014; Reiley and Samek, 2019; Adena and Huck, 2020) and default donations (Goswami and Urminsky, 2016; Altmann et al., 2019; Ghesla et al., 2019). Here, we show that defining the donation decision in unit terms can substantially increase giving, despite being subtler than suggesting a donation or setting a default donation. Another contribution is that the scale of the framing effect depends on the unit size, highlighting an important choice variable in the hands of the fundraiser.

In the following section, we present the design and procedures of our online experiment. Guided by theory and the existing literature, Section 3 develops predictions for the treatment effects of using unit instead of money donation schemes as well as the incremental effects of successively

and List, 2007; Huck et al., 2015; see Epperson and Reif, 2019, for a review) or gifts (e.g., Falk, 2007; Alpizar et al., 2008).

moving from one to the other. These predictions meet the experimental data in Section 4, where we present the main results and further explore the underlying mechanisms. Section 5 concludes.

2 Experimental design

2.1 Donation ask and treatments

The experimental design builds on an online donation ask administered to subjects after an unrelated real-effort task. The goal is to implement different versions of this donation ask, including a pure unit donation and a pure money donation scheme. This requires a charitable good (or service) readily divisible into discrete and meaningful units. We implement the donation ask using rations of a nutritional paste for the treatment of malnourished children offered in UNICEF Canada's online shop.[3] Treating one child for one day with this paste costs US$1, treating it for a month US$30.

In the experiment, each subject had an endowment of $90 (subject to random implementation) and decided how much of this endowment to donate to UNICEF for the provision of the nutritional paste. Subjects took this choice under one of seven treatments, three of which parallel the money or the unit donation schemes in the field. Panel A of Figure 1 shows a screenshot of the pure money donation scheme. The scheme starts with two motivating paragraphs that introduce the donation opportunity, the charitable cause, the charitable good, and the charity. These two paragraphs were the same across all seven treatments. The other paragraphs are treatment-specific. One is a "procedural" paragraph that provides details on how the donation would be processed in the experiment. The other is an "ask" paragraph that prompts the subject to enter their donation decision. In the pure money donation treatment, the ask paragraph asks how much money the subject wishes to donate and the procedural paragraph is phrased accordingly.

Panel B of Figure 1 shows the corresponding wording of the donation ask for one of the two pure unit donation treatments. It differs from the money donation treatment (Panel A) along the three features that jointly make up a unit donation scheme (cost-per-unit information, unit frame, donation grid). First, it contains information on the cost per unit in an additional "information" paragraph. Second, it frames the donation question in the ask paragraph in terms of units. Specif-

[3]The paste is available under the trademark Plumpy'Nut® and offered in UNICEF Canada's web shop (https://shop.unicef.ca/, last accessed on December 7, 2022).

As part of this MTurk HIT, each participant has the opportunity to **support the provision of nutritious food for malnourished children** in developing countries.

Currently, millions of children in developing countries could be pushed to the brink of starvation due to huge shortfalls in humanitarian aid funding amid the COVID-19 pandemic. Ready-to-use therapeutic foods can help: **A specially developed nutritional paste can be used to treat children affected by severe acute malnutrition and help them gain weight.** UNICEF runs a program to provide such foods.

In this MTurk HIT, **you may donate (some of) your additional reward for helping provide the nutritional paste.** Thus, you can donate any amount up to $90.00. If you get the additional reward of $90.00, the amount you have chosen will be subtracted from your reward and donated to UNICEF for the provision of the nutritional paste.

Please tell us below how much money you wish to donate.

$

(A) Money Donation

As part of this MTurk HIT, each participant has the opportunity to **support the provision of nutritious food for malnourished children** in developing countries.

Currently, millions of children in developing countries could be pushed to the brink of starvation due to huge shortfalls in humanitarian aid funding amid the COVID-19 pandemic. Ready-to-use therapeutic foods can help: **A specially developed nutritional paste can be used to treat children affected by severe acute malnutrition and help them gain weight.** UNICEF runs a program to provide such foods.

One ration of the nutritional paste is sufficient to treat a child for one month (30 days) and can be provided for a donation of $30.00.

In this MTurk HIT, **you may donate (some of) your additional reward to provide rations of the nutritional paste.** With $90.00, you can provide up to 3 rations. If you get the additional reward of $90.00, $30.00 per ration will be subtracted from your reward and donated to UNICEF for the provision of the nutritional paste.

Please tell us below how many rations you wish to provide.

ration(s)

(B) Unit Donation - Large

Figure 1: Instructions of main treatments

ically, it asks for the number of rations to fund rather than the amount of money to give (and adjusts the procedural paragraph accordingly). Third, it introduces a donation grid that restricts donations to full units of the charitable good: Subjects can only enter integer amounts in the input field.[4]

The difference between the two pure unit donation treatments lies in the unit size. The treatment presented in Panel B employs a "large" unit size with a monthly ration at a cost of \$30. Three reasons underpin this choice. First, the unit size is sufficiently large such that the smallest possible donation involves a non-negligible amount of giving: Pilot data suggested a first focal point in the money donation treatment at \$10, and the large unit is a multiple of that.[5] Second, the unit size is not so large (relative to the endowment of \$90) that it effectively converts the donation decision into a binary choice: With \$30 per unit, subjects were still able to make adjustments on the intensive margin (how much to give conditional on giving). Third, the unit size of one month is meaningful: Compared to an arbitrary duration of, say, 20 days, a month is a natural choice.

The second pure unit donation treatment employs a "small" unit size of a daily ration at a cost of \$1. The wording of the ask is correspondingly adjusted (see Appendix Figure A.7 for the detailed wording). Across the two unit sizes, the implied effective cost is therefore the same, but the communicated rations cover different durations. We chose the daily unit size for two reasons. First, it minimizes the differences between unit and money donation schemes by perfectly aligning the metric of dollars and physical units: one unit is exactly one dollar and vice versa. By contrast, these metrics differ purposefully for the large unit size in order to allow a large difference between unit and money donations to arise in the experiment. Second, the unit size of one day is meaningful and is expected to appear natural to potential donors.

The three "pure" treatments, one money and two unit donation schemes, make up Panel A of Table 1, which presents all seven treatments and the dimensions along which they differ. The treatments in Panel A allow us to compare donations under the unit and money schemes and to answer whether the unit size matters.

Panel B of Table 1 is made up of four treatments representing two intermediate schemes im-

[4]This restriction becomes particularly salient when subjects try to enter fractions. Then, a help text points out the need to enter full rations to be able to proceed.

[5]We conducted three small pilots (about 50 to 100 observations each) that were primarily used to test the real-effort task (see Section 2.2) and to get a rough idea of the distribution of donations under the money donation scheme. Only the money donation scheme was included in the pilots.

Table 1: Treatments

Treatment	Cost-per-unit info	Unit frame	Donation grid	Unit size
A. Pure schemes				
Money Donation	No	No	No	—
Unit Donation – Small	Yes	Yes	Yes	Small
Unit Donation – Large	Yes	Yes	Yes	Large
B. Intermediate schemes				
Info – Small	Yes	No	No	Small
Info & Frame – Small	Yes	Yes	No	Small
Info – Large	Yes	No	No	Large
Info & Frame – Large	Yes	Yes	No	Large

The table provides an overview of the different treatments in our experiment. Cost-per-unit info: whether information about the cost per unit of the charitable good is provided. Unit frame: whether the ask is framed in terms of physical units (instead of money). Donation grid: whether the choice set is restricted to full units of the charitable good. Unit size: whether one physical unit is a one-month ration of nutritional paste (large) or a one-day ration of nutritional paste (small).

plemented for both unit sizes. These intermediate schemes allow us to investigate how the three features (cost-per-unit information, unit frame, donation grid) drive differences between money and unit donation schemes. These features are successively introduced to enable a decomposition of the total differential between the money and the unit donation scheme into a sequence of incremental effects. The first step is to add information about the cost per unit to a money donation scheme (Info). This means adding the information paragraph on cost per unit (see Appendix Figure A.8 and Appendix Figure A.9 for the detailed wording). Providing cost-per-unit information is the natural first step: Its presence is a prerequisite for the unit frame and sets the stage for the donation grid.

The second step is to also add a unit frame with perfectly divisible units, i.e., without a donation grid (Info & Frame): With an information paragraph present, the ask paragraph of the money donation treatment is now replaced with that of the unit donation treatment. In addition, the procedural paragraph is adjusted accordingly, but makes explicit that giving fractions of units is possible (see Appendix Figure A.10 and Appendix Figure A.11 for the exact wording).

Together with the pure treatments from Panel A, the intermediate treatments from Panel B help identify the impact of each of the three features by successively moving from a pure money donation scheme to a pure unit donation scheme.[6]

[6]We deliberately decided to introduce the donation grid as the last step since restricting the choice set is arguably more intuitive for a potential donor when a unit frame is already in place. Furthermore, it seems rather uncommon in practice to restrict choices (beyond a simple minimum donation) when no unit frame is in place.

2.2 Experimental protocol

We conducted the experiment with U.S. residents on the online labor market Amazon Mechanical Turk, which provides access to a large heterogeneous sample of individuals.[7] In the posted task, workers learned that they would earn $0.50 for completing a simple transcription task and a few questions that would take them about 9 minutes.[8] They also learned that on top of the fixed payment, they would have a verifiable 1 in 100 chance to get an additional reward of $90. This additional reward constitutes the endowment for the donation decision. The expected payoff for completing the experiment (not accounting for any donation) was $1.40, equivalent to an average hourly wage of $9.33. Interested workers followed a link to the survey on the platform LimeSurvey. Before the start of the survey, workers read and confirmed a consent form about the research study. The consent page included details about the lottery payment and its independent verification using the comparison of a subject-specific random number and an official random string published by the US National Institute of Standards and Technology (NIST).

The detailed instructions of the experiment are available in Appendix A.2. The real-effort task was to transcribe two lines of scanned text typed on a 1970s typewriter in a rare German dialect.[9] The real-effort task was followed by a screen containing an attention check before subjects encountered the donation ask. One of the seven treatments of Table 1 was drawn at random and presented to the subject (between-subjects design). If a positive donation was submitted, subjects were reminded of their donation decision (including the implied monetary amount for treatments with unit frame) and were asked to confirm that CloudResearch would make the donation on their behalf if they won the additional reward. This confirmation procedure was chosen for administrative purposes. If subjects did not confirm their donation, they were informed that this would prevent the implementation of their donation and they had one more chance to confirm.[10] The experiment ended with additional questions about beliefs and sociodemographic characteristics.

[7] MTurk is known to provide several benefits to researchers, among them fast and easy access to subjects, a diverse subject pool, and low costs (Paolacci et al., 2010; Mason and Suri, 2012). Regarding data quality, several papers highlight a high internal consistency of self-reported demographics, an incentive-compatibility of earnings, and a "spammer"-free workforce from the built-in reputation system (Ross et al., 2010; Mason and Suri, 2012). They also provide evidence that results from standard experimental games successfully replicate on MTurk (e.g. Paolacci et al., 2010; Rand, 2012).

[8] Subjects took on average 7.9 minutes to complete the experiment.

[9] See Appendix Figure A.4 for a sample.

[10] In total, 29 subjects did not confirm their donation and will subsequently be treated as not having donated.

After completing the survey, subjects received a unique code that they had to enter into the survey task window on MTurk for payment.

Power calculations with insights from our pilot experiment (see Section 2.3) and additional design-specific pilot data under the money donation scheme determined a desirable sample size of 9,000 subjects. The goal was to be able to identify differences in mean donations of about \$3.5 (equivalent to roughly 4% of the endowment) between two treatments with at least 80% power and a 5% significance level.[11] The recruitment of participants from MTurk was administered via CloudResearch (formerly TurkPrime; see Litman et al., 2017; Litman and Robinson, 2020) which allowed us to make use of their data quality features. In particular, we blocked suspicious geocode locations and duplicate IPs within sessions, and required MTurk workers to have at least a 90% approval rating and 100 previous HITs completed. Furthermore, we excluded individuals who had participated in our pilot experiment or were part of the additional pilot data. The experiment and the analysis plan were pre-registered on *aspredicted.org* (see Appendix A.1 or https://aspredicted.org/847_4CC).

We ran seven experimental sessions from April 20 until May 23, 2022, at which point 8,987 participants had completed the experiment. To create our final sample we apply three pre-registered exclusion criteria. First, we drop additional 3,077 observations for failing to complete the experiment. Of these, 2,672 dropped out before treatment assignment.[12] Second, we exclude 85 complete observations for indicating an MTurk ID that was not listed has having worked on the HIT by MTurk. Since we recognized some common mistakes in entering the MTurk ID (e.g., including a space or a colon at the beginning), we automatically removed those extra characters before validating the observations. Third, we drop 229 additional complete observations with duplicate MTurk IDs that do not satisfy the exception requirements (being the first observation with this ID that has been assigned to a treatment and completing the experiment during a time window that does not overlap with any other observation sharing the same ID). This leaves us with a sample of 8,673 participants.

[11] With the realized sample sizes and standard deviations shown in Table 2, the ex-post minimum detectable effect size (with 80% power and a 5% significance level) is also at most about \$3.5 for the relevant separate pairwise comparisons between treatments.

[12] The attrition after treatment assignment varies between 2.8 and 5.1% with a marginally significant difference across treatments ($p < 0.1$, χ^2-test). However, keeping incomplete observations that were assigned to a treatment and pass the other two exclusion criteria at least to some degree does not affect the main results (see Appendix A.4).

2.3 Pilot experiment

Prior to our main experiment presented in this paper, we conducted a much smaller experiment ($N = 847$) that offered some first evidence on unit donation schemes affecting giving behavior and the unit size playing a crucial role. The design of this pilot experiment was comparable but employed a much smaller endowment of \$7, a slightly different set of treatments, a different charity with a similar cause, and unit sizes of \$3.5 (a weekly nutritional ration) and \$0.5 (a daily nutritional ration). Similar to the results presented in Section 4, the unit donation scheme with the large unit size (\$3.5) significantly decreased giving on the extensive margin, while the unit donation scheme with the small unit size (\$0.5) led to a significant increase compared to the money donation scheme.[13] Differences for average donations were large in relative terms (up to 21% of the average donation in the money donation scheme) but not statistically significant. Due to raised concerns about a potential lack of power, an artificially small endowment, and some other design elements, we decided to conduct a completely new, pre-registered, large-scale experiment with an improved design.

3 Predictions

The experimental design decomposes the total effect of moving from the conventional money donations scheme to a unit donation scheme into the three successive steps of (i) adding cost-per-unit information, (ii) imposing a unit frame, and (iii) employing a donation grid that restricts the giving space to full units. Each step might cause average donations – the primary outcome variable of interest – to rise or fall, with material incentives, cognitive and affective channels as potential drivers. Starting with the patterns of giving under the money donation scheme, we rely on the literature to develop predictions on the evolution of average donations for each successive step while taking into account the unit size of the charitable good.

[13] For the large unit size, we also included intermediate treatments. In contrast to the results of the main experiment presented in this paper, the most important factor for the response on the extensive margin in the pilot experiment was the restriction of the choice set to full units at a cost of \$3.5.

3.1 Cost-per-unit information

On theoretical grounds, the effect of learning how much money is needed for a day or a month of nutritional paste is ambiguous, but in the same way for the small and large unit size. The ambiguity arises because potential donors hold unobserved beliefs about material aspects of the donation decision before they learn the cost per unit, e.g., how many dollars are required per ration. The direction of the information effect is therefore unclear. But since the information on the cost per unit is materially similar across unit sizes, the direction of the effect should not depend on unit size.

On empirical grounds, there is no specific prior evidence on how seeing the cost per unit of a charitable good affects giving behavior. Some papers examine the effect of varying a charity's efficacy in form of its *overhead costs* (Meer, 2014; Gneezy et al., 2014; Portillo and Stinn, 2018; Metzger and Günther, 2019; Exley, 2020). While the results show that overhead costs matter, implications regarding the effect of providing efficacy information is limited. Direct evidence on the impact of information provision comes from Butera and Horn (2020), who show that donors increase their donations when learning that the charity is more efficient than expected. Most closely related to our setting is Lewis and Small (2019), who always provide cost-per-unit information to donors, but vary the cost level and its presentation. They find that donations increase in the cost of giving when the information is framed as cost per unit, but a reverse pattern under a units-per-dollar frame. This suggests that whenever numerical information is introduced, cognitive biases could play a role. Similar reasoning applies to our design when dollar amounts of \$1 or \$30 are introduced as part of the donation call, which could give rise to anchoring (Jung et al., 2016). Seeing these dollar amounts could also lead to a perception among donors of expected giving (e.g., Adena and Huck, 2020). In both cases, one would expect that donations of \$1 and \$30 will appear in the data with increased frequency for the small and large unit size, respectively.

3.2 Unit frame

While providing cost-per-unit information is able to affect material incentives, a purely presentational change from a money to a unit frame can at most activate cognitive and affective channels.

Prior evidence does not speak directly to which channels might be activated, but suggests three

mechanisms. One is impact salience. This highlights that the unit frame induces a change in donors' focus from providing monetary inputs to helping provide outputs (nutritional rations). In previous research, exposing donors to the *impact* of giving tended to increase giving, e.g., by explaining how blood donations save children's lives (Latour and Manrai, 1989), by describing tangible details about charity activities (Cryder et al., 2013), or by providing donors with scientific research about the charity's impact (Karlan and Wood, 2017).[14] Based on this evidence, we would expect the effect of impact salience on average donations to be positive, irrespective of unit size.

A second mechanism is cognitive biases. This is suggested by a literature that has examined other ways of framing the ask, finding a substantial impact of suggested donation amounts (Weyant and Smith, 1987; Fraser et al., 1988; Adena et al., 2014; Edwards and List, 2014) and default donations (Goswami and Urminsky, 2016; Altmann et al., 2019; Ghesla et al., 2019). The most closely related evidence comes from Reiley and Samek (2019), who show that a preference for prominent numbers[15] might explain how donors respond so-called "ask strings" – i.e., pre-structured menus of suggested donation amounts – and connect this to the phenomenon of "9.99-pricing." There is a distinction in cognitive psychology between "prominent numbers" and "round numbers" (Converse and Dennis, 2018). Prominence is thought to arise from a heuristic known as accessibility bias: For people raised in the base-10 number system, these numbers readily come to mind (Albers and Albers, 1983), explaining their role as focal points in coordination games (Schelling, 1960). Roundness is thought to arise from a heuristic known as "left-digit bias," the tendency to focus on the left-most digit in numbers (Lacetera et al., 2012; Korvorst and Damian, 2008).[16] Introducing the unit frame could interact with the presence of accessibility and left-digit biases when the frame changes the metric of the decision space. We predict no change in how these biases affect choice for the daily unit size because of the one-to-one correspondence between the dollar metric of the monetary

[14]The effect lacks robustness across subgroups, however. Karlan and Wood (2017) only find a positive effect for large prior donors but a negative response by prior donors who previously gave small amounts.

[15]The authors use the term "round numbers," which may be confusing in light of the distinction that follows. We therefore align the terminology here.

[16]In economic contexts, prominence and roundness lead to distinct economic phenomena: In open-ended economic decisions such as donations or placing orders for stock trades, prominent numbers such as 10, 20, 50, and 100 are present with high frequency for no apparent material reason (Converse and Dennis, 2018). Round numbers, by contrast, are often as conspicuous by their absence as by their presence: They are absent in retail prices, which instead tend to cluster on odd numbers such as 9, 49, and 99, inducing the perception that a person has to give up less. This phenomenon is known as "psychological pricing" (DellaVigna, 2009). They are present when individuals stand to receive quantities such as share dividends (Sonnemans, 2006; Aerts et al., 2008) or their SAT score (Pope and Simonsohn, 2011) where round numbers induce the perception that the person receives more.

donation space and the nutritional ration metric of the unit donation space. We predict a change, however, for the monthly unit size with its continuous donation space between 0 and 3 units. Both, accessibility bias and left-digit bias, are likely to favor integers, leading to a high frequency of giving full units and thereby donations of \$30, \$60, or \$90.

Affective channels provide a third possible mechanism. Similar to the provision of cost-per-unit information, the unit frame could be thought to convey something about the charity's expectations from donors, and donors may be averse to disappointing these perceived expectations if they give (Adena et al., 2014). In the presence of such a mechanism, the large unit size could be seen by potential donors as an expectation that donors give a month's worth of nutritional rations – and a day's worth for the small unit size. Donations of \$1 and \$30 should therefore occur with greater frequency under the small and large unit size, respectively.

3.3 Donation grid

In our experiment, donors always declare their donation amount in a write-in option. The final step from a money to a pure unit donation scheme is to introduce a donation grid that discretizes the set of possible donation amounts. Such discretization is common in charitable giving (e.g., Meier, 2007; Gneezy et al., 2014; Adena and Huck, 2020).[17] It can affect material incentives by restricting choice, but also trigger cognitive biases.

Empirically, the effect of discretization on charitable giving is increasingly better understood. For example, Cartwright and Mirza (2019) find that introducing a minimum donation amount tends to reduce giving. Reiley and Samek (2019), on the other hand, vary the donation grid (or "ask string") and find that increasing the donation levels in the grid reduces donations, even when a write-in option is present and the donation grid is thus not binding. Closest to us are Adena and Huck (2020) who hold donors to discrete donation grids similar to our design. They find that effectively doubling the donation levels in the grid has a clear negative effect on average giving.

Our experiment considers two grid sizes. In the small grid, giving is discretized in steps of \$1. This means that the minimum donation is small and the grid is hardly restrictive. In the large grid, giving is discretized in steps of \$30, a thirty-fold increase in the minimum donation and the step

[17]The discretization of the individual choice set is different from setting thresholds for collective contributions, such as in threshold public goods games (e.g., Cadsby and Maynes (1999); Barbieri and Malueg (2014).

size. Given the findings of Cartwright and Mirza (2019) and Adena and Huck (2020), we expect such an increase to lead to a significant drop in the share of donors for the large unit size and thereby potentially lower average donations.

3.4 Total effect

Summing up across the three steps from a pure money to a pure unit donation scheme, the total effect of cost-per-unit information, unit frame, and donation grid on average donations is ambiguous. This is true for both the small unit size of a daily ration at a cost of $1 and the large unit size of a monthly ration at a cost of $30.

Despite the high level of ambiguity regarding the total effect, we expect the unit donation scheme to induce more change in individual behavior when a large, rather than a small, unit size is in place. The reasons are as follows. First, the small unit size creates a similar metric of the donation space as the money donation scheme. This provides little traction for the cognitive effects to arise. Under the large unit size, the metric of the donation space instead differs significantly from the money donation scheme, favoring an interaction between the unit frame and accessibility or left-digit bias. Second, the small unit size of $1 implies that the donation grid is discretized in dollar steps, putting little restrictions on donors' choices compared to the money donation scheme. By contrast, the large unit size discretizes the donation space in units of $30 and thereby rules out the majority of choices available under a money donation scheme.

Overall, the revealed ambiguity in the discussion of possible predictions adds import to our empirical investigation. In addition to answering our three main research questions, we will use our results to shed light on the relevance of the potential mechanisms discussed in this section (see Section 4.3).

4 Results

Table 2 reports the average donations (including non-donors), the share of donors, and the number of observations across the seven treatment groups. For the treatments with unit framing, the average dollar donation corresponds to the average number of nutritional rations donated times the cost per unit. Average donations vary considerably between $22.42 and $42.35. In the standard money

donation treatment, the average donation amounts to $26.94, which is equivalent to about 30% of the total endowment. The propensity to give is relatively high, with at least 76% of the participants donating to the charity in each treatment. Nevertheless, we observe substantial variation in the share of donors between treatments of up to 10 percentage points.

Table 2: Donations

Treatment	Average donation	Share of donors	N
A. Pure schemes			
Money Donation	26.94 (29.58)	0.81 (0.39)	1,243
Unit Donation – Small	24.25 (29.51)	0.85 (0.36)	1,261
Unit Donation – Large	42.35 (32.27)	0.76 (0.43)	1,438
B. Intermediate schemes			
Info – Small	22.42 (27.77)	0.83 (0.38)	1,174
Info & Frame – Small	25.54 (29.63)	0.86 (0.35)	1,261
Info – Large	23.73 (25.85)	0.77 (0.42)	1,102
Info & Frame – Large	42.01 (32.25)	0.76 (0.43)	1,194

Standard deviations in parentheses.

In the following, we first investigate how unit donation schemes affect average donations and which of the three features associated with unit donations are driving the effect. Next, we conduct a similar analysis for the extensive margin, i.e., the propensity that individuals give to the charity. The extensive margin offers additional evidence on how the donation schemes alter individual behavior, but it is also an interesting metric to evaluate the effectiveness of unit donation schemes in itself: Even if there is no effect on revenue in the short term, an increase in the donor base tends to support future fundraising (Landry et al., 2010). Finally, we combine the results on average donations and the extensive margin with further exploratory analyses to better understand the underlying mechanisms at work.

4.1 Donations

To assess whether unit donation schemes affect donations, we first focus on the three pure solicitation schemes (i.e., Money Donation, Unit Donation – Small, Unit Donation – Large) and regress the monetary amount donated on a set of treatment dummies, with the standard money donation scheme serving as the baseline. Column 1 of Table 3 reports the corresponding estimation results. The unit donation scheme with a small unit size is estimated to significantly decrease average do-

nations by \$2.68 (or 10%) compared to the money donation. In contrast, using a unit donation scheme with a large unit size creates a significantly positive effect of \$15.41 (or 57%). Based on these results, we can reject the null hypothesis that both treatment effect estimates are zero ($p < 0.001$, F-test) and conclude that unit donations do affect average donation levels. Furthermore, we find that the unit size plays a crucial role: The treatment effect significantly changes and even reverses its sign when using a large instead of a small unit ($p < 0.001$, F-test). As shown in column 2 of Table 3, these results are robust to controlling for available covariates.

Table 3: Effect on donations

			Incremental effects			
	Pure schemes		Small unit		Large unit	
	(1)	(2)	(3)	(4)	(5)	(6)
Unit Donation – Small[a]	-2.684**	-2.054*				
	(1.181)	(1.189)				
Unit Donation – Large[b]	15.413***	15.597***				
	(1.195)	(1.147)				
Cost-per-unit info			-4.516***	-4.704***	-3.208***	-2.248**
			(1.167)	(1.157)	(1.145)	(1.139)
Unit frame			3.117***	3.287***	18.281***	17.407***
			(1.163)	(1.164)	(1.215)	(1.158)
Donation grid			-1.285	-0.835	0.340	0.383
			(1.178)	(1.192)	(1.263)	(1.160)
p-value ($a = b = 0$, F-test)	0.000	0.000				
p-value ($a = b$, F-test)	0.000	0.000				
Controls	No	Yes	No	Yes	No	Yes
Observations	3,942	3,790	4,939	4,774	4,977	4,799
R^2	0.066	0.141	0.003	0.035	0.072	0.193

Robust standard errors are in parentheses, *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. The dependent variable is the amount of money the charity receives and the pure money donation treatment always serves as baseline. In columns 1 and 2, only data from the treatments with pure solicitation schemes are considered. In columns 3 to 4, only data from treatments with a small unit size and the pure money donation treatment are considered. In columns 5 to 6, only data from treatments with a large unit size and the pure money donation scheme are considered. Controls include gender, age, whether the individual has a college degree, whether the individual has children and whether online crowdworking is the individual's primary source of income.

Our intermediate treatments allow us to identify which specific features of unit donation schemes are driving the estimated effects above. As preregistered, we run a separate regression for each unit size where we regress the monetary amount donated on dummies for each of the three successively introduced features, i.e., (i) whether information on the cost per unit is provided, (ii) whether the donation is framed in units, and (iii) whether a donation grid restricts the choice set to full units. For each regression, we only include data from the money donation treatment and from the unit donation treatments with the corresponding unit size.

Columns 3 to 6 of Table 3 show the estimation results, without and with controlling for available

covariates. For both unit sizes, providing information on the cost per unit significantly decreases giving whereas using a unit frame creates a significantly positive effect. A key difference between the unit sizes is which effect dominates. For the small unit size, the information effect slightly dominates, leading to an overall negative effect. For the large unit size, the unit frame increases average donations by \$18.51, leading to an overall positive effect. The donation grid does not play a major role for any of the two unit sizes given that cost-per-unit information and a unit frame are already in place.[18]

Table 4: Effect on propensity to give

			Incremental effects			
	Pure schemes		Small unit		Large unit	
	(1)	(2)	(3)	(4)	(5)	(6)
Unit Donation – Small[a]	0.035**	0.045***				
	(0.015)	(0.014)				
Unit Donation – Large[b]	-0.058***	-0.061***				
	(0.016)	(0.015)				
Cost-per-unit info			0.011	0.007	-0.046***	-0.035**
			(0.016)	(0.015)	(0.017)	(0.016)
Unit frame			0.037**	0.041***	-0.010	-0.020
			(0.015)	(0.014)	(0.018)	(0.017)
Donation grid			-0.013	-0.004	-0.003	-0.007
			(0.014)	(0.014)	(0.017)	(0.016)
p-value ($a = b = 0$, F-test)	0.000	0.000				
p-value ($a = b$, F-test)	0.000	0.000				
Controls	No	Yes	No	Yes	No	Yes
Observations	3,942	3,790	4,939	4,774	4.977	4,799
R^2	0.010	0.089	0.003	0.073	0.003	0.106

Robust standard errors are in parentheses, $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variable is whether a subject has donated and the pure money donation scheme always serves as baseline. In columns 1 and 2, only data from the treatments with pure solicitation schemes are considered. In columns 3 to 4, only data from treatments with a small unit size and the pure money donation treatment are considered. In columns 5 to 6, only data from treatments with a large unit size and the pure money donation scheme are considered. Controls include gender, age, whether the individual has a college degree, whether the individual has children and whether online crowdworking is the individual's primary source of income.

4.2 Propensity to give

Table 4 reports estimation results for the extensive margin analogously to the results presented in the previous section on average donations. The results show that unit donation schemes significantly affect the propensity to give and that, again, the unit size plays a critical role: The effect amounts

[18]The impact of the donation grid (i.e., the restriction of the choice set) is identified by comparing a pure unit donation scheme to a scheme with cost-per-unit information and a unit frame but without restriction of the choice set. Hence, the estimated effect is conditional on the unit frame and the information already being in place. We cannot exclude that restricting the choice set without using a unit frame would lead to a significant impact.

to a significant increase of 3.5 percentage points if the unit size is small and a significant decrease of 5.8 percentage points if the unit size is large. Hence, a unit donation scheme with a small unit size might reduce average donations (see Section 4.1) but can manage to attract significantly more donors. The major driver for this positive effect on the extensive margin is the unit framing (see columns 3 and 4 of Table 4). The negative effect with the large unit size is instead mainly driven by providing the information that one nutritional ration of $30 is sufficient to treat a malnourished child for one month (see columns 5 and 6 of Table 4).

4.3 Understanding the mechanisms

In this section, we shed light on the underlying mechanisms that can explain the observed effects of specific features when successively moving from a money donation to a unit donation scheme. In doing so, we directly build on the discussion of potential mechanisms in Section 3.

As a starting point, Figure 2 summarizes the total effect of a unit donation scheme and its disaggregation into the different steps (cost-per-unit information, unit frame, donation grid) for three outcome variables: the average donation (panels A and B; results from Section 4.1), the extensive margin or propensity to give (panels C and D; results from Section 4.2), and the intensive margin, i.e., the average donation conditional on giving (panels E and F). The estimates are based on simple regressions without covariates, analogously to the empirical procedure introduced in sections 4.1 and 4.2. The panels on the left (A, C, and E) focus on the small unit size while the panels on the right (B, D, F) focus on the large unit size. To illustrate the relevance of certain steps, we highlight positive and negative effects that are significant at the five percent level (in a two-sided test) in green and red, respectively. In addition, Figure 3 reports the distribution of donations for each treatment.

Cost-per-unit information. For average donations (panels A and B of Figure 2), providing information on the cost per unit had a negative effect of comparable magnitude across unit sizes. At first sight, this result is in line with belief updating upon receiving information on the cost per unit. However, if belief updating were the main mechanism, we would also expect the effect on the intensive and extensive margin to be similar across units sizes (because the implied effective cost is independent of the unit size). This is not the case. Examining the response to information at the two margins (panels C to F of Figure 2) and taking a closer look at the distribution of donations

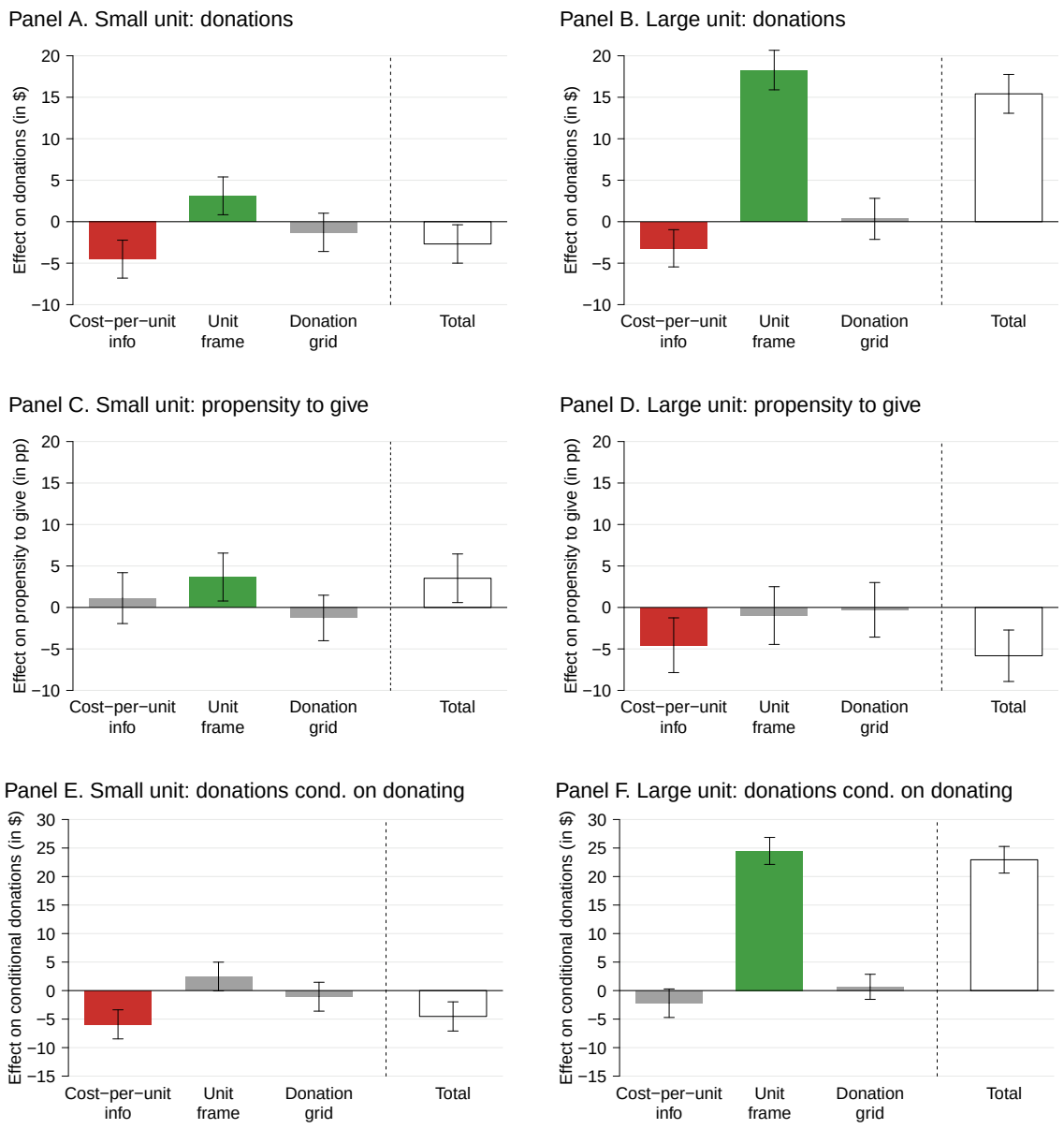

Figure 2: Incremental effects by outcome variable and unit size

Notes: The figure shows that incremental effects when successively moving from a money donation to a unit donation scheme. *Cost-per-unit info* refers to the effect of adding cost-per-unit information to a pure money donation scheme. *Unit frame* refers to the effect of framing the ask in terms of physical units instead of money (in addition to providing cost-per-unit information). *Donation grid* refers to the effect of restricting the donations to full units of the charitable good (in addition to providing cost-per-unit information and framing the ask in physical units). *Total* refers to the total effect of using a unit donation instead of a money donation scheme. The estimates are based on simple OLS regressions without covariates (as introduced in sections 4.1 and 4.2). The panels on the left (A,C,E) focus on the small unit size while the panels on the right focus on the large unit size. The whiskers represent 95% confidence intervals based on robust standard errors. Bars of incremental effects are highlighted in green (red) if the effect is significantly positive (negative) at the 5 percent level (two-sided test).

(panels A to C of Figure 3) suggests instead that cost-per-unit information serves as an anchor or creates the perception among donors that the charity expects a donation of exactly the cost of one unit. When the unit size is large, the potential donor learns that treating a child for one month costs \$30. This relatively high monetary amount (roughly similar to the average donation in the money donation treatment) discourages a substantial share of individuals to give (see Panel D of Figure 2). At the same time, donations of exactly \$30 become more likely (raising from 4.6% in the treatment Money Donation to 20.1% in Info – Large, $p < 0.001$, χ^2-test).[19] When the unit size is small, the communicated cost per unit of \$1 does not discourage individuals to give, but instead encourages individuals to give small amounts and in particular \$1 (the share of donations of \$1 increase from 4.0% in the treatment Money Donation to 11.1% in Info – Small, $p < 0.001$, χ^2-test). As a result, information creates a significant negative effect on the intensive margin (see Panel E of Figure 2) and no adjustment on the extensive margin (see Panel C of Figure 2).

Unit frame. In contrast to the cost-per-unit information, the unit frame created a positive effect on average donations for both unit sizes (see panels A and B of Figure 2). A first striking observation in this context is that donations of fractions of units are almost completely absent once the unit frame is introduced. Even for the large unit size with a cost per unit of \$30, less than 2% of individuals give fractions of units when a unit frame is present (see Panel E of Figure 3).[20] This finding is in line with accessibility and left-digit bias as driving factors of the response to the unit frame, which both predict an increase in the frequency of full units.

Nevertheless, they cannot be the only driving factors. The main reason is that donations of fractions of units are already absent without the unit frame if the unit size is small (less than 3% of participants in Info – Small give fractions of units). Hence, the positive impact of average donations for the small unit size is unlikely to be driven by accessibility or left-digit bias. A plausible explanation for the positive impact is that the unit frame additionally increases impact salience and thereby boosts the marginal utility of giving. This mechanism also likely contributes to the large positive effect of the unit frame on the intensive margin under a large unit size.

An important finding is that the unit frame does not simply induce people to move from donating

[19] This seems to be at least partly driven by pulling donors down to the anchor (the share of donations above \$30 decreases from 33.0% to 22.9%, $p < 0.001$, χ^2-test), which explains the slightly negative effect of providing information on the intensive margin (see Panel F of Figure 2, $p < 0.10$).

[20] We explicitly mentioned the possibility of giving fractions of units in the donation ask to avoid any misperception of a restricted choice set.

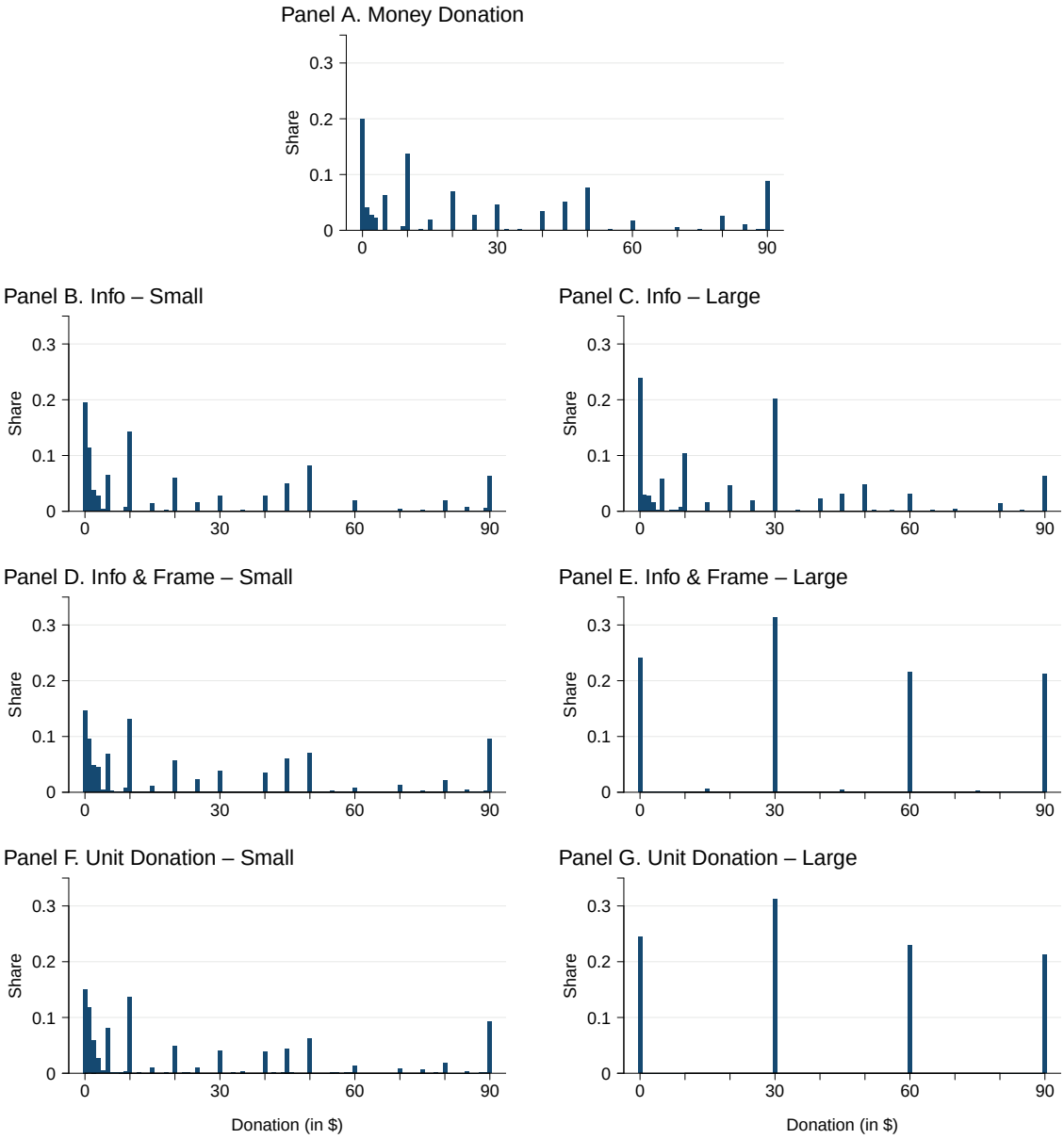

Figure 3: Distribution of donations by treatment

fractions of units to the next higher or lower donation of full units. This becomes clear when investigating how the probability mass of donors who give fractions of units under a money donation scheme with cost-per-unit information (i.e., Info – Large or Info – Small) reallocates when the unit frame is introduced (i.e., Info & Frame – Large or Info & Frame – Small). For example, in the treatment Info – Large, 8.7% of participants donate more than \$60 (more than two full units). In the most optimistic scenario, this complete probability mass, but no more, should move to \$90 (three full units) when the unit frame is introduced. However, looking at the actual distribution in treatment Info & Frame – Large (panel E of Figure 3), we find that the share of donors giving exactly three units is significantly higher than that and amounts to 21.2% ($p < 0.001$, χ^2-test). To further illustrate the point, we recalculate the average donation in the treatments Info – Large and Info – Small for the scenario that all donors giving fractions of units switch to the next higher number of full units available. The recalculated average donations for the large and small unit size amount to \$32.53 and \$22.43, respectively. Even in this most optimistic scenario, the average donations are significantly lower than what we actually observe in the treatments Info & Frame – Large (average donation of \$42.01, $p < 0.001$, two-sided t-test) and Info & Frame – Small (average donation of \$25.54, $p < 0.01$, two-sided t-test).

While increased impact salience and the interaction with the cognitive biases (accessibility and left-digit bias) are sufficient to explain the observed behavioral responses to the unit frame, we cannot exclude that a change in the perceived expected donation amount – the third mechanism discussed for the unit frame in Section 3 – also plays a role. Using a unit frame might create the perception that the charity expects the donor to give one full unit (i.e., \$1 and \$30 in the case of the small and large unit size, respectively). However, the data provides only limited support for this mechanism. While it might contribute to the larger share of donations at \$30 when moving from Info – Large to Info & Frame – Large (20.1% vs. 31.4%, $p < 0.001$, χ^2-test), we do not observe the predicted increase in giving \$1 when moving from Info – Small to Info & Frame – Small (11.1% vs. 9.4%, $p = 0.18$, χ^2-test).

Donation grid. Given that donating fractions of units is already virtually absent in the treatments with unit frame, the additional discritization of the choice set to full units has little scope to create a substantial impact. In line with this, we do not observe a significant effect on average donations, the extensive margin, or the intensive margin irrespective of the unit size. This

does not imply that restricting the choice set is irrelevant. At least for the large unit size, it might substantially alter the outcome if a unit frame has not been introduced, yet. An empirical test of whether this is the case would, however, require a different experimental design.

5 Conclusion

Donation schemes can often be designed in terms of physical units to fund rather than the amount of money to give. Does this design of the ask affect individuals' giving behavior? The popularity of unit donation schemes among fundraisers suggests that it should, and that the scheme's performance justifies the complications of the design, such as additional information provision and the decision of what constitutes a unit. To address this research question, we conducted a large-scale online experiment in which we systematically compared money and unit donation schemes.

Our main result is that employing a unit donation scheme substantially affects giving, with the direction of the effect depending on the unit size. The unit donation scheme increased giving by almost 60% when a large unit size was used (cost per unit of \$30), but decreased giving by about 10% under a small unit size (cost per unit of \$1).

By decomposing the overall effects into incremental steps of successively introducing the three key features of unit donation schemes (cost-per-unit information, unit framing, and the donation grid), we first show that providing cost-per-unit information reduces average donations irrespective of the unit size and that this effect is likely driven by anchoring or a perception among donors that the charity expects a donation of exactly the cost of one unit. This is in line with Lewis and Small (2019) – who find that potential donors are likely to donate the cost of one unit if information is presented as dollars-per-unit instead of units-per-dollar – and evidence that donors are particularly likely to follow suggested donation amounts (Adena et al., 2014; Reiley and Samek, 2019).

Second, we identify unit framing as the driving factor of the overall positive effect of a unit donation scheme under the large unit size. Based on the empirical evidence, we argue that unit framing alters giving by substantially increasing the salience of the donation impact and interacting with accessibility and left-digit bias due to the changed metric of the donation space. While the unit frame also increased giving for the small unit size, the effect is much smaller and thus more than counterbalanced by the negative impact of cost-per-unit information. The smaller effect under

the small unit size can be explained by the fact that, there, the unit framing only increases the salience of the donation impact but does not change the metric of the donation space (leaving accessibility and left-digit bias unaffected).

Third, we do not find any additional effect of introducing a donation grid that restricts donations to full units once the cost-per-unit information and unit frame are already present. Our failure to find additional effects – on average and at the extensive margin – contrasts with earlier result by Cartwright and Mirza (2019) and Adena and Huck (2020) who show that minimum donation amounts or an increase in the step size of donation grids reduce giving. A straightforward reason for this difference in findings is that in our experiment, donating fractions of units is almost completely absent once a unit frame has been introduced, leaving little scope for an effect of eventually restricting choices.

Our results offer new insights into individuals' giving behavior and have direct implications for fundraising practitioners. We show that unit donation schemes offer an attractive alternative to the standard money donation scheme. With the right design, they can be used to achieve strategic goals like increasing overall giving or expanding the donor base. In doing so, the unit size of the charitable good requires special attention as it is a key determining factor in how effects materialize.

Given the crucial role of the unit size, an interesting avenue for future research is to explore the optimal unit size design. At what point does the overall effect reverse and how does this depend on the distribution of donations under the money donation scheme? Other important questions include whether unit donation schemes offer charities an competitive advantage and how different insights from the standard money donation context play out once a unit donation scheme is employed. We hope that our paper encourages more research in this area of great practical and academic relevance.

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Appendix

A.1 Pre-registration

CONFIDENTIAL - FOR PEER-REVIEW ONLY

How to Design the Ask: Experiment (#94287)

Created: 04/15/2022 10:03 AM (PT)

This is an anonymized copy (without author names) of the pre-registration. It was created by the author(s) to use during peer-review.
A non-anonymized version (containing author names) should be made available by the authors when the work it supports is made public.

---

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
1. Does using a Unit Donation instead of a Money Donation scheme affect charitable giving?
2. Does the size of the unit matter for the impact of a Unit Donation scheme on charitable giving?
3. Which mechanisms are driving the effect?

3) Describe the key dependent variable(s) specifying how they will be measured.
1. The amount donated to the charity in $ (zero if no donation was made).
2. Whether the participant donated to the charity.

4) How many and which conditions will participants be assigned to?
Participants are recruited via Amazon Mechanical Turk. They work on a real-effort task (transcribing a scanned sentence), have the opportunity to donate part of their reward to a charity, and answer some questions. Participants are randomly assigned to one of seven treatments (probability of assignment in parentheses):

1. Money Donation (5/36): The donation call does not provide information about the effectiveness of a donation; the participant decides how much money to give; any amount between 0 and $90.00 can be given.

2. Unit Donation – Small (5/36): The donation call states that one nutritional ration is sufficient to treat a malnourished child for one day and that it can be provided for a donation of $1; the participant decides how many rations to provide; up to 90 rations can be given (only integers).

3. Unit Donation – Large (6/36): The donation call states that one nutritional ration is sufficient to treat a malnourished child for one month (30 days) and that it can be provided for a donation of $30; the participant decides how many rations to provide; up to 3 rations can be given (only integers).

4. Info – Small (5/36): The donation call states that one nutritional ration is sufficient to treat a malnourished child for one day and that it can be provided for a donation of $1; the participant decides how much money to give; any amount between 0 and $90.00 can be given.

5. Info + Frame – Small (5/36): The donation call states that one nutritional ration is sufficient to treat a malnourished child for one day and that it can be provided for a donation of $1; the participant decides how many rations to provide; any amount between 0 and 90 rations can be given.

6. Info – Large (5/36): The donation call states that one nutritional ration is sufficient to treat a malnourished child for one month (30 days) and that it can be provided for a donation of $30; the participant decides how much money to give; any amount between 0 and $90.00 can be given.

7. Info + Frame – Large (5/36): The donation call states that one nutritional ration is sufficient to treat a malnourished child for one month (30 days) and that it can be provided for a donation of $30; the participant decides how many rations to provide; any amount between 0 and 3 rations can be given.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
For questions 1 and 2: We conduct an OLS regression where we regress the outcome variable on a dummy for being in treatment 2 and a dummy for being in treatment 3, only using data from treatments 1, 2, and 3. For the first question, we test whether at least one of the estimated coefficients of the two treatment dummies is significantly different from zero. For the second question, we test whether the estimated coefficients of the two treatment dummies are significantly different from each other.

For question 3: We conduct two sets of OLS regressions. In the first set, we only use data from treatments 1, 2, 4, and 5 and regress the outcome variable on dummies for (i) being informed about the effectiveness of the donation (=1 for treatments 2, 4, and 5), (ii) deciding how many units to give (=1 for treatments 2 and 5) and (iii) being restricted to give complete units (=1 for treatment 2). In the second set, we only use data from treatments 1, 3, 6, and 7 and regress the outcome variable on dummies for (i) being informed about the effectiveness of the donation (=1 for treatments 3, 6, and 7), (ii) deciding how many units to give (=1 for treatments 3 and 7) and (iii) being restricted to give complete units (=1 for treatment 3). For each coefficient in each regression, we test whether it is significant to conclude about the role of each feature in explaining the potential difference between treatment 1 and

treatment 2 or 3.

We always use heteroskedasticity robust standard errors.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
1. We exclude observations with duplicate Amazon Mechanical Turk IDs (which are entered during the experiment). The only exception is that we keep an observation if it is the first with this ID to be confronted with the donation call, it completed the experiment, and the time period from starting to completing the experiment does not overlap with any other observation that shares this ID.
2. We exclude observations with Amazon Mechanical Turk IDs that are not listed as having worked on the HIT by Amazon Mechanical Turk.
3. We exclude all observations that did not complete the experiment.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We aim for a sample size of 9,000 participants. Since there is a risk that we will not be able to reach the desired sample size, we will stop the data collection after 8 weeks.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
We will post the experiment on Amazon Mechanical Turk in subsequent HITs with up to 1,500 participants. If a posted HIT is completed, we will post a new HIT (with 1,500 participants unless fewer are needed to arrive at the sample size of 9,000 participants in total). If after seven days a posted HIT is still not completed, we will close this HIT and post a new one.

We will use data from the questionnaire to shed more light on the mechanisms studied in research question 3. In particular, we explore how beliefs about (i) the effectiveness of donating a certain amount ($1 or $10), (ii) the appropriateness of donating a certain amount ($1 or $10), (iii) the extent to which others think donating a certain amount is appropriate ($1 or $10), and (iv) the donation behavior of others vary across the treatments.

As robustness checks we will run the analyses specified in point 5 including the following covariates:
- gender (female/male/other)
- age (18–24/25–30/31–40/ 41–50/ 51–64/65 or older)
- crowdworking as main source of income (yes/no)
- children (yes/no)
- college degree or higher (yes/no)

A.2 Instructions

This section shows screenshots from the instructions of the experiment.

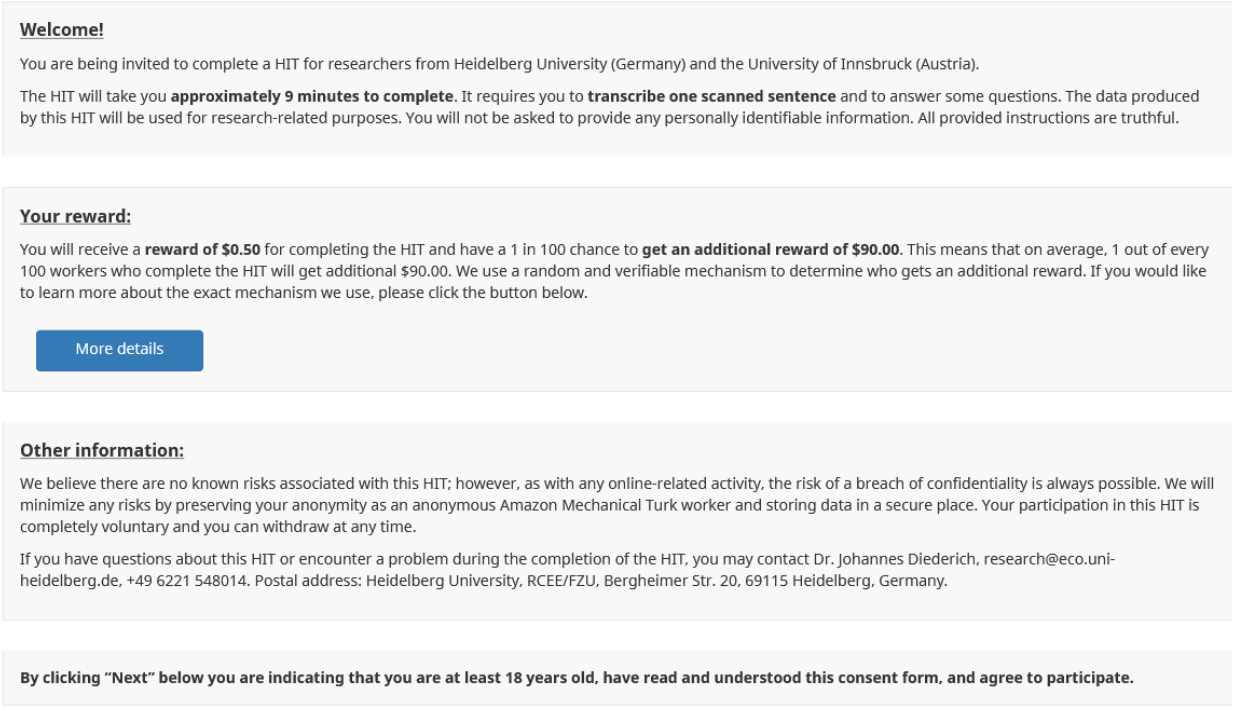

Figure A.2: Screen 1 (consent form)

Notes: If subjects clicked on "More details," the precise details of the procedures for the additional reward were shown.

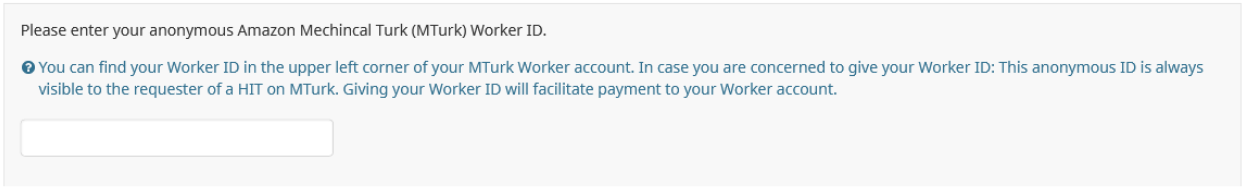

Figure A.3: Screen 2 (MTurk ID)

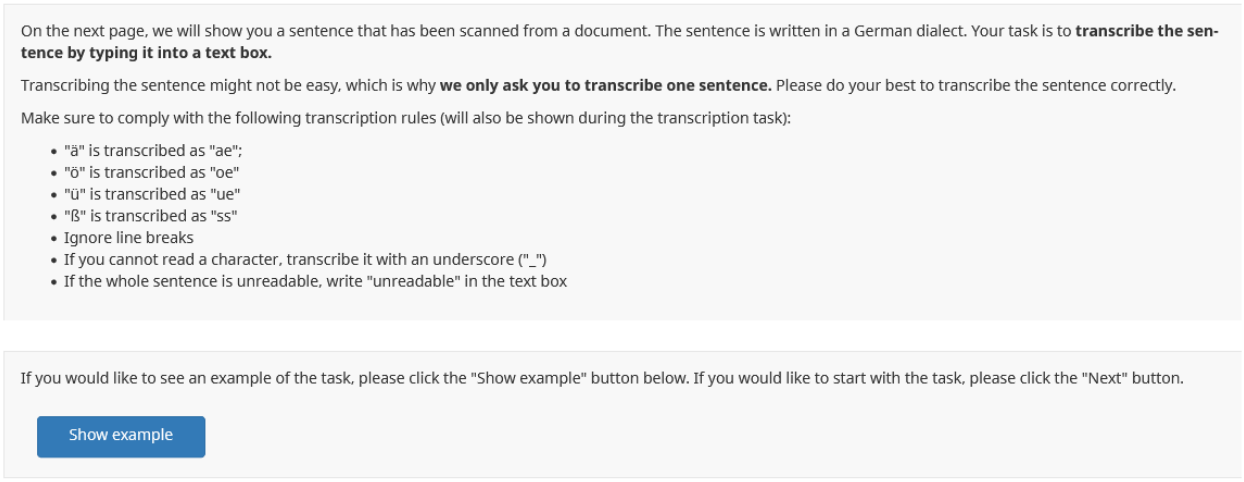

Figure A.4: Screen 3 (instruction of real-effort task)

Notes: If subjects clicked on "Show example," an example of a completed transcription task was shown.

Figure A.5: Screen 4 (real-effort task)

Notes: Subjects randomly received one out of thirteen different sentences.

When posting a HIT on MTurk, it is always helpful to understand how the task is perceived by workers. A difficult task might be more interesting but could also lead to more mistakes. At the same time, it is important to understand whether workers carefully read the instructions. If they do not, this could reduce the quality of the data received from the HIT. To show that you read our instructions carefully, please ignore the following question. Instead, select the answer "other" and enter "understood" (without quotation marks) in the text box. Thank you.

Which of the following statements applies?

- ○ The task was less difficult than most tasks on MTurk.
- ○ The task was more difficult than most tasks on MTurk.
- ○ No answer
- ○ Other:

Figure A.6: Screen 5 (attention check)

As part of this MTurk HIT, each participant has the opportunity to **support the provision of nutritious food for malnourished children** in developing countries.

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Currently, millions of children in developing countries could be pushed to the brink of starvation due to huge shortfalls in humanitarian aid funding amid the COVID-19 pandemic. Ready-to-use therapeutic foods can help: **A specially developed nutritional paste can be used to treat children affected by severe acute malnutrition and help them gain weight.** UNICEF runs a program to provide such foods.

One ration of the nutritional paste is sufficient to treat a child for one day and can be provided for a donation of $1.00.

In this MTurk HIT, **you may donate (some of) your additional reward to provide rations of the nutritional paste.** With $90.00, you can provide up to 90 rations. If you get the additional reward of $90.00, $1.00 per ration will be subtracted from your reward and donated to UNICEF for the provision of the nutritional paste.

Please tell us below how many rations you wish to provide.

ration(s)

Figure A.7: Screen 6 (donation ask in treatment Unit Donation – Small)

As part of this MTurk HIT, each participant has the opportunity to **support the provision of nutritious food for malnourished children** in developing countries.

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Currently, millions of children in developing countries could be pushed to the brink of starvation due to huge shortfalls in humanitarian aid funding amid the COVID-19 pandemic. Ready-to-use therapeutic foods can help: **A specially developed nutritional paste can be used to treat children affected by severe acute malnutrition and help them gain weight.** UNICEF runs a program to provide such foods.

One ration of the nutritional paste is sufficient to treat a child for one month (30 days) and can be provided for a donation of $30.00.

In this MTurk HIT, **you may donate (some of) your additional reward for helping provide the nutritional paste.** Thus, you can donate any amount up to $90.00. If you get the additional reward of $90.00, the amount you have chosen will be subtracted from your reward and donated to UNICEF for the provision of the nutritional paste.

Please tell us below how much money you wish to donate.

$

Figure A.8: Screen 6 (donation ask in treatment Info – Large)

As part of this MTurk HIT, each participant has the opportunity to **support the provision of nutritious food for malnourished children** in developing countries.

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Currently, millions of children in developing countries could be pushed to the brink of starvation due to huge shortfalls in humanitarian aid funding amid the COVID-19 pandemic. Ready-to-use therapeutic foods can help: **A specially developed nutritional paste can be used to treat children affected by severe acute malnutrition and help them gain weight.** UNICEF runs a program to provide such foods.

One ration of the nutritional paste is sufficient to treat a child for one day and can be provided for a donation of $1.00.

In this MTurk HIT, **you may donate (some of) your additional reward for helping provide the nutritional paste.** Thus, you can donate any amount up to $90.00. If you get the additional reward of $90.00, the amount you have chosen will be subtracted from your reward and donated to UNICEF for the provision of the nutritional paste.

Please tell us below how much money you wish to donate.

$

Figure A.9: Screen 6 (donation ask in treatment Info – Small)

As part of this MTurk HIT, each participant has the opportunity to **support the provision of nutritious food for malnourished children** in developing countries.

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Currently, millions of children in developing countries could be pushed to the brink of starvation due to huge shortfalls in humanitarian aid funding amid the COVID-19 pandemic. Ready-to-use therapeutic foods can help: **A specially developed nutritional paste can be used to treat children affected by severe acute malnutrition and help them gain weight.** UNICEF runs a program to provide such foods.

One ration of the nutritional paste is sufficient to treat a child for one month (30 days) and can be provided for a donation of $30.00.

In this MTurk HIT, **you may donate (some of) your additional reward to provide rations of the nutritional paste. Partial rations are also feasible.** With $90.00, you can provide up to 3 rations. If you get the additional reward of $90.00, $30.00 per ration will be subtracted from your reward and donated to UNICEF for the provision of the nutritional paste.

Please tell us below how many rations you wish to provide.

ration(s)

Figure A.10: Screen 6 (donation ask in treatment Info & Frame – Large)

As part of this MTurk HIT, each participant has the opportunity to **support the provision of nutritious food for malnourished children** in developing countries.

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Currently, millions of children in developing countries could be pushed to the brink of starvation due to huge shortfalls in humanitarian aid funding amid the COVID-19 pandemic. Ready-to-use therapeutic foods can help: **A specially developed nutritional paste can be used to treat children affected by severe acute malnutrition and help them gain weight.** UNICEF runs a program to provide such foods.

One ration of the nutritional paste is sufficient to treat a child for one day and can be provided for a donation of $1.00.

In this MTurk HIT, **you may donate (some of) your additional reward to provide rations of the nutritional paste. Partial rations are also feasible.** With $90.00, you can provide up to 90 rations. If you get the additional reward of $90.00, $1.00 per ration will be subtracted from your reward and donated to UNICEF for the provision of the nutritional paste.

Please tell us below how many rations you wish to provide.

ration(s)

Figure A.11: Screen 6 (donation ask in treatment Info & Frame – Small)

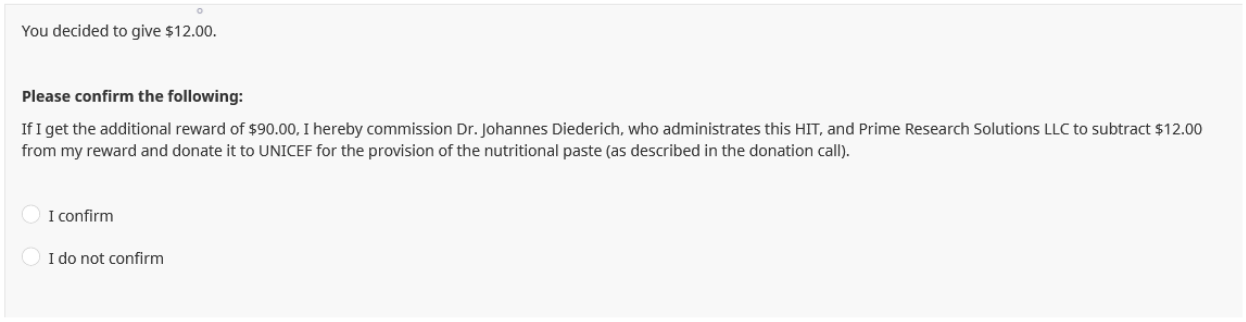

Figure A.12: Screen 7 (donation confirmation)

Notes: If subjects did not select a positive donation amount, they were just reminded of that. For treatments with unit frame, the screen showed the selected number of units and the implied donation in monetary terms. If subjects donated a positive amount but did not confirm the donation on this page, the same screen was shown again but with a hint at the top of the page saying: "Please note that your donation decision cannot be implemented if you do not confirm the statement. Your selected donation amount will only be subtracted from your reward and donated to UNICEF if you confirm the statement and you get the additional reward of $90.00. You now have the one-time chance to change your previous choice and confirm the statement below."

Please indicate how much you agree or disagree with the following statements that refer to the donation opportunity in this MTurk HIT.

	Strongly agree	Agree	Rather agree	Neither agree nor disagree	Rather disagree	Disagree	Strongly disagree	No answer
The recipients of the nutritious food are deserving of support.	○	○	○	○	○	○	○	○
UNICEF will use the money to provide nutritious food as described in the survey.	○	○	○	○	○	○	○	○
Donating $1.00 will make a difference for malnourished children.	○	○	○	○	○	○	○	○
It is inappropriate to donate $1.00 because it is too little.	○	○	○	○	○	○	○	○
Other individuals think it is inappropriate to donate $1.00 because it is too little.	○	○	○	○	○	○	○	○

Figure A.13: Screen 8 (beliefs part 1)

Notes: This screen was shown to subjects in treatments Info – Small, Info & Frame – Small, Unit Donation – Small and a random subsample (about 50 percent) of the treatment Money Donation. Subjects in treatments Info – Large, Info & Frame – Large, and the remaining subsample of the treatment Money Donation saw a screen with similar questions but focusing on a donation of $10 instead of $1. Subjects in treatment Unit Donation – Large did not see this or any equivalent screen.

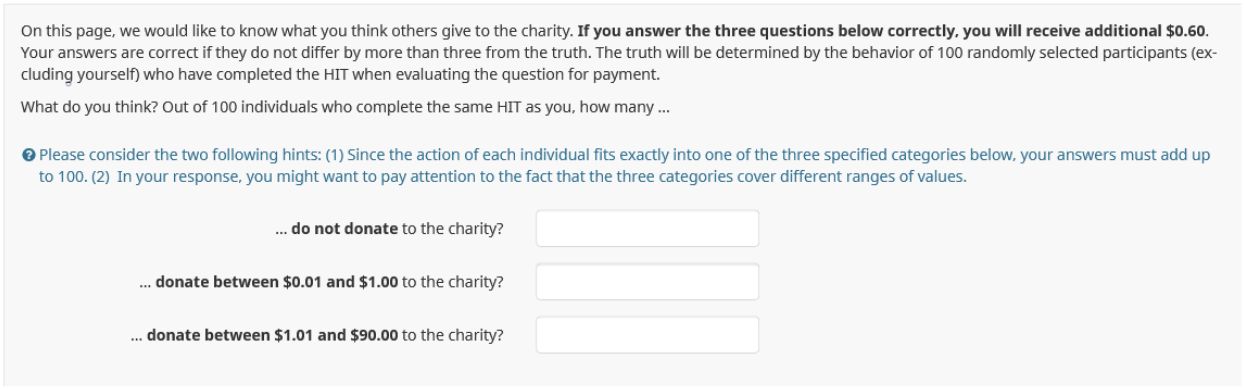

Figure A.14: Screen 9 (beliefs part 2)

Notes: This screen was shown to subjects in treatments Info – Small, Info & Frame – Small, Unit Donation – Small and a random subsample (about 50 percent) of the treatment Money Donation. Subjects in treatments Info – Large, Info & Frame – Large, and the remaining subsample of the treatment Money Donation saw a screen with similar questions but with $10.00 ($10.01) instead of $1.00 ($1.01) as upper (lower) bound of the second (third) donation interval. Subjects in treatment Unit Donation – Large did not see this or any equivalent screen.

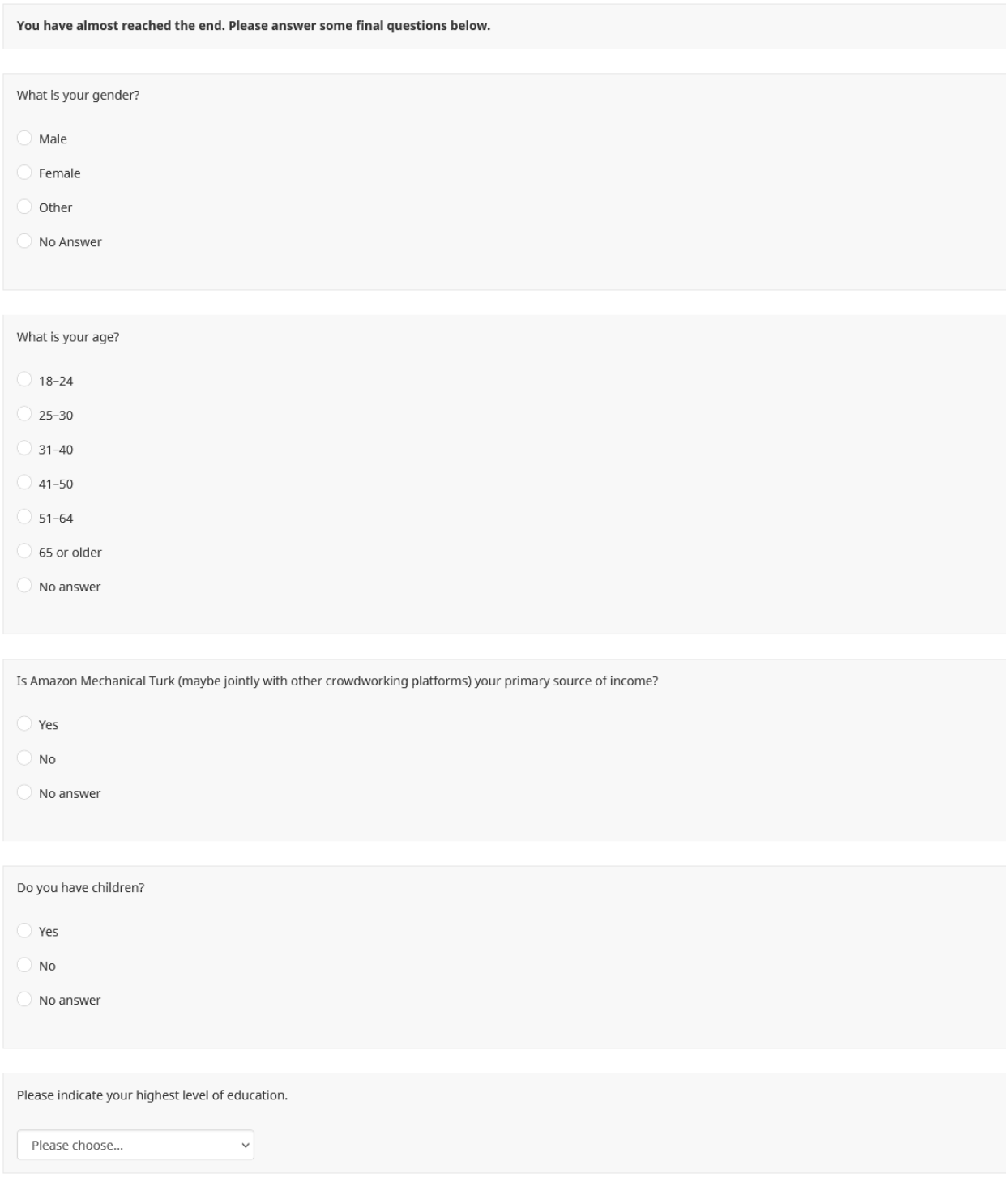

Figure A.15: Screen 10 (sociodemographic characteristics)

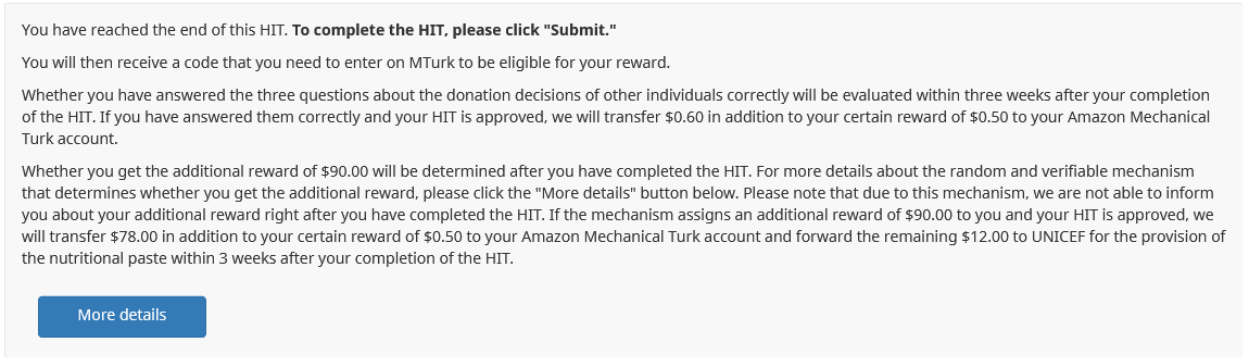

Figure A.16: Screen 11 (submission)

Notes: If subjects clicked on "More details," the precise details of the procedures for the additional reward were shown.

A.3 Beliefs

After the donation ask (and the confirmation of the donation) subjects answered questions about their beliefs in the context of the donation opportunity. The goal was to get additional suggestive evidence on the underlying mechanisms of why certain features of unit donation schemes create an effect. Since the insights form the data are limited, their discussion is delegated to the Appendix.

Figures A.13 and A.14 show the questions administered to subjects in treatments Info – Small, Info & Frame – Small, Unit Donation – Small and a random subsample (about 50 percent) of the treatment Money Donation. On the first screen, subjects answered 7-point Likert scale questions about the deservingness of the donation recipients (deserving), the trustworthiness of the charity (trust), whether making a donation of \$1 – the cost of a daily nutritional ration – makes a difference (effective), whether it is inappropriate to give a small donation of \$1 (self), and whether others think it is inappropriate to give a small donation of \$1 (other). We decided to focus on a donation of\$1 to see whether any of the features of a unit donation scheme change whether such a small donation — equivalent to the cost per unit under a small unit size — is perceived as effective or (in)appropriate.

On the second screen, subjects where asked about the donation behavior of other participants. In particular, they indicated how many out of 100 individuals who completed exactly the same HIT (i) did not donate to the charity, (ii) donated between \$0.01 and \$1, and (iii) donated between \$1.01 and \$90. If their answers for the three categories differed not more than 3 from the observed donation behavior, they received a bonus payment of \$0.60.

For the treatments Info – Large, Info & Frame – Large, and the remaining participants of the treatment Money Donation, we administered the same questions but instead of focusing on a donation of \$1, we focused on a donation of \$10 and also adjusted the intervals on the second screen accordingly. The donation of \$10 was the first focal point under a money donation scheme (identified in pilot data). We decided to use this focal point (which is below the large unit size of \$30) to see whether the unit frame or the cost-per-unit information change whether such a donation is perceived as effective or (in)appropriate. A drawback of this approach is that subjects in treatment Unit Donation – Large did not receive any question because asking them about a donation of \$10 would be confusing, given that such a donation was not possible in the corresponding treatment.

Table A.2: Effects on Beliefs

	Deserving	Trust	Effective	Self	Other
A. Small unit size					
Cost-per-unit info	0.055	0.139**	0.018	0.248**	0.125
	(0.059)	(0.070)	(0.079)	(0.104)	(0.089)
	[1.00]	[1.00]	[1.00]	[0.40]	[1.00]
Unit frame	0.000	-0.041	0.101	-0.162*	-0.136*
	(0.048)	(0.054)	(0.062)	(0.085)	(0.072)
	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]
Donation grid	-0.041	-0.052	-0.056	0.003	-0.057
	(0.048)	(0.055)	(0.060)	(0.084)	(0.072)
	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]
Observations	4,276	4,263	4,257	4,210	4,164
B. Large unit size					
Cost-per-unit info	0.030	-0.115*	-0.221***	-0.022	0.014
	(0.057)	(0.067)	(0.070)	(0.105)	(0.091)
	[1.00]	[1.00]	[0.04]	[1.00]	[1.00]
Unit frame	-0.019	0.068	0.031	0.118	0.138*
	(0.048)	(0.058)	(0.062)	(0.086)	(0.075)
	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]
Observations	2,894	2,886	2,886	2,863	2,832

Notes: Robust standard errors are in parentheses, *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. p-values adjusted for multiple hypothesis correction according to Holm (1979) in square brackets.

Table A.2 shows regression results for each dependent variable of the first screen. Panel A focuses on the treatments with a small unit size and the subsample of the treatment Money Donation that received similar questions. The dependent variable is regressed on dummies for each of the three features of unit donation schemes. Panel B focuses on the treatments with a large unit size (except Unit Donation – Large) and the subsample of the treatment Money Donation that received similar questions. There, the dependent variable is regressed on a dummy for cost-per-unit information and unit framing. Observations with "I don't know" (at most 4%) are always treated as missing.

Most of the estimated effects are insignificant or only marginally significant, even without correcting for multiple hypothesis testing. Once we apply the simple procedure by Holm (1979) to account for multiple hypothesis testing (regarding the number of dependent variables and estimated coefficients in this table), only the effect of providing cost-per-unit information under a large unit size is significant with an adjusted p-value of 0.04. This would suggest that a donation of$10 is perceived as less effective once information on a cost-per-unit of $30 is given, which might be an indirect consequence of anchoring or a perception that the charity expects a donation of $30.

Figures A.17 and A.18 illustrate the average beliefs about others' donation behavior across treatments. For each treatment, the colored bars show the average expected share of donations

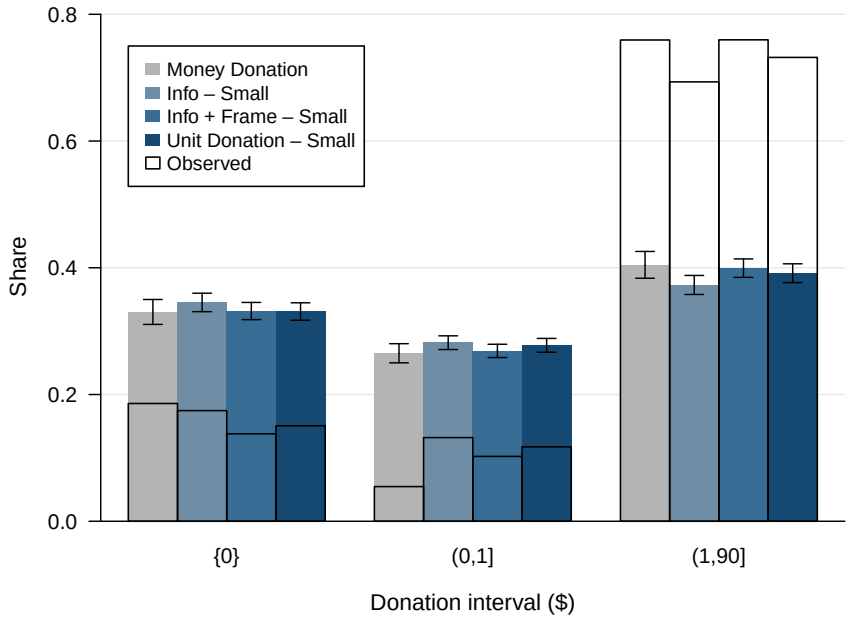

Figure A.17: Beliefs about others' donation behavior – Small unit size

Notes: For each treatment, the colored bars show the average expected share of donations that fall within the corresponding interval, while the bars with black borders represent the observed share of donations within the interval. The belief in the treatment Money Donation is only based on the subsample of subjects that received questions about the corresponding donation intervals. The whiskers represent 95% confidence intervals.

that fall within the corresponding interval, while the bars with black borders represent the observed share of donations within the interval. From the figures, it is very clear that individuals' beliefs are on average far from the observed behavior and generally too conservative, i.e., the frequency of large donations is underestimated.[21] At the same time, it seems that changes in average beliefs across treatments often align with the comparative statics that we observe in the actual donation data (although changes in beliefs are usually much smaller). Given the experimental design, it is of course not possible to identify whether changes in beliefs were a driving factor of changes in behavior.

[21] One contributing reason might be a tendency to allocate the probability mass rather equally across the three presented donation intervals.

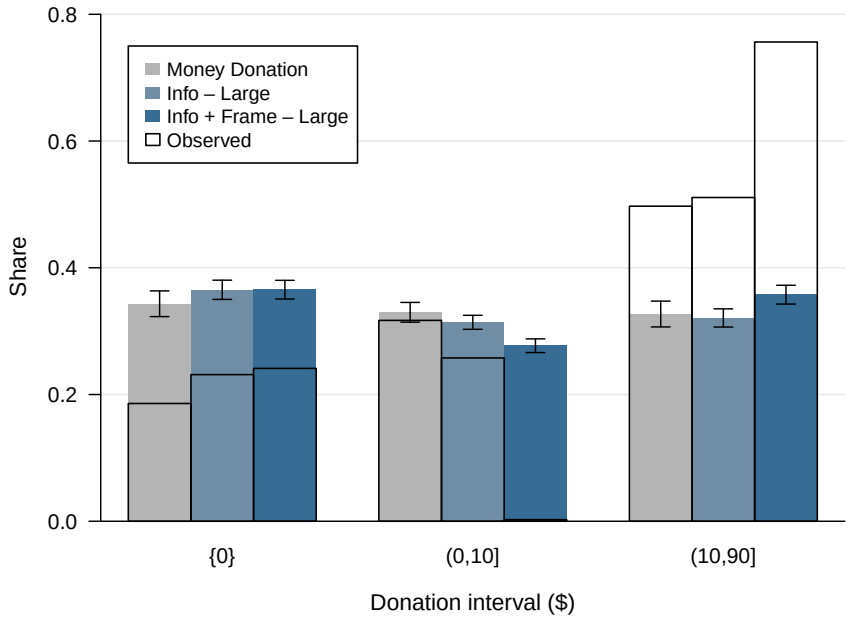

Figure A.18: Beliefs about others' donation behavior – Large unit size

Notes: For each treatment, the colored bars show the average expected share of donations that fall within the corresponding interval, while the bars with black borders represent the observed share of donations within the interval. The belief in the treatment Money Donation is only based on the subsample of subjects that received questions about the corresponding donation intervals. The whiskers represent 95% confidence intervals.

A.4 Robustness with respect to exclusion criteria

In the main analysis of the paper, we apply our pre-registered exclusion criteria to create the final sample. In particular, we exclude (i) incomplete observations, (ii) observations with an MTurk ID that has not been listed has having worked on the HIT by MTurk, and (iii) observations with duplicate MTurk IDs unless they are the first to be assigned to a treatment, their working time does not overlap with any another observation that shares the ID, and they have completed the experiment. Here, we show that the results are robust to alternative exclusion criteria that one might want to apply. Tables A.3, A.5, A.4 show the estimation results under different exclusion regimes for the comparison of the pure solicitation schemes, the incremental effects in case of the large unit size, and the incremental effects in case of the small unit size, respectively.

As mentioned in Section 2, the share of observation that drop out after treatment assignment slightly differs across treatments ($p < 0.1$, χ^2-test). Columns 1 and 2 of each table report the estimation results when incomplete observations with treatment assignment are included in the sample as long as they pass the second and third exclusion criterion (note that the order in which

the criteria are presented here and in Section 2 differs from that in the pre-registration). While column 1 always codes their donations as zero, column 2 uses the submitted donation whenever available. Columns 3 and 4 proceed analogously but weaken the third exclusion criterion from Section 2. In particular, observations with duplicate MTurk IDs are not dropped if they are the first observation with this ID and their working time does not overlap with any other observation that shares the same ID (so, the requirement of completing the experiment is no longer applied).

Column 5 makes use of the attention check that was included in the experiment (see Figure A.6). In addition to the exclusion criteria applied in the main analysis, observations who did not pass the attention check are dropped. To pass the attention check, participants had to select the answer option "other" and type "understood" in the text box behind it. The attention check is quite strict. First, it includes a lengthy text which, when reading the question just before the answer options, seems not to be absolutely necessary for answering the question (but includes the instructions on how to pass the attention check). Second, we only code participants has having passed the attention check if they get it exactly right, implying that any deviation from the input "understood" in the text field is coded as failure. For example, some participants included additional spaces, capital letters, quotation marks, or a small typo. As a result, 32.9% fail the attention check and are thus excluded from the analysis in column 5.

Column 6 differs from the main analysis in the paper by excluding observations in the final sample that share the same IP address. While the enabled data quality feature of CloudResaerch should generally avoid IP address duplicates within each of the seven sessions, duplicates across sessions are not restricted. In fact, there are 387 observations with duplicate IP addresses in the final sample of the main analysis that are not considered in column 6.

Table A.3: Effect of pure schemes with different exclusion criteria

	(1)	(2)	(3)	(4)	(5)	(6)
A. Donation						
Unit Donation – Small[a]	-2.641**	-2.826**	-2.390**	-3.173***	-2.735**	-1.741
	(1.170)	(1.171)	(1.150)	(1.157)	(1.380)	(1.202)
Unit Donation – Large[b]	15.651***	15.414***	15.608***	14.993***	14.135***	15.224***
	(1.190)	(1.191)	(1.177)	(1.182)	(1.412)	(1.212)
p-value ($a = b = 0$, F-test)	0.000	0.000	0.000	0.000	0.000	0.000
p-value ($a = b$, F-test)	0.000	0.000	0.000	0.000	0.000	0.000
B. Propensity to give						
Unit Donation – Small[c]	0.035**	0.031**	0.040**	0.024	0.039**	0.037**
	(0.015)	(0.015)	(0.016)	(0.015)	(0.018)	(0.015)
Unit Donation – Large[d]	-0.049***	-0.058***	-0.040**	-0.061***	-0.069***	-0.058***
	(0.016)	(0.016)	(0.016)	(0.016)	(0.019)	(0.016)
p-value ($c = d = 0$, F-test)	0.000	0.000	0.000	0.000	0.000	0.000
p-value ($c = d$, F-test)	0.000	0.000	0.000	0.000	0.000	0.000
Observations	3,983	3,983	4,084	4,084	2,625	3,761

Robust standard errors are in parentheses, $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variable is the amount of money the charity receives for Panel A and whether the individual donated for Panel B. The results are based on regressing the dependent variable on treatment dummies with the pure money donation treatment always serving as baseline and only using data from the treatments with pure solicitation schemes. The difference between the columns lies in the exclusion of observations and the precise definition of the dependent variable (see description in Appendix A.4).

Table A.4: Incremental effects for small unit size

	(1)	(2)	(3)	(4)	(5)	(6)
A. Donation						
Cost-per-unit info	-4.470***	-4.641***	-4.301***	-4.757***	-4.466***	-3.972***
	(1.156)	(1.156)	(1.133)	(1.142)	(1.369)	(1.187)
Unit frame	3.057***	3.407***	3.110***	3.239***	3.744***	2.986**
	(1.151)	(1.154)	(1.131)	(1.139)	(1.374)	(1.185)
Donation grid	-1.227	-1.592	-1.199	-1.654	-2.013	-0.755
	(1.166)	(1.169)	(1.148)	(1.154)	(1.386)	(1.200)
B. Propensity to give						
Cost-per-unit info	0.010	0.008	0.011	0.007	0.009	0.012
	(0.016)	(0.016)	(0.016)	(0.016)	(0.019)	(0.016)
Unit frame	0.036**	0.039***	0.039**	0.036**	0.034*	0.040***
	(0.015)	(0.015)	(0.016)	(0.015)	(0.018)	(0.015)
Donation grid	-0.011	-0.017	-0.011	-0.019	-0.003	-0.015
	(0.014)	(0.014)	(0.015)	(0.014)	(0.017)	(0.014)
Observations	5,013	5,013	5,151	5,151	3,309	4,723

Robust standard errors are in parentheses, $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variable is the amount of money the charity receives for Panel A and whether the individual donated for Panel B. The results are based on regressing the dependent variable on dummies for each channel of unit donations schemes, only using data from treatments with a small unit size and the pure money donation treatment. The difference between the columns lies in the exclusion of observations and the precise definition of the dependent variable (see description in Appendix A.4.

Table A.5: Incremental effects for large unit size

	(1)	(2)	(3)	(4)	(5)	(6)
A. Donation						
Cost-per-unit info	-3.308***	-3.178***	-3.056***	-3.327***	-1.934	-3.263***
	(1.133)	(1.135)	(1.114)	(1.122)	(1.352)	(1.154)
Unit frame	17.972***	18.461***	17.448***	18.492***	15.165***	18.448***
	(1.207)	(1.208)	(1.196)	(1.195)	(1.443)	(1.232)
Donation grid	0.988	0.131	1.216	-0.172	0.904	0.039
	(1.260)	(1.260)	(1.254)	(1.251)	(1.499)	(1.287)
B. Propensity to give						
Cost-per-unit info	-0.050***	-0.045***	-0.043**	-0.042**	-0.035*	-0.049***
	(0.017)	(0.017)	(0.017)	(0.017)	(0.020)	(0.017)
Unit frame	-0.008	-0.010	-0.010	-0.010	-0.033	-0.007
	(0.018)	(0.018)	(0.018)	(0.017)	(0.021)	(0.018)
Donation grid	0.009	-0.004	0.013	-0.010	-0.001	-0.002
	(0.017)	(0.017)	(0.017)	(0.017)	(0.021)	(0.017)
Observations	5,046	5,046	5,177	5,177	3,333	4,751

Robust standard errors are in parentheses, $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. The dependent variable is the amount of money the charity receives for Panel A and whether the individual donated for Panel B. The results are based on regressing the dependent variable on dummies for each channel of unit donations schemes, only using data from treatments with a large unit size and the pure money donation treatment. The difference between the columns lies in the exclusion of observations and the precise definition of the dependent variable (see description in Appendix A.4).