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JEL Codes: D31, D63, D83, H23, H24, H53, I38, J62, P16.

**Keywords: Redistribution; Fairness Preferences; Income Inequality; Tax** 

Salience; Social Mobility; Government Duty; Beliefs.



# Money is Justice: Experimental Evidence on Non-meritocratic Redistributive Preferences in China\*

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Abstract

This paper explores the factors that influence redistributive preferences in the

context of sustained economic expansion, focusing on luck and growth. Using an

online survey experiment with a nationally representative sample from China, we

find that priming getting rich by non-meritocratic means reduces redistributive sup-

port, specifically for policies that aim to take from the rich and the belief in the

government's duty to redistribute, indicating the presence of non-meritocratic fair-

ness views in China. Heterogeneous treatment effects analysis reveals that such

non-meritocratic fairness views are a general phenomenon and self-interest in the

form of subjective economic pressure only seems to serve as a secondary concern.

While people feel that the rich are more deserving and demand less redistribution

after being primed with stories of getting rich by luck regardless of subjective eco-

nomic pressure, only those under less economic pressure exhibit decreased support

for policies that aim to help the poor. Priming China's growth story does not result

in statistically significant changes in redistributive support. Additionally, we rule

out the influence of three relevant confounders: low tax salience, preference falsifi-

cation under authoritarianism, and misperceptions about relative income positions

and intergenerational occupational mobility. We argue that non-meritocratic fairness

views are rooted in a high-growth economic environment, where economic fortunes

are abundant and random.

**IEL Classification**: D31, D63, D83, H23, H24, H53, I38, I62, P16

**Keywords**: Redistribution; Fairness Preferences; Income Inequality; Tax Salience;

Social Mobility; Government Duty; Beliefs

### 1 Introduction

Rising inequality worldwide calls for attention to popular attitudes toward redistributive policies. Research on the determinants of redistributive preferences has identified a wide range of factors. The earliest theories focused on material self-interest, where an individual's income position determines her preference for redistribution (Meltzer & Richard, 1981). Building on the canonical Melzer-Richard model, recent research further incorporated over- or under-estimation of one's relative income position (such as Cruces et al. (2013) and Karadja et al. (2017)) as well as and expected future income positions (Benabou & Ok, 2001). In addition to self-interest, people value social justice and a desired level of inequality as an end in itself due to well-known behavioral tendencies, such as altruism (Epper et al., 2020), risk-aversion (Gärtner et al., 2017) or a preference for Pareto improvements (Cetre et al., 2019). Such a desired level could also be shaped by specific institutional arrangements (Alesina & Glaeser, 2004).

A major determinant of people's preferred level of inequality is beliefs about the sources of inequality in the income generating process. Prior research in this area has primarily explored different equilibria in which individuals assign varying degrees of importance to different sources of inequality (Alesina & Glaeser, 2004; Alesina & Angeletos, 2005; Benabou & Tirole, 2006; Iversen & Soskice, 2006). When people believe that individual effort plays a greater role than luck in creating inequality, they are typically less inclined to support redistributive policies; in turn, less redistribution incentivizes hard work and sustains such belief (the American equilibrium). Conversely, when people believe that non-effort factors, such as luck, birth, connections, or corruption, are more determinant in the inequality generating process (the European equilibrium), they tend to be more supportive of redistributive policies. However, both equilibria share a preference-level assumption about what sources are considered fair or unfair in the inequality generating process: effort is considered fair, whereas luck is not.

Moving beyond the belief-level variations of redistributive reasoning, a recent strand of literature looks at the preference-level variations, arguing that different fairness views also shape redistributive preferences. This literature provides evidence of how fairness views vary across individuals or societies (Almås et al., 2020, 2021; Cappelen et al., 2021). These studies suggest that a sizable proportion of individuals consider both effort and luck to be legitimate sources of inequality, particularly in countries with less comprehensive welfare systems, such as the United States and many countries in the developing world. We want to understand further whether and why fairness views differ in the developing world and how such fairness views relate to popular support for redistribution.

Through an online survey experiment with a nationally representative sample, we contribute the first set of causal evidence on the determinants of redistributive support from China, the world's largest emerging economy. By priming different sources of inequality, we confirm the existence of a non-meritocratic fairness view at the preference level, which leads to decreased support for redistribution. Specifically, informing respondents of representative stories of individuals getting rich through non-meritocratic means in modern-day China, significantly reduces their support for redistribution, particularly through potential policies to increase taxation on the rich, or the belief in the government's duty to reduce the income gap. While people feel that the rich are more deserving and demand less redistribution after being primed with stories of getting rich by luck regardless of subjective economic pressure, only those under less economic pressure exhibit decreased support for policies that aim to help the poor. We suggest that our results indicate that a primary non-meritocratic fairness view and a secondary self-interest concern drive redistributive preferences in China. We also eliminate several belief-level determinants of redistributive support through the design of our treatments, including low tax salience, potential preference falsification under authoritarianism, and

misperceptions about relative income positions and intergenerational occupational mobility.

On a measurement note, previous research has often relied on a single survey item to gauge support for redistribution, typically asking respondents whether they believe the government has a responsibility to reduce inequality or engage in redistribution. This practice neglects the potential independence and asymmetry between preferences for "taxing the rich" and "helping the poor." We contextualize support for redistribution using a host of hypothetical policies and specify three outcomes of interest: In addition to asking respondents about government responsibility, we also make a distinction between "redistribution from" (taxing the rich) and "redistribution to" (helping the poor), following recent work in rich democracies (Cavaillé & Trump, 2015).

Our research contributes to a growing literature that uses survey experiments to study redistributive preferences.<sup>1</sup> Survey experiments are increasingly popular in this strand of literature, as they provide fine-grained data at the individual level for more rigorous causal identification. Prior research that employs survey experiments to investigate redistributive preferences has primarily focused on providing factual information and examining how belief updates, particularly about one's relative income positions, impact the relative change in demand for redistribution (Cruces et al., 2013; Fehr et al., 2019; Pellicer et al., 2019; Hoy & Mager, 2021). In a topic related to ours, Bastani and Waldenström (2019) informed their respondents about the significance of inherited wealth in the Swedish economy and found that this increased support for inheritance tax. They assumed that inherited wealth is considered unfair and that a higher proportion of such wealth in the income generating process calls for higher redistribution. In our paper, however, we observe that certain types of luck are potentially considered as a fair source of income differences for the Chinese public, especially in terms of family in-

<sup>&</sup>lt;sup>1</sup>Notable studies include but are not limited to the following: Cruces et al. (2013); Kuziemko et al. (2015); Alesina, Miano, and Stantcheva (2018); Alesina, Stantcheva, and Teso (2018); Fehr et al. (2019); Pellicer et al. (2019); Hoy and Mager (2021); Campos-Vazquez et al. (2022)

heritance, speculation, and exogenous opportunity of getting rich, as the corresponding treatment effect goes oppositely.

Our study is closely connected to a growing body of literature that explores a puzzling phenomenon: Why do poor people not demand more redistribution, especially in the developing world? Several existing explanations have been put forward to account for this phenomenon, such as benchmarking reasoning (Hoy & Mager, 2021), the truncation & incompleteness of the welfare state (Holland, 2018) and low tax literacy (Ardanaz et al., 2022). We further contribute to this literature by demonstrating that non-meritocratic fairness preferences may be another significant factor that helps to explain the lack of demand for redistribution among the economically less well-off, where opportunities for wealth accumulation abound and are random.

Finally, the existing studies on redistributive preferences in China have mainly utilized micro-level survey datasets, which offer correlational but not causal evidence. (Smyth et al., 2010; Whyte, 2014; Xun, 2015; An & Ye, 2017; Huang, 2019). There are two studies that use experimental designs to investigate redistributive preferences in China, with one of them highlighting the salience of family experiences in past redistributive movements for descendants (Chen et al., 2017). And the other one comes the closest to our design (Mu, 2022), in which the author randomly informed participants about the actual level of wealth concentration in China and their own relative income positions. Mu (2022) finds that although the information treatment increases perceived income inequality and heightens a belief that income is primarily driven by luck rather than hard work, it does not result in a significant rise in demand for redistribution. Our research complements this finding by suggesting that non-meritocratic fairness preferences among Chinese citizens may help to explain this puzzle, as they may not demand greater levels of redistribution when the perceived importance of luck as opposed to effort increases in generating income inequalities.

The remainder of this paper is structured as follows. Section 2 discusses the theoretical expectations related to determinants of redistributive preferences in China. Section 3 introduces our experiment design. Section 4 presents our main results, while section 5 discusses our interpretations and provides additional analysis from a larger survey. The final section concludes.

## 2 Theoretical Expectations

What moves support for redistribution in a rapidly developing economy such as China? We focus on two key sources of inequality – luck and growth – that are highly relevant and debated in such a context, drawing on insights from existing nationally representative surveys and qualitative interviews (see the Appendix).<sup>2</sup> To ensure that perceiving luck or growth as fair sources of inequality is indeed a fundamental feature shaping redistributive support in China, we also sought to rule out the influence of three highly relevant factors: low tax salience, potential preference falsification, and misperceptions of the level of inequality or mobility. We explain the relevance of the aforementioned factors below.

In a context of rapid socioeconomic changes, instances of people becoming wealthy or remaining poor due to luck (or lack thereof) abound. Therefore, we cannot assume that, in this context, only effort, merit, or performance are perceived as fair in the generation of income inequalities. To clarify, we adopt the convention in this strand of literature and define luck as factors that are outside of an individual's control (Almås et al., 2020;

<sup>&</sup>lt;sup>2</sup>We used to surveys – the International Social Survey Program and the China National Survey of Inequality and Distributive Justice – to inform our study. We also incorporated insights from qualitative interviews that were conducted on our behalf by well-trained sociology concentrators from Tsinghua University in the spring of 2021. To gain a more in-depth understanding of redistributive attitudes in China, we conducted interviews with individuals living in different regions and of varying income brackets and social classes. Each interview lasted approximately one hour and focused on three main themes: perception of inequality, government responsibilities and tax-transfer, and individual perceptions of the three major social policies in China (education, housing, and healthcare). The profile summary of the twenty interviewees can be found in the Appendix.

Cappelen et al., 2020, 2021). The studies cited here suggest that there are three salient fairness views based on whether one considers inequalities caused by effort or luck to be fair or not: the egalitarian view (neither effort/performance nor luck is a fair source), the meritocratic view (effort is a fair source, luck is not), and the libertarian view (both effort and luck are fair). While the meritocratic fairness view is found to be the most prevalent among the three fairness views in the industrialized west, particularly in Scandinavian societies, a higher proportion of people in emerging economies might consider inequalities due to luck as fair, leading to less demand for redistribution. In a cross-country experiment study surveying 60 countries, China and India are the only two countries where the amount of redistribution did not differ significantly when income was due to luck compared with merit (Almås et al., 2021).

In addition to the luck-effort divide in generating inequalities, economic growth might be another fair source of inequality that shapes people's redistributive preferences. A recent record of sustained, rapid economic growth might affect the perception of inequality as growth and inequality arose concurrently. From the 1950s to the late 1970s, China experienced very low income inequality with negligible economic growth. Since economic reforms were launched in 1978, China has entered a period of rapid growth, accompanied by increasing inequality (Piketty et al., 2019). It is important to note that across the entire income distribution, everybody has become much wealthier than before.<sup>3</sup> Some leading sociologists who study China argue that Chinese people tend to view inequality as an inevitable byproduct of development and growth (Whyte, 2014; Xie, 2016). This resonates with Rawls (1971)'s difference principle in the sense that inequality could be better justified if differentiation benefits everyone, including the least disadvantaged members of the society. Another view that might be prevalent among people accustomed to a high-growth regime is that growth might be seen as a necessary

<sup>&</sup>lt;sup>3</sup>For instance, the bottom 50% of the Chinese population also witnessed their average income grow more than fivefold during this process, according to Piketty et al. (2019)'s estimation.

precondition for redistribution, which is in line with the CCP's justification for economic reforms.<sup>4</sup> Either way, if inequality and growth are seen as synchronous, people might view inequality as fairer and thus see redistribution as less pressing.

There are three complicating factors that we need to rule out. First, in an underinstitutionalized fiscal regime like China's, where tax reliance on direct taxation is low, people might reason about government expenditures and tax revenues differently because of low tax salience (Zhang, 2021; Zhang & Dickson, 2023).<sup>5</sup> Viewing luck as a fair source of inequalities – and by extension, viewing the rich as undeserving or the poor as deserving because of luck - does not necessarily translate into actual demand for redistribution, either from the rich or to the poor. Several strands of literature in economics suggest that a heavy reliance on indirect taxation might affect redistributive preferences. The literature on fiscal illusion argues that the form of fiscal institutions affects how taxpayers perceive the price of government and its size, one of the most important elements being revenue structure (Wagner, 1976). Recent works on tax salience suggest that the higher salience of a tax heightens the perception of paying tax (Chetty, Looney, & Kroft, 2009). Research on tax literacy also links knowledge of taxation and tax-paying with outcomes such as tax compliance and financial decisions (Nichita et al., 2019), but little has been done to link tax literacy with redistributive preferences directly.<sup>6</sup> The fact that a significant portion of government revenue comes from indirect taxation and nontax revenue might give an average citizen the wrong impression of having paid no tax and the illusion that the government could redistribute more without raising additional revenue.<sup>7</sup>

<sup>&</sup>lt;sup>4</sup>Deng Xiaoping famously stated that "we should let some people get rich first, and then they will help the others lagging behind to get rich together as well. Only then can we achieve 'common prosperity' for all."

<sup>&</sup>lt;sup>5</sup>Low tax literacy is confirmed in our in-depth interviews.

<sup>&</sup>lt;sup>6</sup>The only recent study that tries to link tax literacy with redistributive preference is Ardanaz et al. (2022), where the authors show that informing respondents about the regressivity of the Value Added Tax (VAT) in eight Latin American countries significantly increased support for more progressive tax policies. However, to the best of our knowledge, there is currently no similar study for other developing countries.

<sup>&</sup>lt;sup>7</sup>In China, individual income tax - the primary tool for redistribution in advanced economies - is only

Second, preference falsification under authoritarianism, where citizens might misrepresent their private preferences, or social desirability bias more generally, might be an issue in a study like ours (Kuran, 1997). Individuals might report differently if they think their answers could be revealed to the government for fear of potential punishment. In a context where political indoctrination blends into formal education and testing, it is also likely that individuals provide answers as if they were sitting on an exam when asked about opinions on politics or policies. In either scenario, we expect preference falsification to be more likely when individuals are asked to respond to issues framed as national matters and less likely when asked to respond to issues framed more closely as personal interests.

Finally, a common query in the literature is whether misperception of income positions or prospects of upward mobility might affect redistributive support. Specifically, if lower-income groups mistakenly believe they have a higher income than they actually do, they might be less likely to support redistribution as their interests are perceived to be harmed by redistribution. If the poorer are overly optimistic about prospects of upward mobility, they might also be less supportive of redistribution to protect the interests of their future selves (Benabou & Ok, 2001; Alesina, Stantcheva, & Teso, 2018). To our knowledge, our study is one of the first two survey experiments that attempt to elicit people's *ex-ante* beliefs about their relative income positions and social mobility statistics in China. In a similar yet distinct fashion, Mu (2022) also has a treatment arm where she tries to update Chinese citizens' prior beliefs about their relative income rankings. While her experiment design focuses on updating relative income positions at the decile

Withe her experiment design focuses on updating relative income positions at the deche

collected from those at the top of the income distribution and constitutes only 8% of tax revenue, which is one-third of the OECD average. Aggregated government revenue by source and by use could be found on the Chinese central government's official web portal (source: http://www.gov.cn/xinwen/2022-01/29/content\_5671104.htm). Like many other developing countries, China also relies more heavily on corporate taxes than advanced economies (source: Global Revenue Statistics Database, https://stats.oecd.org/Index.aspx?DataSetCode=RS\_GBL In addition, about 15% of the fiscal revenue in China comes from non-tax sources, such as income from state-owned enterprises and land sales (source: the Chinese central government, http://www.gov.cn/xinwen/2022-01/29/content\_5671104.htm).

level, our experiment updates them at the percentile level. In addition, we also update the respondents' prior beliefs about changes in inter-generational occupational mobility patterns in China over the past few generations.

## 3 Experiment Design

We adopt a two-stage randomization design to test whether luck is a fair source of inequality and to parse out the effect of low tax salience. In the first stage, we present a non-meritocratic income generating process from two dimensions: one is getting rich, and the other is staying poor. In the former (the rich-by-luck treatment), we provide three short stories of people who got rich because of housing demolition compensations, arbitrage in the housing market, and family inheritance. In the latter (the poor-by-luck treatment), we provide three short stories of people staying poor due to involuntary unemployment, illness, and divorce. All these scenarios are commonplace in contemporary China. Since our outcome questions also fall along the rich and poor dimensions ("taxing the rich" policies and "helping the poor" policies), we want to see if perturbing a single dimension of the income generating process would alter policy preferences along that dimension without affecting the other. In the second stage, we want to see if a treatment that increases tax salience would alter redistributive support. In the tax-salience treatment, we first provide information on how much income tax representative individuals need to pay across the income distribution in China, which is very much progressive. We then provide information on how much value-added tax (VAT) these representative individuals might pay based on their daily consumption. Due to the flat rate of VAT in China and the fact that the poor spend a larger proportion of their total income on consumption than the rich, the updated tax burden is effectively more regressive.

To test if growth and the distributional implications of growth shape redistributive support, we use a treatment that primes the progress and rationale of China's economic reforms from a historical perspective (the growth treatment). We remind respondents that China started with little inequality, yet with everyone in poverty; inequality soared after the economy took off, but even the poorest have also seen their income grown significantly after 1978. We further remind respondents about the official "common prosperity" narrative, which argues that redistribution follows only after a reasonable level of economic development. Finally, we explain that the central government chose Zhejiang Province as China's "Common Prosperity Demonstration Zone" in 2021 because it is one of China's most economically advanced provinces. A potential concern here is that a short piece of information does not update anything since growth is so salient in the Chinese context. We argue that the belief that everybody in China has become rich is not necessarily widely held, so what we update is the implications of economic growth at the individual level rather than China's economic growth per se. These implications are more fundamental in shaping fairness views and redistributive preferences than the mere fact of growth itself.

We use different framings of a hypothetical redistributive policy to address concerns regarding preference falsification. If preference falsification is at play, we expect people to reveal more "fundamental" preferences when primed to think about an issue at a micro-level and pertaining more closely to their personal interests. To test this, we use two treatments. In the macro-narrative treatment, we introduce a hypothetical redistributive policy – the initiation of property taxation – using a tone similar to government propaganda, featuring convoluted political terms and explaining how this new tax affects the entire country. In the micro-narrative treatment, we introduce property tax using plain language and provide information about how much property tax representative households owning varying numbers of properties would pay.

Finally, we use an income position & mobility updating treatment to see if misinformation about relative income positions or mobility affects redistributive support in China. The treatment takes two steps: first, asking respondents to estimate their relative income positions and the degree of intergenerational occupational mobility in China, and then revealing true data to update their knowledge. In the first step, we let respondents guess their relative income positions by asking "what percentage of the population do you think are poorer than you?" and then reveal income distribution data in China by showing where representative individuals' income percentile falls based on their annual incomes. In the second step, we first ask respondents to guess the probabilities of intergenerational social mobility and then reveal the actual probabilities calculated from China General Social Survey (CGSS) data. Specifically, we ask the respondents to estimate top- and bottom-income occupation persistence, that is to say the probabilities of a son with a father working as a senior white-collar worker to also work as a senior white-collar worker, and the son of a farmer or low-skill worker to also work as a farmer or low-skill worker. The definitions of top- and bottom-income occupations are provided in detail in Appendix section 7.10.

An overview of all treatment arms is provided in Figure 3.1.

#### 4 Data and Results

#### 4.1 **Data**

We conducted an online survey experiment through a leading market research firm in China in September 2021, collecting a sample of 2,500 adults. To ensure that our sample is as nationally representative as possible, we imposed a quota scheme for each treatment/control group (described in detail in the Appendix). As reported in the Appendix, the main demographic characteristics of our sample, including age, gender, education,

<sup>&</sup>lt;sup>8</sup>Data source: World Inequality Database (http://wid.world).

<sup>&</sup>lt;sup>9</sup>We believe the pandemic will not affect the validity of our study as pandemic control in China at the time when the survey was conducted was quite stable.

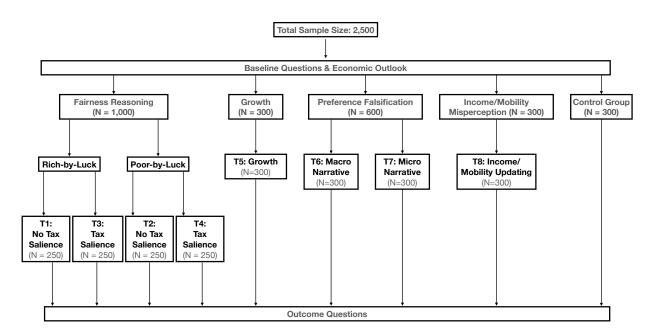


Figure 3.1: Experiment Design by Treatment Arms

and a host of variables on socioeconomic backgrounds and institutional affiliation, are comparable to the national averages.

#### 4.2 Baseline results

We first present the general level of support for redistribution in China per our survey in Table 1. We consider a response as an endorsement when respondents answer "agree" or "strongly agree" for each outcome item, and the average endorsement rate is over 70At baseline, the support for redistributive policies and the government's redistributive duty is quite high, compared to the preferences for redistribution elicited in similarly controlled experimental settings in this strand of literature (Kuziemko et al., 2015; Cruces et al., 2013; Pellicer et al., 2019). 10

<sup>&</sup>lt;sup>10</sup>Two of the most radical policies – "Unconditional Income Ceiling" and "New Sent-down Movement" – receive the least support (the old "Sent-down Movement" during the Cultural Revolution sent urban

Table 1: General Support for Redistributive Policies

	(1)	(2)	
Groups	Control Group (N=300)	Whole Sample (N=2,500)	
Taxing the Rich (mean)	0.734	0.719	
Capital Tax (Ultra-rich Tax)	0.840	0.817	
Property Tax	0.690	0.708	
Auditing Top Earners	0.813	0.786	
Control for Overseas Capital Transfer	0.853	0.830	
Unconditional Income Ceiling	0.473	0.452	
Helping the Poor (mean)	0.743	0.754	
Free Healthcare for the Poor			
with Serious Illnesses and Chronic Diseases	0.920	0.912	
Quota for Poor Students in College	0.657	0.672	
Raise Minimum Wage	0.823	0.799	
Raise Income Tax Threshold	0.793	0.784	
Expand Social Housing	0.810	0.846	
New Sent-down Movement	0.473	0.514	
Raise Minimum Social Protection	0.727	0.751	
Government Duty (mean)	0.823	0.794	
Reduce the Income Gap	0.900	0.881	
Guaranteed Job Provision	0.807	0.78	
Govt. Involvement in Redistribution is Just	0.770	0.727	
Equal Admissions in Higher Educ.	0.823	0.789	

*Notes*: The figures indicate the total fraction of individuals who answered "agree" or "strongly agree" to a given statement in the respective samples.

youth to the countryside to live and work). It is worth noting that even these radical policies receive over 45% support.

### 4.3 Average Treatment Effects on Support for Redistribution

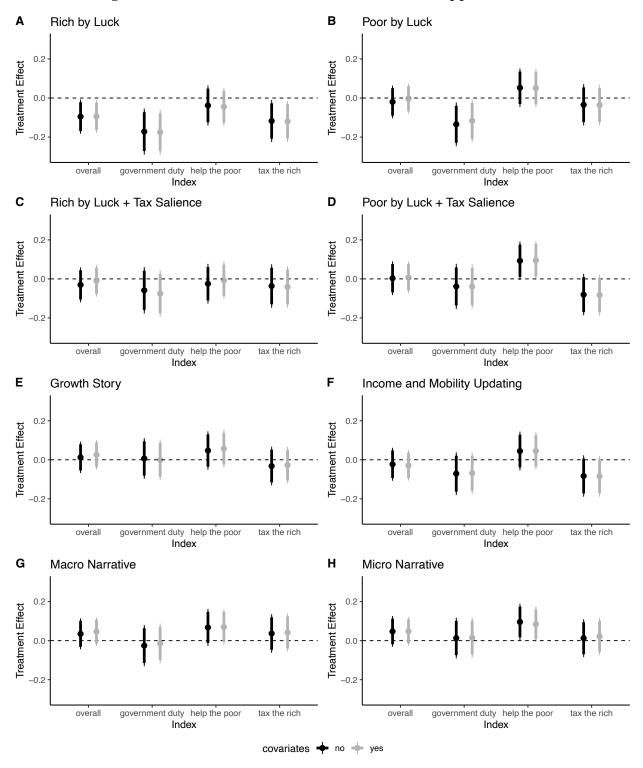
We report the Average Treatment Effects (ATE) of each treatment arm in Figure 4.1. All the ATEs reported here are the Intention To Treat (ITT) effects of being randomly assigned to a particular treatment group, relative to the control group.

The dependent variables along the x-axis are indexes calculated as the average of the Z-scores of the endorsement for policies in each category. We use simple Ordinary Least Square (OLS) regression as our baseline model. Given the large total number of potential baseline demographic, socio-economic, and social value controls (110 variables in total) relative to our total sample size (2,500), we also adopt the double LASSO cross-fit partialling-out control variable selection technique to include the relevant set of control variables in each one of our estimation equation. The results obtained with or without the selected covariates are very similar across all treatment arms and indexes.

<sup>&</sup>lt;sup>11</sup>All of our main tables hereafter report estimates based on this the double LASSO control variable selection technique. On average, cross-fit partialling-out selects around 30 control variables out of the whole battery of potential control variables.

<sup>&</sup>lt;sup>12</sup>We have also performed the analysis with the full set of control variables, such as province & prefecture fixed effects, demographics, job and income categories, subjective socio-economic status and life satisfaction and channel of obtaining information. The end result remains largely unchanged, although some level of significance is lost due to the inclusion of a larger set of control variables.

Figure 4.1: Treatment Effects on Redistributive Support Indexes



N = 250 respectively for treatment groups from Panel A to Panel D, while N = 300 for the rest of the treatment arms (inclusive of the control group).

Most notably, only our first treatment arm, which provides cues and stories on the luck component of the inequality generating process, produces a statistically significant effect on the general level of redistributive support. The rich-by-luck treatment decreases redistributive support with a magnitude of nearly 0.1 standard deviation, which is commensurate with the average impacts detected in the experimental studies on redistributive preferences (Stantcheva, 2020). This finding suggests that reminding respondents in China that some individuals became rich due to non-meritocratic factors, such as luck, opportunism, or family background, leads to a decrease in their willingness to support redistribution. Specifically, this effect is driven by a decreased belief in the government's duty to redistribute and decreased support for policies that redistribute away from the rich, rather than policies that aim to help the poor, as can be seen from the results of the other three indexes in Figure 4.1 Panel A.

Reminding respondents of how poor people remain poor due to non-meritocratic reasons (such as illness, involuntary unemployment, and divorce), on the other hand, also results in a statistically significant decrease in their belief that the government has a duty to redistribute (with a magnitude of 0.13 standard deviation, see Figure 4.1 Panel B).

In addition to the rich-by-luck treatment, further informing respondents about their effective tax burden seems to moderate the decrease in demand for redistribution slightly. When receiving the second-stage tax salience treatment after the first-stage the rich-by-luck treatment, respondents no longer report a significant decrease in their support for redistribution as shown in Panel C of Figure 4.1. Similarly, in Panel D, respondents do not report a significant decrease in their belief in the government's duty to redistribute after receiving the tax salience treatment following the poor-by-luck treatment. In Panel D, while the increase in the support for the help-the-poor policy becomes statistically significant at the 90% level, support for the tax-the-rich policies is pulled in the oppo-

site direction. Moreover, while using the rich-by-luck or poor-by-luck treatment as the benchmark control for the tax treatment arms, the effect of the tax salience treatment itself is not significant. The differences are reported in Figure 4.2. Therefore, we do not find evidence strong enough to interpret that information on the regressivity of indirect taxation on top of rich or poor by luck narratives in China might have perturbed our respondents' redistributive preferences.

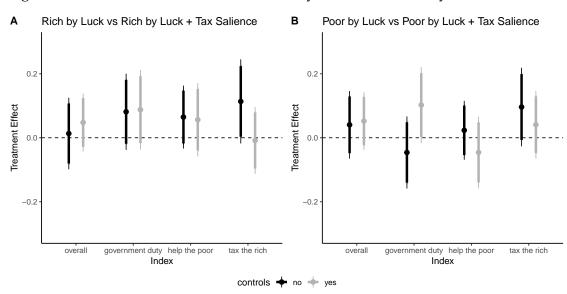


Figure 4.2: Effect of Tax Salience In Rich-by-Luck and Poor-by-luck Treatments

Notes: N = 250 for all treatment groups. The differences in coefficients between no control and with control in the poor-by-luck treatments are linked to a slight imbalance between the two treatment groups, namely the poor-by-luck treatment arm has significantly higher economic pressure, compared to the poor-by-luck + tax salience treatment arm.

Among other treatments, only the micro-narrative treatment triggered a statistically significant increase in the support for help-the-poor policies with a magnitude of around 0.1 standard deviation when no covariates are selected. Further analysis suggests that this effect is primarily due to an increase in support of social housing support and doubling minimum living assistance (*Dibao*) standards.<sup>13</sup> As the micro-narrative treat-

<sup>&</sup>lt;sup>13</sup>Please refer to 6 in the Appendix Table 6, which shows that the micro-narrative significantly increases support for social housing and doubling minimum living assistance (*Dibao*) standards, but has no statistically significant impact on other policies.

ment includes information about the potential tax burden resulting from introducing a new property tax, we believe the increase in support for social housing and doubling minimum living assistance (*Dibao*) standards is due to anxieties triggered by the specific policy domain rather than the micro-narrative treatment itself. Therefore, we refrain from drawing interpretations regarding Chinese people's redistributive preferences solely based on this result.

Across four indexes of redistributive support, the other treatments – the income position & mobility updating treatment, the growth treatment, the macro-narrative treatment, and the micro-narrative treatment – do not produce any statistically significant effects. Additionally, we find no evidence that micro and macro narratives trigger changes in redistributive support in opposite directions. We are therefore confident to say that preference falsification should not be a concern in our study.

Although updating respondents with the correct numbers of relative income positions or intergenerational mobility does not lead to statistically significant changes in redistributive support, we find that Chinese people tend to significantly underestimate their relative income positions, which is consistent with the findings of Mu (2022). In addition to underestimating their relative income positions, we also find that Chinese citizens significantly overstimate the degree of downward intergenerational occupational mobility in China. We report the details of the result in Figure 7.3 in the Appendix. On average, Chinese people underestimate their relative income positions by 19 percentage points. In fact, the extent to which Chinese people underestimate their relative income positions is comparable to that of the Swedish people, as documented by Karadja et al. (2017). Furthermore, people believe that a child whose father has a high-level white-collar job has a 62% chance of remaining in a high-level white-collar job, while the actual probability in China is only 28% (see Figure 7.5 in the Appendix). However, people's estimates of the likelihood of a child whose father is an unskilled worker/ordinary

farmer remaining in the same job fairly accurate (see Figure 7.7 in the Appendix). In other words, Chinese people have an accurate sense of bottom-income occupation persistence but severely underestimate Top-Income Occupation persistence, or overestimate the possibility of downward mobility for families employed in professional jobs. An important factor to consider is that the large regional disparities in income and wealth in China may cause urban residents in more developed regions/cities to drastically underestimate their relative income positions nationwide. In the Appendix, we provide additional analysis by splitting the survey sample into urban and rural samples. As shown in Figures 7.4a and 7.4b in the Appendix, the urban residents underestimate their relative income position by 22 percentage points, while the rural residents only by 13 percentage points; in addition, about 25% of rural respondents accurately guessed their relative income position, and only about 6% of urban respondents did so. Figures 7.6a and 7.6b show that the rural residents overestimate top-income occupation persistence more than the urban residents do. The urban residents gave an average estimate of 59%, while the rural residents gave an average estimate of 68%. This suggests that urban residents may be more concerned about downward mobility.

## 4.4 Heterogeneous Treatment Effects on Redistributive Support

The significant treatment effects of priming rich-by-luck stories suggest that a certain proportion of Chinese people believe that those who become wealthy through some of the most representative non-meritocratic means in China deserve to keep their wealth. The evidence suggests the existence of a non-meritocratic preference regarding inequality and redistribution in China. If this kind of non-meritocratic preference is primarily rooted in certain types of commonalities that every Chinese is exposed to, such as culture, or national politics, we would expect to find relatively homogeneous treatment effects across subgroups. If non-meritocratic preference is primarily driven by some

kind of self-serving bias, then we would expect to find heterogeneous treatment effects across subgroups. The fault lines dividing subgroups would reveal the specific content of such self-serving bias.

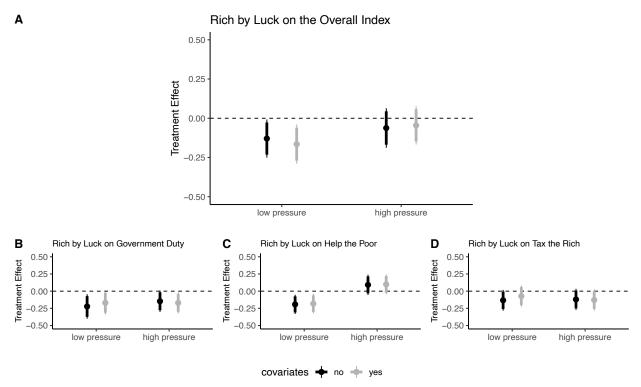
We find that the effects of the rich-by-luck treatment indeed vary across subgroups, with no differences along the line of objective income position (self-reported income brackets) or other socioeconomic and demographic variables, but rather along subjective economic anxiety levels. As part of the baseline questions, respondents were asked to rate their level of economic pressure on a scale from zero (indicating "no pressure at all") to ten (indicating "having extremely high economic pressure") to elicit subjective economic anxiety. Most respondents report the level of economic pressure to be at the higher end, with a median of around level seven on a scale of zero to ten. We construct a dummy variable of economic pressure that takes on the value of one if the self-reported level is above or at level eight to indicate high pressure, and zero otherwise to indicate low pressure.

Recall that in the full-sample results, the rich-by-luck treatment leads to statistically significant decreases in overall redistributive support, as well as in the belief that the government has a duty to redistribute and support policies that would help the poor. After splitting the survey sample into high and low economic pressure groups, we find that the decrease in redistributive support caused by the rich-by-luck treatment is primarily driven by the low economic pressure group. The results are visualized in Figure 4.3. As Panel A in Figure 4.3 shows, without controlling for covariates, the subgroup with low economic pressure exhibits a 0.17 standard deviation decrease in support for the overall index of redistributive support after receiving the rich-by-luck treatment, and a 0.13 standard deviation decrease if covariates are included using double LASSO cross-fit partialling-out control variable selection. The subgroup with high economic pressure, on the other hand, shows no statistically significant changes in the overall index of re-

distributive support after receiving the rich-by-luck treatment.

The statistically significant effect in Figure 4.3 Panel A is mainly driven by the sharp differences in Panel C, on the support for policies that aim to help the poor. As can be seen in Figure 4.3 Panel B and D, the high and low economic pressure groups have reduced their support similarly for the questions on government duty and policies about taxing the rich, suggesting that both groups consider the rich to be deserving and could keep their wealth after receiving the rich-by-luck treatment. However, the low economic pressure significantly decreases their support for helping-the-poor policies, contrasting with those high economic pressure who do not decrease their support for those policies.

Figure 4.3: Heterogeneous Treatment Effects on Redistributive Support Indices



Who are the people that self-report to have lower economic pressure? We compare the baseline demographic and subjective-evaluation variables for the two subgroups mentioned above and report the results in Table 2. Interestingly, The low economic pressure

group is only slightly richer, but significantly more secure. The difference in personal income between the high and low economic pressure groups is around 0.4 income brackets, which corresponds to approximately 8,000 yuan, a difference of about 0.25 standard deviation. This magnitude is much smaller than the difference in subjective security between the two groups: the group with higher economic pressure reports an average subjective security level of 3.8 out of 10, at the  $40^{th}$  percentile of the distribution, while the group with lower economic pressure reports an average subjective security level of 6.2 out of 10, which is on the  $75^{th}$  percentile in the distribution. The difference is 2.35 points, which corresponds to 1.56 standard deviations. People with low economic pressure are also more likely to report higher social status and social class, have higher levels of life satisfaction, and feel more secure in case of an accident.

Overall, our analysis indicates that individuals with low economic pressure are more likely to reside in smaller cities where living expenses tend to be lower, have a higher likelihood of being employed at present, and receive more locally privileged social security coverage, whether it is through formal or informal channels. On the last point specifically, we use health insurance and pension as measures of formal social security. As the access to and affordability of quality medical care is a major concern in Chinese society and often depends on personal connections, we asked respondents to rate their level of confidence in receiving good medical treatment for themselves or their families when sick. We believe this question provides a robust indicator of both formal and informal channels of social insurance. Recall from Figure 4.3 that after the rich-by-luck treatment, both the low economic pressure group and the high economic pressure group may feel that the rich are more deserving and demand less redistribution. However, only those who report low economic pressure decrease their support for policies aimed at helping the poor. This is likely because they feel more secure economically and are

<sup>&</sup>lt;sup>14</sup>The question used is: "To what extent do you agree with the following statements? I am confident that I or my family can receive good medical treatment when we are sick. Respondents are asked to rate their level of confidence using a five-point scale (from strongly disagree to strongly agree.)"

Table 2: Determinants of Economic Pressure

	(1) Low Econ Pressure		(2) High Econ Pressure		(3) Mean Difference	
	Mean	S.D.	Mean	S.D.	Coefficient	T-stat
Baseline Demographics						
Personal Income	6.437	2.325	6.030	2.587	0.407***	(4.136)
Family Income	8.836	1.946	8.404	2.204	0.432***	(5.192)
Working = 1	0.926	0.262	0.880	0.325	0.046***	(3.889)
No Health Insurance = 1	0.014	0.116	0.035	0.184	-0.021***	(-3.456
No Pension = 1	0.020	0.140	0.037	0.188	-0.016*	(-2.476
CCP Member = 1	0.049	0.216	0.060	0.237	-0.011	(-1.158
Public Sector = 1	0.167	0.373	0.172	0.377	-0.005	(-0.336
Female = 1	0.502	0.500	0.498	0.500	0.003	(0.160)
Age	39.176	11.549	38.980	11.299	0.195	(0.428)
Education	3.589	1.185	3.591	1.183	-0.002	(-0.043
Household Size	3.346	0.712	3.382	0.779	-0.036	(-1.210
Home Owndership	2.107	0.334	2.094	0.323	0.013	(1.011)
Father's Education	3.141	1.341	3.170	1.426	-0.028	(-0.509
Residence/Region						
Residence - 1 (Big City) to 5(Rural)	3.313	1.634	2.998	1.727	0.315***	(-4.680
Rural = 1	0.372	0.483	0.348	0.476	0.024	(1.240)
Migrant = 1	0.282	0.450	0.318	0.466	-0.036*	(-1.973
Self-reported Status						-
Self-reported Income Category (1-10)	5.011	1.745	4.665	2.080	0.346***	(4.501)
Self-reported Social Class (1-4)	1.870	0.736	1.748	0.782	0.122***	(4.000)
Self-reported Status (1-10)	5.220	1.701	4.840	2.089	0.380***	(4.978
Self-reported Anxiety/Emotional Status						
Confident to be treated while sick (1-5)	3.140	1.011	2.992	1.133	0.148***	(3.446)
Satisfied with life (1-10)	5.994	1.582	5.621	1.930	0.373***	(5.278)
Feel secured (1-10)	6.193	1.501	3.839	1.590	2.354***	(38.047
Experienced Mobility						
Upward Mobility =1	0.400	0.490	0.340	0.474	0.060**	(2.976)
Downward Mobility =1	0.089	0.285	0.097	0.296	-0.008	(-0.670
Mobility =1	0.311	0.627	0.243	0.615	0.068**	(2.625)
N	1242		1258		2500	
Estimated Mobility/Income						
Bottom Persistence Estimate (%)	49.788	16.088	54.805	17.244	-5.018**	(-2.602
Top Persistence Estimate (%)	60.473	18.381	62.916	19.514	-2.443	(-1.115
Self Income Position Underestimate (%)	19.110	18.563	18.552	18.006	0.558	(0.264
N	146		154		300	

less likely to become poor. Our interpretation aligns with the findings of Cavaillé (2021), which suggest that people's redistributive preferences are mainly driven by their views on social justice but can also be influenced by their self-interests.

Furthermore, it is significantly more likely for individuals in the low economic pressure group to report more positive experiences with intergenerational social mobility, as they are more likely to maintain similar levels or move up the occupation ladder than those in the high economic pressure group.<sup>15</sup> Specifically, 40% of individuals in the low

<sup>&</sup>lt;sup>15</sup>We employ a widely used method in the sociology literature to measure intergenerational social mobility. Specifically, we employ the same occupation categorization and ask respondents to provide in-

economic pressure group experienced upward occupation mobility compared to their fathers' generation, while this figure stands at only 34% for the high economic pressure group.

In addition to actual experiences of inter-generational occupation mobility, individuals in the high economic pressure group are also more pessimistic about perceived inter-generational mobility: they perceive inter-generational bottom occupational persistence to be higher than that in reality (54.8% instead of 50% in reality), while the low economic pressure group rather accurately estimates bottom persistence (49.8%). This pessimism on perceived mobility might also explain why the high economic pressure group is more supportive of helping-the-poor redistributive policies than the low economic pressure group.

Furthermore, as reported in the previous section, urban residents under-estimate top-income occupation persistence in China compared to rural residents, indicating a greater concern about downward mobility (falling down from the top) in urban areas of China. In Appendix graphs 7.8a and 7.8b, we report respondents' own estimates of top- and bottom-category inter-generational occupation persistence by their places of residence. While there is no statistically significant difference in estimates of bottom persistence, people living in larger cities significantly under-estimate top occupation persistence compared to people living in more rural regions. We believe that the greater concerns about downward mobility in larger cities are in line with our findings on heterogeneous treatment effects, as individuals with lower economic pressure (who are also less likely to be living in larger cities) may be less worried about the possibility of downward mobility.

formation about both their own and their father's occupation categories. To elicit information about the father's occupation, we ask the following question: "Now please recall, what was your father's main occupation when you were 14 years old? (If your father had passed away by then, please select your mother's main occupation when you were 14 years old)"

#### 5 Discussion

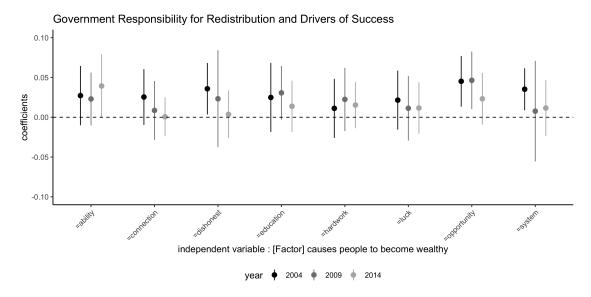
We propose that the respondents decreased their support for redistribution in the richby-luck treatment because the representative getting-rich stories in the vignette evoked a sense of deservingness. This implies the existence of a non-meritocratic fairness view, where income generated by both luck and effort is considered fair.

While this non-meritocratic view of fairness may seem counter-intuitive and at odds with the conventional wisdom of East Asian societies being meritocratic, it is not unfounded in the literature. Recent research by Almås et al. (2021) indicates that a substantial portion of the Chinese population holds a "libertarian" fairness view, which considers income inequalities resulting from both effort and luck as fair. According to the study, along with India, China is one of the only two countries in the world where participants do not significantly increase redistribution in an experimental setting where inequality stems from luck instead of effort.

In a similar vein, we conducted an analysis using data from the China National Survey of Inequality and Distributive Justice, in which we regressed the demand for redistribution on respondents' beliefs about the importance of effort, luck, and other factors (such as connections, the system, and education) in becoming wealthy, while controlling for a range of demographic factors. In a meritocratic society, we would expect that the more people believe success is due to effort, the less they would demand government redistribution. Conversely, the more people believe success is attributable to factors such as connections, luck, and family background, the more they would demand government redistribution. We show that this is not the case in China in Figure 5.1: The regression coefficients are insignificant for luck and effort. The only statistically significant factor that is positively correlated with higher demand for redistribution is the importance of the inequality of opportunities. We believe that this kind of fairness view is particularly likely in a context of unprecedented economic growth, where economic

fortunes are abundant and random.

Figure 5.1: Correlations between Importance of Different Factors in Getting Rich and Demand for Redistribution in China



*Notes:* Data Source for this analysis is the China Inequality and Distributive Justice Survey (2004, 2009 and 2014). The dependent variable is agreeing to the statement "The government has a responsibility to reduce the gap between the poor and the rich" on a scale of 1-5, and the independent variable is agreeing to the statement "In your opinion, to what degree do each of the following factors currently cause people to become wealthy?" on a scale of 1-5. The regressions are run separately for each factor and each wave of survey in 2004, 2009 and 2014, controlling for age, gender, education, party member status, migrant status, marital status, urban/rural resident, income, whether employed by the state, subjective social status, and fixed effect for county, prefecture and province. Standard errors are clustered at the county level.

We think that our results extend beyond a simple expectation of upward mobility. The prospect of upward mobility (POUM) theory suggests that individuals who are poorer than average but reasonably expect higher income in the future may oppose redistribution, resulting in lower overall support for redistribution in society. In our study, however, the group that drives the reduction in redistributive preferences are not those who are expected to have higher income in the future, namely college-educated young people in large cities like in (Cojocaru, 2014). Rather, the group that showed reduced support for redistribution are more likely to be residents of smaller cities, and there was no distinction in age or education level compared to their peers in the high economic

pressure group. It is possible that the respondents in our study saw the representative getting-rich cases in the vignettes and thought "that could be me," leading them to decrease their support for redistribution. However, it is noteworthy that the group of respondents who demonstrated this behavior were neither currently poor nor statistically most likely to experience upward mobility.

We suggest that the non-meritocratic fairness view is pervasive throughout China, and the observed heterogeneity in Section 4 may be attributed to a secondary concern for self-interest. We believe that the rich-by-luck treatment did indeed elicit a sense of deservingness and reluctance to redistribute wealth among all respondents. This was evidenced by the significant decrease in support for government duty and taxing-the-rich policies among both the low and high economic pressure groups. The only discernible difference between these groups was that the low economic pressure group also reduced support for helping the poor, thus decreasing their support for redistribution as a whole compared to the high economic pressure group, while the high economic pressure group marginally increased support for helping the poor. The high economic pressure group does this due to self-serving concerns, such as feeling less insured and more likely to become poor (the insurance story), experiencing less intergenerational mobility in their lives, and thus being less optimistic about upward mobility (the mobility story), or feeling relatively poorer compared to others in a big city (the relative deprivation story). It is worth noting that none of these individual concerns alone can fully explain the observed heterogeneity, as none of them can generate statistically significant heterogeneity on their own. It is likely that a combination of these factors, along with idiosyncratic psychological factors such as anxiety, contributed to the heterogeneity.

Our results are consistent with those of Cavaillé (2021), which suggest that individuals first base their views on redistribution on their ideology, aiming to decrease redistribution. They then adjust their attitudes with respect to self-interest, if possible, by only

modifying their stance towards policies that affect them directly, such as helping-thepoor policies, without changing their attitude towards policies that affect them less.

#### 6 Conclusions

We summarize three important findings from our survey experiment and discuss their implications as follows. First of all, the Chinese population exhibit high levels of baseline support for redistribution. If there were a hypothetical two-party system in China, the location of meaningful policy debates would center on the very left end of the left-right spectrum, as the majority of citizens prefer a big government. We suspect strong support for redistribution is derived from China's socialist legacy and people's high expectations for government responsibility or a strong tendency towards a acquiescence bias. We observe similar results from other nationally representative surveys as well, where the majority of Chinese respondents think it is the government's duty to provide healthcare, primary and secondary education, and elderly care. 17

Second, priming respondents on how rich people become wealthy by non-meritocratic means resulted in a decrease in redistributive support, suggesting that many Chinese hold a non-meritocratic fairness view where both merit and luck are considered fair sources of inequalities. We argue that non-meritocratic fairness views are rooted in a high-growth economic environment, where economic fortunes are abundant and random. Hetergeneity analysis further reveals that such non-meritocratic fairness views are a general phenomenon on which Chinese people base their redistributive preferences and self-interest in the form of subjective economic pressure only seems to serve as a secondary concern. While people feel that the rich are more deserving and demand less redistribution after being primed with stories of getting rich by luck regardless of sub-

 $<sup>^{16}</sup>$ Tellingly, about 80% of the respondents think the government should provide jobs for each individual.

<sup>&</sup>lt;sup>17</sup>Source: China Inequality and Distributive Justice Survey

jective economic pressure, only those under less economic pressure exhibit decreased support for policies that aim to help the poor. Subjective economic pressure is the only cleavage we found to trigger statistically significant heterogeneity, which combines several factors such as economically more secure and experiencing less relative deprivation, having better social security coverage through formal or informal means and feeling more insured, and having a more positive experience with intergenerational social mobility.

Thirdly, our study found that priming China's growth story did not result in statistically significant changes in redistributive support. It is possible that this is because the treatment itself was not effective in updating Chinese people's prior knowledge about the country's recent history. We hope that future research can find more effective methods to address this issue. Moreover, our experimental design allowed us to rule out the influence of three important confounding factors on redistributive preferences in China: low tax salience, preference falsification under authoritarianism, and misperceptions about relative income positions and intergenerational occupational mobility.

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# 7 Appendices

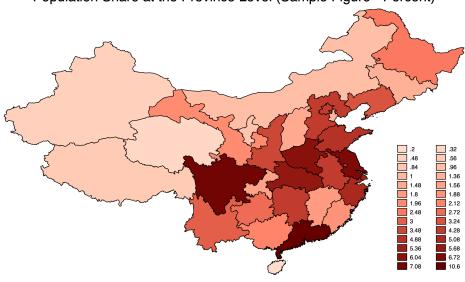
# 7.1 Experiment Preparation

## Profile Summary of Qualitative Interviewees

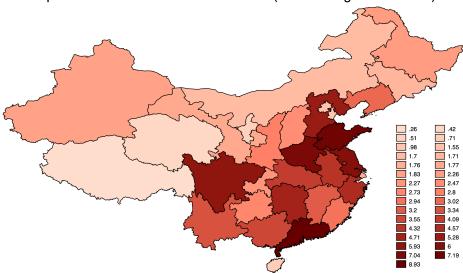
Gender	Age	Household Registration (Hukou)	Occupation	Income(yuan/month)	Social Class
Male	51	Beijing, Metropolis	IT research	Unclear but "competitive"	Middle Class
Female	49	Beijing, Metropolis	Publisher, Mid-level Management	Unclear but "ok"	Middle Class
Female	61	Shandong, Urban	Retired	2.5 k	Lower Middle Class
Female	32	Shandong, Rural	Middle School Teacher	5k	Lower Middle Class
Female	70	Shandong, Non-agricultural	Farmer		Lower Class
Male	60	Henan, Agricultural	University Staff		Middle Class
Female	37	Hebei, Urban	Masseuse	5k-6k	Lower Middle Class
Male	21	Henan, Rural	Hairdresser	10k	Lower Middle Class
Male	45	Beijing Metropolis	Taxi Driver	8k	Lower Middle Class
Female	39	Hebei, Rural	Cook	5k	Lower Class
Female	45	Hebei, Rural	Security Guard		Lower Class
Male	30	Guangzhou, Metropolis	Civil Servant	20k	Middle Class
Male	32	Zhejiang, City	Civil Servant		Middle Class
Male	47	Shenzhen, Metropolis	Enterpreneur	83-250k	Upper Middle Class
Female	58	Guangdong, Urban	Retired	(Family) 6-7k	Lower Middle Class
Male	22	Henan, Rural	Car Repair	5k	Lower Class
Male	25	Jiangxi, Urban	Bank Teller	5k	Lower Middle Class
Male	60	Shandong, Rural	Hired Farmer	4k	Lower Class
Male	33	Hubei, Rural	Hairdresser	6-7k	Lower Middle Class
Male	23	Jiangxi, Urban	Engineer in a State-owned Enterprise	6-7 k	Lower Middle Class

## 7.2 Geographical Outreach of the Online Experiment

Population Share at the Province Level (Sample Figure - Percent)



Population Share at the Province Level (National Figure - Percent)



#### 7.3 Randomization Protocol

Our data were collected online by a leading market research firm in China between September 3 and September 15, 2021. The total sample size was 2,500 and was collected through a quota system. To ensure that each treatment group (including the control group) was as nationally representative as possible, we adopted the following randomization protocol.

- 1. Multiply the demographic quota by the treatment group size (sub-sample size) to calculate the number of questionnaires needed in each demographic "slot."
  - For example, if the first treatment group consists of 300 people and requires 150 men and 150 women, then a "slot" of 150 men and a "slot" of 150 women are created based on the demographic quota. For more details on the exact quotas, please refer to the next sub-section of the appendix.
- 2. Distribute the questionnaire to a first round of potential respondents, randomly assigning them to a treatment group. About 5-10% of them would become eligible for each treatment group.
- 3. If an individual slot is filled, the system will filter out respondents who are not eligible for this slot. They will be shown a message that says "Thanks for your participation, but you do not satisfy the conditions of this survey," and they will then exit the survey.
- 4. If there are still unfilled slots after the first round, the survey firm will distribute the questionnaire for a second round to new potential respondents
- 5. Repeat steps 2 to 4 until all quotas are filled.

## 7.4 Quotas Imposed

#### Quota Scheme

Variable	Quotas
Gender	50% male
	50% female
Age	Between 18 and 35 years old (including 35 years old): 40%
· ·	Between 35 and 50 years old (including 50 years old): 40%
	Over 50 years old: 20%
Geographical Region	North China: 12%
0 1	Northeast China: 7%
	East China: 30%
	Central China: 16%
	South China: 13%
	Southwest China: 15%
	Northwest China: 7%
Migrant Status	Migrant Status: 30%
	Non-Migrant Status: 70%
Usual Residence	Urban/Peri-urban residence: 64%
	Rural residence: 36%
Income	Gross personal income up to ¥50,000 per year (including those with no income): 50%
	Gross personal income of ¥50,000 to ¥100,000 per year (including ¥100,000): 30%
	Gross personal income of ¥100,000 or more per year: 20%
Education	Junior high school degree and below: 60%
	High school education and below, junior high school education and above: 20%
	College/College-level Vocational School degree and above: 20%

*Notes*: Quotas for age, geographical region, migrant status, education and usual residence are based on the Seventh National Population Census of the People's Republic of China (the 2020 Chinese Census). Quotas for income are based on World Inequality Database.

Geographical region asks one's current place of residence.

Migrant status: If one's household registration (*hukou*) does not match her current place of residence, we consider that person a migrant.

## 7.5 Baseline Characteristics of the Study Sample

Table 3: Baseline Characteristics - Compared with the Latest National Figures

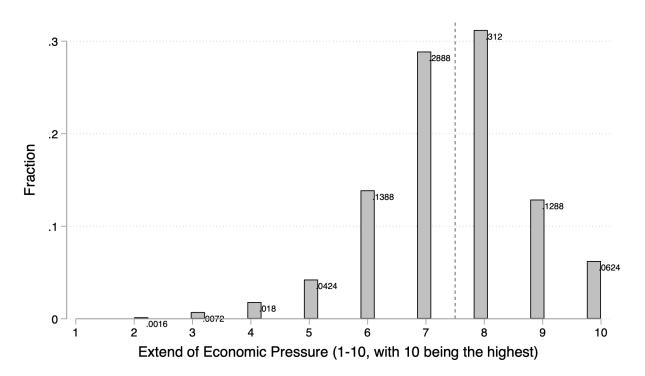
	(1)	(2)
Characteristics	Our Sample	National Figures
Gender (male)	0.50	0.5124
Median Age	38	38.4
Fraction of College Graduates	0.20	0.154
Median Pre-Tax Income Per Adult	¥ 45,000	¥ 46,749 (2019 - WID)
Fraction of Migrant	0.30	0.345
Mean Household Size	3	2.62
Fraction of Urban Dwellers	0.64	0.6389
Mean Years of Schooling	10.5	9.91
Fraction of CCP Members	0.0544	0.067
Fraction in Public Sector	0.1692	?

 $\it Notes$ : Data source for national figures excluding income: the 2020 Chinese Census. Data source for income: World Inequality Database.

# 7.6 Subjective Economic Pressure, Life Satisfaction and Feeling Secured

Figure 7.1: Distribution of Subjective Assessment of Economic Pressure

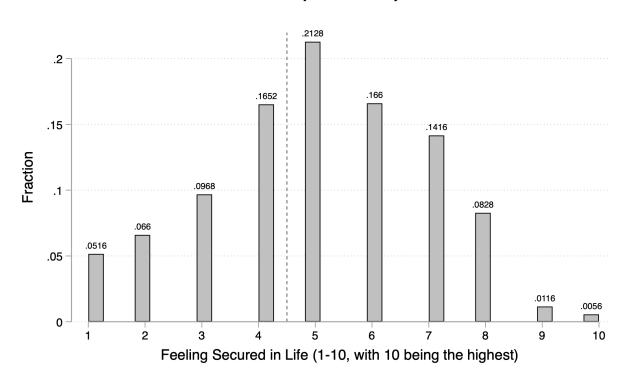
#### **Extent of Economic Pressure**



*Notes*: Distribution of subjective pressure, N = 2500. The question for subjective economic pressure asks, "What is the level of economic pressure your family is currently experiencing? If 1 represents no pressure and 10 represents a lot of pressure, what level would you say your family's economic pressure is at?"

Figure 7.2: Distribution of Subjective Assessment of Feeling Secured

#### Subjective Security



*Notes*: Distribution of subjective security, N = 2500. The question for subjective security asks "Do you feel that your life is secure? If 1 represents 'I have no security at all, anything could happen at any time,' and 10 represents 'I am not very worried about sudden unemployment/illness, and my life is very secure,' where would you rate your level of concern?

#### 7.7 Representative Vignettes in Treatment Arm One and Two

#### • Treatment Arm One: Getting Rich by Luck

Since reform and opening up, China has seen a significant increase in national wealth. Some people have become rich through various means. For example, please read the following three stories.

- 1. Wang is the owner of a medium-sized enterprise located in a city of the Zhejiang Province. Since 2000, he has been a member of a local real estate hunting group, where he has been buying real estate around the country for investment purposes. The group's practice of purchasing together makes bargaining with developers easier, and Wang has turned his initial investment of 1.1 million into 10 million in just a few years.
- 2. Li's family resides in a city in Jiangsu Province. His parents started a successful family business and have gained considerable wealth in their hometown after many years of operation. Li struggled with academics as a child and was sent to study abroad by his parents. After obtaining his college degree and returning to China, he joined the family business and now serves as the Vice CEO. Liu, who is the same age as Li, graduated from a prestigious university and joined the company as a sales manager, earning an annual salary of 120,000 yuan. Both Li and Liu work tirelessly, but Li earns 30 times more than Liu.
- 3. The Zhang family purchased a small property in the urban village of Shenzhen in 2000, measuring approximately 120 square meters, for a price of some 100,000 yuan. In 2019, demolition finally took place, and the compensation standard was set at 100,000 yuan per square meter. With the compensation of 12 million yuan, the Zhang family became instant millionaires.

#### • Treatment Arm Two: Remaining in Poverty due to Bad Luck

Since reform and opening up, China has seen a significant increase in national wealth. Some people are still poor for various reasons, however. For example, please read the following three stories.

- 1. Wang, who resides in a city in Hebei Province, used to work at a factory until he was laid off three years ago due to the company's underperformance. Due to his age and health issues, he found temporary employment. Wang and his wife, who works as a sanitation worker, have to support their elderly parents and their school-going child, making their financial situation extremely challenging, and could hardly save much money.
- 2. Li and his wife reside in a village in Jiangxi Province and earn their livelihood mostly through farming and part-time jobs. After years of hard work, they were finally able to send their only son to college in Nanchang. After graduating from college, their son stayed in Nanchang for work. As life gets better, however, Li's wife was diagnosed with uremia. Their son, who had just started working, doesn't have much savings. The medical expenses drained all their savings, leading the family back to poverty.
- 3. Zhang lost her job because her company shut down shortly after she gave birth to her second child, and since then, she has been a homemaker. At the age of 39, her husband divorced her for another woman, leaving her with limited assets and minimal child support that is often overdue. To support her two children, she works multiple jobs, including as a janitor during the day and as a part-time worker at a nearby restaurant at night. Despite her tireless efforts, she finds it difficult to make ends meet and often has to resort to borrowing money for her children's education.

#### 7.8 Details of Outcomes of Interest

#### Policies pertaining to taxing the rich

- 1. Asset tax (tax on the very rich): For whatever reason, the rich should pay an annual asset tax if their total assets exceed a certain limit.
- 2. The top 0.1% of the ultra-high income group (1.4 million people) would be subject to annual state audits and disclosure of their income sources.
- 3. Real estate taxes should be imposed on people who own two or more real estate properties
- 4. Unconditional maximum income limit: No one can have an annual income above a ceiling for any reason.
- 5. We should strictly restrict the rich people from transferring assets overseas.

#### Policies pertaining to helping the poor

- 1. Students from poor families or underdeveloped areas should have reserved quota in key universities and key high schools.
- 2. Low-income families would be reimbursed for most treatment costs for serious chronic and major illnesses.
- 3. Set a uniform national minimum wage and the amount of the minimum wage will be further increased.
- 4. Urban affordable housing will be further expanded, mainly for young working people and those whose parents do not own urban housing.
- 5. Expanding the minimum living assistance program (*Dibao*) to more than twice its current coverage and increasing the amount of benefits.
- 6. The starting point of personal income tax should be further increased (currently the starting point is \$5,000).

7. Urban residents in developed areas will be obliged to go to poor areas for a year of compulsory rural work and poverty alleviation before the age of 30.

#### • Statements pertaining to government responsibility

- 1. Our government should take strong action to reduce the gap between the rich and the poor.
- 2. The government should use uniform test questions and admissions standards to allow everyone to compete fairly for higher education admissions.
- 3. Our government has a responsibility to provide appropriate jobs for everyone who wants to work.
- 4. It is just to let the government regulate the distribution of wealth and income.

# 7.9 Additional Analyses

Table 4: Treatment Effects on Detailed Policy Outcomes (1)

	(1)	(2)	(3)	(4)
VARIABLES	Wealth Tax	<b>Property Tax</b>	Auditing	<b>Capital Control</b>
Rich by Luck	-0.0722**	-0.0135	-0.0373	-0.0768**
	(0.0338)	(0.0383)	(0.0337)	(0.0325)
Rich by Luck & Tax Salience	-0.0547*	0.0128	<b>-0.1010</b> ***	-0.0406
	(0.0329)	(0.0379)	(0.0355)	(0.0308)
Poor by Luck	-0.0359	0.0214	-0.0133	-0.0156
	(0.0326)	(0.0378)	(0.0321)	(0.0305)
Poor by Luck & Tax Salience	-0.0354	-0.0005	-0.0089	-0.0437
	(0.0328)	(0.0389)	(0.0322)	(0.0314)
Macro Narrative	0.0164	0.0810**	-0.0064	0.0071
	(0.0294)	(0.0349)	(0.0306)	(0.0283)
Micro Narrative	0.0204	0.0638*	0.0057	-0.0154
	(0.0287)	(0.0353)	(0.0309)	(0.0289)
Growth & Redistribution	-0.0213	-0.0017	-0.0191	-0.0009
	(0.0301)	(0.0365)	(0.0309)	(0.0283)
Income & Mobility Updating	-0.0279	-0.0124	-0.0647**	-0.0315
	(0.0306)	(0.0368)	(0.0328)	(0.0296)
Observations	2,500	2,500	2,500	2,500
CF Partialling-Out Controls	YES	YES	YES	YES
Control Mean	0.840	0.690	0.813	0.853
No. of Controls Selected	17	24	29	19

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.1.

Table 5: Treatment Effects on Detailed Policy Outcomes (2)

	(1)	(2)	(3)	(4)
VARIABLES	Income Ceiling	Poor Student Quota	Free Healthcare Poor	Raise Min. Wage
Rich by Luck	-0.0234	-0.0506	-0.0268	-0.0343
Rich by Luck	(0.0411)	(0.0395)	(0.0242)	(0.0338)
Rich by Luck + Tax	-0.0275	-0.0370	-0.0334	-0.0560*
,	(0.0413)	(0.0395)	(0.0244)	(0.0336)
Poor by Luck	-0.0145	0.0559	0.0101	-0.0525
,	(0.0411)	(0.0384)	(0.0219)	(0.0341)
Poor by Luck + Tax	-0.0688*	0.0362	0.0007	0.0114
•	(0.0409)	(0.0383)	(0.0224)	(0.0318)
Macro Narrative	0.0276	0.0250	-0.0079	-0.0138
	(0.0392)	(0.0376)	(0.0217)	(0.0319)
Micro Narrative	-0.0325	0.0564	0.0039	0.0234
	(0.0390)	(0.0361)	(0.0216)	(0.0305)
Growth & Redistribution	0.0267	0.0291	0.0016	-0.0117
	(0.0397)	(0.0375)	(0.0217)	(0.0321)
Income & Mobility Updating	-0.0482	0.0211	-0.0116	-0.0444
	(0.0388)	(0.0369)	(0.0220)	(0.0325)
Observations	2,500	2,500	2,500	2,500
CF Partialling-Out Controls	YES	YES	YES	YES
Control Mean	0.473	0.657	0.920	0.823
No. of Controls Selected	22	21	23	22

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.1.

Table 6: Treatment Effects on Detailed Policy Outcomes (3)

	(1)	(2)	(3)	(4)
VARIABLES	<b>Social Housing</b>	Double Dibao	Raise Income Tax Threshold	New Sent-down
Rich by Luck	0.0621**	-0.0242	-0.0361	0.0326
	(0.0306)	(0.0368)	(0.0350)	(0.0403)
Rich by Luck + Tax	0.0137	-0.0047	-0.0241	0.0817**
	(0.0324)	(0.0359)	(0.0347)	(0.0405)
Poor by Luck	0.0235	0.0267	0.0061	0.0422
	(0.0323)	(0.0357)	(0.0338)	(0.0404)
Poor by Luck + Tax	0.0551*	0.0534	0.0032	0.0286
•	(0.0311)	(0.0347)	(0.0335)	(0.0415)
Macro Narrative	0.0564*	0.0268	0.0262	0.0502
	(0.0295)	(0.0340)	(0.0312)	(0.0382)
Micro Narrative	0.0590**	0.0764**	-0.0246	0.0403
	(0.0294)	(0.0334)	(0.0329)	(0.0388)
Growth & Redistribution	0.0344	0.0302	-0.0228	0.0603
	(0.0311)	(0.0338)	(0.0327)	(0.0389)
Income & Mobility Updating	0.0573*	0.0309	-0.0193	0.0530
	(0.0293)	(0.0345)	(0.0328)	(0.0389)
Observations	2,500	2,500	2,500	2,500
CF Partialling-Out Controls	YES	YES	YES	YES
Control Mean	0.810	0.727	0.793	0.473
No. of Controls Selected	21	24	19	27

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.1.

Table 7: Treatment Effects on Detailed Policy Outcomes (4)

	(1)	(2)	(3)	(4)
VARIABLES	Reduce Income Gap	Job Provision	Redist. Just	Edu. Admission Standardize
Rich by Luck	-0.0366	-0.0933***	-0.0914**	-0.0442
ruen by Euck	(0.0267)	(0.0353)	(0.0362)	(0.0345)
Rich by Luck + Tax	-0.0241	-0.0486	-0.0512	-0.0480
	(0.0258)	(0.0345)	(0.0359)	(0.0343)
Poor by Luck	-0.0019	-0.0517	-0.1003***	-0.0589*
,	(0.0250)	(0.0344)	(0.0369)	(0.0352)
Poor by Luck + Tax	-0.0236	-0.0095	-0.0991***	-0.0377
,	(0.0262)	(0.0321)	(0.0361)	(0.0348)
Macro Narrative	-0.0574**	0.0068	-0.0430	0.0163
	(0.0262)	(0.0309)	(0.0340)	(0.0319)
Micro Narrative	0.0002	-0.0174	-0.0003	0.0032
	(0.0237)	(0.0315)	(0.0331)	(0.0317)
Growth & Redistribution	-0.0037	0.0102	-0.0178	-0.0038
	(0.0239)	(0.0308)	(0.0337)	(0.0320)
Income & Mobility Updating	-0.0198	-0.0219	-0.0497	-0.0093
, , ,	(0.0247)	(0.0315)	(0.0342)	(0.0321)
Observations	2,500	2,500	2,500	2,500
CF Partialling-Out Controls	YES	YES	YES	YES
Control Mean	0.900	0.807	0.770	0.813
No. of Controls Selected	30	22	27	21

<sup>\*\*\*</sup> p<0.01, \*\* p<0.05, \* p<0.1.

Table 8: Causes of Wealth & Poverty

Panel A: Causes of Wealth			
Survey Wave	2004	2009	2014
Ability	0.693	0.728	0.706
Efforts	0.615	0.680	0.679
Connections	0.599	0.514	0.589
Education	0.601	0.564	0.468
Opportunity	0.452	0.403	0.523
Luck	0.391	0.342	0.397
Dishonesty	0.174	0.179	0.205
System	0.259	0.202	0.284
Family		0.426	0.473
Parental education		0.304	0.331
Ambition		0.472	0.488
Panel B: Causes of Poverty (a lack thereof)			
Survey Wave	2004	2009	2014
Ability	0.612	0.651	0.634
Efforts	0.538	0.649	0.613
Discrimination	0.212	0.199	0.250
Education	0.541	0.532	0.423
Opportunity	0.273	0.257	0.361
Luck	0.269	0.279	0.291
Character	0.311	0.320	0.337
System	0.210	0.154	0.233
System Family	0.210	0.154 0.311	0.233 0.344
	0.210		

Notes: Numbers indicate the fraction of individuals answered "agree" or "strongly agree" that a given factor is important in either a person becomes rich or stays poor. Source: China Inequality and Distributive Justice Survey

#### 7.10 Protocol for Inter-generational Occupation Mobility Calculation

Chinal General Social Surveys (CGSS) We use the pooled sample of the China General Social Survey (CGSS) in the 2010s, including the following four waves: 2011, 2013, 2015 and 2017. The CGSS contains the respondents' and their father's occupations coded following the International Standard Classification of Occupations (ISCO). We take the ISCO code at first-digit level, and coded the occupational status accordingly in the following way:

- **High-Income Occupation**: Managers and Professionals (ISCO one-digit code 0, 1 or 2)
- **Medium-Top Occupation**: Technicians, Clerks and Employees in the Service Industry (ISCO one-digit code 3, 4, 5)
- Medium-Low Occupation: Lower-Skilled Workers (ISCO one-digit code 7 or 8)
- Low-Income Occupation: Farmers and Unskilled Workers (ISCO one-digit code 6 and 9)

Using this categorization, the persistence figures of high and low socio-economic statuses are respectively 28% and 50%; that is to say, for someone born to a father with a high-income occupation, the chance that he or she also stays in this occuaptional category is 28%. The full results are reported in Table 9.

**Our Survey** Given the structure of our questions, we are unable to ask our respondents' occupations in the same detail as that in the CGSS; We coded our respondents' and their fathers' socio-economic statuses in the following way:

• **High-Income Occupation**: Private Enterprise Owners, Party and Government Officials, Management and Professionals (inclusive of teachers, doctors, lawyers, etc)

- Medium-Income Occupation: Clerks, Workers in the Service Sector and Skilled Workers
- Low-Income Occupation: Farmers and Unskilled Workers

The coding of socio-economic status in our survey is slightly different from the CGSS coding at the top. In the CGSS, we code genuinely representative high-income managerial and professional jobs as proxies high socio-economic status, whereas in our survey the standard is slightly relaxed to include professionals at a lower level. Meanwhile, the coding for the proxy of low socio-economic status (farmers and low-skill workers) is the same.

Using this coding methodology, we observe that the persistence of high and low socio-economic status are respectively 38% and 47%; The statistic for the bottom-occupation category is very similar to the one obtained from the CGSS, while the figure for the top-occupation category is larger. This is somewhat expected as the bottom-occupation definition are the same and given that our definition of top-income occupation is also broader.

Table 9: Socio-economic Status and Social Mobility Indexes from the CGSS (2011-2017)

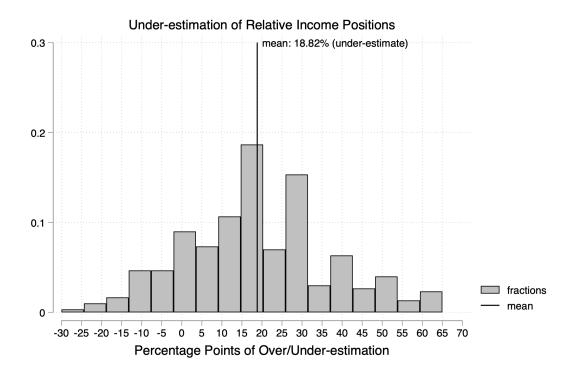
	Children's Socio-Economic Status (SES)				
	Low-Income	Mid-Low	Mid-High	High-Income	Total
Father's SES	Obs/pct	Obs/pct	Obs/pct	Obs/pct	Obs/pct
Low-Income	12811	4457	5003	2099	24370
	<b>50%</b>	19%	22%	9%	100%
Mid-Low	574	1129	1596	633	3932
	14%	28%	41%	17%	100%
Mid-High	573	686	1691	790	3740
	14%	17%	46%	23%	100%
High-Income	581	449	1157	827	3014
	19%	14%	39%	28%	100%
Total	14539	6721	9447	4349	35056
	39%	19%	28%	13%	100%

Table 10: Socio-economic Status and Social Mobility Indexes - Our Survey

	Children's Socio-Economic Status (SES)					
	Low-Income	Medium-Income	High-Income	Total		
Father's SES	Obs/pct	Obs/pct	Obs/pct	Obs/pct		
Low-Income	657	681	53	1391		
	47.23%	48.96%	3.81%	100%		
Medium-Income	71	486	116	673		
	10.55%	72.21%	17.24%	100%		
High-Income	18	124	87	229		
	7.86%	54.15%	37.99%	100%		
Total	746	1291	256	2293		
	32.53%	56.30%	11.16%	100%		

## 7.11 Income Position and Mobility Updating

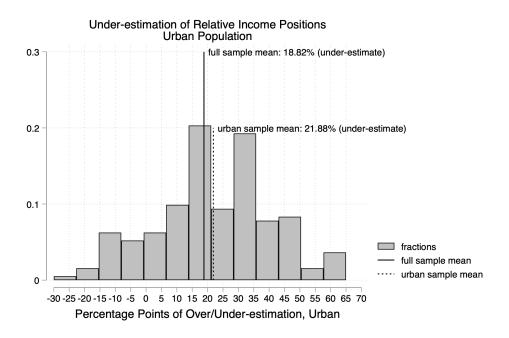
Figure 7.3: Over- and Under-estimation of Relative Income Positions



*Notes:* A positive percentage point indicates under-estimation and a negative percentage point indicates over-estimation. On average, the Chinese citizens under-estimate their relative income positions by 18.82 percentage points.

Figure 7.4: Over- and Under-estimation of Relative Income Positions (Urban and Rural Divide)

(a) Over- and Under-estimation of Relative Income Positions (Urban)



(b) Over- and Under-estimation of Relative Income Positions (Rural)

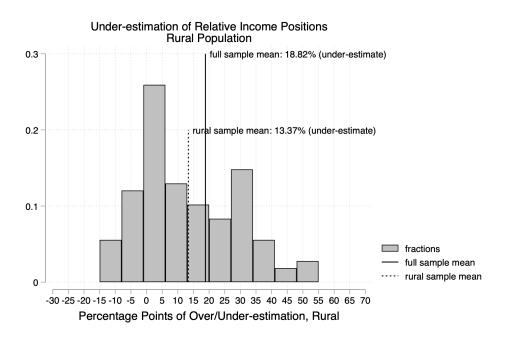
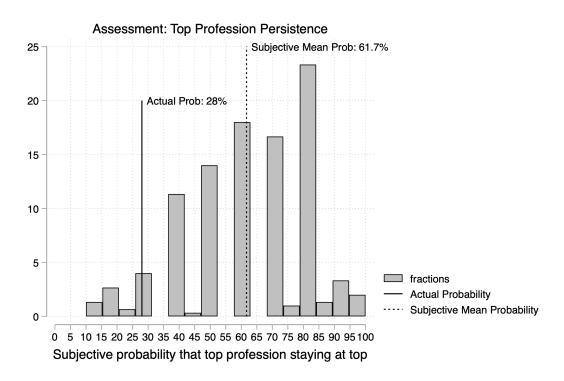


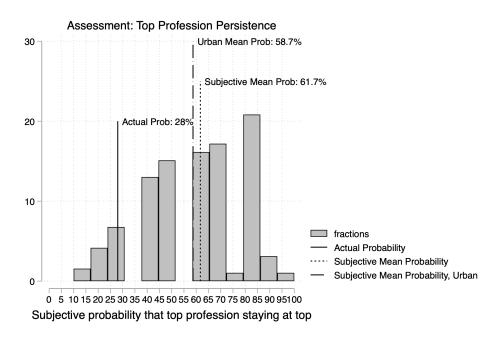
Figure 7.5: Over-estimation of Inter-generational Top-Income Occupation Persistence



*Notes:* The chance of staying in top socio-economic category is 28%, but the average perception is around 62%.

Figure 7.6: Over-estimation of Inter-generational Top-Income Occupation Persistence (Urban-Rural Divide)

(a) Over-estimation of Top-Income Occupation Persistence (Urban)



(b) Over-estimation of Top-Income Occupation Persistence (Rural)

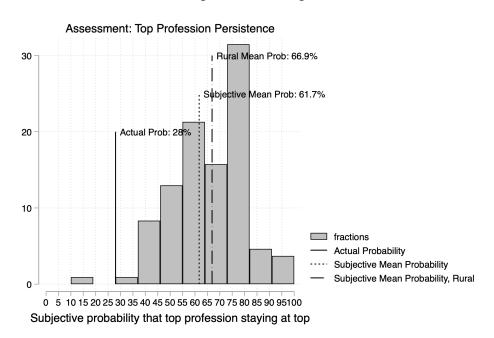
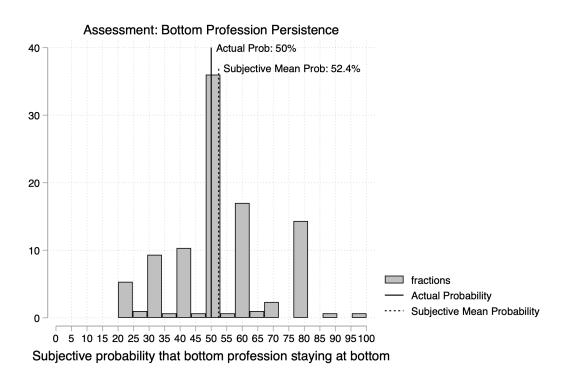


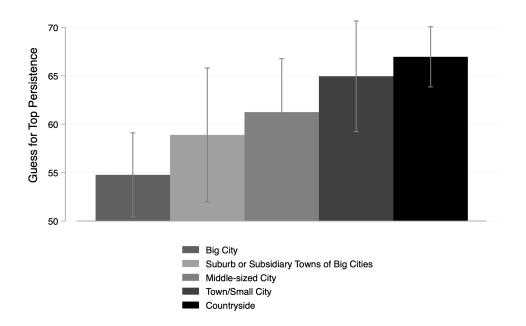
Figure 7.7: Correct Estimation of Inter-generational Bottom-Income Occupation Persistence



Notes: People guessed relatively correctly the change of getting out of the lowest socio-economic category.

Figure 7.8: Average Estimation of Inter-generational Top-Income Occupation Persistence by Places of Residence

(a) Over-estimation of Top-Income Occupation Persistence by Places of Residence



(b) Average Estimation of Inter-generational Bottom-Income Occupation Persistence by Place of Residence

