

Overconfidence, Income-Ability Gap, and Preferences for Income Equality*

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Abstract

Overconfident people who do not earn what they think they can may attribute this negative gap to the unfairness of the economy and thereby favor reducing income inequality when they realize their negative income-ability gap. To test this theory, we conducted an online survey experiment in the US in which we assigned the treatment emphasizing each respondent's self-perception of the income-ability gap randomly. The results indicate that realizing this negative income-ability gap lowers respondents' perception of the economy being meritocratic and fair. However, it did not translate into the higher support for reducing income inequality or the support for the government intervention. In addition, we examined the potential heterogeneity depending on political ideologies and political trust levels.

JEL classification: D31; D72; H23; H24

Keywords: Preferences for redistribution, Overconfidence, Political ideology, Meritocracy, Fairness

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1 Introduction

Much evidence shows that people tend to be overconfident about their ability in many situations.¹ For example, Svenson (1981) famously finds that 88% of US respondents consider themselves to be safer than the median driver. Workers tend to systematically overpredict their productivity, which lowers the turnover rate (Hoffman and Burks, 2020). CEOs often overestimate the returns on their investment projects, which leads to overinvestment (Malmendier and Tate, 2005). This study contributes to the literature of behavioral political economy (Schnellenbach and Schubert, 2015) by investigating how the political preferences of overconfident people, specifically preferences regarding equality, change when they see a gap between their economic status and their self-evaluations of their ability.

Overconfident people do not actually earn what they think they can, implying that they may be aware of a negative gap between their economic status and their own evaluations of their ability at some point during their lives. As they hold a strongly biased belief about their own ability, they would not attribute this gap to their low ability but rather that their economic status does not appropriately reflect their talent and effort, which implies that society is non-meritocratic and unfair. As such, overconfident people would attribute the negative income-ability gap to the unfairness of the economy, which should in turn increase overconfident people's support for reducing income inequality. They may also increase the support for government interventions.²

While several recent studies emphasize the role of personal economic experiences as a determinant of the view on fairness and preferences for redistribution (e.g., Berthet et al., 2020; Deffains et al., 2016; Fehr and Vollmann, 2020; Ng and Semenov, 2019), the effect of

¹Moore and Healy (2008) provide a survey of the literature and classify overconfidence into three categories: overestimation, over-placement, and over-precision. In the first, people believe that their performance is better than what it actually is. In the second, people wrongly believe that their performance is better than that of others. In the third, people are overconfident about the precision of information. We focus on the first and second types of overconfidence.

²Another effect of overconfidence is over-placement of income. Overconfident people might overestimate the relative location of their current incomes, which reduces support for redistribution. Several empirical studies verify this channel (e.g., Buser et al., 2020; Cruces et al., 2013; Fernández-Albertos and Kuo, 2018), but it is not our focus.

realizing the negative income-ability gap is understudied, despite its prevalence. In particular, there is no experimental evidence outside labs because manipulating actual economic experience is difficult beyond hypothetical situations in the labs.

By running a unique experiment, we explore how realizing the negative income-ability gap changes political preferences in a real economic environment. We conducted an online survey experiment in the US with around 4,500 participants. At the beginning of the survey, respondents were asked to disclose their income and self-evaluation of their earning ability, which provided us with their self-perceptions of the income-ability gap. For the majority of the respondents, the self-evaluations of their earning ability were not equal to the location of their income. Furthermore, among such respondents facing the income-ability gap, the majority considered that their income were lower than their earning ability, which we call *the negative income-ability gap*. Then, respondents were randomly assigned to the treatment that emphasizes the income-ability gap constructed by their previous answers.³

The unique structure of our survey is that we customized this treatment for each respondent. For example, consider respondents who chose “very high ability” as their self-evaluation and chose “low” as the relative location of their household income. We assigned half of these respondents randomly to the treatment question, which reminds them that their income is low despite their very high ability, and the other half to the control that received no such question. By exploiting this feature of our survey design, we explore the causal effect of realizing the income-ability gap on preferences for reducing inequality. Our interest is in the treatment effect on respondents facing the negative income-ability gap.

We obtained two main results. The first result is on the effect on the perceived degree of unfairness. We found that realizing the negative income-ability gap makes people think that ordinary people earn incomes below their ability. That is, people attribute the negative income-ability gap not to low ability but to the unfairness of the economy.

³Respondents evaluate their income position based on information about the real income distribution in the US. Thus, their self-evaluation of income-position is not subjective, though the evaluation of their ability is subjective.

The second result is on the preferences for reducing income inequality. Due to the aforementioned effect on the view of the unfairness of the economy, we hypothesized that realizing the negative income-ability gap might increase people's support for income equality. We found that the effect on preferences for income equality was limited. On average, it does not increase the support for reducing income inequality or the support for government intervention. This result indicates that finding out the world is not as one thinks it is does not necessarily influence one's preferences for equality.

As existing experimental studies show (Alesina et al., 2018; Kuziemko et al., 2015), the effect of information provision on policy preferences for equality could depend on political attitudes such as political ideologies or political trust. Such potential heterogeneity of the treatment effect may have resulted in the null result on the average treatment effect. Taking this possibility into account, we also examined potential heterogeneity. We found that realizing the negative income-ability gap does not change the support for reducing inequality among centrists and right-wing people. On the other hand, we found a suggestive evidence that it enhances the support for reducing inequality among left-wing people, though it is not statistically significant at a conventional cutoff (the p-value was 0.06). However, even left-wing people did not increase the support for government intervention. In addition, we also examined heterogeneity depending on a political trust level, but we did not find the heterogeneity.

Overall, the results indicate that after realizing the negative income-ability gap, people are more likely to think that society is unfair, but do not necessarily increase support for reducing income inequality. Overconfident people do not actually earn what they think they can, and thus they would be aware of a negative gap between their economic status and their own evaluations of their ability at some point during their lives. Our study shows how realizing this negative income-ability gap influences people's view on fairness and inequality.

Related literature: Whether the causes of inequality are meritocratic significantly affects pref-

erences for reducing inequality (e.g., Alesina and Angeletos, 2005; Alesina and La Ferrara, 2005; Krawczyk, 2010; McCoy and Major, 2007). Thus, it is important to explore the conditions under which people change their understanding of the meritocratic or non-meritocratic causes of inequality. As a determinant of beliefs on the causes of inequality, several recent studies emphasize individual economic experiences such as individual economic success and failure (e.g., Berthet et al., 2020; Deffains et al., 2016; Fehr and Vollmann, 2020; Ng and Semenov, 2019). We contribute to this strand of the literature by showing the novel interplay between overconfidence and the individual income-ability gap.

The most closely related study to ours is Ng and Semenov (2019), who also analyzed the role of overconfidence.⁴ Specifically, they conducted a lab experiment in which they assigned income to participants randomly based on task performance and chance, where the degree to which income depends on task performance was uncertain. Overconfident participants overestimated their task performance, and thus after receiving low income, believed that economic system in the lab was not based on task performance. Consequently, even without self-interested motivations, overconfident participants chose more redistribution when they experienced failure. The novelty of our study is that we test the theory not in an artificial context of lab experiments but in a real economic environment using respondents' real incomes. Our results differ from theirs in an important way. We find that realizing the negative income-ability gap does not necessarily promote support for reducing inequality in a real economic context.

⁴Another related work is that by Fehr and Vollmann (2020), who conducted an incentivized experiment where the success of each person's effort task was determined randomly. They analyzed how economic success changes the participants' views of the role of effort in the task and preferences for redistributing the reward of the task across subjects. In the analysis, they considered the potential heterogeneous effects of political ideology and find that political ideology does not play a role. Because they considered redistribution of the reward in the effort task, they did not identify preferences for redistribution in a real economic context.

2 Theoretical Framework

2.1 Hypotheses

Perception on unfairness of economy: To establish the concept, let us consider the following simple theoretical framework.⁵ Suppose that individual i 's income is $y_i \in \{y_H, y_L\}$, where $y_H > y_L$, and her earning ability is given by $a_i \in \{a_H, a_L\}$, where $a_H > a_L$. This earning ability is a product of her previous effort and her innate ability, though we do not explicitly model its source. The economic environment determines how income depends on earning ability, but whether the economic environment is meritocratic is uncertain. Let the economic environment be $\theta \in \{G, B\}$. When $\theta = G$, the economy is meritocratic such that individual income is commensurate with earning ability; that is,

$$\Pr(y_i = y_H | a_i = a_H) = \Pr(y_i = y_L | a_i = a_L) = p > 0.5.$$

In this case, we refer to the economy as fair. On the other hand, when $\theta = B$, the economy is non-meritocratic such that income is unrelated to earning ability; that is,

$$\Pr(y_i = y_H | a_i = a_H) = \Pr(y_i = y_L | a_i = a_L) = 0.5.$$

In this case, we refer to the economy as unfair. The prior probability of θ being G is $q \in (0, 1)$.

Now, suppose that person i believes that $a_i = a_H$, but $y_i = y_L$. Then, once the individual realizes the gap between income and earning ability, she updates her belief on the fairness of the economy as follows:

$$\Pr(\theta = G | a_i = a_H, y_i = y_L) = \frac{q(1-p)}{q(1-p) + (1-q)0.5},$$

which is lower than the prior q because $p > 0.5$. Since individual i believes that her earn-

⁵We consider a binary outcome, but our argument can easily extend to a more general setting.

ing ability is high, she attributes the income-ability gap to the unfairness of the economy. Consequently, realizing the income-ability gap lowers the perceived degree of fairness of the economy.

This simple theoretical framework yields the following hypothesis:

Hypothesis 1. *Suppose that a person believes that her earning ability is high, but her income is low. Realizing this negative income-ability gap leads her to believe that ordinary people do not get income commensurate with their ability. That is, realizing the negative income-ability gap increases the perceived degree of unfairness of the economy.*

Support for reducing income inequality: We next turn to the effect on the support for reducing income inequality. As both theoretical and empirical studies show, one's belief about whether inequality stems from justifiable factors (e.g., whether society offers equality of opportunity) determines her preference for income equality (e.g., Alesina and Angeletos, 2005; Alesina and La Ferrara, 2005; Krawczyk, 2010; McCoy and Major, 2007).

The unfairness of economy in terms of non-meritocracy would be a typical example of unjustifiable factors. For example, in their survey experiment, Almås et al. (2020) report that 37.5% of the US respondents have a meritocratic view such that whether inequality is justified depends on whether its source is meritocratic or not. Furthermore, earning ability is an outcome of one's own human capital investment from a dynamic perspective; that is, it depends on previous effort as well as innate talent. Thus, the "effort vs. luck" argument in the literature can be regarded as a meritocratic view (e.g., Alesina and Angeletos, 2005). Based on these existing studies, we would expect that the view that society is unfair increases support for reducing income inequality. In addition, it would be natural to expect that this belief increases support for government intervention.

Combining this argument with Hypothesis 1, we obtain the following hypothesis:

Hypothesis 2. *Suppose that a person believes that her ability is high, but her income is low. Realizing this negative income-ability gap increases her support for reducing income*

inequality. In addition, when realizing the negative income-ability gap, she demands public intervention to reduce inequality as the private sector yields unfair outcomes.

It is important to note the assumption that people have meritocratic view. The literature of welfare economics discusses the concept of “responsibility” (e.g., Fleurbaey and Maniquet, 2011): when inequality comes from characteristics for which each individual is deemed responsible, inequality would be accommodated. Our theoretical argument implicitly assumes that each individual is deemed responsible for a part of their earning ability so that inequality coming from non-meritocratic sources is unjustified, but inequality stemming from heterogeneous earning abilities is justified to some extent. Of course, a part of citizens may not share this view; if the fraction of such citizens is large, Hypothesis 2 may not hold. Our experiment works as an indirect test of whether a majority of citizens have meritocratic view.

Potential heterogeneity: So far, our argument does not incorporate each individual’s political attitudes. However, in practice, political attitudes matter. First, it has been found that conservatives attribute greater responsibility than liberals to an individual (e.g., Williams, 1984). This empirical fact suggests that the treatment might not increase the perceived degree of unfairness of the economy among right-wing people. Furthermore, by definition, conservatives believe that government intervention is undesirable, whereas liberals are willing to invite government intervention as needed. Hence, we expect a larger effect on preferences for government intervention among left-wing people than among right-wing people.⁶ Indeed, Alesina et al. (2018) find that pessimistic information about social mobility increases support for redistribution only among left-wing respondents. From this consideration, we obtain the following hypothesis:

Hypothesis 3. *Hypotheses 1 and 2 are more salient for people with a left-wing ideology.*

Lastly, another dimension of political attitudes affects support for government interven-

⁶This hypothesis is non-trivial as we can consider an alternative story where this is false. For example, the leftists may have already hold a high level of support for reducing inequality; thus it may be harder for them to further change their views. Thus, this hypothesis requires an empirical investigation. See also footnote 19.

tion. Those with political distrust might oppose any type of government involvement and seek other ways to address unfairness. Thus, realizing the negative income-ability gap might increase support for government intervention only for those with trust in the government. Indeed, existing studies find that lower political trust reduces support for redistribution (Kuziemko et al., 2015; Rudolph and Evans, 2005). Thus, we obtain the following hypothesis:

Hypothesis 4. *The effect on support for government intervention is salient only for those with trust in the government.*

2.2 Discussion

Role of overconfidence: Key to theory is the presumption that individual i believes that her ability is high, but her income is low. When do people face this negative income-ability gap? The first possibility is that she wrongly believes that $a_i = a_H$ despite her low ability, which we can regard as overconfidence. The second possibility is that individual i correctly recognizes that her ability is a_H , but she happens to earn a low income because ability and income are not perfectly aligned in reality. Indeed, the high-ability individual can have y_L with probability $1 - p$ even if $\theta = G$ in our model.

Since the true earning ability is unobservable, we cannot identify which one is the source of each one's negative income-ability gap. While existing studies of overconfidence suggest that a substantial fraction of the negative income-ability gap is stemming from overconfidence, we do not try to identify each person's source of the income-ability gap. Since our hypotheses do not rely on the source of the income-ability gap, we analyze the effect of realizing the negative income-ability gap without considering its sources.

Updating the belief on ability: Our model implicitly assumes away belief updating regarding ability by positing that people have a hard-wired belief that their ability is high. Arguably, they might actually be unsure of their ability and update their belief on their ability after

learning the income-ability gap.⁷ However, we believe that our setting, where individual i never updates her belief about a_i , reasonably approximates reality. Prior empirical research describes self-serving bias, where people attribute positive events to their own character but attribute negative events to outside factors (e.g., Mezulis et al., 2004). Given this cognitive bias, it is reasonable to assume that respondents do not update their beliefs about a_i . Reassuringly, we found no statistically significant impact of our intervention on individuals' beliefs about their own ability. See Section 5 for details.

3 Experimental Design

We implemented our online survey experiment from June 26 to July 5, 2021. The survey had the following structure. At the beginning of the survey, respondents were asked to answer (i) questions on demographics and political attitudes and (ii) questions on income and earning ability. Then, we assigned them randomly to (iii) the treatment question. Afterward, they were asked to answer (iv) questions on their views on inequality and redistribution. Respondents were forced to answer all questions. The experiment was conducted using Qualtrics survey software. This research was approved by the Tokyo University of Science Institutional Review Board (Protocol number 20001) and preregistered at AEA RCT Repository (AEARCTR-0007852).⁸

3.1 Data Collection

We posted the survey openly on Amazon Mechanical Turk (MTurk) with a description stating that the survey paid \$1.00 for approximately 5 minutes. To ensure the quality of the survey respondents, we took several attempts.⁹ First, we had Amazon show the survey only to workers who had US addresses to exclude foreign workers. Second, to exclude robots, only

⁷Formally, $\Pr(a_i = a_H) = 1$ induces no Bayes updating on ability after realizing the income-ability gap, while $\Pr(a_i = a_H) < 1$ induces updating.

⁸<https://www.socialsciscience.org/trials/7852>

⁹These are standard methods to ensure the quality of surveys using MTurk (e.g., Kuziemko et al., 2015).

workers with a past completion rate of greater than 95 percent and a past completion task numbers of more than 50 were allowed to take the survey. Third, to exclude any unexpected cheating, respondents could not receive payment unless they used a password visible only at completion.

Many studies in psychology and political science use MTurk to implement large-scale online survey experiments. Recent studies in the field of political economy also use this platform (e.g., Barton and Pan, 2021; Kuziemko et al., 2015). While MTurk participants are not nationally representative samples, they are demographically diverse (e.g., Buhrmester et al., 2011)¹⁰ and existing studies indicate that results obtained using MTurk are similar to those using representative samples (e.g., Mullinix et al., 2015; Snowberg and Yariv, 2021).

3.2 Substantiating the Income-Ability Gap

To construct each respondent's self-perception of the income-ability gap, all the respondents were asked to answer questions on the relative location of their incomes and their earning ability at the beginning of the survey.

First, we presented a table of income distribution in the US. Based on this table, respondents were asked to answer the relative location of their household incomes on a 7-point scale from "very high" (top 15 %) to "very low" (bottom 15%). As prior studies demonstrate, overconfident people tend to misunderstand the relative location of their household incomes (e.g., Cruces et al., 2013; Fernández-Albertos and Kuo, 2018). Because we are not interested in this channel, we need to exclude it. For this purpose, we informed respondents of the correct location of their incomes.

Second, we asked respondents to evaluate the relative location of their earning ability by a 7 point-scale from "very high" (top 15%) to "very low" (bottom 15%), which is the same scale as used in the question about their household incomes. Since committing to a specific proxy for the earnings ability (e.g., IQ) might miss other abilities relevant for earnings (e.g.,

¹⁰Moss et al. (2020) report that the COVID-19 did not change the demographics of participants on this platform much: race, income, and gender remained constant.

How do you think about your earning ability?

Your ability is

- Very high (in the top 0-14% among the U.S. society)
- High (in the top 15-29% among the U.S. society)
- Relatively high (in the top 30-44% among the U.S. society)
- Average (in the top 45-54% among the U.S. society)
- Relatively low (in the top 55-69% among the U.S. society)
- Low (in the top 70-84% among the U.S. society)
- Very low (in the top 85-100% among the U.S. society)

Figure 1: Question on the self-evaluation of earning ability

communication skills), we choose to comprehensively capture it by using an abstract notion of “earning ability” as seen in Figure 1.

From these two questions, we constructed each respondent’s income-ability gap. If the self-evaluation on earning ability is higher than the income location, we coded it as being *the negative income-ability gap*.

The choice to use the self-reported household income as a measure of income may induce misclassification. First, because household income tends to increase with household size, this coding might disproportionately code small households as facing the negative income-ability gap. Second, household income depends on the ability of both the respondent and the other family members. Such misclassification inevitably occurs because of the difficulty in comparing the life quality of households with different sizes. Furthermore, respondents may not truthfully reveal their household income, which may induce misclassification. Recognizing that any measure can entail its own issues, we adopt self-reported raw household income as the measure of income by virtue of its simplicity.

Importantly, our treatment works as intended so long as respondents believe our treatment information and realize that their income is not commensurate with their ability. Hence, so long as our experiment succeeds in creating such a situation, our experiment resembles the situation of interest and the misclassification is irrelevant for our purpose.¹¹ We believe

¹¹In our data, respondents tend to be classified as facing the negative income-ability gap when they are

that our experiment sheds light on people's behavior in a real society despite the potential misclassification.¹²

3.3 Treatment: Realizing the Income-Ability Gap

We assigned respondents randomly to the treatment question. The aim of this treatment is to emphasize the income-ability gap. To this end, we customized this question for each respondent depending on her self-perception of the income-ability gap.

Suppose that a respondent chose “low” as the relative location of her household income and “very high” as the self-evaluation of her ability. This implies that her income is much lower than the self-evaluation of her earning ability. However, she might not realize this income-ability gap. As in Figure 2, we designed our treatment question to alert the respondent to the income-ability gap based on their answers to the previous questions.

In this question, the respondent was first told that their income is low, whereas their ability is very high. We customized this information depending on the answers to the previous questions on income and earning ability. However, providing only this information might not be enough because respondents might skip the information without serious reading. To prevent this outcome, we asked the respondent to evaluate her income-ability gap based on the provided information on a 5-point scale. As such, for the respondents facing the negative income-ability gap, the treatment works as a stimulus reminding them that what they actually earn is lower than what they think they can earn.

Note that this treatment question was not given to respondents in the control group. They just skipped this question and answered the subsequent questions.

unmarried (see Online Appendix A.5) because their income level tends to be lower than that of married respondents. A threat to our analysis is that such misclassification makes the treatment information so unrealistic that survey respondents no longer believe it. In this case, we expect no effect of our treatment, which is not the case in our data. To address this concern, we conducted the analysis for unmarried respondents as a robustness check. The results are qualitatively similar to those for the full sample, which indicates that these misclassification issues are not very serious. See Figure A.1 in the Online Appendix.

¹²Another potential issue is that students' incomes tend to be low no matter how high their abilities are. While this is the case, it is unlikely to affect our results as the proportion of students in our full-sample is only around 2.7%. Note also that around 76.0% of our respondents are either full-time employees, self-employed, or small business owners.

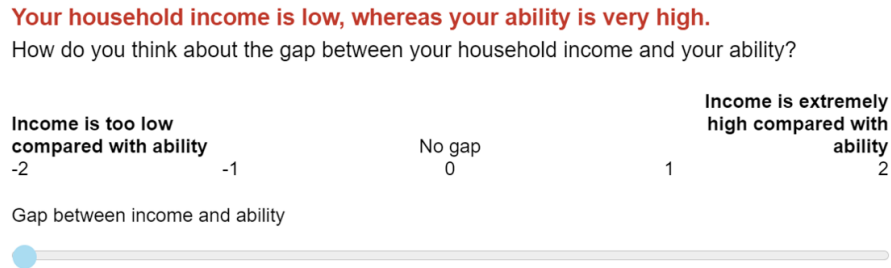


Figure 2: Treatment

3.4 Main Outcomes

We explore the effect of the treatment on views on inequality and preferences for reducing inequality. For this purpose, we use the answers to the following questions as our main outcomes.

Unfairness of the economy: In a meritocratic society, economic status should be based on earning ability (i.e., talent and effort). If not, then the society is non-meritocratic and unfair. Based on this view, we asked respondents to answer whether the incomes of ordinary people in the US are higher than, equal to, or lower than their ability. We used the answer to this question as the perception of the unfairness of the economy.

Preferences for reducing income inequality: We asked the following two questions. The first question is about whether to reduce income inequality in general. In particular, respondents were asked to answer whether US society should reduce income inequality on a 4-point scale from “strongly disagree” to “strongly agree.” While income redistribution is a particular interest in the literature, it is not the only way to reduce income inequality. In our context, people might consider that making society more meritocratic is a better way to reduce income inequality if many high-ability individuals earn less than what they would in a fairer economy. Our question encompasses such alternative approaches to reduce inequality.¹³

In addition, because there are various ways to reduce income inequality, it is not neces-

¹³Respondents were also asked about specific policies such as redistribution. See Section 6 for details.

sarily true that support for reducing inequality leads to support for government intervention. We therefore designed the second question to ask about support for government intervention. In particular, respondents were asked to answer whether “the task for reducing income inequality should be delegated to the US government” or “the US government cannot be entrusted with the task for reducing income inequality.”

4 Data

4,850 individuals started to answer this survey and 4,697 individuals completed it. Since our treatment requires that respondents are seriously engaging in the survey and remembering the relevant information, samples that took either too short or too long time for completing the survey are undesirable. Since our survey is designed so that engaging participants can complete the survey in 5-6 minutes, we drop samples that took less than 90 seconds (1.5 minutes) and more than 900 seconds (15 minutes).¹⁴ This leaves us 4,471 respondents. The median time to complete the survey is 317.5 seconds. The randomization of the treatment looks successful. In Online Appendix A.2, we investigate whether the characteristics of treatment and control groups are balanced, which is an implication of successful random assignment. Overall, we find little evidence against the successful random assignment.

4.1 Income-Ability Gap

Table 1 reports the data for the income-ability gap. According to the data, 2744 respondents considered their incomes did not correctly reflect their earning abilities, which accounts for around 61.4 % of the respondents. Furthermore, among such respondents facing the income-ability gap, a majority faced the negative income-ability gap (i.e., considered their incomes lower than their abilities), which accounts for around 34.1 % of the total respondents (its number is 1526). Although the specific numbers should be taken with grain of salt as our

¹⁴We set the assignment duration (the allotted amount of time) as 15 minutes for each worker to complete the survey when we posted the survey on Amazon MTurk.

survey is not based on a representative sample of the US, our documentation of the negative income-ability gap might be noteworthy.

We can also view the presence of the negative income-ability gap from another perspective. Figure 3 illustrates the marginal distributions of income and ability for the full sample and the negative income-ability sample. The figure shows that the income distribution for the full sample is nearly symmetric. Compared with this income distribution, the proportion of respondents who considered their ability below the average is smaller and the proportion of respondents who considered their ability on average is significantly larger.

In sum, our data indicate that a certain fraction of the respondents are facing the negative income-ability gap. While it does not necessarily come from cognitive bias, as we discussed in Section 2.2, we hereafter focus exclusively on respondents facing the negative income-ability gap (1526 respondents). We also discuss the effect on the other respondents in Section 6.¹⁵

4.2 Characteristics of the Respondents Facing the Negative-Gap

We summarize the characteristics of respondents facing the negative income-ability gap in Table 2. For the characteristics of the full sample, see Table A.1 in the Online Appendix. To see how the negative income-ability gap is correlated with socioeconomic characteristics, we regressed facing the negative gap on various characteristics by a linear probability model (see Online Appendix A.5). Respondents tend to face the negative income-ability gap when they are young or single, have right-wing ideology, higher education, lower income,¹⁶ or trust government. The experimental literature reports that men are more likely to be overconfident

¹⁵Note that the fraction of those facing the negative income-ability gap is smaller than the fraction of overconfident people estimated in several lab experiments (Buser et al., 2020). In addition to a difference in the context (we consider earning ability), this may reflect a difference in the samples. To ensure data quality, only workers with a past completion rate of greater than 95 percent were allowed to take the survey (see Section 3.1). While this is the standard method, this may reduce the number of overconfident people in the pool of respondents if overconfidence reduces the task performance.

¹⁶A potential concern is that those facing the negative income ability gap are likely to earn lower income than the no-gap and positive-gap respondents, which may influence our treatment effects to be examined. However, the effect of income is offset by examining the treatment effect only among the respondents facing the negative gap. Having said this, we also control higher income earners in the following regression equations for ensuring the robustness of our results.

Income Position	Ability						
	Very high	High	Relatively high	Average	Relatively low	Low	Very low
Very high	61	79	33	19	3	3	2
High	34	165	170	99	17	14	6
Relatively high	16	103	302	362	59	22	7
Average	23	81	212	561	114	23	8
Relatively low	17	27	90	374	245	109	19
Low	7	13	48	139	94	211	50
Very low	12	16	20	68	49	83	182

Notes: The people facing the negative income-ability gap are presented in shaded cells.

Table 1: Income-ability gap

than women in terms of task performance (e.g., Buser et al., 2020; Deaux and Farris, 1977; Niederle and Vesterlund, 2007), but we do not find such evidence regarding the self-evaluation of the earning ability.

A concern is that our definition of the income-ability gap might be measured with error because our measures of income and ability are imperfect. Indeed, differences in income level and marital status are, at least partially, likely to come from our classification strategy. By the construction of the income-ability gap, higher-income earners are less likely to be classified as facing the negative gap. In addition, because we asked about household income, a married respondent's income level tends to be higher than that of single respondents. Hence, these two characteristics of our income-ability gap measure create such differences.¹⁷ However, as discussed in Section 3.2, these issues are not essential for our purpose.

5 Results

5.1 Views on the Unfairness of the Economy

How does realizing the income-ability gap affect a respondent's views on the unfairness of the economy?

¹⁷Another potential concern is that the income in one year might not fully capture the earning capacity of an individual. For instance, the wealth might be another aspect of it. Having said this, our treatment successfully increases the perceived unfairness of the economy, which would not happen if the measurement error is so severe that respondents no longer take our treatment seriously.

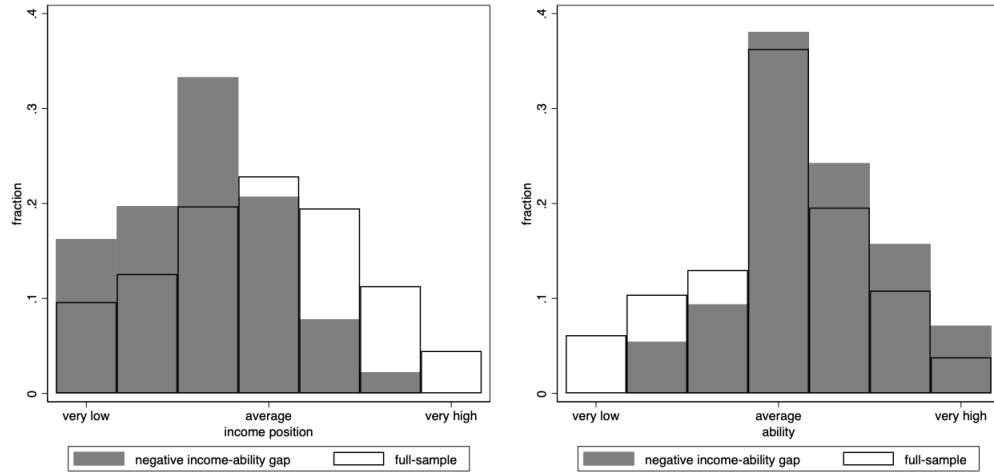


Figure 3: Income distribution and distribution of respondents' self-assessment of their ability

	Mean	SD	Min	Max	Count
Treatment	0.51	0.500	0	1	1526
Age	38.28	12.186	18	78	1526
Female	0.48	0.500	0	1	1526
Urban	0.42	0.494	0	1	1526
Race: European American/White	0.70	0.456	0	1	1526
Race: African American/Black	0.15	0.355	0	1	1526
Race: Hispanic/Latino	0.07	0.254	0	1	1526
Race: Asian/Asian American	0.05	0.224	0	1	1526
Race: Other	0.02	0.156	0	1	1526
Married	0.50	0.500	0	1	1526
BA or more	0.67	0.471	0	1	1526
High income	0.19	0.389	0	1	1526
Left	0.42	0.494	0	1	1526
Right	0.31	0.463	0	1	1526
Government trust	0.40	0.491	0	1	1526
Observations	1526				

Table 2: Descriptive statistics of respondents facing the negative income-ability gap

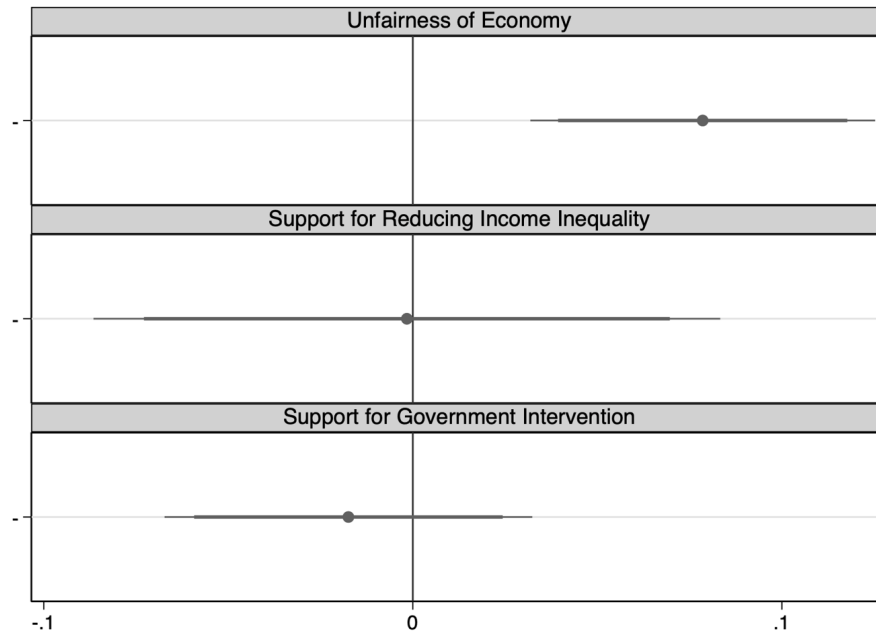


Figure 4: Treatment effect on main outcomes

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. Equation (A.1) in Section A.3 provides the details of the specification. The outcome variables of the top and bottom panels are binary variables coded as one if the respondent chooses “in the US society, ordinary people earn incomes that are lower than their abilities” and “the task for reducing income inequality should be delegated to the US government,” respectively. The outcome variable of the middle panel is a 4-point scale: 0=“strongly disagree,” 1=“disagree,” 2=“agree,” 3=“strongly agree.”

To see this, we first estimate a linear probability model by OLS without taking heterogeneous effects into account (see Online Appendix A.3 for specific details):

$$y_i = \tau T_i + \beta X_i + \epsilon_i,$$

where y_i is the outcome variable, T_i represents the treatment dummy, and X_i represents control variables. Our interest is in the value of τ . Though the pre-registered analysis plan starts with the analysis of heterogeneous treatment effects and does not include this specification, it would be useful to estimate the average treatment effect as benchmark; thus we first estimate this model.

The result is reported in the top panel of Figure 4. Hypothesis 1 predicts that people attribute the individual negative income-ability gap to the unfairness of the economy. Consistent with this hypothesis, realizing the negative income-ability gap increases the perceived degree of unfairness of the economy by 7.85 percent. This effect is statistically significant at the 0.05 level. This result indicates that people attribute the fact that they do not earn as much as what their ability might dictate to the unfairness of the society.

As stated in Hypothesis 3, the effect can be heterogeneous depending on the political ideology. Rightists tend to attribute greater responsibility to an individual than leftists do. Based on this argument, Hypothesis 3 predicts that realizing the negative income-ability gap does not much increase the perception on the unfairness of economy among rightists. To account for this potential heterogeneity, before the treatment assignment, we asked respondents about their political orientation, ranging from “far right” to “far left” on a 5-point scale. Respondents who indicated that they are either “far right” or “moderately right” (resp. “far left” or “moderately left”) are classified as being right-wing (resp. “left-wing”).¹⁸ We estimate a linear probability model by OLS including the interactions of political ideologies

¹⁸To validate the reliability of this self-reported political ideology, we checked whether it is consistent with the voting behavior in the 2020 presidential election. The result shows that most of leftists voted for Joe Biden as intended, while a significant fraction of rightists also voted for Joe Biden.

with the treatment (see Online Appendix A.3 for specific details):

$$y_i = \sum_{position=[left, right, center]} \tau_{position} T_i \times I(position_i = position) + \sum_{position=[left, right]} \alpha_{position} I(position_i = position) + \beta X_i + \epsilon_i.$$

Below, we report the estimated coefficients $(\tau_{left}, \tau_{right}, \tau_{center})$.

We report the results in the top panel of Figure 5. Realizing the negative income-ability gap increases the perceived degree of unfairness of the economy by 6.18 percent for leftists, 5.32 percent for rightists, and 15.3 percent for centrists.¹⁹ While the effect size and the statistical significance differ across political ideologies, the direction of the effect is homogeneous in contrast to Hypothesis 3: our treatment unanimously increases the perceived degree of the unfairness of economy.

We summarize our finding on the views about the unfairness of the economy as follows:

Result 1. *Consistent with Hypothesis 1, people have a stronger belief that the economy is non-meritocratic and unfair after realizing their negative income-ability gap.*

Result 2. *In contrast to Hypothesis 3, this effect is observed independently of political ideologies.*

Updating the belief on ability: So far, we have shown that respondents attribute the negative income-ability gap to the unfairness of economy. As we discussed in Section 2.2, another possibility is that respondents attribute the negative gap to their lack of ability, leading them to update their beliefs about their abilities. This is not supported by our data (see Figure 1). Both before and after the treatment, respondents were asked to provide a self-evaluation of their own ability. We took the difference between the evaluations before and

¹⁹ The fact that the effect on centrists is higher than that on rightists is not surprising given our hypothesis. An interesting point is that it is even higher than the effect on leftists, which could be explained as follows. Leftists have low trust in the market economy so that their baseline perception on the unfairness of economy is already high in our samples (see Table A.3 in Online Appendix). This high distrust in the baseline may explain why the effect of the treatment is not so large among leftists.

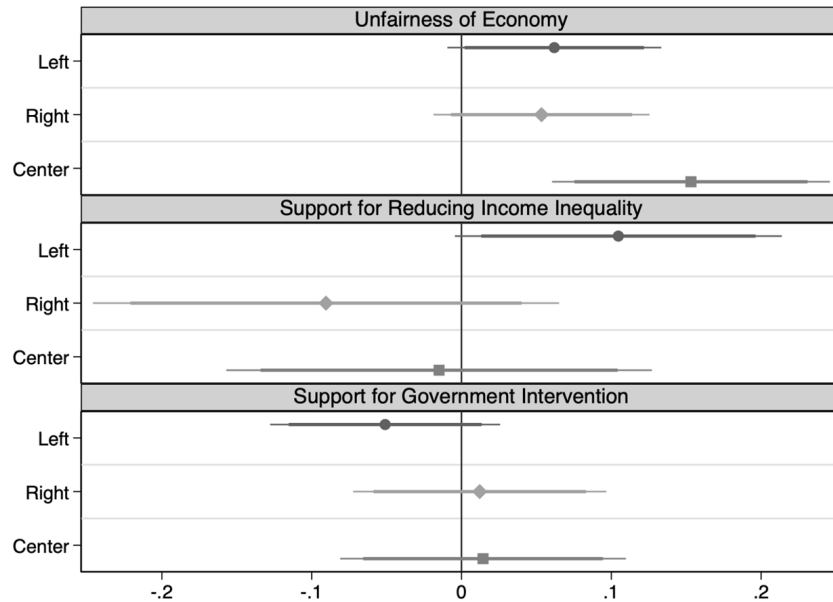


Figure 5: Heterogeneous treatment effects: role of political ideologies

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. Equation (A.2) in Section A.3 provides the details of the specification. The outcome variables of the top and bottom panels are binary variables coded as one if the respondent chooses “in the US society, ordinary people earn incomes that are lower than their abilities” and “the task for reducing income inequality should be delegated to the US government,” respectively. The outcome variable of the middle panel is a 4-point scale: 0=“strongly disagree,” 1=“disagree,” 2=“agree,” 3=“strongly agree.” Note that since we control for the dummies of the political ideology, the treatment effect for each group is identified using the treatment-control variation in the same group.

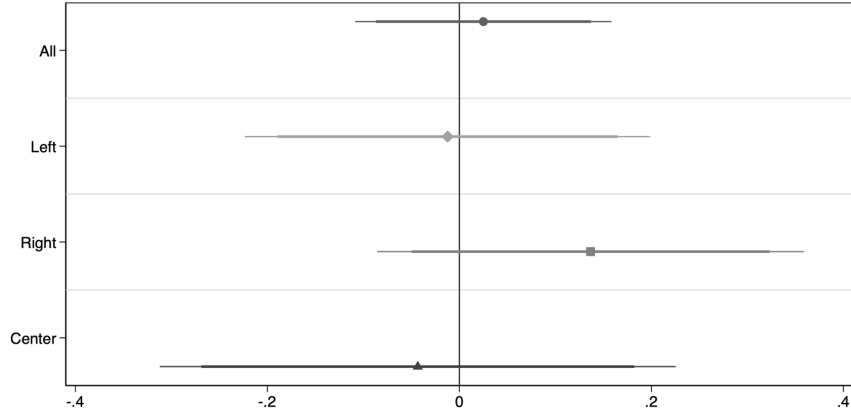


Figure 6: Treatment effects on ability updating

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. Equations (A.2) and (A.3) in Section A.3 provide the details of the specification. The covariates are the same as those in Table A.3. Let p_1 be the self-evaluation of ability before the treatment and p_2 be that after the treatment. p_t is a 7-point scale: 0=“very low,” 2=“low,” 3=“relatively low,” 4=“average,” 5=“relatively high,” 6=“high,” and 7=“very high.” The outcome variable is defined by $p_2 - p_1$. Note that since we control for the dummies of the political ideology, the treatment effect for each group is identified using the treatment-control variation in the same group.

after the treatment, where a higher value represents the upward updating on ability. If respondents attribute the negative income-ability gap to their lack of ability, the estimated treatment effect should be negative. However, the estimated effects are positive (i.e., the treatment is estimated to upwardly increase each respondent’s self-evaluation on ability) and not statistically significant. Combining this with the effect on the view on unfairness suggests that respondents attribute the negative income-ability gap to the unfairness of the economy, not to individual responsibility.

5.2 Preferences for Reducing Income Inequality

We saw that the treatment changed respondents’ views on the unfairness of the economy, but does this lead to preferences for reducing income inequality? Hypothesis 2 predicts that they will show stronger support for reducing income inequality and government interventions.

We present the results in the middle and bottom panels of Figure 4. Interestingly, despite the large effect on the perception of the unfairness of the economy, we find no significant

effects on preferences for reducing income inequality. The effect on the support for reducing inequality is almost zero. Furthermore, the effect on the support for government interventions is estimated to be negative, though it is not statistically significant.

However, we argue that this result might mask the important heterogeneity with respect to political ideologies. For example, those having libertarian view may dislike reducing inequality as the market outcomes, regardless of its source (Almås et al., 2020). Hypothesis 3 predicts that realizing the negative income-ability gap increases the support for reducing income inequality only among leftists. To see if this is the case, we estimate the heterogeneous treatment effects in the middle and bottom panels of Figure 5 as we did in estimating the heterogeneous effect on the view about the unfairness of economy.

Consistent with Hypothesis 3, the results in the middle panel of Figure 5 indicate that, on the one hand, the treatment increases the support for reducing inequality by 10.5 point among leftists, where p-value is 0.06. On the other hand, the effects on centrists and rightists are estimated to be negative, though they are not statistically significant. That is, there is suggestive evidence that our treatment enhances the support for reducing inequality only among leftists, though it is not statistically significant at a conventional cutoff. Alesina et al. (2018) find that pessimistic information about social mobility increases support for redistribution only among left-wing respondents. Our result is consistent with such existing finding.

Since there are various measures in correcting inequality, it is not obvious whether this increased support for reducing inequality among leftists induces the support for government interventions. As in the bottom panel of Figure 5, the treatment is estimated to decrease the support for government interventions by 5.09 percent, though it is not statistically significant. That is, even leftists do not increase the support for government interventions.

The following two results succinctly summarize our findings:

Result 3. *In line with Hypotheses 2 and 3, after realizing the negative income-ability gap, left-wing people become more in favor of reducing income inequality, though it is not statistically*

significant at a conventional cutoff. However, such effects are not observed among centrists and rightists.

Result 4. *In contrast to Hypotheses 2 and 3, after realizing the negative income-ability gap, people do not become more in favor of government interventions.*

Lastly, we examine another potential heterogeneity: political trust. Prior studies demonstrate that political distrust decreases support for public spending and redistribution (e.g., Kuziemko et al., 2015; Rudolph and Evans, 2005).²⁰ Based on these studies, Hypothesis 4 expects that realizing the negative income-ability gap increases the support for government intervention when people have political trust. To test this hypothesis, before the treatment assignment, we asked respondents about their trust in the US government (“How much of the time do you think you can trust the government in Washington to do what is right?”). The respondent is coded as having trust in the government if the respondent chooses either “just about always” or “much of the time.” We estimate a linear probability model by OLS including the interactions of political ideologies and political trust level with the treatment (see Online Appendix A.3 for specific details). Figure 7 reports the results. The treatment did not increase the support for government intervention even among leftists with high trust in the US government. Thus, in contrast to Hypothesis 4, our treatment does not increase the support for the government intervention even for those trusting in the government. This is summarized as follows:

Result 5. *In contrast to Hypotheses 4, the treatment does not increase the support for the government intervention even among people who trust in the government.*

In summary, realizing the negative income-ability gap increases the perceived unfairness of the economy. However, it does not necessarily lead to increased support for reducing income inequality. We find a only suggestive evidence that the treatment leads to increased support for reducing income inequality among leftists. Furthermore, it does not induce people

²⁰While this is a common view, a recent study by Peyton (2020) indicates the possibility that political distrust does not reduce preferences for redistribution.

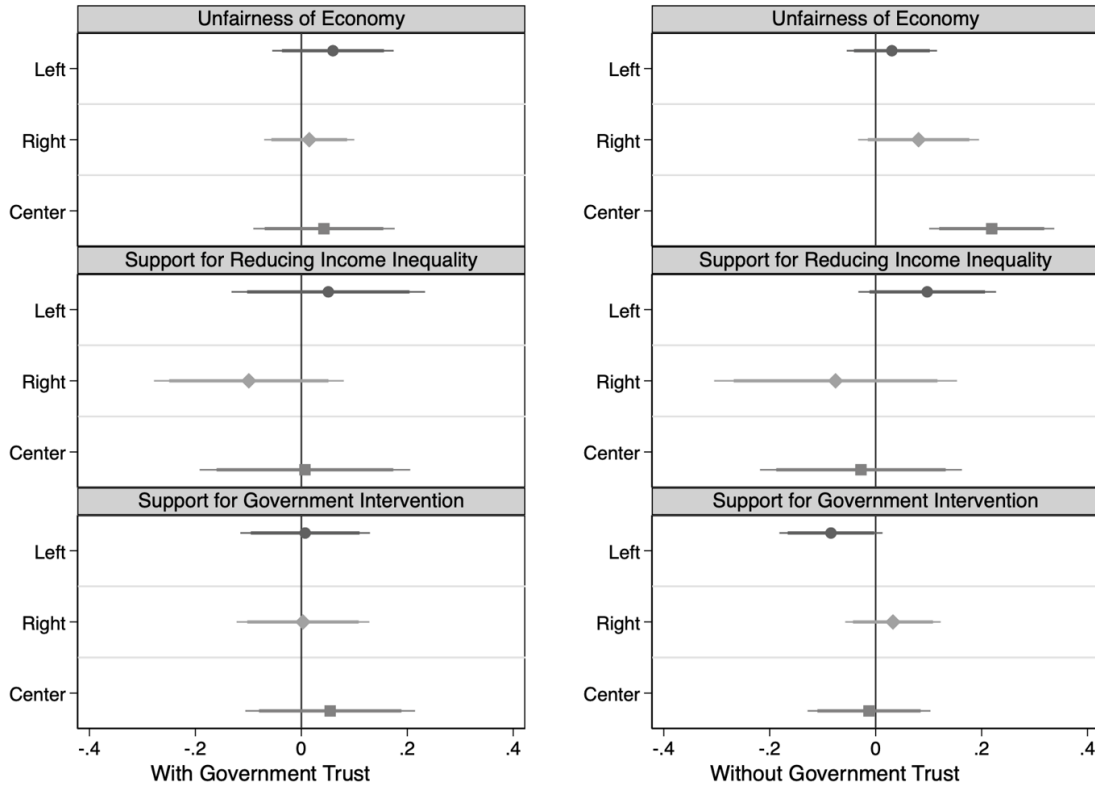


Figure 7: Heterogeneous treatment effects: role of trust in the government

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. Equation (A.3) in Section A.3 describes the specification in detail. The outcome variables of the top and bottom panels are binary variables coded as one if the respondent chooses “in the US society, ordinary people earn incomes that are lower than their abilities” and “the task for reducing income inequality should be delegated to the US government,” respectively. The outcome variable of the middle panel is a 4-point scale: 0=“strongly disagree,” 1=“disagree,” 2=“agree,” 3=“strongly agree.” The respondent is coded as having trust in the government if the respondent chooses either “just about always” or “much of the time” for the question about political trust. Note that since we control for the dummies of the political ideology and the trust on top of their interactions with the treatment dummy, the treatment effect for each group is identified using the treatment-control variation in the same group.

to be more favorable of government intervention to correct the inequality. Heterogeneity by political trust levels does not affect these results.

Various studies have empirically analyzed the effect of correcting misinformation on political opinions (Jerit and Zhao, 2020). Some of them show that it changes the belief about the information, but leaves political opinions unchanged (e.g., Nyhan et al., 2020). In a similar vein, Aldama et al. (2021) analyze the effect of providing information about the US inequality on preferences for redistribution and find a null result, despite that subjects update their factual beliefs in response to the provided information.²¹ They argue that characteristics such as party ideology or family and personal values are major determinants of preferences for redistribution and changing a belief about social and economic environments may have a limited role. Our limited effect on preferences for reducing income inequality may stem from the same mechanism.

6 Supplementary Discussions

We briefly discuss additional results here. Details are found in the Online Appendix.

6.1 Effect on Policy Priorities

There are various ways to reduce income inequality besides income redistribution. To see if preferences for policy priorities change, we asked respondents to prioritize the following policies to reduce inequality: redistribute income, ensure people earn incomes commensurate with their abilities, and help the poor improve their skills.²² For leftists who increase the

²¹Kuziemko et al. (2015) conducted a survey experiment where an information treatment regarding inequality does not necessarily enhance the support for government interventions such as increasing the income tax. They argued that information regarding inequality had a mediation effect on the support for government interventions through an increase in political distrust effect, which created the limited total effect on the support for government interventions. After the treatment, we asked respondents about their trust in the US government (“How much of the time do you think you can trust the government in Washington to do what is right?”). We tested this mediation effect by looking at the treatment effects on this level of political distrust. The treatment effects are not statistically significant and close to zero.

²²Another interesting question could be whether the treatment affects one’s preference for specific measures of redistribution such as income tax, real estate tax, and capital gain tax. Our questionnaire does not contain

support for reducing inequality, the estimated effects are close to zero; that is, our treatment does not change the policy priorities among leftists. On the contrary, while we do not find statistically significant effects, the point estimates indicate a sizable effect wherein both rightists and centrists reduce the support for redistribution. Instead, rightists show higher support for ensuring people earn incomes commensurate with their abilities. That is, even if the support for government intervention increases, it does not necessarily imply support for income redistribution through taxes and transfers.

6.2 Heterogeneous Effect across Different Income Levels

It might be interesting to investigate the treatment effect heterogeneity by income given that the literature has emphasized the role of individual incomes in the formation of preferences for redistribution (e.g., Meltzer and Richard, 1981). For instance, redistribution is always beneficial for the poor, thus they may support reducing income inequality no matter how fair the economy is. We analyzed this potential heterogeneous effects, but there is no systematic difference in the treatment effects between the rich and the poor.

6.3 Respondents without Negative Income-Ability Gap

Our data also include the respondents who considered that their income is equal to their earning ability (i.e., *no income-ability gap*) and the respondents who considered that their income is above their earning ability (i.e., *positive income-ability gap*). While it is not in our main focus, we analyzed the treatment effects on the respondents facing the no gap and the respondents facing the positive gap.

Table 3 shows the descriptive results regarding how the treatment changes the view on the unfairness of economy (see Online Appendix for the statistical analysis). First, realizing the positive gap might be expected to induce respondents to think that the incomes of

questions on these specific policy instruments; thus we could not analyze this issue. However, given that we find no effect on the support for reducing inequality, it would be difficult to expect the treatment effect on support for specific policies to reduce inequality.

ordinary people in the US are higher than their ability, but there is no such effect. Similarly, the treatment does not change the view on the unfairness of economy among the no-gap respondents (see Figure A.4). In the literature, it is well known that people tend to have self-serving bias (e.g., Larsen, 2021; Mezulis et al., 2004); that is, people do not ascribe success to external factors, but ascribe failure to them. Since positive or no gaps can be regarded as success, respondents with self-serving bias would not relate their positive or no gap with whether the society is meritocratic. This could be an explanation why the treatment has null effect on the unfairness of economy among respondents facing either positive or no gap.²³

	Ordinary people earn incomes that are lower than equal to higher than their abilities		
Positive-gap samples – Control Group	42.44%	40.68%	16.88%
Positive-gap samples – Treatment Group	39.77%	43.62%	16.61%
No-gap samples – Control Group	41.85%	45.43%	12.72%
No-gap samples – Treatment Group	42.81%	43.62%	13.57%
Negative-gap samples – Control Group	39.36%	43.11%	17.54%
Negative-gap samples – Treatment Group	46.73%	33.12%	20.15%

Table 3: Distribution of the answers to the question about the unfairness of economy

In addition, this null effect strongly suggests that our identified effect on the negative-gap respondents does not come from experimenter demand effects. One may wonder if respondents infer the purpose of the experiment from the treatment and respond so as to help confirm the experimenter’s hypothesis. While we cannot perfectly rule out this possibility, if so, the treatment should induce the no-gap (resp. positive-gap) respondents to choose “the ordinary people’s incomes are equal to (resp. higher than) their ability” as an answer. However, such patterns are not observed in our data. This suggests that our identified effect on the respondents facing the negative gap is not driven by experimenter demand effects, and the treatment works as intended.²⁴

²³We find that the treatment has a positive effect on the support for government intervention among respondents facing positive gap as shown in Figure A.4. While we cannot rule out that we obtain the significant effect by coincidence, a possible explanation might be that the treatment leads them to become more confident and thus feel less the necessity for depending on government.

²⁴Furthermore, several studies indicate that experimenter demand effects are not serious in survey experi-

6.4 Other Concerns: Data Quality

Are ability perceptions random?: In our sample, respondents are almost equally divided into the negative gap, the no gap, and the positive gap. One may wonder if this is stemming from respondents' random answers on their earning ability. However, this is not the case. To check this, we examined the correlation between the self-evaluation on ability and the reported household income. The correlation coefficient is 0.5882. This rejects the hypothesis that respondents randomly report their self-evaluation on the earning ability.

Satisficer: Another related concern is that a significant fraction of respondents are satisficers who do not seriously take the survey. To mitigate this problem, we adopted several methods to ensure the quality of surveys (Section 3.1) and we eliminated samples who took either too short or too long time for completing the survey. Having said that, we conducted another test for the robustness of our results. In our survey, we asked their household income in two ways: one asked the absolute value of their 2020 household income with 12 intervals, whereas the other asked the relative location of their 2018 household income with a 7-point scale.²⁵ If one's answers to these two questions are consistent with each other, it suggests that the respondent is not a satisficer who randomly chose answers.²⁶ Motivated by this fact, we reanalyzed the data by restricting our attention to those who chose consistent answers (3618 respondents chose consistent answers, which accounts for around 81% of our samples). The results remain the same, indicating that the quality of the respondents is ensured.

7 Concluding Remarks

Overconfident people do not actually earn what they think they can, and thus they would be aware of a negative gap between their economic status and their own evaluations of their

ments (Mummolo and Peterson, 2019).

²⁵We used the latter in our main analysis.

²⁶On the contrary, it should be emphasized that inconsistent answers do not indicate that she or he is a satisficer, because the income may change between 2018 and 2021.

ability at some point during their lives. This paper studied how realizing this negative income-ability gap changes political preferences. We highlighted the channel through which people may attribute the negative income-ability gap to the unfairness of the economy (i.e., the non-meritocratic aspect of society), rather than correcting their beliefs about their abilities. We hypothesize that the enhanced perceived unfairness increases support for reducing inequality and government intervention. We conducted a survey experiment in the US to test these hypotheses.

The results show that people attribute the negative income-ability gap to the unfairness of the economy. However, it does not necessarily leads to increased support for reducing income inequality. We only find a suggestive evidence that it does only among leftists, though it is not statistically significant at a conventional cutoff. Furthermore, it does not induce people to be more favorable of government intervention to correct the inequality. Overall, the results indicate that after realizing the negative income-ability gap, people are more likely to think that society is unfair, but do not necessarily increase support for reducing income inequality.

While we collected our data in the US, our results would also be relevant for other countries because overconfidence is prevalent in many non-US contexts. However, we might expect some international differences. In particular, the view on whether the economy is fair differs across countries (e.g., Alesina et al., 2018). Such a difference in the prior belief on the current state of economy may lead to a different result. Replicating our results in other countries is left to future work.

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A Online Appendix (Not for Publication)

A.1 Descriptive Statistics: Full Sample

We provide the descriptive statistics of the full sample in Table A.1. Our sample is close to the typical sample obtained using MTurk (see Snowberg and Yariv, 2021, Online Appendix, Table A.1). Our sample is younger, more educated, poorer, and has fewer minorities than the US representative sample.

	Mean	SD	Min	Max	Count
Treatment	0.50	0.500	0	1	4471
Age	39.43	12.303	18	89	4471
Female	0.50	0.500	0	1	4471
Urban	0.39	0.487	0	1	4471
Race: European American/White	0.72	0.450	0	1	4471
Race: African American/Black	0.13	0.335	0	1	4471
Race: Hispanic/Latino	0.06	0.246	0	1	4471
Race: Asian/Asian American	0.07	0.247	0	1	4471
Race: Other	0.02	0.151	0	1	4471
Married	0.57	0.495	0	1	4471
BA or more	0.67	0.471	0	1	4471
High income	0.39	0.488	0	1	4471
Left	0.42	0.494	0	1	4471
Right	0.30	0.460	0	1	4471
Government trust	0.37	0.483	0	1	4471
Observations	4471				

Table A.1: Descriptive statistics: full sample

A.2 Balance Test

We provide the balance table for the respondents facing the negative income-ability gap in Table A.2. Overall, we find that the control and treatment groups are balanced except for the marginally significant difference of the sex. Since we are testing the balancing of many variables, we believe that finding one marginally significant difference does not invalidate our randomization. In the regression analyses, we control for all the covariates in Table A.2 to further mitigate the concern for unbalanced experimental assignment.²⁷

In order to avoid accidentally obtaining a statistically significant difference just by testing many hypotheses, we regress the dummy about whether an individual receives a treatment on all the control variables in Table A.2. We then test the hypothesis that all coefficients are zero, implying that no individual characteristics explain the treatment assignment. We fail to reject this hypothesis with the p-value 0.61. This is again in favor of the random assignment. Overall, these results support the successful random assignment.

²⁷Note that women tend to think that the economy is unfair and support reducing inequality according to Table A.3. Then, since the treatment group has less women, the bias should be in the opposite direction as our treatment effect if our treatment effect spuriously captures the effect of being woman. This is in favor of the robustness of our result.

	Control	Treatment	Difference
Age	38.225 (12.673)	38.336 (11.708)	0.111 (0.624)
Female	0.506 (0.500)	0.457 (0.498)	-0.049* (0.026)
Race: European American/White	0.710 (0.454)	0.700 (0.459)	-0.010 (0.023)
Race: African American/Black	0.143 (0.351)	0.153 (0.360)	0.010 (0.018)
Race: Hispanic/Latino	0.078 (0.268)	0.062 (0.241)	-0.016 (0.013)
Race: Asian/ Asian American	0.051 (0.220)	0.055 (0.229)	0.004 (0.011)
Race: Other	0.019 (0.136)	0.031 (0.173)	0.012 (0.008)
High income	0.182 (0.386)	0.190 (0.393)	0.008 (0.020)
Urban	0.426 (0.495)	0.421 (0.494)	-0.005 (0.025)
Married	0.501 (0.500)	0.497 (0.500)	-0.004 (0.026)
BA or more	0.660 (0.474)	0.674 (0.469)	0.014 (0.024)
Government trust	0.415 (0.493)	0.392 (0.488)	-0.023 (0.025)
Left	0.427 (0.495)	0.415 (0.493)	-0.012 (0.025)
Right	0.300 (0.459)	0.321 (0.467)	0.021 (0.024)
Observations	747	779	1,526

Notes: Entries represent the mean, whose standard error is in parenthesis. * indicates $p < 0.1$.

Table A.2: Balance table for the respondents facing the negative income-ability gap.

A.3 Regression Specification Details

Our baseline model is

$$y_i = \tau T_i + \beta X_i + \epsilon_i, \quad (\text{A.1})$$

where y_i is the outcome variable and T_i represents the treatment dummy. The coefficient of interest is τ . X_i includes the constant term, the income level, age, sex, race, whether a person lives in an urban area, marital status, and whether the person completed 4-year college or more as controls. ϵ_i is the error term. We use the heteroskedasticity-robust standard errors.

When we account for the heterogeneity depending on political ideologies, the regression specification is

$$y_i = \sum_{\text{position}=[\text{left},\text{right},\text{center}]} \tau_{\text{position}} T_i \times I(\text{position}_i = \text{position}) + \sum_{\text{position}=[\text{left},\text{right}]} \alpha_{\text{position}} I(\text{position}_i = \text{position}) + \beta X_i + \epsilon_i. \quad (\text{A.2})$$

The coefficients of interest are $(\tau_{\text{left}}, \tau_{\text{right}}, \tau_{\text{center}})$, describing the treatment effect for people with the corresponding political position.²⁸ Note that the effect of being centrist (“ α_{center} ”) is absorbed in the constant term in X_i .²⁹

We also leverage another heterogeneity in addition to that of political ideologies. For example, when we account for heterogeneity depending on people’s level of trust in the government, we use the following regression specification:

²⁸This specification can be rewritten as in Table A.3, which is what we actually coded in the analysis. For example, in Table A.3, τ_{left} corresponds to the coefficient of Treatment + the coefficient of Treatment \times Left.

²⁹Thus, α_{left} and α_{right} capture the differential impact relative to being centrist.

$$\begin{aligned}
y_i = & \sum_{position=[left, right, center]} \tau_{position} T_i \times I(position_i = position) \\
& + \sum_{position=[left, right, center]} \tau_{position, yes} T_i \times I(position_i = position) \times I(trust_i = yes) \\
& + \sum_{position=[left, right]} \alpha_{position} I(position_i = position) \\
& + \sum_{position=[left, right, center]} \alpha_{position, yes} I(position_i = position) \times I(trust_i = yes) \\
& + \beta X_i + \epsilon_i,
\end{aligned} \tag{A.3}$$

where $(\tau_{left}, \tau_{right}, \tau_{center}, \tau_{left} + \tau_{left, yes}, \tau_{right} + \tau_{right, yes}, \tau_{center} + \tau_{center, yes})$ is the coefficient of interest, describing the treatment effect for people with the political position given by *position* and the government trust level given by *trust*.

A.4 Additional Results

Regression results for the main outcomes: We present the regression results for Figure 4 and Figure 5 in Table A.3.

Updating the belief on ability: The regression table for this analysis is reported in Table A.4.

Heterogeneous effects across political trust levels: The regression table for this analysis is reported in Table A.5.

Effects on unmarried respondents: See Figure A.1. The regression table for this analysis is reported in Table A.6.

Policies for reducing income inequality: See Figure A.2. The regression table for this analysis is reported in Table A.7.

Heterogeneous effects across income levels: See Figure A.3. The regression table for this analysis is reported in Table A.8.

Effects on respondents facing either the positive or no gap: See Figure A.4. The regression table for this analysis is reported in Table A.9.

Satisficers: In Q12 (see the questionnaire), we had asked the last year household income in terms of the absolute value, whereas we asked the relative location of the 2018 household income based on the US income distribution in Q 13. For each question, we divided the answers to the three subgroups: high income (\$107,001~ in Q12, Top 30% in Q13), middle income (\$39,000~\$107,000 in Q12, Top70%~Top30% in Q13), and low income (~\$39,000 in Q12, Top100%~Top70% in Q13). If a respondent's answers to Q12 and Q13 belong to the same subgroup, we call her or his answer being *consistent*. Table A.10 shows the regression results when we restrict our attention to consistent respondents.

	Unfairness of the Economy		Support for Reducing Inequality		Support for Government Intervention	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.0785*** (0.0238)	0.153** (0.0473)	-0.00162 (0.0433)	-0.0150 (0.0724)	-0.0175 (0.0254)	0.0144 (0.0486)
Left		0.178*** (0.0420)		0.399*** (0.0663)		0.158*** (0.0435)
Right		-0.126** (0.0421)		-0.376*** (0.0779)		-0.109* (0.0459)
Treatment × Left		-0.0912 (0.0596)		0.120 (0.0914)		-0.0653 (0.0624)
Treatment × Right		-0.0998+ (0.0599)		-0.0755 (0.107)		-0.00224 (0.0648)
Age	-0.00162 (0.00102)	-0.000572 (0.000987)	-0.0115*** (0.00195)	-0.00874*** (0.00171)	0.000743 (0.00107)	0.00151 (0.00104)
Female	0.129*** (0.0242)	0.114*** (0.0233)	0.116** (0.0441)	0.0671+ (0.0396)	0.0232 (0.0257)	0.00978 (0.0253)
Race: African American/Black	0.0192 (0.0331)	0.00775 (0.0325)	0.0378 (0.0614)	0.0149 (0.0606)	-0.0141 (0.0369)	-0.0218 (0.0371)
Race: Hispanic/Latino	0.0330 (0.0474)	0.0421 (0.0474)	0.00473 (0.0839)	0.0390 (0.0811)	0.0373 (0.0503)	0.0445 (0.0522)
Race: Asian/Asian American	0.0842 (0.0552)	0.0481 (0.0562)	0.151 (0.0924)	0.0542 (0.0895)	0.165** (0.0553)	0.140** (0.0543)
Race: Other	0.0974 (0.0825)	0.0878 (0.0795)	-0.0558 (0.148)	-0.0551 (0.128)	0.102 (0.0849)	0.101 (0.0839)
High income	-0.00886 (0.0307)	-0.00772 (0.0293)	-0.0762 (0.0577)	-0.0680 (0.0537)	-0.0127 (0.0341)	-0.0119 (0.0334)
Urban	-0.0671** (0.0249)	-0.0687** (0.0240)	0.0395 (0.0455)	0.0274 (0.0415)	0.0341 (0.0267)	0.0333 (0.0263)
Married	-0.269*** (0.0263)	-0.212*** (0.0265)	-0.127** (0.0469)	0.0380 (0.0440)	0.0339 (0.0269)	0.0748** (0.0267)
BA or more	-0.0599* (0.0284)	-0.0616* (0.0273)	0.0240 (0.0512)	0.0112 (0.0455)	0.117*** (0.0284)	0.113*** (0.0276)
Constant	0.583*** (0.0506)	0.489*** (0.0560)	2.457*** (0.0940)	2.255*** (0.0945)	0.327*** (0.0526)	0.254*** (0.0577)
Observations	1526	1526	1526	1526	1526	1526

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where $Covariates$ are listed to the left in the row. + Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.3: Regression results for Figure 4 and Figure 5

	Ability Updating			
	(1)		(2)	
Treatment	0.0250	(0.0680)	-0.0433	(0.137)
High income	-0.119	(0.0881)	-0.119	(0.0884)
Left			-0.0566	(0.120)
Right			-0.138	(0.126)
Treatment \times Left			0.0310	(0.174)
Treatment \times Right			0.180	(0.177)
Age	-0.00453	(0.00290)	-0.00445	(0.00291)
Female	0.00963	(0.0694)	0.0103	(0.0698)
Race: African American/Black	0.00986	(0.110)	0.00760	(0.111)
Race: Hispanic/Latino	0.0895	(0.139)	0.0867	(0.139)
Race: Asian/Asian American	-0.0484	(0.182)	-0.0519	(0.183)
Race: Other	0.232 ⁺	(0.124)	0.224 ⁺	(0.124)
Urban	-0.0110	(0.0724)	-0.00666	(0.0731)
Married	-0.398 ^{***}	(0.0715)	-0.401 ^{***}	(0.0759)
BA or more	0.0917	(0.0734)	0.0919	(0.0742)
Constant	0.192	(0.139)	0.254	(0.160)
Observations	1526		1526	

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where *Covariates* are listed to the left in the row. ⁺ Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.4: Regression results for Figure 6

	(1)	(2)	(3)
	Unfairness of Economy	Support for Reducing Income Inequality	Support for Government Intervention
Treatment	0.219*** (0.0602)	-0.0278 (0.0972)	-0.0126 (0.0592)
Left	0.267*** (0.0536)	0.516*** (0.0854)	0.222*** (0.0550)
Right	-0.189** (0.0599)	-0.713*** (0.108)	-0.262*** (0.0529)
Government Trust	-0.155* (0.0658)	-0.0285 (0.107)	0.187* (0.0725)
Treatment × Left	-0.189* (0.0743)	0.125 (0.118)	-0.0718 (0.0772)
Treatment × Right	-0.138+ (0.0837)	-0.0479 (0.152)	0.0452 (0.0746)
Treatment × Government Trust	-0.176+ (0.0906)	0.0346 (0.140)	0.0671 (0.101)
Government Trust × Left	-0.194* (0.0814)	-0.276* (0.132)	-0.181* (0.0906)
Treatment × Government Trust × Left	0.205+ (0.117)	-0.0809 (0.181)	0.0246 (0.129)
Government Trust × Right	0.142+ (0.0829)	0.697*** (0.149)	0.283** (0.0911)
Treatment × Government Trust × Right	0.110 (0.116)	-0.0579 (0.204)	-0.0965 (0.128)
High Income	-0.00478 (0.0280)	-0.0601 (0.0514)	-0.00938 (0.0323)
Age	0.000450 (0.000977)	-0.00578*** (0.00166)	0.00265** (0.00101)
Female	0.0931*** (0.0228)	0.0513 (0.0382)	0.0155 (0.0245)
Race: African American/Black	0.0107 (0.0314)	-0.00683 (0.0596)	-0.0381 (0.0369)
Race: Hispanic/Latino	0.0356 (0.0453)	0.0427 (0.0808)	0.0472 (0.0515)
Race: Asian/Asian American	0.0706 (0.0540)	0.0932 (0.0903)	0.140* (0.0550)
Race: Other	0.0630 (0.0744)	-0.0545 (0.115)	0.120 (0.0816)
Urban	-0.0374 (0.0236)	-0.0157 (0.0414)	-0.0204 (0.0260)
Married	-0.159*** (0.0272)	0.0154 (0.0440)	0.0151 (0.0268)
BA or more	-0.0341 (0.0271)	-0.0287 (0.0448)	0.0644* (0.0273)
Constant	0.458*** (0.0603)	2.213*** (0.0994)	0.223*** (0.0601)
Observations	1526	1526	1526

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where *Covariates* are listed to the left in the row. + Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.5: Regression results for Figure 7



Figure A.1: Treatment effects on unmarried respondents

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. Equations (A.2) and (A.3) in Section A.3 provide the details of the specification. The covariates are the same as those in Table A.3. Let p_1 be the self-evaluation of ability before the treatment and p_2 be that after the treatment. p_t is a 7-point scale: 0=“very low,” 2=“low,” 3=“relatively low,” 4=“average,” 5=“relatively high,” 6=“high,” and 7=“very high.” The outcome variable is defined by $p_2 - p_1$.

	(1)		(2)		(3)	
	Unfairness of Economy		Support for Reducing Income Inequality		Support for Government Intervention	
Treatment	0.135*	(0.0685)	-0.0567	(0.107)	0.0506	(0.0681)
Left	0.231***	(0.0602)	0.465***	(0.0916)	0.212***	(0.0592)
Right	-0.211**	(0.0688)	-0.587***	(0.120)	-0.201**	(0.0643)
Treatment × Left	-0.0765	(0.0827)	0.207	(0.127)	-0.126	(0.0846)
Treatment × Right	-0.0497	(0.100)	-0.0589	(0.176)	-0.0227	(0.0950)
Married	-0.194**	(0.0662)	0.0179	(0.107)	0.0905	(0.0676)
Treatment × Married	0.0355	(0.0942)	0.0811	(0.144)	-0.0769	(0.0973)
Married × Left	-0.119	(0.0839)	-0.154	(0.134)	-0.122	(0.0874)
Treatment × Married × Left	-0.0480	(0.120)	-0.242	(0.184)	0.122	(0.126)
Married × Right	0.132	(0.0867)	0.344*	(0.158)	0.145	(0.0907)
Treatment × Married × Right	-0.0984	(0.126)	-0.0813	(0.222)	0.0367	(0.130)
Age	-0.000330	(0.000989)	-0.00803***	(0.00170)	0.00183+	(0.00103)
Female	0.109***	(0.0233)	0.0605	(0.0393)	0.00548	(0.0253)
Race: African American/Black	0.00562	(0.0324)	0.00868	(0.0595)	-0.0232	(0.0371)
Race: Hispanic/Latino	0.0406	(0.0466)	0.0399	(0.0805)	0.0414	(0.0523)
Race: Asian/Asian American	0.0583	(0.0556)	0.0830	(0.0878)	0.151**	(0.0544)
Race: Other	0.0912	(0.0795)	-0.0392	(0.123)	0.107	(0.0826)
Urban	-0.0755**	(0.0240)	0.0100	(0.0415)	0.0268	(0.0263)
BA or more	-0.0654*	(0.0272)	-0.00584	(0.0449)	0.110***	(0.0273)
Constant	0.477***	(0.0644)	2.246***	(0.104)	0.238***	(0.0639)
Observations	1526		1526		1526	

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where *Covariates* are listed to the left in the row. + Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.6: Regression results for Figure A.1

	(1)		(2)		(3)	
	Redistribute income from the rich to the poor		Make people earn incomes commensurate with their abilities		Help the poor improve their skills	
Treatment	-0.0573	(0.0389)	0.0141	(0.0485)	0.0432	(0.0460)
Left	0.256***	(0.0407)	-0.116**	(0.0432)	-0.140***	(0.0379)
Treatment × Left	0.0501	(0.0553)	0.00248	(0.0613)	-0.0526	(0.0545)
Right	-0.0769*	(0.0376)	-0.100*	(0.0473)	0.177***	(0.0452)
Treatment × Right	0.0149	(0.0487)	0.0601	(0.0663)	-0.0749	(0.0643)
Age	-0.00245**	(0.000912)	-0.00141	(0.00104)	0.00385***	(0.000978)
Female	-0.00293	(0.0221)	0.0301	(0.0253)	-0.0272	(0.0227)
Race: African American/Black	-0.0169	(0.0323)	0.0516	(0.0366)	-0.0347	(0.0316)
Race: Hispanic/Latino	-0.0585	(0.0402)	0.0253	(0.0505)	0.0332	(0.0471)
Race: Asian/Asian American	-0.0241	(0.0536)	-0.000257	(0.0571)	0.0244	(0.0515)
Race: Other	0.0302	(0.0645)	-0.101	(0.0752)	0.0711	(0.0754)
High Income	-0.0230	(0.0289)	0.00522	(0.0340)	0.0178	(0.0306)
Urban	-0.0105	(0.0224)	0.0508+	(0.0261)	-0.0404+	(0.0232)
Married	-0.0434+	(0.0236)	0.124***	(0.0271)	-0.0806**	(0.0245)
BA or more	0.00189	(0.0242)	0.0598*	(0.0278)	-0.0617*	(0.0255)
Constant	0.349***	(0.0499)	0.385***	(0.0585)	0.265***	(0.0546)
Observations	1526		1526		1526	

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where *Covariates* are listed to the left in the row. + Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.7: Regression results for Figure A.2

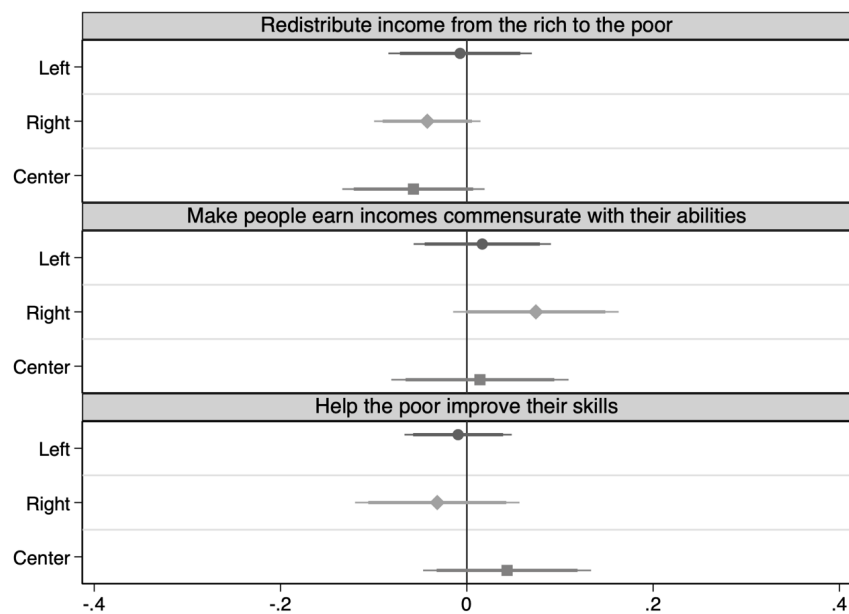


Figure A.2: Results about policy priorities

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. Equations (A.2) and (A.3) in Section A.3 provide the details of the specification. The covariates are the same as those in Table A.3.

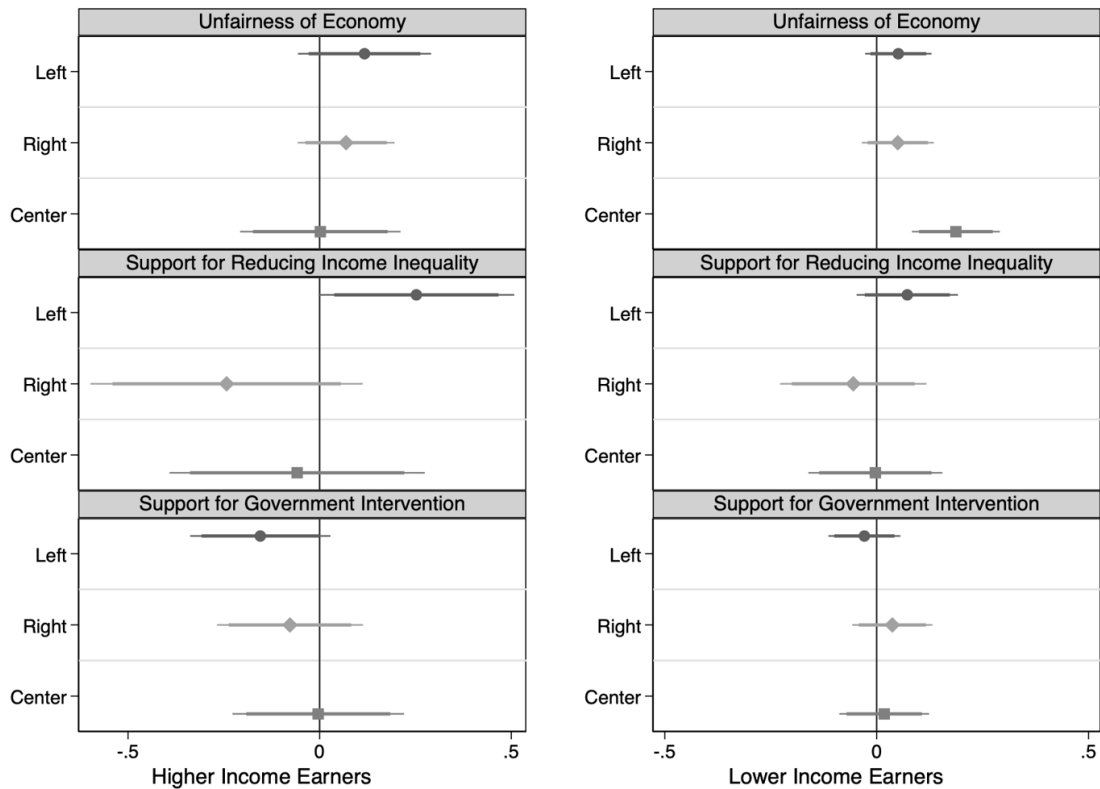


Figure A.3: Heterogeneous effects: role of incomes

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. To account for potential heterogeneity depending on income level, we replace the trust variable with the income dummy in the treatment terms of equation (A.3). The covariates are the same as those in Table A.3. Higher income earners are defined by those whose household incomes are above the median income level (i.e., those who chose either "very high", "high", or "relatively low" in the question on the household income). The other respondents are coded by lower income earners.

	(1)		(2)		(3)	
	Unfairness of Economy		Support for Reducing Income Inequality		Support for Government Intervention	
Treatment	0.187***	(0.0528)	-0.00310	(0.0806)	0.0178	(0.0540)
Left	0.193***	(0.0465)	0.421***	(0.0721)	0.148**	(0.0482)
Right	-0.108*	(0.0473)	-0.431***	(0.0848)	-0.111*	(0.0503)
High Income	0.0736	(0.0879)	-0.110	(0.147)	0.0141	(0.0907)
Treatment × Left	-0.136*	(0.0662)	0.0753	(0.101)	-0.0468	(0.0691)
Treatment × Right	-0.137*	(0.0685)	-0.0521	(0.120)	0.0191	(0.0722)
Treatment × High Income	-0.185	(0.119)	-0.0556	(0.189)	-0.0214	(0.127)
High Income × Left	-0.0885	(0.111)	-0.118	(0.182)	0.0521	(0.114)
Treatment × High Income × Left	0.251	(0.154)	0.236	(0.236)	-0.104	(0.163)
High Income × Right	-0.108	(0.103)	0.284	(0.209)	0.00715	(0.122)
Treatment × High Income × Right	0.204	(0.142)	-0.132	(0.276)	-0.0930	(0.166)
Age	-0.000571	(0.000989)	-0.00864***	(0.00170)	0.00150	(0.00104)
Female	0.114***	(0.0234)	0.0654 ⁺	(0.0396)	0.00952	(0.0253)
Race: African American/Black	0.00810	(0.0324)	0.0169	(0.0605)	-0.0222	(0.0372)
Race: Hispanic/Latino	0.0385	(0.0479)	0.0375	(0.0826)	0.0447	(0.0526)
Race: Asian/Asian American	0.0421	(0.0570)	0.0632	(0.0893)	0.135*	(0.0547)
Race: Other	0.0854	(0.0797)	-0.0599	(0.127)	0.0996	(0.0845)
Urban	-0.0669**	(0.0240)	0.0278	(0.0414)	0.0315	(0.0263)
Married	-0.213***	(0.0265)	0.0387	(0.0440)	0.0737**	(0.0268)
BA or more	-0.0604*	(0.0274)	0.0112	(0.0454)	0.112***	(0.0276)
Constant	0.475***	(0.0575)	2.259***	(0.0963)	0.252***	(0.0596)
Observations	1526		1526		1526	

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where $Covariates$ are listed to the left in the row. ⁺ Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.8: Regression results for Figure A.3

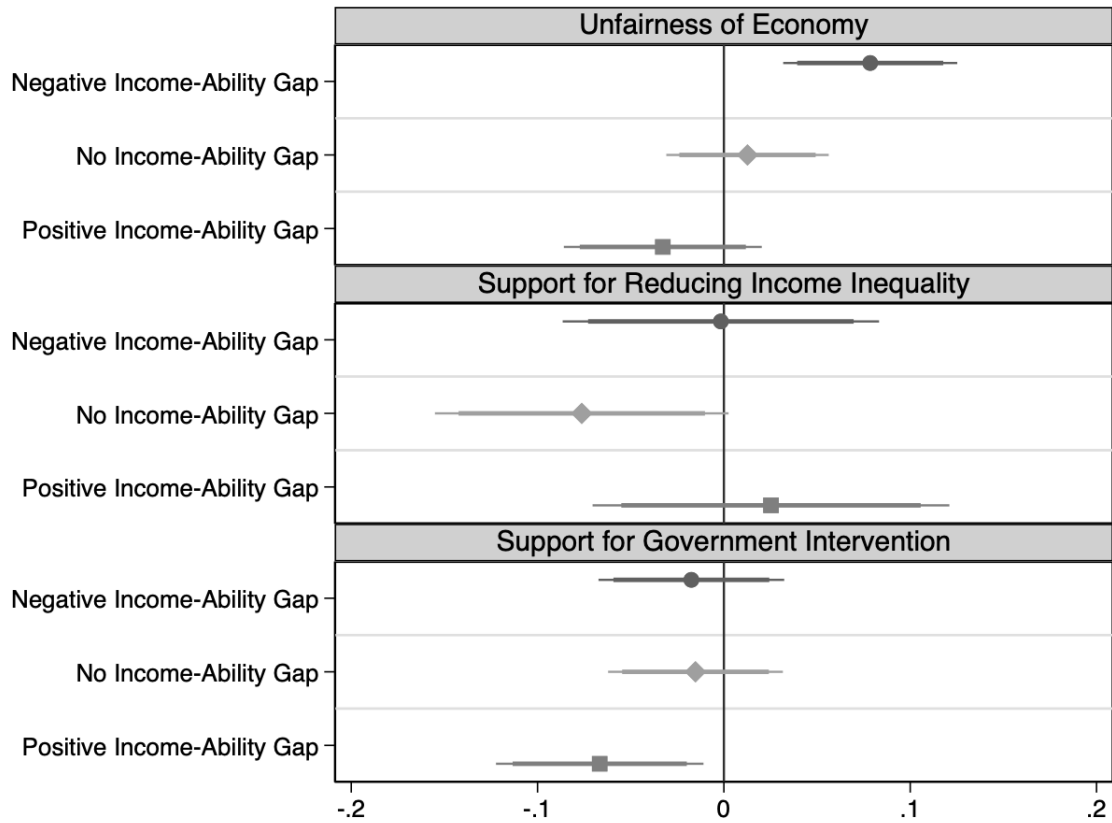


Figure A.4: Treatment effects for respondents without negative income-ability gap

Notes: The thin lines are the 95 % confidence intervals and the thick lines are 90% confidence intervals. Each dot is the estimated treatment effect based on the following regression equation $Outcome_i = (Treatment\ terms) + \beta Covariates_i + \epsilon_i$. Equation (A.1) in Section A.3 provides the details of the specification. The outcome variables of the top and bottom panels are binary variables coded as one if the respondent chooses “in the US society, ordinary people earn incomes that are lower than their abilities” and “the task for reducing income inequality should be delegated to the US government,” respectively. The outcome variable of the middle panel is a 4-point scale: 0=“strongly disagree,” 1=“disagree,” 2=“agree,” 3=“strongly agree.” Note that the figure breaks the results into the those with negative income-ability gap, no income-ability gap, and positive income-ability gap.

Unfairness of Economy						
	(1) Negative-gap samples		(2) No-gap samples		(3) Positive-gap samples	
Treatment	0.0785***	(0.0238)	0.0127	(0.0222)	-0.0328	(0.0271)
Age	-0.00162	(0.00102)	-0.000645	(0.000940)	0.000660	(0.00119)
Female	0.129***	(0.0242)	0.0756***	(0.0224)	0.114***	(0.0279)
Race: African American/Black	0.0192	(0.0331)	0.0334	(0.0342)	-0.0482	(0.0412)
Race: Hispanic/Latino	0.0330	(0.0474)	-0.0164	(0.0425)	-0.0109	(0.0604)
Race: Asian/Asian American	0.0842	(0.0552)	0.0910 ⁺	(0.0488)	-0.0705	(0.0537)
Race: Other	0.0974	(0.0825)	-0.122 ⁺	(0.0722)	0.0937	(0.0838)
High Income	-0.00886	(0.0307)	-0.0606*	(0.0243)	-0.0317	(0.0293)
Urban	-0.0671**	(0.0249)	-0.0970***	(0.0232)	-0.0585*	(0.0288)
Married	-0.269***	(0.0263)	-0.234***	(0.0245)	-0.227***	(0.0317)
BA or more	-0.0599*	(0.0284)	-0.155***	(0.0265)	-0.0802*	(0.0320)
Constant	0.583***	(0.0506)	0.697***	(0.0486)	0.593***	(0.0622)
Observations	1526		1727		1218	

Support for Reducing Income Inequality						
	(4) Negative-gap samples		(5) No-gap samples		(6) Positive-gap samples	
Treatment	-0.00162	(0.0433)	-0.0763 ⁺	(0.0402)	0.0253	(0.0488)
Age	-0.0115***	(0.00195)	-0.00879***	(0.00173)	-0.00681**	(0.00227)
Female	0.116**	(0.0441)	0.0233	(0.0406)	-0.0149	(0.0515)
Race: African American/ Black	0.0378	(0.0614)	0.229***	(0.0576)	0.0340	(0.0694)
Race: Hispanic/ Latino	0.00473	(0.0839)	0.0408	(0.0741)	-0.0895	(0.120)
Race: Asian/ Asian American	0.151	(0.0924)	0.132*	(0.0667)	0.127	(0.0836)
Race: Other	-0.0558	(0.148)	0.146	(0.143)	-0.0408	(0.149)
High Income	-0.0762	(0.0577)	-0.200***	(0.0430)	-0.210***	(0.0527)
Urban	0.0395	(0.0455)	0.104*	(0.0410)	0.169**	(0.0521)
Married	-0.127**	(0.0469)	-0.221***	(0.0438)	-0.222***	(0.0581)
BA or more	0.0240	(0.0512)	0.0341	(0.0472)	-0.0107	(0.0585)
Constant	2.457***	(0.0940)	2.501***	(0.0864)	2.538***	(0.108)
Observations	1526		1727		1218	

Support for Government Intervention						
	(7) Negative-gap samples		(8) No-gap samples		(9) Positive-gap samples	
Treatment	-0.0175	(0.0254)	-0.0152	(0.0239)	-0.0666*	(0.0284)
Age	0.000743	(0.00107)	-0.00233*	(0.000985)	-0.00176	(0.00124)
Female	0.0232	(0.0257)	0.0258	(0.0240)	-0.0583*	(0.0293)
Race: African American/ Black	-0.0141	(0.0369)	0.0209	(0.0384)	0.122**	(0.0445)
Race: Hispanic/ Latino	0.0373	(0.0503)	-0.0536	(0.0476)	0.0633	(0.0671)
Race: Asian/ Asian American	0.165**	(0.0553)	0.0940 ⁺	(0.0480)	0.0915 ⁺	(0.0552)
Race: Other	0.102	(0.0849)	-0.0339	(0.0819)	-0.00770	(0.0961)
High Income	-0.0127	(0.0341)	-0.0918***	(0.0258)	-0.0306	(0.0312)
Urban	0.0341	(0.0267)	0.0339	(0.0252)	0.0832**	(0.0317)
Married	0.0339	(0.0269)	-0.000920	(0.0255)	0.0549 ⁺	(0.0321)
BA or more	0.117***	(0.0284)	0.0906***	(0.0273)	-0.00465	(0.0322)
Constant	0.327***	(0.0526)	0.557***	(0.0518)	0.550***	(0.0647)
Observations	1526		1727		1218	

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where *Covariates* are listed to the left in the row. ⁺ Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.9: Regression results for Figure A.4

	(1)		(2)		(3)	
	Unfairness of Economy		Support for Reducing Income Inequality		Support for Government Intervention	
Treatment	0.0877** (0.0270)	0.160** (0.0540)	0.00132 (0.0491)	-0.0517 (0.0809)	0.000911 (0.0283)	0.0244 (0.0538)
Left		0.178*** (0.0481)		0.403*** (0.0750)		0.154** (0.0485)
Treatment × Left		-0.105 (0.0673)		0.136 (0.101)		-0.0490 (0.0692)
Right		-0.172*** (0.0485)		-0.459*** (0.0902)		-0.123* (0.0507)
Treatment × Right		-0.0768 (0.0686)		0.00445 (0.123)		-0.000901 (0.0721)
High Income	-0.0228 (0.0351)	-0.0180 (0.0334)	-0.0773 (0.0651)	-0.0637 (0.0615)	-0.0331 (0.0381)	-0.0293 (0.0374)
Age	-0.00234* (0.00115)	-0.00114 (0.00111)	-0.0119*** (0.00217)	-0.00902*** (0.00188)	0.000531 (0.00118)	0.00140 (0.00113)
Female	0.104*** (0.0273)	0.0816** (0.0263)	0.136** (0.0500)	0.0618 (0.0446)	0.0280 (0.0285)	0.00794 (0.0281)
Race: African American/Black	0.00782 (0.0382)	0.00385 (0.0370)	-0.00576 (0.0706)	-0.000240 (0.0707)	-0.0160 (0.0418)	-0.0153 (0.0420)
Race: Hispanic/Latino	0.0231 (0.0528)	0.0356 (0.0524)	-0.0134 (0.0927)	0.0380 (0.0914)	0.00678 (0.0555)	0.0172 (0.0583)
Race: Asian/Asian American	0.0667 (0.0630)	0.0351 (0.0657)	0.152 (0.112)	0.0706 (0.110)	0.175** (0.0629)	0.156* (0.0623)
Race: Other	0.151 (0.0974)	0.126 (0.0946)	0.102 (0.159)	0.0662 (0.131)	0.156 (0.0955)	0.146 (0.0978)
Urban	-0.0713* (0.0283)	-0.0753** (0.0272)	0.0205 (0.0520)	-0.00402 (0.0471)	0.0255 (0.0299)	0.0208 (0.0294)
Married	-0.249*** (0.0294)	-0.189*** (0.0295)	-0.125* (0.0525)	0.0498 (0.0486)	0.0164 (0.0298)	0.0605* (0.0296)
BA or more	-0.0457 (0.0312)	-0.0433 (0.0300)	0.0337 (0.0565)	0.0301 (0.0495)	0.135*** (0.0311)	0.135*** (0.0300)
Constant	0.625*** (0.0565)	0.536*** (0.0638)	2.484*** (0.105)	2.299*** (0.106)	0.330*** (0.0576)	0.257*** (0.0639)
Observations	1232	1232	1232	1232	1232	1232

Notes: For each row, the coefficient and p-value are from the regressions of the form assigned to $Outcome_i = \alpha + \beta Covariates_i + \epsilon_i$, where $Covariates$ are listed to the left in the row. + Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.10: Regression results for precisely answered samples

A.5 Observable determinants of negative income-ability gap

Using observable characteristics, we examine who are likely to face the negative income-ability gap in our sample. We regress facing the negative income-ability gap on various characteristics by a linear probability model. The results are reported in Table A.11.

Left	0.00239	(0.0166)
Right	0.0423*	(0.0179)
Government trust	0.0325*	(0.0155)
High income	-0.290***	(0.0137)
Age	-0.00245***	(0.000562)
Female	-0.0188	(0.0136)
Race: African American/Black	0.00724	(0.0219)
Race: Hispanic/Latino	-0.0168	(0.0288)
Race: Asian/Asian American	-0.0485 ⁺	(0.0265)
Race: Other	0.00253	(0.0431)
Urban	0.0116	(0.0148)
Married	-0.0642***	(0.0153)
BA or more	0.0573***	(0.0154)
Constant	0.532***	(0.0299)
Observations	4471	

Notes: The coefficient and p-value are from regressions of the form assigned to $Negative_i = \alpha + \beta Covariates_i + \epsilon_i$, where $Negative_i$ is a dummy variable that represents whether i is facing the negative income-ability gap and $Covariates$ are listed to the left in the row. ⁺ Significant at the 10% level. * Significant at the 5% level. ** Significant at the 1% level. *** Significant at the 0.1% level.

Table A.11: Determinants of negative income-ability gap

A.6 Questionnaire

One can access our questionnaire at https://tus.qualtrics.com/jfe/form/SV_6KaYpqtITtqDw58.

Pre-treatment questions:

1. What is your gender?
 - Male
 - Female
2. What is your age?
3. Please indicate your marital status
 - Single
 - Married
4. Do you have children living with you?
 - Yes
 - No
5. How would you describe your ethnicity/race?
 - European American/White
 - African American/Black
 - Hispanic/Latino
 - Asian/Asian American
 - Other
6. Were you born in the United States?
 - Yes

- No

7. In which state do you live?

8. Which one of the following best describes the area of your home?

- Urban
- Suburban
- Rural

9. Which category best describes your highest level of education?

- Eighth Grade or less
- Some High School
- High School degree/ GED
- Some College
- 2-year College Degree
- 4-year College Degree
- Master's Degree
- Doctoral Degree
- Professional Degree (JD, MD, MBA)

10. What is your current employment status?

- Full-time employee
- Part-time employee
- Self-employed or small business owner
- Unemployed and looking for work
- Student

- Not in labor force (for example: retired, or full-time parent)

11. How long have you worked for your current employer? **Choose the first item if you are currently not working.**

- Less than one year.
- 1-3 years.
- 3-10 years.
- More than ten years.

12. What was your TOTAL household income (before taxes and transfers) **last year**?

Note. The household income includes your income as well as other household members' income.

- \$0 - \$7,000
- \$7,001 - \$15,000
- \$15,001 - \$27,000
- \$27,001 - \$39,000
- \$39,001 - \$52,000
- \$52,001 - \$67,000
- \$67,001 - \$85,000
- \$85,001 - \$107,000
- \$107,001 - \$139,000
- \$139,001 - \$197,000
- \$197,001 - \$262,000
- \$262,001+

13. The following table shows the distribution of the US annual household income (before taxes and transfers) in 2018. Which of the following correctly describes your household **in 2018**?

	Annual Household Income
Top 15%	\$ 161561
Top 30%	\$ 107003
Top 45%	\$ 75706
Top 55%	\$ 59950
Top 70%	\$ 39410
Top 85%	\$ 21000

Source: 2019 Current Population Survey

Note. We ask your income in 2018 because the governmental statistics on the 2019 income have not yet been available.

- Very high: My household earned more than the top 15% household.
- High: My household earned more than the top 30% household, but less than the top 15household.
- Upper middle: My household earned more than the top 45% household, but less than the top 30% household.
- Middle: My household earned more than the top 55% household, but less than the top 45household.
- Lower middle: My household earned more than the top 70% household, but less than the top 55% household.
- Low: My household earned more than the top 85% household, but less than the top 70household.
- Very low: My household earned less than the top 85% household.

14. Who did you support in the presidential election in 2020? If you were not able to vote, just choose the person you wanted to win the election at that time.

- Donald Trump
- Joe Biden
- Other

15. Where do you see yourself in the political spectrum?

- Far left
- Moderately left
- Center
- Moderately right
- Far right

16. Are you registered to vote?

- Yes
- No

17. How much of the time do you think you can trust the government in Washington to do what is right?

- Just about always
- Most of the time
- Only some of the time
- Hardly ever

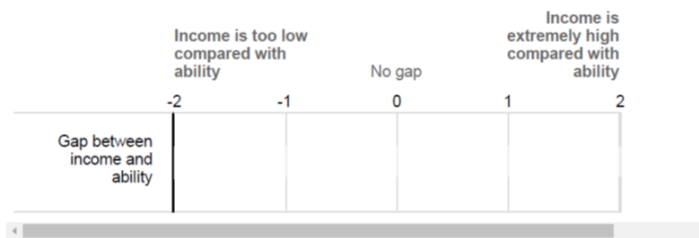
18. How do you think about your earning ability? Your ability is

- Very high (in the top 0-14% among the US society)
- High (in the top 15-29% among the US society)
- Relatively high (in the top 30-44% among the US society)

- Average (in the top 45-54% among the US society)
- Relatively low (in the top 55-69% among the US society)
- Low (in the top 70-84% among the US society)
- Very low (in the top 85-100% among the US society)

Treatment:

1. Your household income is (Answer in Q. 13), whereas your ability is (Answer in Q18).³⁰ How do you think about the gap between your household income and your ability?



Post-treatment questions:

1. Which of the following better describes your idea?
 - In the US society, ordinary people earn incomes that are higher than their abilities.
 - In the US society, ordinary people earn incomes that are equal to their abilities.
 - In the US society, ordinary people earn incomes that are lower than their abilities.
2. Agree or Disagree: The US society is unequal.
 - Agree
 - Disagree
3. Agree or Disagree: The US society should reduce income inequality.

³⁰Note that half of respondents were randomly assigned to question 19. This information was not presented to survey participants.

- Strongly agree
 - Agree
 - Disagree
 - Strongly disagree
4. When we need to reduce income inequality, what action should we take? Please choose the most prioritized action.
- Redistribute income from the rich to the poor
 - Make people earn incomes commensurate with their abilities
 - Help the poor improve their skills
5. Agree or Disagree: Regardless of the party that heads the US government, the US governments **DO NOT** implement desirable actions to reduce income inequality.
- Agree
 - Disagree
6. We will ask the respondents who chose "Agree" in the previous question. Why do you think that the US governments DO NOT implement desirable actions? Due to
- The lack of the governments' will
 - The lack of the governments' competence
 - Both of them
7. Which of the following better describes your idea?
- The task for reducing income inequality should be delegated to the US government.
 - The US government cannot be entrusted with the task for reducing income inequality.

8. Suppose you have to spend 1% of your earnings to help the poor. Which choice do you prefer?
- Paying 1% of my earnings as a tax to the government.
 - Paying 1% of my earnings to private charities.
9. The US society should reduce income inequality because...
- A. Wealth is concentrated on only a small fraction of people.
 - B. We need to help the poor.
 - Both A and B.
 - Choose this option if you disagree that the US society should reduce income inequality.
10. How do you think about your future income before the retirement age?
- My future income will increase compared with the current income.
 - My future income will not change much.
 - My future income will decrease compared with the current income.
11. How do you think about your earning ability? Your ability is
- Very high (in the top 0-14% among the US society)
 - High (in the top 15-29% among the US society)
 - Relatively high (in the top 30-44% among the US society)
 - Average (in the top 45-54% among the US society)
 - Relatively low (in the top 55-69% among the US society)
 - Low (in the top 70-84% among the US society)
 - Very low (in the top 85-100% among the US society)

12. How willing are you to give to good causes without expecting anything in return?
Please use a scale from 0 to 10, where 0 means “completely unwilling to give to good causes” and a 10 means you are “very willing to give good causes”.
13. Imagine the following situation: Today you unexpectedly received \$ 1,000. How much of this amount would you donate to a good cause? (Values between 0 and 1000 are allowed.)
14. Please tell me, in general, how willing or unwilling you are to take risks. Please use a scale from 0 to 10, where 0 means “completely unwilling to take risks” and a 10 means you are “very willing to take risks”.
15. Agree or Disagree: I assume that people have only the best intentions.
 - Agree
 - Disagree