

# Poverty and Redistributive Preferences: Pre-analysis plan\*

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January 4, 2016

## **Abstract**

This document describes the analysis plan for a randomized experiment examining the psychological effects of poverty on redistributive preferences. We will recruit respondents from Amazon Mechanical Turk. We will run one experiment in which we expose our treatment group to a prime that triggers feelings of poverty (Mani et al., 2013). In the experiment we recruit 500 participants. We examine the effect of poverty primes on behavior in a behavioral measure of redistributive preferences as well as explicit questions on redistributive preferences. This plan outlines the design of the experiments, the outcomes of interest, the econometric approach and the dimensions of heterogeneity we intend to explore.

**Keywords:** Poverty, Redistribution, Psychology, Experiment.

**JEL classification:** C90, Z1, Z13

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# 1 Motivation

Poverty is one of the most serious issues facing the world today: more than 1.5 billion individuals live on less than \$1 a day. Poverty has far-reaching consequences, not only materially, but also psychologically. Feelings of poverty negatively affect cognition (Mani et al., 2013; Shah et al., 2012) as well as economic behavior, e.g. inter-temporal decision making (Haushofer et al., 2013) and risk-taking behavior (Haushofer and Fehr, 2014).

Little is understood on how feeling poor affects people’s perception of fairness and in particular their redistributive preferences. Specifically, it could be that individuals exhibiting higher levels of financial worries dislike inequality more strongly and prefer more equal distributions of scarce resources. In order to provide evidence on the effect of poverty on redistributive preferences, we conduct an experiment on Amazon Mechanical Turk. We present our respondents with either an easy or a hard financial scenario. The hard financial scenario has been shown to trigger feelings of financial worries (Mani et al., 2013) in comparison to the easy financial scenario. We examine the effect of poverty primes on behavior in a behavioral measure for redistributive preferences as well as several explicit measure of redistribution.

This document proceeds as follows: In section two we describe the sample, our treatment and the schedule of tasks. Subsequently, we delineate the econometric approach. Finally, we describe the main outcomes measures of interest used in the two experiments.

## 2 Design

### 2.1 Our Sample

We will run our experiment on Amazon Mechanical Turk (AMT), an online crowdsourcing marketplace developed in 2005 by Amazon.com, Inc. This platform is now commonly used by academics to conduct online experiments, as it provides a cheap and efficient way of recruiting participants. A link to our experiment will be openly posted on AMT with a description stating that the survey paid \$1.10 for approximately 8 minutes, i.e., an hourly wage of about \$6.50. This is higher than the average effective wage on mTurk which according to Amazon is around \$4.80 per hour (Kuziemko et al., 2015; Mason and Suri, 2012).

## **2.2 Treatment**

### **2.2.1 Poverty Prime**

We have adapted the poverty primes by Mani et al. (2013) to the MTurk environment. As in Mani et al. (2013), we present our respondents with hypothetical scenarios, each of which describes a financial problem. We randomly assign our respondents to either a hard or an easy financial scenario.

In the first financial scenario they need to explain how they would deal with an income decrease of 30% (3%) in the hard (easy) financial scenario. We then ask them a variety of questions on whether this income shock would substantially affect their situation and what kind of sacrifices they would need to make. In the second scenario people explain how they would deal with a situation in which they need to come up with an amount of money: In the hard (easy) financial scenario respondents are asked how they would come up with \$5000 (\$300) in a short notice. The order with which these financial scenarios is presented is randomized. Respondents write down how they might deal with the financial scenarios. The aim of exposure to these scenarios is to trigger feelings of poverty.

We have made two main changes to the primes used by Mani et al. (2013): first, we increased the amounts for the hard financial scenarios. Second, we removed two financial scenarios because they did not seem well-suited for the MTurk population. We have conducted a pilot study with a sample of 350 participants on August 1st in which we document that our two primes successfully affect financial worries. In particular, poorer individuals from our sample are quite strongly affected by our treatment: They display substantially stronger financial worries. The primes are further explained in Appendix A. Moreover, at the very end of the document we attach the exact experimental instructions.

## **2.3 Schedule of Tasks and Treatments: Experiment**

The sequence of the different tasks in our experiment is as follows:

1. Poverty primes.
2. Manipulation checks.
3. Behavioral Measure of Redistributive Preferences

4. Explicit measures of redistribution
5. Simple demographics
6. Credit constraints

## 2.4 Power Calculations

The chosen sample size of 500 participants for each of the two experiments ensures that we can detect an effect size of about 0.25 at a significance level of 0.05 with a power of 0.8.

## 3 Econometric Approach

### 3.1 Main Specification

We compare the measures of redistributive preferences between our treatment group and the control group.  $Treatment_i$  takes value one for those participants receiving the difficult financial scenario and value zero for those receiving the easy financial scenario. Our main specification is given by:

$$y_i = \alpha_0 + \alpha_1 Treatment_i + \varepsilon_i \quad (1)$$

Here our coefficient of interest is  $\alpha_1$  which gives us the treatment effect of the poverty prime on redistributive preferences for the whole sample.  $\varepsilon_i$  is the idiosyncratic error term. We expect that our treatment effects are stronger for individuals experiencing higher levels of poverty. We make use of an indicator variable  $Poor_i$  which takes value one for all individuals below the median income in our sample. Then, we estimate how our treatment differentially affects those living in higher levels of poverty in comparison to those who are not poor.

$$y_i = \beta_0 + \beta_1 Treatment_i \times Poor_i + \beta_2 Treatment_i + \beta_3 Poor_i + \varepsilon_i \quad (2)$$

Our main coefficient of interest is  $\beta_1$  which gives us the treatment effect of the prime for the poorer half of our sample.  $\beta_2$  is the treatment effect of the prime for the “richer half

of our sample”. In an alternative specification, we will also interact income  $inc_i$  with our treatment indicator. Here, our specification of interest is given as follows:

$$y_i = \gamma_0 + \gamma_1 Treatment_i \times inc_i + \gamma_2 Treatment_i + \gamma_3 inc_i + \varepsilon_i \quad (3)$$

Moreover, we will explore heterogeneity by gender (the dummy  $male_i$  takes value one for males) with the following specification:

$$y_i = \gamma_0 + \gamma_1 Treatment_i \times male_i + \gamma_2 Treatment_i + \gamma_3 male_i + \varepsilon_i \quad (4)$$

## 4 Main Outcome Variables

- **Redistribution Game:** We will give our respondents the following instructions:

*We will give you the chance to decide what payoffs two other mTurk workers, whom we shall refer to as person A and person B, will receive. One of the participants from our survey will be randomly chosen to get their choice implemented. Each person A and Person B have previously participated in one of our surveys. You are now given the chance to split a total \$20 between person A and person B. Before you take the decision on how you split the money, we will provide you with some information about person A and person B. Person A has an annual household income of \$20,000, while person B has an annual household income of \$80,000. Person A and B are both male, married and have a household of size five. They live in the same state. You can choose to split the money in several ways resulting in different payoffs for Person A and Person B.*

- **Petition:** We measure people’s willingness to sign up for a petition in favor of the minimum wage. Specifically we give our respondents the following instructions:  
*Find below a link to a page that gives information about a petition in favor of increasing the minimum wage. On this page you can find a set of arguments why an increase in the minimum wage is desirable and you can sign the petition. If you want to learn more about this initiative, you can click on the link below.*

<https://www.whitehouse.gov/raise-the-wage>

*Would you be willing to sign a petition in support of increasing the minimum wage?*

- **Explicit measures of redistributive preferences:** We ask our respondents about their opinions regarding redistribution. Specifically we ask them to what extent they agree to several statements about redistribution, such as “I am in favor of the Food Stamps Program” or “The government should increase taxes for millionaires. More details on the exact questions can be found in the experimental instructions. We will create one index of explicit measures for redistribution based on the weighting procedure suggested by Anderson (2008).

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## A Poverty Primes adapted from (Mani et al., 2013)

We will now ask you to imagine various scenarios, and we will ask you to explain how you would deal with them.

- Scenario 1: Imagine that the economy is going through difficult times, like in the recent financial crisis. Consider a scenario where your income suddenly decreases by 20% (5%)\* due the bad economic circumstances.

Then participants are asked to what extent they agree with the following statement (On a 4-point scale: 1 - strongly disagree, 2- disagree, 3 - agree, 4- strongly agree):

“Given my situation, I would be able to maintain roughly the same lifestyle under those new circumstances.”

All participants selecting either 1 or 2 they will be further prompted to answer the following: In the previous question, you said that you would not be able to maintain roughly the same lifestyle if your income decreased by 20% (5%). What changes would you need to make? Three sentences should be enough.

Subsequently, all participants will be presented with the following question: In what ways would the 20 % (5%) reduction in your income affect your leisure, housing or travel plans? Three sentences should be enough. Finally, they are asked to answer a last question: To what extent do you agree with the following statement? (On a 4-point scale: 1 - strongly disagree, 2- disagree, 3 - agree, 4- strongly agree)

"The 20% (5%) decrease in my income would strongly impact my leisure, housing, or travel plans."

- Scenario 2: Imagine that an unforeseen event requires of you an immediate \$5,000 (\$300) expense. Are there ways in which you may be able to come up with that amount of money on a very short notice? Participants answer this first question with either yes or no. Then, they are presented with the following open-ended question:

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\*The numbers in brackets are those from the easy financial scenario, while the numbers not in brackets are from the hard financial scenario.

How would you go about getting \$5,000 (\$300) on a very short notice?

Three sentences should be enough.

Finally, they are asked to answer two-likert type questions: To what extent do you agree with the following statement? (On a 4-point scale: 1 - strongly disagree, 2- disagree, 3 - agree, 4- strongly agree)

- Coming up with \$5000 (\$300) on a very short notice would cause me long-lasting financial hardship.
- Coming up with \$5000 (\$300) on a very short notice would require me to make sacrifices that have long-term consequences.

## **B Manipulation checks**

### **B.1 Financial Worries Scale**

Participants will be asked: To what extent do you agree to the following statements? The scale is as follows:

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neither Disagree nor Agree
- 4 - Agree
- 5 - Strongly Agree.

1. I am very worried about my financial situation.
2. I am very worried about having enough money to make ends meet.
3. I am very worried about not being able to find money in case I really need it.