

# Who Should Get Money? Estimating Welfare Preferences in the U.S.

## Pre-registration

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### 1 This version

In version 5 (14 December 2022 - v2), and version 4 (14 December 2022) of this document, we fixed minor typos and inconsistencies.

In version 3 of the document (13 December 2022), we have included the design and proposed analysis of our Wave 2 of data collection (Section 6) and also included the instructions for Wave 2 (Section 8).

In version 2 of the document (07 December 2021), we have included some minor changes relative to version 1 (29 November 2021). In particular, we have modified the instructions in the following ways: (i) the attention check question and the comprehension check question have been modified in consultation with our data service provider, (ii) the consent screen includes a sentence indicating that the survey includes attention checks and a sentence indicating that they have a maximum of one hour to finish the survey, (iii) the exit screens have been slightly modified, (iv) the exit screen shown to participants who fail the comprehension check was missing in the previous set of instructions and has now been included.

### 2 Introduction

In this project, we run a large-scale experiment to understand how the general population of the U.S. assigns “social marginal welfare weights” to other individuals in the society. These weights are general enough to capture many different fairness concerns that people may have.

In our experiment, participants assigned to the role of “Social Architects” are sampled from the general population of the U.S. Their task in the experiment is to assign social marginal welfare weights to seven “Recipients” with different after-tax incomes.

Our project has several goals. First, we provide the first estimate of welfare weights using a general population sample of the U.S. Second, we explore the heterogeneity in the weights by running a k-means clustering algorithm. Third, we administer a number of treatments to check the robustness of the welfare weights estimation. Fourth, we validate the weights

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by testing if Social Architects’ weights correlate with their policy views. Fifth, we explore whether Social Architects’ demographics and political affiliation correlate with their assigned weights. Sixth, we compare the weights obtained from our sample to the weights implied by policies. Seventh, we compare the weights obtained from our sample to common functional forms used in the literature. Finally, we explore the aggregation of weights.

### 3 Design

#### 3.1 Recruitment of Social Architects

We recruit the participants in the role of Social Architects from the data service provider Lucid. We program the experiment using Qualtrics. The data service provider distributes the survey link to participants.

In the initial section of the survey, Social Architects are asked (i) their consent to participate in the experiment, (ii) their demographic information and political affiliation, and (iii) a question that tests their attention. If participants do not consent to participate in the survey, fall into one of the demographic quotas that are full, state that they do not reside in the U.S., or fail the attention check, they exit the survey and do not fill the rest of the survey. We define demographic quotas on the basis of age, income, education, gender, and region. Participants that do fit into one of the quotas proceed with the survey, and are subsequently randomly assigned into treatments. Table 1 provides the target quotas.

After being assigned to treatments, participants view the instructions. We include a comprehension check question at the end of the instructions. Participants who answer the comprehension check question wrong are dropped from the survey. The full set of instructions can be found in Section 7.

#### 3.2 Design for Social Architects in Treatment Loss x Moderate

In the main task, Social Architects face 6 decision screens. In each decision screen, they face a pair of Recipients (Recipient  $i$  and Recipient  $j$ ) and have to decide how to allocate some money between them. Table 2 lists the income levels of the Recipients in each decision screen. To minimize the concern of any order effect, half the participants view the decision screens depicted in the top part of the table while the other half view the the decision screens depicted in the bottom part of the table.

In each decision screen, a Social Architect faces a “staircase” with 4 questions. In each question, the Social Architect has to indicate whether she prefers the option on the left or right. The option on the right always takes away \$500 from Recipient  $j$  and gives \$500 to the Recipient  $i$ . The option on the left involves taking away an amount  $-t$  from Recipient  $j$  and

Table 1: Quotas for the full sample

	Number	Share
Annual Individual Income		
Less than \$29,999	52	1061
\$30,000 to \$59,999	24	490
\$60,000 to \$99,999	13	265
\$100,00 to \$149,999	5	102
\$150,000 and above	4	82
Age		
18-34	29	598
35 - 44	16	330
45 - 54	16	330
55 - 64	16	330
65 and above	20	412
Education		
Up to Highschool	51	1020
Some college	18	360
Bachelor or Associate	22	440
Masters or above	9	180
Region		
Region: West	24	487
Region: North-east	17	345
Region: South	37	751
Region: Mid-west	20.5	417
Sex		
Male	48	960
Female	52	1040

giving an amount  $pt$  to Recipient  $i$ . For convenience, we will refer to the option on the right as Constant reform and the option on the left as Variable reform. Note that participants are informed that two Recipients in the end would receive an initial \$1500 bonus.

The first question that Social Architects face is common for all Social Architects. The second, third, and fourth questions that Social Architects face depend on the choices that the Social Architects made in the first, second, and third questions respectively. Section 5 depicts the Variable reform amounts  $(pt, -t)$  that would be selected for each Social Architect based on their choices. The order of questions can also be found in Section 7. For example, if a Social Architect chooses  $(500,-500)$  in the first question when asked to decide between  $(500,-500)$  and  $(1000,-1000)$ , the second question asks Social Architect to choose between  $(500,-500)$  and  $(1250,-750)$ . Section 5 indicates the mapping from Social Architects' choices

Table 2: Income levels of the recipients

	Decision Screen					
	1	2	3	4	5	6
Recipient i	\$8,000	\$35,000	\$70,000	\$70,000	\$70,000	\$70,000
Recipient j	\$70,000	\$70,000	\$100,000	\$170,000	\$250,000	\$500,000
	Decision Screen: Reverse order					
	1	2	3	4	5	6
Recipient i	\$70,000	\$70,000	\$70,000	\$70,000	\$35,000	\$8,000
Recipient j	\$500,000	\$250,000	\$170,000	\$100,000	\$70,000	\$70,000

to the implied  $p$ .<sup>2</sup> We similarly obtain  $p_1, \dots, p_6$  for each of the six decision screens.

After the task of assigning weights, Social Architects face a second task where we elicit their policy views. The first question asks them whether they would like to increase the tax on millionaires and the second question asks them if they would like the government to increase redistribution. The order of the policy views questions is counterbalanced across participants.

### 3.3 Treatments

The design described above is for Treatment Loss x Moderate in the study. We implement several other treatments.

Social Architects in Treatment Loss x High go through the same steps as the Architects in Treatment Loss x Moderate, with the exception that the Recipients in each decision screen are different. Table 3 presents the incomes of the Recipients in each decision screen in Treatment Loss x High. As is the case in Treatment Loss x Moderate, participants in Treatment Loss x High are randomly assigned to two version of the survey, each of which presents the order of the Recipients differently.

In Treatment Gain x Moderate we change the framing of the Reform. In contrast to Treatment Loss x Moderate, Social Architects in Treatment Gain x Moderate are not told about the initial \$1500 bonus given to Recipients. Instead, the \$1500 is reflected in the Reform amounts they face in the questions. Everything else remains the same between Treatment Loss x Moderate and Treatment Gain x Moderate.

Finally, in Treatment Gain x High, Social Architects face the same decisions screens as Social Architects in Treatment Loss x High, indicated in Table 3. Furthermore, these

<sup>2</sup>We order the set of 15 possible questions in increasing order of  $pt$ , such that it resembles a multiple price list. The Social Architect's choices would indicate that they would choose the Constant reform at the start and switch to Choosing the Variable reform in row  $i$ . We then take the mid-point of the Variable reform amounts between row  $i$  and row  $i-1$  to identify  $p$ .

Table 3: Income levels of the recipients in treatment conditions Loss x High and Gain x High

	Decision Screen					
	1	2	3	4	5	6
Recipient i	\$8,000	\$35,000	\$70,000	\$100,000	\$170,000	\$250,000
Recipient j	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
	Decision Screen: Reverse order					
	1	2	3	4	5	6
Recipient i	\$250,000	\$170,000	\$100,000	\$70,000	\$35,000	\$8,000
Recipient j	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000

Architects face the same questions (gain framing) as those in Treatment Gain x Moderate.

### 3.4 Implementation

At the end of the study, we will randomly select one Social Architect. For the randomly selected Social Architect, one of the six decision screens will be randomly selected, and one of the four questions within the selected decision screen will be randomly selected and implemented. The randomly selected question will involve two Recipients. We will recruit these two Recipients from a survey panel. The final bonus payments of the two Recipients will depend on the choices of the randomly selected Social Architect.

Note that we will only select one Social Architect across treatments in this wave of data collection as well as in other future waves of this study.

## 4 Analysis

### 4.1 Sample

The sample of completed responses includes all Social Architects who have consented to the study, who have passed the attention check, who have passed the comprehension question, and who have reached the final page of the study.

We drop participants in each treatment whose response time is less than 3 standard deviations from the mean response time in their treatment.

### 4.2 Estimating welfare weights

We construct the weights assigned by Social Architects in Treatment Loss x Moderate to the seven Recipients as follows. First, we set the raw weight assigned to Recipient 3 (earning \$70,000) as 1. The raw weights assigned to Recipients 1 through 7 (excluding Recipient 3) is

given by  $1/p_1, 1/p_2, p_3, p_4, p_5, p_6$ <sup>3</sup>. The re-normalized weights assigned by a Social Architect to the 7 Recipients is given by dividing each of the raw weights by  $\Sigma$ , where  $\Sigma = 1 + 1/p_1 + 1/p_2 + p_3 + p_4 + p_5 + p_6$ .

We follow a similar procedure for participants in other treatments and for those whose order of Recipients is reversed.

### 4.3 Identifying clusters in the weights

We identify the clusters in the weights separately in each Treatment by using two iterative methods: k-means and dendrogram. We apply these two algorithms to pinpoint the number of clusters in the weights. Both methods establish how many clusters can consistently group the Social Architects' weights. Finally, we will group the weights in clusters. As a robustness check we also identify the clusters in the pooled data.

### 4.4 Estimating the slope of weights

We identify the slope of the line fit through a Social Architect's weights across Recipients. In particular, we run a regression for each Social Architect in which the dependent variable is the weights assigned to the seven recipients and the independent variable is the vector (-1,-2,-3,-4,-5,-6,-7).<sup>4</sup> We define  $P_i$  as the coefficient associated with the vector in the regression. Higher values of the coefficient indicate a higher slope and thereby imply that the Social Architect is more progressive, i.e. assigns higher weights to the lower income individuals.

To test how the slope of the Architects' weights relate to the weights they attach to the seven recipients, we estimate the following regression:

$$P_i = \beta_0 + \sum_j \beta_j g(R_j)_i + \theta T_i + \alpha Order_i + \epsilon_i, \quad (1)$$

where  $g(R_j)_i, \forall j \in \{1, 2, 3, 5, 6, 7\}$  is the weight attached by Social Architect  $i$  on Recipient  $j$ . In the event that the variables  $g(R_j)_i, \forall j \in \{1, 2, 3, 5, 6, 7\}$  turn out to be highly multicollinear, we will run seven regressions where each of the seven variables  $g(R_1), g(R_2), g(R_3), g(R_4), g(R_5), g(R_6), g(R_7)$  enter the regression separately. The dependent variable is the slope of the line fit through a Social Architect's weights across Recipients, as defined

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<sup>3</sup>Remember that in each decision screen,  $p$  is the weight assigned to the higher income Recipient divided by the weight assigned to the low income individual.

<sup>4</sup>The values -1,-2,-3,-4,-5,-6, and -7 are assigned to the Recipients who earn incomes \$8000, \$35,000, \$70,000, \$100,000, \$170,000, \$250,000, and \$500,000 respectively.

above. The vector  $T_i$  contains a set of three treatment dummies indicating if a Social Architect is in Treatment Loss x Moderate, Gain x High, or Gain x Moderate, respectively. Treatment Loss x High forms the base category.  $Order_i$  is a dummy variable indicating the order of the decisions screens faced by Architect  $i$ .

Note that all the standard errors computed in all regressions are robust to heteroskedasticity (HC3).

#### 4.5 The effect of treatments and controls on Architects' weights

##### Predictors of Architect's progressivity

To estimate the treatment effects, we estimate several regressions of the following form:

$$P_i = \beta_0 + \theta T_i + \alpha Order_i + \gamma X_i + \epsilon_i \quad (2)$$

$P_i$  is the slope of the line fit through a Social Architect's weights across Recipients, as defined in the previous section. The vector  $T_i$  contains a set of treatment dummies, as defined in the previous section. The dummy variable  $Order_i$  is defined in the previous section. The control variables  $X_i$  include the following dummy variables: *High Age* (=1 if age is above median age), *High Education* (=1 if education is above median education), *Male* (=1 if sex is Male), and *Republican* (=1 if political affiliation is Republican). To flexibility control for income, we also include  $\ln(income)$  and  $\ln(income)^2$  as controls.

As a robustness check, we estimate Equation (2) without demographic controls. To explore the heterogeneous treatment effects, we run several Causal Forest models (Wager & Athey 2018). We do this separately for each of the three treatments (Loss x Moderate, Gain x High, or Gain x Moderate), comparing each to Treatment Loss x High. The control variables used in the models are defined above.

As a robustness check we will use a quadratic fit as an alternative measure of Social Architect's progressivity. In particular, for each Social Architect, we identify which value of  $\nu$  corresponding to the function (after-tax income) $^{-\nu}$  fits the social Architect's weights the best. The best fit function is the one with the lowest root mean-squared error (RMSE). We then compare the average  $\nu$  across treatments.

## Predictors of Architect’s weights

To understand the effect of the treatments and demographic variables on the weights assigned to each Recipient, we run several regressions of the following form

$$g(R_j)_i = \beta_0 + \theta T_i + \alpha Order_i + \gamma X_i + \epsilon_i \quad (3)$$

We estimate seven such regressions, such that in each regression, the dependent variable is the weight assigned by Architect  $i$  to Recipient  $j$ , for  $j \in 1, \dots, 7$ .  $T_i$ ,  $X_i$ , and  $Order_i$  are defined above.

## The effect of own income on assigned weights

To estimate the effect of own income on the assigned weights, we estimate the following fixed-effects model

$$g_{ij} = \beta_0 + \beta_1 1(income\_near\_R_j)_{ij} + \beta_2 \ln Incomediff_{ij} + \beta_3 1(income\_higher\_R_j) + \beta_4 \ln Incomediff_{ij} * 1(income\_higher\_R_j) + \nu_i + \epsilon_{ij} \quad (4)$$

where  $g_{ij}$  is the weight assigned by Social Architect  $i$  to Recipient  $j$ .  $1(income\_near\_R_j)_{ij}$  takes a value of 1 if Social Architect  $i$ 's income is closest to the income of Recipient  $j$  ( $\pm 20\%$  of Recipient  $j$ 's income), and 0 otherwise.  $\ln Incomediff_{ij}$  is the log of the income difference between Architect  $i$  and Recipient  $j$ .  $1(income\_higher\_R_j)$  is a dummy variable that takes a value of 1 if the income of Social Architect  $i$  is higher than 1.2 times the income of Recipient  $j$ , and 0 otherwise. We leverage the variation within individuals by including individual fixed-effects  $\nu_i$ .

To test if Architects' with similar incomes to a Recipient assign higher weights to that Recipient than do other Architects', we estimate the following fixed-effects model.

$$g_{ij} = \beta_0 + \beta_0 + \beta_1 1(income\_near\_R_j)_{ij} + \beta_2 \ln Incomediff_{ij} + \beta_3 1(income\_higher\_R_j) + \beta_4 \ln Incomediff_{ij} * 1(income\_higher\_R_j) + \theta T_i + \alpha Order_i + \gamma X_i + \nu_j + \epsilon_{ij} \quad (5)$$

In Equation (5), we include Recipient fixed-effects  $\nu_j$ , a vector of treatment dummies  $T_i$ , dummy indicating the order  $Order_i$ , and demographic controls  $X_i$ .

As a robustness check, we estimate Equations (4) and (5), by changing the bandwidth of nearness to the Recipient's income to 10% and 30%.



## 4.6 Relation between individual weights and policy views

We estimate several linear regressions that takes the following form:

$$y_i = \beta_0 + \beta_1 P_i + \theta T_i + \alpha Order_i + \beta Order\_policy_i + \gamma X_i + \epsilon_i. \quad (6)$$

$P_i, T_i, Order_i$ , and  $X_i$  are defined above.  $Order\_policy_i$  is a dummy variable indicating the order in which the policy questions were presented to Social Architects.  $y_i$  is defined below. As a robustness check, we estimate Equation (6) without controls  $X_i$ . Table 4 provides an overview of the regressions estimated in this section.

### Preference for redistribution

When we analyze the relationship between people’s weights and their preferences for the government to reduce inequality,  $y_i$  in Equation (6) takes a value between 1 and 7, where higher values indicate that the Social Architect wants the government to do something to reduce inequality (we reverse code the question asked to participants).

As a robustness check we estimate an ordered probit model in which the dependent variable is people’s preferences for redistribution.

### Taxation of millionaires

When we analyze the relationship between people’s weights and their preferences to increase the tax on millionaires,  $y_i$  in Equation (6) takes a value between 1 and 7, where higher values indicate that the Social Architect wants the government to increase the top-taxes (we reverse code the question asked to participants).

As a robustness check we estimate an ordered probit model in which the dependent variable is people’s preferences for increasing the top-taxes.

In addition to estimating Equation (6) for the top-tax question, we also estimate several regressions that take the following form.

$$y_i = \beta_0 + \sum_{j=1,2,3,5,6,7} \beta_j g(R_j)_i + \theta T_i + \alpha Order_i + \beta Order\_policy_i + \gamma X_i + \epsilon_i. \quad (7)$$

where  $g(R_j)_i$  is the weight attached by Social Architect  $i$  on Recipient  $j$  and  $y_i$  takes values between 1 and 7 indicating people’s preferences to increase the taxes on millionaires. We include the weight assigned by Architects on Recipients 1 through 7, excluding Recipient 4, in the regression. In the event that the variables  $g(R_1), \dots, g(R_7)$  turn out to be highly

multicollinear, we will run seven regressions where each of the seven variables  $g(R_1)$ ,  $g(R_2)$ ,  $g(R_3)$ ,  $g(R_4)$ ,  $g(R_5)$ ,  $g(R_6)$ ,  $g(R_7)$  enter the regression separately.

Table 4: Overview of regressions estimated to understand Architects' policy views

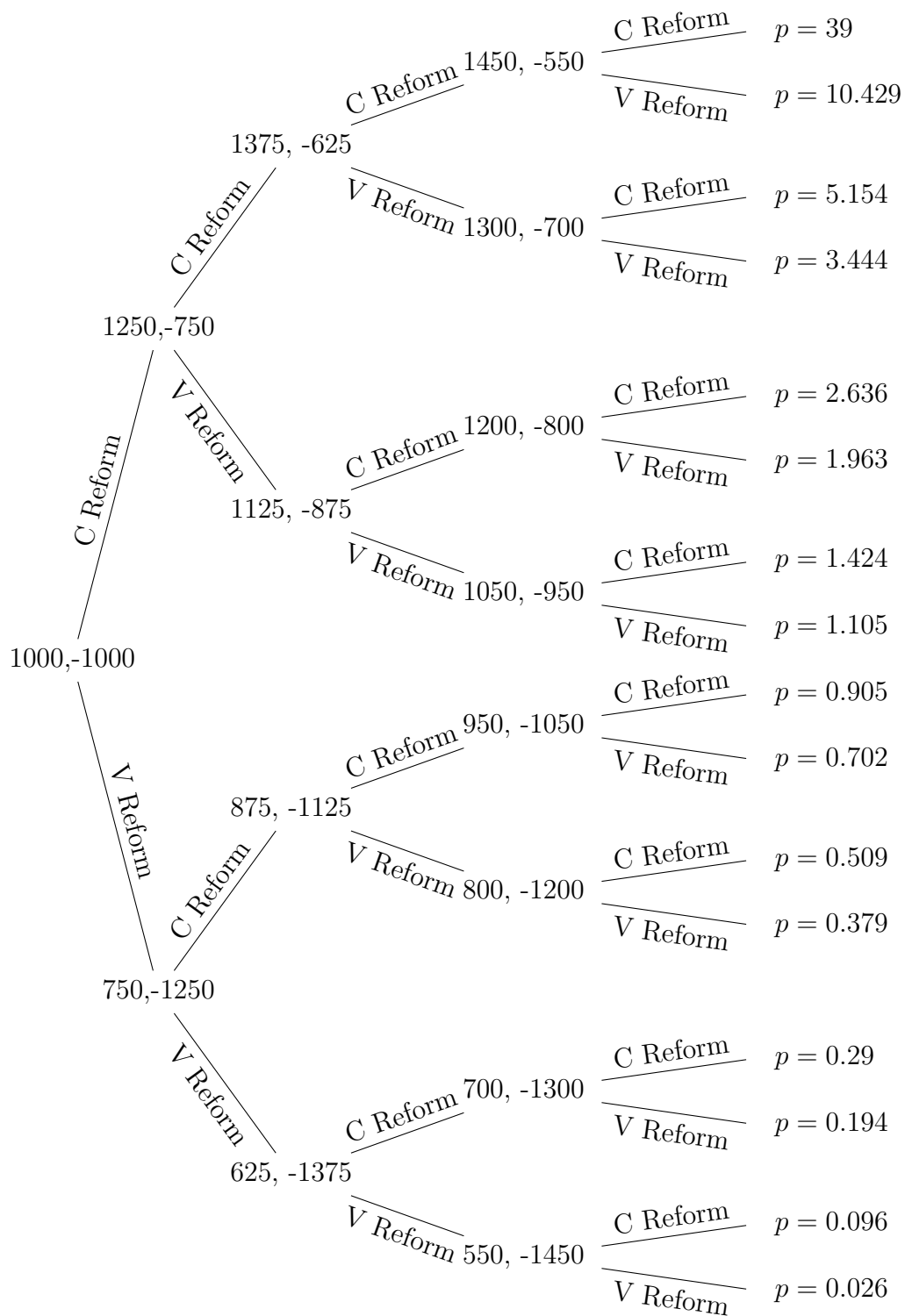
Dependent variable	Main explanatory variable	Demographic controls?
Reduce inequality	Slope of the weights	No
Reduce inequality	Slope of the weights	Yes
Tax on millionaires	Slope of the weights	No
Tax on millionaires	Slope of the weights	Yes
Tax on millionaires	$g(R_1)$ , $g(R_2)$ , $g(R_3)$ $g(R_5)$ , $g(R_6)$ , $g(R_7)$	No
Tax on millionaires	$g(R_1)$ , $g(R_2)$ , $g(R_3)$ $g(R_5)$ , $g(R_6)$ , $g(R_7)$	Yes

Notes: All regressions include treatment dummies, question order dummy, and policy order dummy.

## 4.7 Applications

For the additional exercises carried out in the paper e.g., comparing our weights to the weights implied by policies, we take the simple average of the weights of all participants across all treatments. As a robustness check, we take the simple average of the weights across all treatments involving a gain-framing and take the simple average of the weights across treatments involving a loss-framing. As a final robustness check, we estimate the weights excluding those who choose Constant Reform in every question and every decision screen.

5 Variable Reform (“V Reform”) Amounts Selected by the Staircase Procedure in Treatments Loss x High and Loss x Moderate. Constant Reform Amounts are always (500,-500)



## 6 Wave 2

### 6.1 Design

#### Recruitment of Social Architects

We recruit 2000 participants in the role of Social Architects from the data service provider Prolific. These participants are selected such that they are currently living in the U.S. and are older than 18 years. The data service provider distributes the survey link to participants. We program the experiment using oTree.

In the initial section of the survey, Social Architects are asked (i) their consent to participate in the experiment, (ii) their demographic information and political affiliation, and (iii) a question that tests their attention. If participants do not consent to participate in the survey or state that they do not reside in the U.S., they are dropped from the study. Other participants proceed with the survey and are subsequently randomly assigned to treatments.

After being assigned to treatments, participants view the instructions. We include two comprehension check questions at the end of the instructions. Participants who answer at least one of the three questions (one attention check and two comprehension checks) wrong are dropped from the survey. The full set of instructions can be found in Section 8.

#### Treatments

In Wave 2, Social Architects are randomly assigned to one of four treatments. All treatments are similar to Treatment Loss x Moderate in Wave 1. Treatment Base in Wave 2 is identical to Treatment Loss x Moderate in Wave 1. We include this treatment to test if there are differences across waves. To test whether incentives play a role, we include Treatment Hypothetical. This treatment is identical to Treatment Base except that the Social Architects are informed that their decisions are purely hypothetical and will not affect any Recipients. Treatments Brackets show the Social Architects the income brackets of the Recipients rather than the exact incomes of the Recipients. It is identical to Treatments Base in all other respects. Comparing Social Architects' weights from Treatment Base with those from Treatment Brackets allows us to assess the role of framing the incomes of the Recipients in shaping welfare weights. Treatment Self-Interest is identical to Treatment Brackets, except that Social Architects can be in the role of one of the Recipients. Specifically, each Social Architect replaces the Recipient whose income bracket contains their own income. Thus, the Social Architects could also potentially receive the bonus payment that results from their decisions. Comparing Social Architects' weights from Treatment Self-Interest with those from Treatment Brackets helps explore if Social Architects' self-interest motives affect their

assigned welfare weights.

## Other questions

We ask Social Architects a number of other questions.

*Confidence:* We ask Social Architects how confident they are that the choices they made in the welfare weight elicitation task reflect what they really think.

*Welfarist motives:* We explore whether Social Architects' weights are guided by welfarist or non-welfarist motives. We ask Social Architects whether they think that high-income individuals (i) do not deserve their current income and do not need their current income, (ii) deserve their current income but do not need their current income, (iii) do not deserve their current income but need their current income, or (iv) deserve their current income and need their current income. We ask them a similar question about low-income individuals.

*Person rich due to luck:* We elicit Social Architects' beliefs about whether a person is rich because they had more advantages than others or because they worked harder than others.

*Tax preferences:* We elicit Social Architects' tax preferences by asking them to indicate their preferred average tax rate for the first six tax brackets in the U.S. The average tax rate of the highest income tax bracket will change automatically to ensure that the government revenue is constant.

*Perceptions about the level of taxes:* We elicit Social Architects' beliefs about (i) the share of households in the top tax bracket, (ii) the average tax rate of those in the top tax bracket, (iii) the share of households who pay no taxes, (iv) the average tax rate of the median income household.

*Perceptions low-income share:* asks Social Architects their beliefs about the share of households who earn below \$35,000.

*Perceptions about income mobility:* We ask Social Architects their perceived probability of being in the fifth quintile as an adult for a child with parents in the first quintile.

*Behavioral responses high earners:* This question asks Social Architects their beliefs about the extent to which taxing high-income earners would encourage them to work less.

*Higher taxes high-incomes hurt economy:* This question asks Social Architects their beliefs about whether taxing high-income earners would hurt the economy.

*Belief trickle down:* This question asks Social Architects their beliefs about whether the lower class and middle class mostly win if taxes on high-income earners were cut.

*Inequality is a serious issue:* We ask Social Architects their beliefs about inequality being a serious issue, considering that inequality can have externalities on crime, trust, corruption, and social unrest.

*Trust in government:* We elicit Social Architects' trust in the U.S. government.

## **Implementation**

At the end of the study, we will randomly select one Social Architect (across waves). For the randomly selected Social Architect, one of the six decision screens will be randomly selected, and one of the four questions within the selected decision screen will be randomly selected and implemented.

If the randomly selected Social Architect is not in Treatment Self-Interest, we will pay out the final bonus to two Recipients recruited from a survey panel. If the randomly selected Social Architect is in Treatment Self-Interest, we will pay out the final bonus to the selected Social Architect and to one Recipient recruited from a survey panel.

### **6.2 Analysis**

In addition to conducting the analysis indicated above using the data from Wave 1 only, we conduct the following set of additional analyses using the data pooled from Wave 1 and Wave 2.

We will perform all the analyses below with and without using sampling weights. Our sampling weights (raking weights) are constructed to ensure that the weighted means of our sample demographics match the means of the population demographics. See Section 3.1 for the list of variables used to construct the weights and the sources used to identify the population means. Note that the population means used to construct the weights may differ from those indicated in Table 1 because the latter contains some errors in calculations. In addition to the variables listed in Table 1, we will create the weights based on the share of Republicans in the population. We will obtain the share of Republicans in the population from Gallup.

#### **6.2.1 Sample and estimating the weights**

Our final sample in Wave 2 is selected based on the criteria indicated in Section 4.1. We will estimate the welfare weights of participants in Wave 2 as described in Section 4.2, identify clusters in the weights as described in Section 4.3, and estimate the slope of the weights as described in Section 4.4.

#### **6.2.2 The effect of treatments and controls on Architects' weights**

We will conduct the analysis indicated in Section 4.5 using the pooled data from Wave 1 and Wave 2. In addition, we estimate several linear regressions that take the following general form

$$\begin{aligned} \log(g(R_j)_i) &= \beta_0 + \nu_0 \log(z_j - T(z_j)) + \beta_1 x_i^1 + \dots + \beta_n x_i^n \\ &+ \nu_1 x_i^1 * \log(z_j - T(z_j)) + \dots + \nu_n x_i^n * \log(z_j - T(z_j)) + \epsilon_{ij} \end{aligned} \quad (8)$$

where  $\log(g(R_j)_i)$  is the log of the weight assigned by Social Architect  $i$  to Recipient  $j$  and  $\log(z_j - T(z_j))$  is the log of the after-tax income of Recipient  $j$ . As a notational shorthand, we define  $X$  as the vector including the variables  $x^1, \dots, x^n$ . These regressions allow us to explore, using the data pooled over Social Architects' decisions, how Social Architects' elasticity of weights with respect to the income of the Recipients changes across groups.

**Treatments and demographics:** To explore how the elasticity of Social Architects' weights differ across treatments and demographic variables, we estimate several versions of Equation (8) in which the vector  $X$  includes (i) a set of treatment dummies from Wave 1, (ii) a set of treatment dummies from Wave 2, and (iii) a set of treatment dummies from Wave 1 and Wave 2. We estimate versions of the above three specifications in which the vector  $X$  additionally includes the set of demographic controls including *High Age* (=1 if age is above median age), *High Education* (=1 if education is above median education), *Male* (=1 if sex is Male), *Republican* (=1 if political affiliation is Republican), and *High Income* (= 1 if above median income). As a robustness check, we estimate four versions of Equation (8) in which the variables *High Age*, *High Education*, *Male*, and *Republican* enter the vector  $X$  individually.

**Role of self-interest:** To explore the role of self-interest, we estimate a version of Equation (8) in which the vector  $X$  includes *Self-interest\*Income Group 2, ..., Self-interest\*Income Group 7*. The variable *Self-interest\*Income Group 2* is an indicator variable that takes a value of 1 if a Social Architect is in Treatment Self-interest and in income-group 2, and a value of 0 if the Social Architect is in Treatment Brackets and in income-group 2. The seven income groups correspond to the income brackets of the seven Recipients in Treatment Brackets and Self-interest. If there are too few observations in a given income group, we will pool observations across groups.

**Confidence:** To explore the role of confidence, we estimate a version of Equation (8) in which the vector  $X$  includes *High Confidence*; *High Confidence* is an indicator variable taking a value of 1 if a Social Architect's confidence is above the median, and 0 otherwise.

To explore the demographic correlates of Confidence, we regress *High Confidence* on *High*

*Age, High Education, Male, Republican, and High Income.*

**Welfarist Motives:** To explore whether Social Architects’ weights are driven by welfarist or non-welfarist motives, we estimate a version of Equation (8) in which the vector  $X$  includes *High-income deserve and need*, *High-income deserve but do not need*, *High-income do not deserve but need*, *Low-income deserve and need*, *Low-income do not deserve but need*, *Low-income do not deserve but need*. The indicator variable *High-income deserve and need* takes a value of 1 if a Social Architect indicates that “High-income individuals deserve their current income and need their current income,” and 0 otherwise. The indicator variable *High-income deserve but do not need* takes a value of 1 if a Social Architect indicates that “High-income individuals deserve their current income but do not need their current income.” The indicator variable *High-income do not deserve but need* takes a value of 1 if a Social Architect indicates that “High-income individuals do not deserve their current income but need their current income.” The indicator variable *High-income do not deserve or need* (the base category) takes a value of 1 if a Social Architect indicates that “High-income individuals do not deserve their current income and do not need their current income.” We similarly define the variables indicating Social Architects’ views on low-income individuals using the question about low-income individuals.

To explore how people interpret our questions, we regress the variable *Person rich due to luck* on the six variables defined above. The indicator variable *Person rich due to luck* takes a value of 1 if a Social Architect indicates “Because she or he worked harder than others,” and a value of 0 otherwise.

**Beliefs about the causes for individuals to be rich:** To explore whether Social Architects’ weights are driven by their beliefs about whether luck is the main reason people become rich, we estimate a version of Equation (8) in which the vector  $X$  includes the indicator variable *Person rich due to luck*.

**Views about the tax system and society:** We estimate a version of Equation (8) in which the vector  $X$  includes the following variables.

*Overestimate the level of taxes:* We elicit Social Architects’ beliefs about (i) the share of households in the top tax bracket, (ii) the average tax rate of those in the top tax bracket, (iii) the share of households who pay no taxes, (iv) the average tax rate of the median income household. We identify misperceptions in each of the four variables by subtracting participants’ answers from the truth (see Stantcheva (2021)). This is done as follows

- Gap in top tax = Beliefs about top tax - 32.7



- Gap in top share = Beliefs about top share - 0.73
- Gap in non-filers = Beliefs about non-filers - 44
- Gap in median share = Beliefs about median tax - 13

We standardize each of the four misperceptions variables (subtracting the mean and dividing by the standard deviation) such that the resulting variables have a mean of 0 and a standard deviation of 1. Then, we create an index by taking the equally weighted average of the four standardized misperceptions variables and then standardize the resulting variable again (subtracting the mean and dividing by the standard deviation). The procedure of indexing reduces concerns for multiple hypothesis testing and helps with the interpretation of the variables.

*Overestimate low-income share:* We ask Social Architects their beliefs about the share of individuals who earn below \$35,000. We identify Architects' misperceptions by subtracting the truth (which is 30) from their responses. Finally, we standardize the resulting misperceptions by subtracting the mean and dividing by the standard deviation.

*Overestimate income-mobility:* We ask Social Architects their perceived probability of being in the fifth quintile as an adult for a child with parents in the first quintile. We identify Architects' misperceptions by subtracting the truth (which is 7.8) from their responses. Finally, we standardize the resulting misperceptions by subtracting the mean and dividing by the standard deviation.

*Behavioral responses high earners:* This variable takes a value of 1 if a Social Architect indicates "A moderate amount," "A lot," or "A great deal," and a value of 0 if the respondent indicates "A little," or "None at all."

*Higher taxes high-incomes hurt economy:* This variable takes a value of 1 if the respondent indicates "Hurt economic activity in the U.S." and a value of 0 if the respondent indicates "Not have an effect on economic activity in the U.S." or "Help economic activity in the U.S."

*Belief trickle down:* This variable takes a value of 1 if a respondent indicates "Mostly win," and a value of 0 if the respondent indicates "Mostly lose" or "Neither lose nor win."

*Inequality is a serious issue:* Takes a value of 1 if the respondent indicates "A serious issue" or "A very serious issue," and a value of 0 if the respondent indicates "Not an issue at all," "A small issue," or "An issue."

*Trust the government:* takes a value of 1 if the respondent indicates "Always" or "Most of the time," and a value of 0 if the respondent indicates "Only some times" or "Never."

We also estimate a version of Equation (8) in which the vector  $X$  includes the above variables, demographic variables, and treatment dummies.

### 6.2.3 Validating survey measure of welfare weights

Our survey measure of welfare weights asks Social Architects if they would like to further redistribute incomes. Responses on this question can range from -2 to +2, where where a +2 means that income should be further redistributed by taking from higher-income individuals and giving to lower/middle-income individuals while a -2 means that income should be further redistributed by taking from lower/middle-income individuals and giving to higher-income individuals.

**Mapping from survey weights to experimental weights:** To understand the mapping from people’s responses in the survey measure of welfare weights and their progressivity in the experimental measure of welfare weights, we estimate a version of Equation (8) in which the vector  $X$  includes three dummy variables that indicate if a Social Architect’s responded with a -2, +1, or +2 on the survey measure, respectively. We will pool over categories in case there are too few responses in a given category. To explore if the mapping differs by treatment, we perform the above exercise separately in the four treatments in Wave 2.

**Exploring differences between the two measures:** People’s responses on the survey measure of welfare weights are likely also guided by motives other than redistribution. To explore this, we regress *Progressive survey weights* on *Progressive experimental weights*. The variable *Progressive survey weights* is an indicator variable that takes a value of 1 if a Social Architect’s welfare weights on the survey measure are progressive (reporting +1 or +2 on the question), and 0 otherwise. The variable *Progressive experimental weights* is an indicator variable that takes a value of 1 if a Social Architects’ welfare weights on the experimental measure are progressive, and 0 otherwise. In particular, we estimate the following regression for each Social Architect.

$$\log(g(R_j)) = \beta_0 + \nu \log(z_j - T(z_j)) + \epsilon_j \quad (9)$$

where  $g(R_j)$  is the weight assigned by the Social Architect to Recipient  $j$  and  $z_j - T(z_j)$  is the after-tax income of Recipient  $j$ . In this regression,  $\hat{\nu}$  is the estimated elasticity of a Social Architect’s weights with respect to the incomes of the Recipients. For each Social Architect, the variable *Progressive experimental weights* takes a value of 1 if their  $\hat{\nu}$  is negative, and 0 otherwise.

In a second specification, we add to the base regression Social Architects’ demographics (*High Age*, *High Education*, *Male*, and *Republican*). In a third specification, we add to the

base regression Social Architects’ misperceptions (*Overestimate the level of taxes, Overestimate low-income share, Overestimate income-mobility*). In a fourth specification, we add to the base regression Social Architects’ views about tax system and society excluding misperceptions (*Behavioral responses high earners, Higher taxes high-incomes hurt economy, Belief trickle down, Inequality is serious issue, Trust the government*). In a fifth regression, we add to the regression all the variables specified in previous four specifications. For each of the five specifications, we compute the predictive power of the specification by computing the root-mean-squared of the specification using a k-fold cross-validation with k=4. Furthermore, we control for treatment dummies in all five specifications. We include a version of the first specification without controlling for treatment dummies.

We will also perform the above exercise using Social Architects’ responses on the survey measure (ranging from -2 to +2) as the dependent variable and the standardized estimated  $\nu$  as the explanatory variable. We standardize  $\hat{\nu}$  by subtracting the mean and dividing by the standard deviation.

**Welfarist Motives:** To explore if Social Architects’ responses on the survey measure of welfare weights is guided by welfarist or non-welfarist motives, we regress Social Architects’ responses on the survey measure (ranging from -2 to +2) on *High-income deserve and need, High-income deserve but do not need, High-income do not deserve but need, Low-income deserve and need, Low-income do not deserve but need, and Low-income do not deserve but need*. These variables are defined in Section 6.2.2.

**Beliefs about the causes for individuals to be rich:** To explore whether Social Architects’ weights elicited using the survey measure are driven by their beliefs about whether luck is the main reason people become rich, we regress Social Architects’ responses on the survey measure (ranging from -2 to +2) on *Person rich due to luck*.

#### 6.2.4 Relation between individual weights and policy views

##### Predicting individual tax preferences

To explore Social Architects’ policy views, we estimate the following set of linear regressions.

$$t_i^k = \beta_0 + \alpha_1 g_i^k + \theta T_i + \epsilon_i^k \quad (10)$$

where  $t_i^k$  is Social Architect  $i$ ’s preferred average tax rate in tax bracket  $k$ . We estimate seven regressions, one for each  $k \in \{1, \dots, 7\}$  indicating each of the seven tax brackets. The

variable  $g_i^k$  is the weight assigned by Social Architect  $i$  to Recipient  $k$ , with  $k \in \{1, \dots, 7\}$  indicating the seven Recipients earning \$8,000 to \$500,000. The vector  $T_i$  indicates the treatment dummies in Wave 2.

In the second set of specifications, we add Social Architects' demographics (*High Age, High Education, Male, and Republican*) to Equation (10). In the third set of specifications, we add Social Architects' misperceptions (*Overestimate the level of taxes, Overestimate low-income share, Overestimate income-mobility*) to Equation (10). In the fourth set of specifications, we add Social Architects' views about tax system and society excluding misperceptions (*Behavioral responses high earners, Higher taxes high-incomes hurt economy, Belief trickle down, Inequality is serious issue, Trust the government*) to Equation (10). In the fifth set of specifications, we add all the variables specified in the previous four specifications to Equation (10).

As a robustness check, we also estimate specifications, starting from Equation (10), in which the following variables enter the regression individually (*High Age, High Education, Male, and Republican, Overestimate the level of taxes, Overestimate low-income share, Overestimate income-mobility, Behavioral responses high earners, Higher taxes high-incomes hurt economy, Belief trickle down, Inequality is serious issue, Trust the government*).

In each of the above specifications, we compute the predictive power of the specification by computing the root-mean-squared-error using a k-fold cross-validation with  $k=4$ .

We use a Gelbach decomposition (Gelbach 2016) to identify the share of the variance in tax preferences explained by the welfare weights that is due to the other variables. We also use a Gelbach decomposition to identify the share of the variance in tax preferences explained by political affiliation that is due to the other variables.

To explore whether Social Architects' tax preferences are driven by their welfarist or non-welfarist motives, we regress  $t_i^k$  for  $k \in \{1, \dots, 7\}$  on *High-income deserve and need, High-income deserve but do not need, High-income do not deserve but need, Low-income deserve and need, Low-income do not deserve but need, Low-income do not deserve but need*. To explore whether Social Architects' tax preferences are driven by their beliefs about whether luck is the main reason people become rich, we regress  $t_i^k$  for  $k \in \{1, \dots, 7\}$  on *Person rich due to luck*. These variables are defined in Section 6.2.2.

## Predicting tax progressivity

To explore the predictors of Social Architects' desired progressivity of the income distribution, we estimate the following linear regression.

$$D_i = \beta_0 + \alpha_1 S_i + \theta T_i + \epsilon_i^k \quad (11)$$

The variable  $D_i = \frac{1}{N} \sum_i [\ln \frac{y_i^*}{y_i}]$  measures, for Social Architect  $i$ , the divergence of the after-tax incomes of the  $N = 7$  Recipients that results from changes in the average tax rates ( $y_i$ ) from the current after-tax incomes of the Recipients (status-quo). The variable  $S_i$  is the standardized estimated value of  $\nu$  from the regression in Equation 9.

In the second specification, we add Social Architects' demographics (*High Age, High Education, Male, and Republican*) to Equation (11). In the third specification, we add Social Architects' misperceptions (*Overestimate the level of taxes, Overestimate low-income share, Overestimate income-mobility*) to Equation (11). In the fourth specification, we add Social Architects' views about tax system and society excluding misperceptions (*Behavioral responses high earners, Higher taxes high-incomes hurt economy, Belief trickle down, Inequality is serious issue, Trust the government*) to Equation (11). In the fifth specification, we add all the variables specified in the previous four specifications to Equation (11).

To account for measurement error in the weights, we employ the ORIV methodology from Gillen et al. (2019) and re-estimate the previous specifications. In these specifications, we use Social Architects' responses on the survey measure of welfare weights (ranging from -2 to +2) as an instrument for  $S_i$ .

As a robustness check, we also estimate specifications, starting from Equation (11), in which the following variables enter the regression individually (*High Age, High Education, Male, and Republican, Overestimate the level of taxes, Overestimate low-income share, Overestimate income-mobility, Behavioral responses high earners, Higher taxes high-incomes hurt economy, Belief trickle down, Inequality is serious issue, Trust the government*).

In each of the above specifications, we compute the predictive power of the specification by computing the root-mean-squared-error using a k-fold cross-validation with  $k=4$ .

We use a Gelbach decomposition (Gelbach 2016) to identify the share of the variance in  $D_i$  explained by  $S_i$  that is due to the other variables. We also use a Gelbach decomposition to identify the share of the variance in  $D_i$  explained by the explanatory variable *Republican* that is due to the other variables.

To explore whether Social Architects' tax progressivity is driven by welfarist or non-welfarist motives, we regress  $D_i$  on *High-income deserve and need, High-income deserve but do not need, High-income do not deserve but need, Low-income deserve and need, Low-income do not deserve but need, and Low-income do not deserve but need*. To explore whether Social Architects' tax progressivity is driven by their beliefs about whether luck is the main reason

people become rich, we regress Social Architects' divergence on *Person rich due to luck*. These variables are defined in Section 6.2.2.

### 6.3 Application

We explore if people's aggregated welfare weights can be used to generate policies that look similar to their aggregated tax preferences elicited directly. We calibrate the optimal income tax formula in Saez & Stantcheva (2016) for all values of  $\nu$  ranging from -3 to 3. Some values of  $\nu$  correspond to some forms of aggregated weights. We then compare the calibrated income taxes to the average tax rates stated by the general population, averaged across all participants. We also compare the calibrated income taxes to the tax rates stated by the general population aggregated using alternative aggregation rules (such as the median). We make these comparisons using two methods. First, we use the Kolmogorov-Smirnov Goodness-of-Fit Test. Second, we compute the compensating variation/equivalent variation of the calibrated tax preferences in relation to the survey tax preferences.

## References

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## 7 Instructions Wave 1

Bold text, underlining, tables, etc. appear as in the original screen.

### 7.1 Treatment Loss x Moderate

[Consent screen]

#### **Introduction**

Welcome to this research study. We appreciate your participation. We are a non-partisan group of researchers from University of Zurich and Erasmus University Rotterdam. This study contains real choices and questions regarding your demographic characteristics. No matter what your political views are, by completing this survey you are contributing to our knowledge as a society.

#### **Time required**

Approximately **10 minutes**. You will have a maximum of one hour to finish the survey after starting it.

#### **Requirements**

You must be a U.S. resident to participate in this study. You must also be above the age of 18. The survey contains attention checks. You must pass these check in order to proceed with the survey.

#### **Confidentiality**

All data obtained from you will be used for research purposes only. Data will be anonymized immediately after collection. Researchers will at no point have access to any information that could be used to personally identify you.

#### **Voluntary participation**

It is voluntary to participate in the project, and you can at any time choose to withdraw your consent without stating any reason.

#### **Questions about the Survey**



If you have questions about this study or your rights, please get in touch with us at krishna.srinivasan@econ.uzh.ch

### **Consent**

I have received the above information about the project and am willing to participate.

- Yes
- No

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page break

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[If participant did not provide consent]

### **End of survey**

You did not give your consent to continue with the study.

Thank you for your time.

You will be automatically redirected in 5 seconds.

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page break

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[Demographics screen]

What is your sex?

- Male
- Female

How old are you?

- 18 years old - 34 years old
- 35 years old - 44 years old
- 45 years old - 54 years old

- 55 years old - 64 years old
- 65 years old or above

In which state do you currently reside?

- Northeast (ME, NH, VT, MA, CT, RI, NY, PA, NJ)
- Midwest (OH, MI, IN, WI, IL, MN, IA, MO, ND, SD, NE, KS)
- South (DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, AL, MS, AR, LA, OK, TX)
- Pacific (MT, WY, CO, NM, ID, UT, AZ, NV, WA, OR, CA, AK, HI)
- I do not reside in the U.S.

What is the highest level of education you have completed?

- Less than High School
- High School/GED
- Some College
- Associate's Degree
- Bachelor's degree
- Master's degree
- Doctoral or Profession Degree (PhD, ED.D, JD, DVM, DO, MD, DDS, or similar)

As of today, do you consider yourself a Republican, a Democrat, or an Independent?

- Democrat
- Republican
- Independent

The next question is about your **total individual income in 2020 before taxes**. This figure should include income from all sources, including salaries, wages, pensions, Social Security, dividends, interest, and all other income. What was your total individual income (USD) in 2020?

- \$29,999 and below
- \$30,000 to \$59,999
- \$60,000 to \$99,999
- \$100,000 to \$149,999
- \$150,00 and above

[Displayed if \$29,999 and below is chosen]

You have reported that your total individual income in 2020 before taxes was \$29,999 and below.

Could you provide your best guess of what your **total individual income** was?

[Displayed if \$30,000 to \$59,999 is chosen]

You have reported that your total individual income in 2020 before taxes was \$30,000 to \$59,999.

Could you provide your best guess of what your **total individual income** was?

[Displayed if \$60,000 to \$99,999 is chosen]

You have reported that your total individual income in 2020 before taxes was \$60,000 to \$99,999.

Could you provide your best guess of what your **total individual income** was?

[Displayed if \$100,000 to \$149,999 is chosen]

You have reported that your total individual income in 2020 before taxes was \$100,000 to \$149,999.

Could you provide your best guess of what your **total individual income** was?

[Displayed if \$150,000 and above is chosen]

You have reported that your total individual income in 2020 before taxes was \$150,000 and above.

Could you provide your best guess of what your **total individual income** was?

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page break

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[If quotas are full]

**End of survey**

Unfortunately, we already have the number of participants needed for this study.

Thank you for your time.

You will be automatically redirected in 5 seconds.

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[If participant does not reside in the U.S]

**End of survey**

Unfortunately, you do not fulfil the requirements of this study since you do not reside in the U.S.

Thank you for your time.

You will be automatically redirected in 5 seconds.

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[Attention check screen]

In surveys like ours, some participants do not carefully read the questions. This means that there are a lot of random answers that can compromise the results of research studies. To show that you read our questions carefully, please choose both “Extremely interested” and “Not at all interested” below:

- Extremely interested

- Very interested
- A little bit interested
- Almost not interested
- Not at all interested

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page break

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[If participant failed the attention check]

### **End of survey**

Sorry, you failed the attention check. You were supposed to select both “Extremely interested” and “Not at all interested.”

You cannot continue with the study.

Thank you for your time.

You will be automatically redirected in 5 seconds.

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[Instructions screen]

### **Instructions**

In this study, you will make several choices involving **seven real people**. These people will be selected at random from a survey panel and will not participate in the same survey as you. These people are above the age of 18 and are U.S. citizens. The incomes of the seven people are as follows:

Person	After-tax Annual income
Person A	\$8000
Person B	\$35,000
Person C	\$70,000
Person D	\$100,000
Person E	\$170,000
Person F	\$250,000
Person G	\$500,000

Here is an example of a question that you will see in the survey:

	Person C	Person G
After-tax annual income	\$70,000	\$500,000

**Question 2/4:** Please choose your preferred alternative

Person C: +\$750 Person G: -\$1250	Person C: +\$500 Person G: -\$500
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In this question, if you choose the option on the left, then \$1250 will be taken away from Person G and \$750 will be given to Person C. If you choose the option on the right, then \$500 will be taken away from Person G and \$500 will be given to Person C.

If you choose the option on the left, the final incomes of the two people (**including an initial \$1500 bonus**) will be Person C: \$72,250 and Person G: \$500,250. If you choose the option on the right, the final incomes of the two people (including an initial \$1500 bonus) will be Person C: \$72,000 and Person G: \$501,000.

You will face four questions like the one you saw above in each “decision screen.” **Overall, you will face six decision screens with four questions in each.** In each question, you will see a different amount in the option on the left. In each decision screen, you will see a different pair of people.

There is a chance that you may be randomly selected in this study. If you are randomly selected, your choice on one randomly selected question on one randomly selected decision

screen will be implemented. **This means that if you are randomly selected, one of your choices will have real consequences for two other people.** The final bonus of these two people will be transferred to them at the end of the study.

---

Please answer the following questions to demonstrate that you have understood the instructions. You can read the instructions above again if you feel the need to.

Please state True or False: “In this study, you will make several choices involving seven real people.”

- True
- False

Please state True or False: “If you are randomly selected, one of your choices will have real consequences for two other people.”

- True
- False

(You will be allowed to move to the next screen in 30 seconds)

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page break

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[If participant fails the comprehension check]

### **End of survey**

The correct answers were “True” and “True”. You answered incorrectly.

You cannot continue with the study.

Thank you for your time.

You will be automatically redirected in 5 seconds.

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## Decision Screen 1:

[D1Q1: shown to all participants]

### Decision Screen 1/6

Please consider each question carefully because if you are selected, one of your choices will have real consequences for two other persons.

	Person A	Person G
After-tax annual income	\$8,000	\$500,000

**Question 1/4:** Please choose your preferred alternative

Person A: +\$1000 Person G: -\$1000	Person A: +\$500 Person G: -\$500
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————— page break —————

[All questions hereafter in Decision Screen 1 look like D1Q1]

[D1Q2.1: If (500,-500) chosen in D1Q1, Architect chooses between (1250,-750) and (500,-500)]

————— page break —————

[D1Q2.2: If (1000, -1000) chosen in D1Q1, Architect chooses between (750,-1250) and (500,-500)]

————— page break —————

[D1Q3.1: If (500,-500) chosen in D1Q2.1, Architect chooses between (1375,-625) and (500,-500)]

————— page break —————

[D1Q3.2: If (1250,-750) chosen in D1Q2.1, Architect chooses between (1125,-875) and (500,-500)]

————— page break —————



[D1Q3.3: If (500,-500) chosen in D1Q2.2, Architect chooses between (875,-1125) and (500,-500)]

————— page break —————

[D1Q3.4: If (750,-1250) chosen in D1Q2.2, Architect chooses between (625,-1375) and (500,-500)]

————— page break —————

[D1Q4.1: If (500,-500) chosen in D1Q3.1, Architect chooses between (1450,-550) and (500,-500)]

————— page break —————

[D1Q4.2: If (1375,-625) chosen in D1Q3.1, Architect chooses between (1300,-700) and (500,-500)]

————— page break —————

[D1Q4.3: If (500,-500) chosen in D1Q3.2, Architect chooses between (1200,-800) and (500,-500)]

————— page break —————

[D1Q4.4: If (1125,-875) chosen in D1Q3.2, Architect chooses between (1050,-950) and (500,-500)]

————— page break —————

[D1Q4.5: If (500,-500) chosen in D1Q3.3, Architect chooses between (950,-1050) and (500,-500)]

————— page break —————

[D1Q4.6: If (875,-1125) chosen in D1Q3.3, Architect chooses between (800,-1200) and (500,-500)]

————— page break —————

[D1Q4.7: If (500,-500) chosen in D1Q3.4, Architect chooses between (700,-1300) and (500,-500)]

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page break

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[D1Q4.8: If (625,-1375) chosen in D1Q3.4, Architect chooses between (550,-1450) and (500,-500)]

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page break

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[Decision Screen 2 is identical to Decision Screen 1, except that the incomes of the two recipients are B: \$35,000 and C: \$70,000]

[Decision Screen 3 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and D: \$100,000]

[Decision Screen 4 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and E: \$170,000]

[Decision Screen 5 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and F: \$250,000]

[Decision Screen 6 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and G: \$500,000]

[For half the participants the order of the Decision Screens is reversed. The pair of recipients they views is as follows: Decision Screen 1 (C: \$70,000 and G: \$500,000), Decision Screen 2 (C: \$70,000 and F: \$250,000), Decision Screen 3 (C: \$70,000 and E: \$170,000), Decision Screen 4 (C: \$70,000 and D: \$100,000), Decision Screen 5 (B: \$35,000 and C: \$70,000), Decision Screen 6 (A: \$8,000 and C: \$70,000).]

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page break

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[Policy views screen]

[The order of the two questions is counterbalanced across participants in each treatment.]

We have some final questions. It is important for us that you answer them carefully.

The top income tax category in 2020 includes those with an annual individual income of over \$518,400. Do you think that income taxes levied on these people in the top income category should be increased, stay the same, or decreased?

- 1 - Increased a lot

- ...
- 4 - Stay the same
- ...
- 7 - Decreased a lot

Some people think that the government in Washington ought to reduce the income differences between the rich and the poor, perhaps by raising the taxes of wealthy families or by giving income assistance to the poor. Others think that the government should not concern itself with reducing this income difference between the rich and the poor.

Here is a scale from 1 to 7. Think of a score of 1 as meaning that the government ought to reduce the income differences between rich and poor, and a score of 7 meaning that the government should not concern itself with reducing income differences. What score between 1 and 7 comes closest to the way you feel?

- 1 - Government should do something to reduce income differences between rich and poor
- ...
- 7 - Government should not concern itself with income differences

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page break

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## **End of survey**

Thank you for your time!

You will be automatically redirected in 5 seconds.

## **7.2 Treatment Loss x High**

[The Consent screen, Demographics screen, Attention check screen, Instruction Screen and Policy Views screen are identical to the corresponding screens in Treatment Loss x Moderate]

[Decision Screen 1 is identical to Decision Screen 1 from Treatment Loss x Moderate, except that the incomes of the two recipients are A: \$8,000 and G: \$500,000]

[Decision Screen 2 is identical to Decision Screen 1, except that the incomes of the two recipients are B: \$35,000 and G: \$500,000]

[Decision Screen 3 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and G: \$500,000]

[Decision Screen 4 is identical to Decision Screen 1, except that the incomes of the two recipients are D: \$100,000 and G: \$500,000]

[Decision Screen 5 is identical to Decision Screen 1, except that the incomes of the two recipients are E: \$170,000 and G: \$500,000]

[Decision Screen 6 is identical to Decision Screen 1, except that the incomes of the two recipients are F: \$250,000 and G: \$500,000]

[For half the participants the order of the Decision Screens is reversed. The pair of recipients they views is as follows: Decision Screen 1 (F: \$250,000 and G: \$500,000), Decision Screen 2 (E: \$170,000 and G: \$500,000), Decision Screen 3 (D: \$100,000 and G: \$500,000), Decision Screen 4 (C: \$70,000 and G: \$500,000), Decision Screen 5 (B: \$35,000 and G: \$500,000), Decision Screen 6 (A: \$8,000 and G: \$500,000).]

### **7.3 Treatment Gain x Moderate**

[The Consent screen, Demographics screen, Attention check screen, and Policy views screen are identical to the corresponding screens in Treatment Loss x Moderate.]

[Instructions screen]

#### **Instructions**

In this study, you will make several choices involving **seven real people**. These people will be selected at random from a survey panel and will not participate in the same survey as you. These people are above the age of 18 and are U.S. citizens. The incomes of the seven people are as follows:

Person	After-tax Annual income
Person A	\$8000
Person B	\$35,000
Person C	\$70,000
Person D	\$100,000
Person E	\$170,000
Person F	\$250,000
Person G	\$500,000

Here is an example of a question that you will see in the survey:

	Person C	Person G
After-tax annual income	\$70,000	\$500,000

**Question 2/4:** Please choose your preferred alternative

Person C: +\$2250 Person G: +\$250	Person C: +\$2000 Person G: +\$1000
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**In this question, if you choose the option on the left, then \$250 will be given to Person G and \$2250 will be given to Person C. If you choose the option on the right, then \$1000 will be given to Person G and \$2000 will be given to person C.**

If you choose the option on the left, the final incomes of the two people will be Person C: \$72,250 and Person G: \$500,250. If you choose the option on the right, the final incomes of the two people will be Person C: \$72,000 and Person G: \$501,000.

You will face four questions like the one you saw above in each “decision screen.” **Overall, you will face six decision screens with four questions in each.** In each question, you will see a different amount in the option on the left. In each decision screen, you will see a different pair of people.

There is a chance that you may be randomly selected in this study. If you are randomly selected, your choice on one randomly selected question on one randomly selected decision

screen will be implemented. **This means that if you are randomly selected, one of your choices will have real consequences for two other people.** The final bonus of these two people will be transferred to them at the end of the study.

---

Please answer the following questions to demonstrate that you have understood the instructions. You can read the instructions above again if you feel the need to.

Please state True or False: “In this study, you will make several choices involving seven real people.”

- True
- False

Please state True or False: “If you are randomly selected, one of your choices will have real consequences for two other people.”

- True
- False

(You will be allowed to move to the next screen in 30 seconds)

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page break

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[If participant fails the comprehension check]

### **End of survey**

The correct answers were “True” and “True”. You answered incorrectly.

You cannot continue with the study.

Thank you for your time.

You will be automatically redirected in 5 seconds.

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page break

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[Decision screen 1]

[D1Q1: Architect chooses between (2500,500) and (2000,1000)]

————— page break —————

[D1Q2.1: If (2000,1000) chosen in D1Q1, Architect chooses between (2750,750) and (2000,1000)]

————— page break —————

[D1Q2.2: If (2500, 500) chosen in D1Q1, Architect chooses between (2250,250) and (2000,1000)]

————— page break —————

[D1Q3.1: If (2000,1000) chosen in D1Q2.1, Architect chooses between (2875,875) and (2000,1000)]

————— page break —————

[D1Q3.2: If (2750,750) chosen in D1Q2.1, Architect chooses between (2625,625) and (2000,1000)]

————— page break —————

[D1Q3.3: If (2000,1000) chosen in D1Q2.2, Architect chooses between (2375,375) and (2000,1000)]

————— page break —————

[D1Q3.4: If (2250,250) chosen in D1Q2.2, Architect chooses between (2125,125) and (2000,1000)]

————— page break —————

[D1Q4.1: If (2000,1000) chosen in D1Q3.1, Architect chooses between (2950,950) and (2000,1000)]

————— page break —————

[D1Q4.2: If (2875,875) chosen in D1Q3.1, Architect chooses between (2800,800) and (2000,1000)]

————— page break —————

[D1Q4.3: If (2000,1000) chosen in D1Q3.2, Architect chooses between (2700,700) and (2000,1000)]

————— page break —————

[D1Q4.4: If (2625,625) chosen in D1Q3.2, Architect chooses between (2550,550) and (2000,1000)]

————— page break —————

[D1Q4.5: If (2000,1000) chosen in D1Q3.3, Architect chooses between (2450,450) and (2000,1000)]

————— page break —————

[D1Q4.6: If (2375,375) chosen in D1Q3.3, Architect chooses between (2300,300) and (2000,1000)]

————— page break —————

[D1Q4.7: If (2000,1000) chosen in D1Q3.4, Architect chooses between (2200,200) and (2000,1000)]

————— page break —————

[D1Q4.8: If (2125,125) chosen in D1Q3.4, Architect chooses between (2050,50) and (2000,1000)]

————— page break —————

[Decision Screen 2 is identical to Decision Screen 1, except that the incomes of the two recipients are B: \$35,000 and C: \$70,000]

[Decision Screen 3 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and D: \$100,000]

[Decision Screen 4 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and E: \$170,000]

[Decision Screen 5 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and F: \$250,000]

[Decision Screen 6 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and G: \$500,000]

[For half the participants the order of the Decision Screens is reversed. The pair of recipients they views is as follows: Decision Screen 1 (C: \$70,000 and G: \$500,000), Decision Screen 2 (C: \$70,000 and F: \$250,000), Decision Screen 3 (C: \$70,000 and E: \$170,000), Decision Screen 4 (C: \$70,000 and D: \$100,000), Decision Screen 5 (B: \$35,000 and C: \$70,000), Decision Screen 6 (A: \$8,000 and C: \$70,000).]



## 7.4 Treatment Gain x High

[The Consent screen, Demographics screen, Attention check screen, Instruction screen and Policy views screen are identical to the corresponding screens in Treatment Gain x Moderate.]

[Decision Screen 1 is identical to Decision Screen 1 from Treatment Gain x Moderate, except that the incomes of the two recipients are A: \$8,000 and G: \$500,000]

[Decision Screen 2 is identical to Decision Screen 1, except that the incomes of the two recipients are B: \$35,000 and G: \$500,000]

[Decision Screen 3 is identical to Decision Screen 1, except that the incomes of the two recipients are C: \$70,000 and G: \$500,000]

[Decision Screen 4 is identical to Decision Screen 1, except that the incomes of the two recipients are D: \$100,000 and G: \$500,000]

[Decision Screen 5 is identical to Decision Screen 1, except that the incomes of the two recipients are E: \$170,000 and G: \$500,000]

[Decision Screen 6 is identical to Decision Screen 1, except that the incomes of the two recipients are F: \$250,000 and G: \$500,000]

[For half the participants the order of the Decision Screens is reversed. The pair of recipients they views is as follows: Decision Screen 1 (F: \$250,000 and G: \$500,000), Decision Screen 2 (E: \$170,000 and G: \$500,000), Decision Screen 3 (D: \$100,000 and G: \$500,000), Decision Screen 4 (C: \$70,000 and G: \$500,000), Decision Screen 5 (B: \$35,000 and G: \$500,000), Decision Screen 6 (A: \$8,000 and G: \$500,000).]

## 8 Instructions - Wave 2

Bold text, underlining, tables, etc. appear as in the original screen.

### 8.1 Treatment Base

This is an academic study conducted by the University of Zurich and Erasmus University Rotterdam.

- What you will do: You will make a number of decisions.
- Time required: Approximately 12 minutes.
- Requirements: In order to take part, you need to be a U.S. resident

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page break

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[Consent screen]

#### **Introduction**

Welcome to this research study. We appreciate your participation. We are a non-partisan group of researchers from University of Zurich and Erasmus University Rotterdam. This study contains real choices and questions regarding your demographic characteristics. No matter what your political views are, by completing this survey you are contributing to our knowledge as a society.

#### **Time required**

Approximately **12 minutes**.

#### **Requirements**

You must be a U.S. resident to participate in this study. You must also be above the age of 18. The survey contains attention checks. You must pass these check in order to proceed with the survey.

#### **Confidentiality**

All data obtained from you will be used for research purposes only. Data will be anonymized immediately after collection. Researchers will at no point have access to any information that could be used to personally identify you.

### **Voluntary participation**

It is voluntary to participate in the project, and you can at any time choose to withdraw your consent without stating any reason.

### **Questions about the Survey**

If you have questions about this study or your rights, please get in touch with us at Krishna.srinivasan@econ.uzh.ch

### **Consent**

I have received the above information about the project and am willing to participate.

- Yes
- No

What is your prolific ID?

---

page break

[If participant did not provide consent]

You did not give your consent to continue with the study.

Thank you for your time.

**Please return your submission on Prolific by selecting the ‘Stop without completing’ button.**

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page break

[Demographics screen]

What is your sex?

- Male
- Female

How old are you?

- 18 years old - 34 years old

- 35 years old - 44 years old
- 45 years old - 54 years old
- 55 years old - 64 years old
- 65 years old or above

In which state do you currently reside?

- Alabama
- ...
- Wyoming
- I do not reside in the U.S.

In which ZIP code do you live? (5 digits)

What is the highest level of education you have completed?

- Less than High School
- High School/GED
- Some College
- Associate's Degree
- Bachelor's degree
- Master's degree
- Doctoral or Profession Degree (PhD, ED.D, JD, DVM, DO, MD, DDS, or similar)

As of today, do you consider yourself a Republican, a Democrat, or an Independent?

- Republican
- Democrat

- Independent

The next question is about your **total individual income in 2021 before taxes**. This figure should include income from all sources, including salaries, wages, pensions, social security, dividends, interest, and all other income. What was your total individual income (USD) in 2021?

- \$29,999 and below
- \$30,000 to \$59,999
- \$60,000 to \$99,999
- \$100,000 to \$149,999
- \$150,00 and above

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page break

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[Displayed if \$29,999 and below is chosen]

You have reported that your total individual income in 2021 before taxes was \$29,999 and below.

[Displayed if \$30,000 to \$59,999 is chosen]

You have reported that your total individual income in 2021 before taxes was \$30,000 to \$59,999.

[Displayed if \$60,000 to \$99,999 is chosen]

You have reported that your total individual income in 2021 before taxes was \$60,000 to \$99,999.

[Displayed if \$100,000 to \$149,999 is chosen]

You have reported that your total individual income in 2021 before taxes was \$100,000 to \$149,999.

[Displayed if \$150,000 and above is chosen]

You have reported that your total individual income in 2021 before taxes was \$150,000 and above.

[Displayed in all cases]

Could you provide your best guess of what your **total individual income** was?

---

page break

[If participant does not reside in the U.S.]

### **End of survey**

Unfortunately, you do not fulfil the requirements of this study since you do not reside in the U.S.

Thank you for your time.

**Please return your submission on Prolific by selecting the ‘Stop without completing’ button.**

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page break

[Attention check screen]

In surveys like ours, some participants do not carefully read the questions. This means that there are a lot of random answers that can compromise the results of research studies. To show that you read our questions carefully, please choose both “Extremely interested” and “Not at all interested” below:

- Extremely interested
- Very interested
- A little bit interested
- Almost not interested
- Not at all interested

---

page break

[Instructions screen]

## Instructions

In this study, you will make several choices involving **seven real people**. These people will be selected at random from a survey panel and will not participate in the same survey as you. These people are above the age of 18 and are U.S. citizens. The incomes of the seven people **after all taxes paid and transfers received** are as follows:

Person	After-tax annual income
Person A	\$8,000
Person B	\$35,000
Person C	\$70,000
Person D	\$100,000
Person E	\$170,000
Person F	\$250,000
Person G	\$500,000

---

Here is an example of a question that you will see in the survey:

	Person C	Person G
After-tax annual income	<b>\$70,000</b>	<b>\$500,000</b>

**Question 2/4:** Please choose your preferred alternative

Person C: +\$750	Person C: +\$500
Person G: -\$1250	Person G: -\$500

**In this question, if you choose the option on the left, then \$1250 will be taken away from Person G and \$750 will be given to Person C. If you choose the option on the right, then \$500 will be taken away from Person G and \$500 will be given to Person C.**

If you choose the option on the left, the final incomes of the two people (**including an initial \$1500 bonus**) will be Person C: \$72,250 and Person G: \$500,250. If you choose the option on the right, the final incomes of the two people (including an initial \$1500 bonus) will be Person C: \$72,000 and Person G: \$501,000.

You will face four questions like the one you saw above in each “decision screen.” **Overall,**

**you will face six decision screens with four questions in each.** In each question, you will see a different amount in the option on the left. In each decision screen, you will see a different pair of people.

One participant in this study will be randomly selected. If you are randomly selected, your choice on one randomly selected question on one randomly selected decision screen will be implemented. **This means that if you are randomly selected, one of your choices will have real consequences for two other people.** The final bonus of these two people will be transferred to them at the end of the study.

---

Please answer the following questions to demonstrate that you have understood the instructions. You can read the instructions above again if you feel the need to.

Please state True or False: “In this study, you will make several choices involving seven real people.”

- True
- False

Please state True or False: “If you are randomly selected, one of your choices will have real consequences for two other people.”

- True
- False

(You will be allowed to move to the next screen in 30 seconds)

[The timer updates dynamically. When the time elapses, the text disappears.]

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— page break —

[If participant fails at least two out of three checks (one attention check and two comprehension checks)]

**End of survey**



Sorry, you answered at least two out of three comprehension/attention checks incorrectly.

You cannot continue with the study.

Thank you for your time.

**Please return your submission on Prolific by selecting the ‘Stop without completing’ button.**

[If participant fails only one out of three checks (one attention check and two comprehension checks)]

### **End of survey**

Thank you for your time.

We will pay you your £2 participation fee in the following days.

**Please click the following link to finish the survey.**

————— page break —————

[D1Q1: shown to all participants]

#### **Decision Screen 1/6**

Please consider each question carefully because if you are selected, one of your choices will have real consequences for two other persons.

	<b>Person A</b>	<b>Person C</b>
After-tax annual income	<b>\$8,000</b>	<b>\$70,000</b>

**Question 1/4:** Please choose your preferred alternative:

Person A: +\$1000 Person C: -\$1000 <input type="radio"/>	Person A: +\$500 Person C: -\$500 <input type="radio"/>
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————— page break —————

[All questions hereafter in Decision Screen 1 look like D1Q1]

[D1Q2.1: If (500,-500) chosen in D1Q1, choose between (1250,-750) and (500,-500)]

[D1Q2.2: If (1000, -1000) chosen in D1Q1, choose between (750,-1250) and (500,-500)]

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— page break —

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[D1Q3.1: If (500,-500) chosen in D1Q2.1, choose between (1375,-625) and (500,-500)]

[D1Q3.2: If (1250,-750) chosen in D1Q2.1, choose between (1125,-875) and (500,-500)]

[D1Q3.3: If (500,-500) chosen in D1Q2.2, choose between (875,-1125) and (500,-500)]

[D1Q3.4: If (750,-1250) chosen in D1Q2.2, choose between (625,-1375) and (500,-500)]

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— page break —

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[D1Q4.1: If (500,-500) chosen in D1Q3.1, choose between (1450,-550) and (500,-500)]

[D1Q4.2: If (1375,-625) chosen in D1Q3.1, choose between (1300,-700) and (500,-500)]

[D1Q4.3: If (500,-500) chosen in D1Q3.2, choose between (1200,-800) and (500,-500)]

[D1Q4.4: If (1125,-875) chosen in D1Q3.2, choose between (1050,-950) and (500,-500)]

[D1Q4.5: If (500,-500) chosen in D1Q3.3, choose between (950,-1050) and (500,-500)]

[D1Q4.6: If (875,-1125) chosen in D1Q3.3, choose between (800,-1200) and (500,-500)]

[D1Q4.7: If (500,-500) chosen in D1Q3.4, choose between (700,-1300) and (500,-500)]

[D1Q4.8: If (625,-1375) chosen in D1Q3.4, choose between (550,-1450) and (500,-500)]

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— page break —

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[Decision Screens 2-6 are identical to Decision Screen 1, with the below exceptions]

[In Decision Screen 2, the incomes of the two recipients are B: \$35,000 and C: \$70,000]

[In Decision Screen 3, the incomes of the two recipients are C: \$70,000 and D: \$100,000]

[In Decision Screen 4, the incomes of the two recipients are C: \$70,000 and E: \$170,000]

[In Decision Screen 5, the incomes of the two recipients are C: \$70,000 and F: \$250,000]

[In Decision Screen 6, the incomes of the two recipients are C: \$70,000 and G: \$500,000]

[For half the participants the order of the Decision Screens is reversed. The pair of recipients they views is as follows: Decision Screen 1 (C: \$70,000 and G: \$500,000), Decision Screen 2 (C: \$70,000 and F: \$250,000), Decision Screen 3 (C: \$70,000 and E: \$170,000), Decision Screen 4 (C: \$70,000 and D: \$100,000), Decision Screen 5 (B: \$35,000 and C: \$70,000), Decision Screen 6 (A: \$8,000 and C: \$70,000).]

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page break

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How confident are you that the choices you made in the previous screens reflect what you really think?

Please provide your answer on a scale of 1 to 5. A 1 indicates “Not confident all,” and a 5 indicates “Completely confident.”

- 5: Completely confident
- 4:
- 3:
- 2:
- 1: Not confident at all

---

page break

---

In the following screens, we would like to ask you some general questions about your views on society. Your opinion and thoughts are important to us.

**Consider the current incomes of individuals in society obtained after all taxes are paid and transfers received.**

Which of the following statements comes closest to how you feel?

High-income individuals ...

- do not deserve their current income and do not need their current income
- deserve their current income but do not need their current income
- do not deserve their current income but need their current income

- deserve their current income and need their current income

---

Which of the following statements comes closest to how you feel?

Low-income individuals ...

- do not deserve their current income and do not need their current income
- deserve their current income but do not need their current income
- do not deserve their current income but need their current income
- deserve their current income and need their current income

---

— page break —

**Consider the current incomes of individuals in society obtained after all taxes are paid and transfers received.**

Do you think that, given the current incomes of individuals in society, incomes should be further redistributed or should not be further redistributed?

Please provide your answer on a scale from -2 to +2 where a +2 means that income should be further redistributed by taking from the higher-income individuals and giving to the lower/middle-income individuals while a -2 means that income should be further redistributed by taking from the lower/middle-income individuals and giving to the higher-income individuals.

- -2: Incomes should be further redistributed by taking from the lower/middle-income individuals and giving to the higher-income individuals
- -1:
- +0: Incomes should **not** be further redistributed
- +1:
- +2: Incomes should be further redistributed by taking from the higher-income individuals and giving to the lower/middle-income individuals

The next set of questions is about the income tax system in the United States. These are questions for which there are right or wrong answers.

In order for your answers to be most helpful to us, it is really important that you answer these questions as accurately as you can. Although you may find some questions difficult, it is very important for our research that you try your best. Thank you very much!

---

Out of 100 households in the U.S., how many are in the top federal personal income tax bracket?

[slider 0-100]

---

What share of their total income do people in the top federal personal income tax bracket pay in taxes?

[slider 0-100]

---

Out of 100 U.S. households, how many pay no federal income taxes?

[slider 0-100]

---

Imagine a middle class household that is right at the middle of the income distribution, such that half of all households in the U.S. earn more than this household and half earn less. What share of their income do you think such a household pays in federal income taxes?

[slider 0-100]

---

Out of every 100 individuals in the U.S., how many earn an income (after all taxes paid and transfers received) below \$35,000?

[slider 0-100]

---

We would now like to ask you what you think about the life opportunities of children from very poor families.

For the following question, we focus on 500 families that represent the U.S. population. We divide them into five groups on the basis of their income, with each group containing 100 families. These groups are:

- The poorest 100 families
- The second poorest 100 families
- The middle 100 families
- The second richest 100 families
- The richest 100 families

How many out of 100 children coming from the poorest 100 families will grow up to be among the richest 100 families?

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page break

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[Tax preferences screen]

We would like to ask you what you think the distribution of after-tax income in the U.S. should be.

There are **7 tax groups** (tax brackets) in the U.S. Group 1 includes households with the lowest incomes and Group 7 includes households with the highest incomes. Groups 2 through 6 include households with incomes in the middle.

Column 2 of the table below lists the **CURRENT** average annual after-tax income of all households in each group. The after-tax income is obtained by subtracting all federal income taxes (e.g., ordinary income taxes, alternative minimum taxes) from the pre-tax income and adding all federal transfers (e.g., tax credits) to the pre-tax income.

In Column 3 of the table below, we list the average federal income tax rate of each group. This rate was determined based on the ordinary income taxes that households paid. As an example, if a household with a pre-tax income of \$80,000 has an average tax rate of 15%, they would pay  $80000 \times 0.15 = \$12,000$  in taxes.

We would like you to indicate what you think the average tax rate for each tax group in the U.S. should be. This can be done as follows. **You can increase or decrease the average tax rates of the first six groups. The average tax rate of group 7 adjusts automatically so that all seven groups together pay as much taxes as they currently do.**

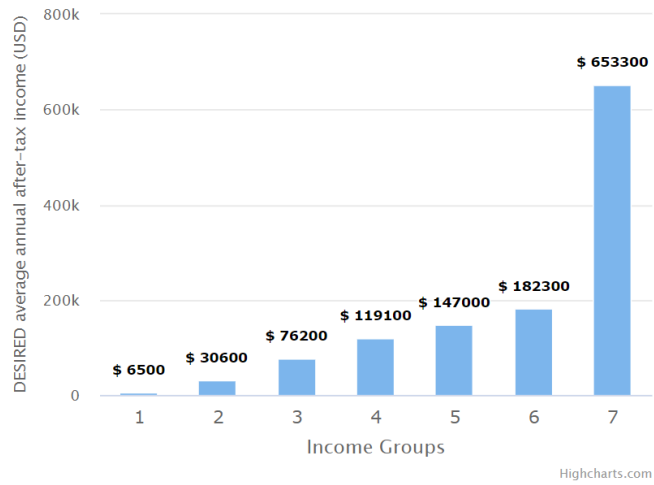
Column 4 of the table below and the figure below indicate your **DESIRED** average annual after-tax incomes. The numbers in the table as well as the figure update automatically as you change the average tax rates.

Your choices will sometimes be limited for a variety of reasons. For example, you cannot set the tax rate for a group such that their average after-tax income becomes lower than the average after-tax income of the group below them or higher than the average after-tax income of the group above them.

Note also that there may be rounding-off errors in various calculations.

You can go back to the initial situation by refreshing the page.

### DESIRED Income Distribution



Income group	Annual after-tax income (CURRENT)	Average tax rate	Annual after-tax income (DESIRED)
1	\$6,500	9% ▾	\$6,500
2	\$30,600	11% ▾	\$30,600
3	\$76,200	15% ▾	\$76,200
4	\$119,100	19% ▾	\$119,100
5	\$147,000	21% ▾	\$147,000
6	\$182,300	25% ▾	\$182,300
7	\$653,300	31%	\$653,300



Please answer the following last set of questions.

Which has more to do with why a person is rich?

- Because she or he worked harder than others
- Because she or he had more advantages than others

---

If the federal personal income tax rate were to increase for the richest people in the economy, to what extent would it encourage them to work less?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

---

Do you think that increasing income taxes on high-income households would hurt economic activity, not have an effect on economic activity, or help economic activity in the U.S.?

- Hurt economic activity in the U.S.
- Not have an effect on economic activity in the U.S.
- Help economic activity in the U.S.

---

Typically, when the top federal income tax rate on high earners is cut, do you think that the lower class and working class mostly win or mostly lose from this change?

- Mostly lose
- Neither lose nor win
- Mostly win

---

Some people think that income inequality in society can affect the level of crime, trust, corruption, and social unrest in society.

How big of an issue do you think income inequality is in America?

- Not an issue at all
- A small issue
- An issue
- A serious issue
- A very serious issue

---

How much of the time do you think you can trust the federal government to do what is right?

- Always
- Most of the time
- Only some times
- Never

---

— page break —

### **End of survey**

Thank you for your time!

We will pay you your £2 participation fee in the following days.

**Please click the following link to finish the survey.**

## 8.2 Treatment Hypothetical

[All screens with the exceptions of those listed below are identical to the screens in Treatment Base]

[Instructions screen]

### Instructions

In this study, you will make several choices involving **seven hypothetical people**. These people are not real but you should imagine them as above the age of 18 and U.S. citizens. The incomes of the seven people **after all taxes paid and transfers received** are as follows:

Person	After-tax annual income
Person A	\$8,000
Person B	\$35,000
Person C	\$70,000
Person D	\$100,000
Person E	\$170,000
Person F	\$250,000
Person G	\$500,000

---

Here is an example of a question that you will see in the survey:

	Person C	Person G
After-tax annual income	<b>\$70,000</b>	<b>\$500,000</b>

**Question 2/4:** Please choose your preferred alternative

Person C: +\$750 Person G: -\$1250	Person C: +\$500 Person G: -\$500
---------------------------------------	--------------------------------------

In this question, if you choose the option on the left, then \$1250 will be taken away from Person G and \$750 will be given to Person C. If you choose the option on the right, then \$500 will be taken away from Person G and \$500 will be given to Person C.

If you choose the option on the left, the final incomes of the two people (**including an**

**initial \$1500 bonus**) will be Person C: \$72,250 and Person G: \$500,250. If you choose the option on the right, the final incomes of the two people (including an initial \$1500 bonus) will be Person C: \$72,000 and Person G: \$501,000.

You will face four questions like the one you saw above in each “decision screen.” **Overall, you will face six decision screens with four questions in each.** In each question, you will see a different amount in the option on the left. In each decision screen, you will see a different pair of people.

**The choices you make in the survey will not have real consequences.**

---

Please answer the following questions to demonstrate that you have understood the instructions. You can read the instructions above again if you feel the need to.

Please state True or False: “In this study, you will make several choices involving seven hypothetical people.”

- True
- False

Please state True or False: “Your choices will **not** have real consequences.”

- True
- False

(You will be allowed to move to the next screen in 30 seconds)

[The timer updates dynamically. When the time elapses, the text disappears.]

---

page break

---

[D1Q1: shown to all participants]

**Decision Screen 1/6**

Please consider each question carefully.

	<b>Person C</b>	<b>Person G</b>
After-tax annual income	<b>\$70,000</b>	<b>\$500,000</b>

**Question 1/4:** Please choose your preferred alternative:

Person C: +\$1000 Person G: -\$1000 <input type="radio"/>	Person C: +\$500 Person G: -\$500 <input type="radio"/>
---	---

[All decision screens and questions and identical to those in Treatment Base. Only the first sentence differs between the two treatments]

### 8.3 Treatment Brackets

[All screens with the exceptions of those listed below are identical to the screens in Treatment Base]

[In the Demographics screen, all questions with the exception of the question on own income is the same as in Treatment Base]

The next question is about your **total individual income in 2021 before taxes**. This figure should include income from all sources, including salaries, wages, pensions, Social Security, dividends, interest, and all other income. What was your total individual income (USD) in 2021?

- \$22,000 and below
- \$22,000 to \$53,000
- \$53,000 to \$85,000
- \$85,000 to \$135,000
- \$135,000 to \$210,000
- \$210,000 to \$375,000
- \$375,000 and above

---

page break

[Displayed if \$22,000 and below is chosen]

You have reported that your total individual income in 2021 before taxes was \$22,000 and below.

[Displayed if \$22,000 to \$53,000 is chosen]

You have reported that your total individual income in 2021 before taxes was \$22,000 to \$53,000.

[Displayed if \$53,000 to \$85,000 is chosen]

You have reported that your total individual income in 2021 before taxes was \$53,000 to \$85,000.

[Displayed if \$85,000 to \$135,000 is chosen]

You have reported that your total individual income in 2021 before taxes was \$85,000 to \$135,000.

[Displayed if \$135,000 to \$210,000 is chosen]

You have reported that your total individual income in 2021 before taxes was \$135,000 to \$210,000.

[Displayed if \$210,000 to \$375,000 is chosen]

You have reported that your total individual income in 2021 before taxes was \$210,000 to \$375,000.

[Displayed if \$375,000 and above is chosen]

You have reported that your total individual income in 2021 before taxes was \$375,000 and above.

[Displayed in all cases]

Could you provide your best guess of what your **total individual income** was?

---

page break

---

[Instructions screen]

## Instructions

In this study, you will make several choices involving **seven real people**. These people will be selected at random from a survey panel and will not participate in the same survey as you. These people are above the age of 18 and are U.S. citizens. The incomes of the seven people **after all taxes paid and transfers received** put them in the following income brackets:

Person	After-tax annual income
Person A	\$22,000 and below
Person B	\$22,000 to \$53,000
Person C	\$53,000 to \$85,000
Person D	\$85,000 to \$135,000
Person E	\$135,000 to \$210,000
Person F	\$210,000 to \$375,000
Person G	\$375,000 and above

---

Here is an example of a question that you will see in the survey:

	Person C	Person G
After-tax annual income	<b>\$53,000 to \$85,000</b>	<b>\$375,000 and above</b>

**Question 2/4:** Please choose your preferred alternative

Person C: +\$750 Person G: -\$1250	Person C: +\$500 Person G: -\$500
---------------------------------------	--------------------------------------

In this question, if you choose the option on the left, then \$1250 will be taken away from Person G and \$750 will be given to Person C. If you choose the option on the right, then \$500 will be taken away from Person G and \$500 will be given to Person C.

If you choose the option on the left, the final income brackets of the two people (**including an initial \$1500 bonus**) will be Person C: \$55,250 to \$87,250 and Person G: \$375,250 and above. If you choose the option on the right, the final incomes of the two people (including an initial \$1500 bonus) will be Person C: \$55,000 to \$87,000 and Person G: \$376,000 and



above.

You will face four questions like the one you saw above in each “decision screen.” **Overall, you will face six decision screens with four questions in each.** In each question, you will see a different amount in the option on the left. In each decision screen, you will see a different pair of people.

One participant in this study will be randomly selected. If you are randomly selected, your choice on one randomly selected question on one randomly selected decision screen will be implemented. **This means that if you are randomly selected, one of your choices will have real consequences for two other people.** The final bonus of these two people will be transferred to them at the end of the study.

---

Please answer the following questions to demonstrate that you have understood the instructions. You can read the instructions above again if you feel the need to.

Please state True or False: “In this study, you will make several choices involving seven real people.”

- True
- False

Please state True or False: “If you are randomly selected, one of your choices will have real consequences for two other people.”

- True
- False

(You will be allowed to move to the next screen in 30 seconds)

[The timer updates dynamically. When the time elapses, the text disappears.]

---

— page break —

[D1Q1: shown to all participants]

**Decision Screen 1/6**

Please consider each question carefully because if you are selected, one of your choices will have real consequences for two other persons.

	<b>Person A</b>	<b>Person C</b>
After-tax annual income	<b>\$22,000 and below</b>	<b>\$53,000 to \$85,000</b>

**Question 1/4:** Please choose your preferred alternative:

Person A: +\$1000 Person C: -\$1000 <input type="radio"/>	Person A: +\$500 Person C: -\$500 <input type="radio"/>
---	---

[All questions are identical to those in Treatment Base.]

[Decision Screens 1 to 6 are identical to the corresponding Decision Screens in Treatment Base, with the exception that the incomes of the Recipients are different. The pair of Recipients they view is as follows:

Decision Screen 2 (B: \$22,000 to \$53,000 and C: \$53,000 to \$85,000)

Decision Screen 3 (C: \$53,000 to \$85,000 and D: \$85,000 to \$135,000)

Decision Screen 4 (C: \$53,000 to \$85,000 and E: \$135,000 to \$210,000)

Decision Screen 5 (C: \$53,000 to \$85,000 and F: \$210,000 to \$375,000)

Decision Screen 6 (C: \$53,000 to \$85,000 and G: \$375,000 and above)]

[For half the participants the order of the Decision Screens is reversed]

## 8.4 Self-Interest Treatment

[All screens with the exceptions of those listed below are identical to the screens in Treatment Brackets]

[Instructions screen]

### Instructions

In this study, you will make several choices involving **six real people** and you. These six people will be selected at random from a survey panel and will not participate in the same survey as you. These people are above the age of 18 and are U.S. citizens. The incomes of the six people **after all taxes paid and transfers received** put them in the following income brackets:

Note that in this study, you are Person [A/B/C/D/E/F/G] earning [income].

Person	After-tax annual income
Person A	\$22,000 and below
Person B	\$22,000 to \$53,000
Person C	\$53,000 to \$85,000
Person D	\$85,000 to \$135,000
Person E	\$135,000 to \$210,000
Person F	\$210,000 to \$375,000
Person G	\$375,000 and above

---

Here is an example of a question that you will see in the survey:

	Person C	Person G
After-tax annual income	\$53,000 to \$85,000	\$375,000 and above

**Question 2/4:** Please choose your preferred alternative

Person C: +\$750 Person G: -\$1250	Person C: +\$500 Person G: -\$500
---------------------------------------	--------------------------------------

In this question, if you choose the option on the left, then \$1250 will be taken away from Person G and \$750 will be given to Person C. If you choose the option

**on the right, then \$500 will be taken away from Person G and \$500 will be given to Person C.**

If you choose the option on the left, the final income brackets of the two people (**including an initial \$1500 bonus**) will be Person C: \$55,250 to \$87,250 and Person G: \$375,250 and above. If you choose the option on the right, the final incomes of the two people (including an initial \$1500 bonus) will be Person C: \$55,000 to \$87,000 and Person G: \$376,000 and above.

You will face four questions like the one you saw above in each “decision screen.” **Overall, you will face six decision screens with four questions in each.** In each question, you will see a different amount in the option on the left. In each decision screen, you will see a different pair of people.

**Remember that in this study, you are Person [A/B/C/D/E/F/G] earning [income].**

One participant in this study will be randomly selected. If you are randomly selected, your choice on one randomly selected question on one randomly selected decision screen will be implemented. **This means that if you are randomly selected, one of your choices will have real consequences. If the selected question involves a payment to you, then we will pay out the bonus to you and to the other person. If the selected question involves a payment to two other persons, then we will pay out the bonus to these two other persons.** The final bonus will be transferred at the end of the study. If you are among the winners, we will contact you in a few months and pay out your bonus via prolific.

---

Please answer the following questions to demonstrate that you have understood the instructions. You can read the instructions above again if you feel the need to.

Please state True or False: “In this study, you will make several choices involving six real people and you.”

- True
- False

Please state True or False: “If you are randomly selected, one of your choices will have real consequences for two other people or for you and one other person.”

- True
- False

(You will be allowed to move to the next screen in 30 seconds)

[The timer updates dynamically. When the time elapses, the text disappears.]

---

page break

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[D1Q1: shown to all participants]

**Decision Screen 1/6**

Please consider each question carefully because if you are selected, one of your choices will have real consequences.

	<b>Person A</b>	<b>You</b>
After-tax annual income	<b>\$22,000 and below</b>	<b>\$53,000 to \$85,000</b>

**Question 1/4:** Please choose your preferred alternative:

Person A: +\$1000 You: -\$1000 <input type="radio"/>	Person A: +\$500 You: -\$500 <input type="radio"/>
--	--

[All questions and decision screens are identical to those in Treatment Brackets with the exception that in the relevant decision screens, we replace “Person [A/B/C/D/E/F/G]” with “You.” Furthermore, the first sentence in all decision screens is different.]