Replication of

Avoiding Overhead Aversion in Charity

by Gneezy, U. / Keenan, EA / Gneezy, A. (2014)
in: Science, 346, pp. 632–635

Replication Authors:

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In a laboratory experiment, Gneezy et al. (2014) asked participants to decide which of two charitable organizations (*Kids' Korps* or *charity: water*) would receive a $100 donation. There was no overhead associated with donations to *Kids Korps*. The experimenters manipulated the overhead costs associated with *charity: water* and whether a third party covered them, in five randomly assigned experimental treatments ("control", "5% overhead", "50% overhead", "5% overhead, covered" or "50% overhead, covered"). Participants were informed that the decision of one randomly selected participant would be implemented, making their decisions consequential. The researchers found that the likelihood of choosing *charity: water* was significantly lower when the overhead associated with the donation was 50% compared to 5% or no overhead. Findings further showed that the likelihood of choosing *charity: water* was significantly higher when the overhead was 50% but covered by a third party, compared to the same 50% overhead but not covered.

The paper includes a laboratory study with 5 experimental treatments and a field experiment. In this replication study we focus on the comparison between the "50% overhead" and "50% overhead, covered" treatments in the lab study, and therefore conduct only these two treatments.

Hypothesis to replicate and bet on:

The likelihood of choosing a charity is higher when potential donors know that the overhead is already paid for, than when the donors pay for overhead themselves (a comparison of the fraction choosing to donate to "*charity: water*" between the "50% overhead, covered treatment" and the "50% overhead treatment", $z = 3.00$, $p < 0.01$ (exact $p = 0.0027$), p. 633).

(This hypothesis was picked by lottery instead of comparing the "no overhead treatment" and the "50% overhead treatment", $z = 3.27$, $p < 0.01$, p. 633.)

Power Analysis and Criteria for Replication: First Data Collection

The original sample size was 180 observations (2 out of 5 randomly assigned treatment to a subject pool of $n = 449$). The standard-ized effect size measured as the correlation coefficient (r) was 0.222. To have 90% power to detect 75% of the original effect size a sample size of 380 is required. The criteria for replication is an effect in the same direction

as the original study and a *p*-value < 0.05 (in a two-sided test).

Power Analysis and Criteria for Replication: Second Data Collection

If the original result is not replicated in the first data collection, a second data collection is carried out. To have 90% power to detect 50% of the original effect size in the pooled sample (first and second data collection), a sample size of 863 is required, i.e., a sample size of 483 in the second data collection is required. The criteria for replication are an effect in the same direction as in the original study and a *p*-value < 0.05 (in a two-sided test) in the pooled data.

Sample

The sample size in the first data collection consists of 380 individuals from the behavioral lab at Wharton. If the original result is not replicated in the first data collection (two-sided *p*-value < 0.05 in the original direction) a second data collection of 483 additional individuals from the same subject pool will be carried out so that the total sample size is 863.

Materials

We use the same computer program as used in the original article (Qualtrics).

Procedure

We follow the procedure of the original article. The following summary of the experimental procedure is therefore based on the section "Method" of the Supplementary Information (pp. 2–4). The experiment will be in English as in the original study.

When participants arrive at the lab for their assigned session they will be seated at a computer to complete the study, designed using Qualtrics. We will randomly assign the participants to one of two treatment conditions. All participants will be presented with information about two charities, *Kids Korps USA* and *charity: water*, and will be asked to decide which of the two charities should receive a $100 donation. Participants will be told that there is no overhead associated with donations made to *Kids Korps*. For *charity: water*, there will be an overhead cost of 50%, and we will vary whether another individual already covered the overhead. See the experimental text below.

Laboratory Experimental Text:

In today's study we will ask you to give $100 to one of two non-profits. At the end of the study, we will randomly choose the decision of one participant and implement it (i.e., make his/her specific payment). Your choice is whether to give the $100 to "Kids Korps" or to "charity: water."

Kids Korps. "Kids Korps" is a non-profit organization that engages young people in volunteerism and teaches them about leadership and civic responsibility. There is no overhead (i.e., spending on administrative and fundraising costs) associated with this donation, so for every dollar you'll donate the entire $1 will go to "Kids Korps."

[Participants will be randomly assigned to one of the following two "charity: water" conditions.]

[50% overhead:]

Charity: water. "Charity: water" is a non-profit organization that brings clean and safe drinking water to people in developing nations. There is 50% overhead (i.e., spending on administrative and fundraising costs) associated with this donation, so for every dollar

you'll donate 50 cents will go to "charity: water" and 50 cents will be used to cover our costs.

[50% overhead, covered:]

Charity: water. "Charity: water" is a non-profit organization that brings clean and safe drinking water to people in developing nations. There is 50% overhead (i.e., spending on administrative and fundraising costs) associated with this donation, but someone else already covered this cost for your contribution, so for every dollar you'll donate the entire $1 will go to "charity: water."

[Dependent Variable:]

Please tell us which organization you would like to give $100 to:

○ "Kids Korps"
○ "charity: water"

[Additional Questions in Laboratory Experiment:]

- On average, how often do you donate money to non-profits? (1 = never to 6 = 6 or more times a year)

- How familiar are you with *Kids Korps*? (1 = not at all to 7 = very)

- How familiar are you with *charity: water*? (1 = not at all to 7 = very)

- What is your gender? (male or female; order of gender options is counterbalanced)

- What is your age?

Analysis

The analysis will be performed exactly as in the original article. The proportion donating to "*charity: water*" in the "50% overhead" and "50% overhead, covered" treatments will be compared using a two sample z-proportion test (two sided). In the original study the fraction donating to the "*charity: water*" was 49.43% in the "50% overhead" treatment and 71.43% in the "50% overhead, covered" treatment. Based on a z-test of proportions, the difference between the "50% overhead" treatment and the "50% overhead, covered" treatment is statistically significant with $z = 3.00$ and $p = 0.0027$. The same test will be used in the replication study.

The results will first be estimated based on the first data collection. If the original result is replicated in the first data collection (a two-sided p-value < 0.05 in the same direction as the original study), the second data collection will not be carried out. If the original result is not replicated in the first data collection a second data collection will be carried out. The above statistical test will then be estimated for the pooled sample of the first and second data collection to test if the original result replicated (a two-sided p-value < 0.05 in the same direction as the original result).

The result for the z-test above will be the main replication result. For completeness we will also report the results using probit regressions (the same regressions as presented in Table S1 of the original study, although including only the two treatments of the replications rather than the five treatments of the original study).

Differences from Original Study

The replication procedure is the same as that of the original study, with some unavoidable deviations. The replication will be performed at Wharton behavioral lab between September 2016 and September 2017, whereas the data in the original study was carried out at UCSD in Spring 2014.

The original study was incentivized by course credit, where the replication will have a show-up fee of $5.00.

The original paper contains five experimental treatments performed at the lab and an additional field study. For the replication, the focus is only on two of the laboratory experimental treatments, the "50% overhead" and "50% overhead, covered" treatments. These treatments were picked by lottery, instead of comparing the "no overhead treatment" and the "50% overhead treatment".

The original study was a part of a bundle of experiments given in return for course credit. There were two studies before it, and then 4 that followed. The first study involved participants being endowed with one of two items and then they were given the opportunity to trade for the other item. The manipulation involved four different risk levels (i.e., chances that they would not be able to keep the item they ended up with). The second study was exploratory and involved a participant first filling out the PANAS, followed by a dictator game as well as asking participants to consider a positive/negative/ordinary/nostalgic event. After participants completed the PANAS again, they completed a temporal discounting measure, made a product choice, completed a self-report scale of social distance, and filled out some demographic info.

Replication Results for the First Data Collection (90% power to detect 75% of the original effect size)

[To be added when replication experiments have been completed.]

Replication Results for the First and Second Data Collection Pooled (90% power to detect 50% of the original effect size)

[To be added when replication experiments have been completed.]

Unplanned Protocol Deviations

[To be added when replication experiments have been completed.]

Discussion

[To be added when replication experiments have been completed.]

References

Gneezy, U. / Keenan, E. A. / Gneezy, A. (2014): *Avoiding overhead aversion in charity*, Science, 346 (6209), pp. 632–635.