

# Does Wealth Reduce Support for Redistribution? Evidence from an Ethiopian Housing Lottery\*

Asbjørn G. Andersen<sup>1</sup>, Simon Franklin<sup>2</sup>, Tigabu Getahun<sup>3</sup>, Andreas Kotsadam<sup>1</sup>, Vincent Somville<sup>4,5</sup>, and Espen Villanger<sup>5</sup>

<sup>1</sup>Ragnar Frisch Centre for Economic Research

<sup>2</sup>Queen Mary University London

<sup>3</sup>EDRI

<sup>4</sup>NHH Norwegian School of Economics

<sup>5</sup>Chr. Michelsen Institute

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## Abstract

Exploiting the variation in wealth created by an Ethiopian housing lottery, we show that general attitudes towards redistribution and inequality aversion are not affected by a large positive wealth shock. New homeowners are, however, less supportive of taxing homeowners, highlighting a potential conflict between self-interest and preferences for redistribution. We also find evidence of endogenous beliefs: relative to losers, the wealthier winners are less likely to emphasize the role of luck in explaining economic success. We interpret this finding in terms of a self-serving bias.

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\*Andersen: a.g.andersen@frisch.uio.no, Franklin: s.franklin@qmul.ac.uk, Getahun: tigabu@uni-bonn.de, Kotsadam: andreas.kotsadam@frisch.uio.no, Somville: vincent.somville@nhh.no, Villanger: espen.villanger@cmi.no. This research has been funded by strategic funds from the Frisch Centre and by NHH småforsk. Somville acknowledges support from the Research Council of Norway (250415 and 262675). Kotsadam acknowledges support from the Research Council of Norway (Project number: 287766 “Field Experiments to Identify the Effects and Scope Conditions of Social Interactions”). We would like to thank Ingvild Almås, Alexander W. Cappelen, Erik Sørensen and Bertil Tungodden for sharing their questionnaires. Alexander W. Cappelen, Sonja Kovacevic, Bjørn-Atle Reme, Bertil Tungodden, Vanessa Valero and four anonymous reviewers provided valuable comments on an earlier version of the paper. A pre-analysis plan is registered at the AEA RCT registry (AEARCTR-0003579) and all deviations from the plan are noted in the text. The pre-analysis plan can be found [here](#). The project was reviewed by the IRB of NHH (NHH-IRB 01/19).

# 1 Introduction

The relationship between wealth and support for redistribution is a classic topic in the social sciences (Marx, 1859; Lipset, 1960; Downs, 1957). The correlation is generally negative (Alesina and Giuliano, 2011), but causal evidence remains scarce. This is not due to a lack of interest, which is evident from its prominence in theoretical models (Romer, 1975; Meltzer and Richard, 1981), but rather to the difficulty of finding plausibly exogenous variation in wealth. The nature of this relationship is increasingly relevant for low- and middle-income countries today. As these economies grow, and their citizens and political elites become wealthier, the potential impact on demand for redistribution may have an important bearing on the development of nascent welfare states.

From a classical economic viewpoint, individual support for redistribution reflects economic self-interest. According to this “*pocketbook*” perspective, better-off people should oppose redistribution, because they are more likely to have to pay for it. In reality, however, support for redistribution is also driven by inequality aversion and fairness considerations that may run counter to self-interest (Cappelen et al., 2007). Indeed, the respondents in our context voice overwhelming aversion to inequality, believe that inequality in Ethiopia is unfair, and support redistribution.<sup>1</sup> Moreover, people generally consider economic differences to be fairer and, hence, more acceptable, if they are the result of effort rather than luck or personal connections (Alesina and Giuliano, 2011; Alesina and Glaeser, 2004; Alesina and Angeletos, 2005; Alesina et al., 2018; Fong, 2001; Almås et al., 2020a). Support for redistribution may, therefore, depend not only on self-interest and fairness considerations, but also on beliefs about the sources of inequality.

We provide evidence on the causal effects of material conditions on support for redistribution by studying winners and losers of an Ethiopian housing lottery. The lottery randomly allocates the right to purchase an apartment at a highly subsidized price, and winners experience a substantial increase in wealth. In contrast to other sources of variation in wealth, windfalls should not *directly* affect fundamental attitudes towards inequality.<sup>2</sup> On the other hand, winners should reduce their support for redistribution out of self-interest.

Our main finding is that winning the lottery does not affect fundamental attitudes towards redistribution or inequality acceptance, suggesting that such attitudes are rooted in deep and stable values. Winners are, however, less supportive of a specific redistributive policy that would affect them directly; namely a real estate tax. This is consistent with the pocketbook-perspective. We also find evidence of endogenous beliefs. In particular, we show that lottery winners are less likely than losers to attribute poverty to luck, even though the difference in economic resources between the two groups is entirely due to chance. This indicates that people may be subject to a *self-serving bias* (Zuckerman, 1979; Mezulis et al., 2004).

To enhance the credibility of our findings, we replicate them using survey data from an earlier round of the lottery collected by Franklin (2019), which included similar questions. These data support the overall conclusion that general attitudes towards redistribution and inequality acceptance are unaffected by winning the lottery, and again we find that winners are less likely to believe that luck is important for economic success.

The fact that the observed changes in beliefs do not translate into a decreased support for redistribution might seem surprising. At least, that is what we would expect to see if preferences for redistribution were driven by meritocratic fairness views. While there may be several potential explanations for this finding

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<sup>1</sup>Nearly all respondents agree that the Ethiopian government should aim at reducing inequality (99%), and that the economic differences between rich and poor in Ethiopia are unfair (98%). More generally, respondents believe that a fair society requires differences in living standards to be small (70%), and that it is the government’s responsibility to reduce differences between rich and poor (81%).

<sup>2</sup>Several studies have exploited job or wage trajectories to study similar questions (e.g. Lind, 2010; Owens and Pedulla, 2013; Margalit, 2013; Brunner et al., 2011).

—including motivated reasoning or simply that changes in attitudes take longer to materialize than changes in beliefs— a more plausible explanation may be that the lottery participants we study simply do not hold such meritocratic views. Indeed, new global evidence suggest that people in non-Western countries (including Ethiopia) are not as meritocratic as people in richer countries (Almås et al., 2022). Hence, even though lottery winners are less likely to think that success is due to luck, we would not necessarily expect this belief to strongly influence inequality acceptance or support for redistribution in the context that we study.

Our findings contribute to the scarce literature on the causal effects of wealth and income on support for redistribution. To our knowledge, only two previous studies have investigated the effects of lottery-induced wealth on political attitudes or outcomes. Powdthavee and Oswald (2014) use self-reported data from the British Household Panel Survey to compare lottery winners before and after they win. They find that winners of larger amounts are less likely to vote for parties that favor redistribution. Doherty et al. (2006) exploit the variation in prizes among lottery winners in the US to show that winners of larger amounts are more hostile to estate taxes. They find no effects on support for redistribution, views on inequality, nor on the desire to expand the social safety net; however, the absence of such effects is unclear, because the small sample size (342 winners) does not permit the authors to reject either large or null effects.

Our study overcomes a key limitation of the previous lottery studies. They compare winners from different lotteries and lack information about how much people played before winning. It is, therefore, unclear if the winners of different amounts are drawn from the same distribution. By contrast, we compare randomly drawn winners and losers from the same lottery. Furthermore, given that roughly half of the city’s population signed up for the lottery we study, the participants are probably more representative of the general population than is the case for most prize-lotteries. Finally, our investigation includes a wider set of outcomes on inequality acceptance, beliefs and support for redistribution, allowing us to investigate different aspects of the income-attitudes nexus.

Despite housings’ large share of the total stock of wealth in most countries (Piketty and Zucman, 2014), there is even less work on the effect of this particular type of wealth. Using longitudinal data from the USA and the UK, as well as cross sectional data from 29 countries, Ansell (2014) shows that house ownership and higher housing prices are related to lower demand for redistribution.<sup>3</sup>

We also contribute to a literature documenting that beliefs may adjust endogenously to material conditions. This includes the study of Di Tella et al. (2007), who show that assignment of property rights to squatters increases pro-market beliefs, as well as recent evidence from the laboratory (Deffains et al., 2016; Durante et al., 2014; Molina et al., 2019). Our findings are also consistent with new evidence from a large-scale study implemented with a representative sample from the United States, showing that economic success has a causal effect on beliefs (Fehr and Vollmann, 2021). Motivated beliefs serve both psychological and functional needs (Bénabou and Tirole, 2016; Bénabou, 2015). In our case, winners may adjust beliefs to avoid identity conflicts or preserve internal consistency, and selective recall may make them understate the role of luck.

Finally, our paper contributes to a broader literature on the endogeneity of policy preferences and determinants of support for redistribution.<sup>4</sup> Importantly, the literature on support for redistribution and belief

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<sup>3</sup>See Ansell (2019) for an overview of the literature on the importance of asset ownership, and in particular home ownership. Among conservative politicians there has been a hope that increased house ownership would induce more conservative voting. Indeed, such considerations appear to have underlain the promotion of the “ownership society” by the Thatcher-administration in the UK and the W. Bush-administration in the US (Ansell, 2019). Alpino (2018) further show that politicians (in this case Berlusconi) use housing tax reductions strategically to increase conservative voting in elections.

<sup>4</sup>See, for example, recent studies that have shown that preferences for redistribution may depend on culture (Alesina and

formation is so far based almost exclusively on samples from high-income, Western countries. It is, however, critical to provide evidence from low-income but fast-growing countries such as Ethiopia. Indeed, fast changes in economic conditions and income mobility in such countries could lead to significant transformations in the traditional support for public redistribution.

## 2 The lottery

The lottery we study is part of a large-scale urban planning policy labeled The Integrated Housing and Developing Programme (IHDP). This program oversees the construction and allocation of high-quality condominium apartments in Addis Ababa, Ethiopia. The apartments are sold at highly subsidized prices, and due to excess demand, purchase rights are allocated through a lottery. We describe the program in detail in Appendix A, but summarize some key features here.

We study the 11<sup>th</sup> round of the lottery which took place in 2016 and allocated the purchase rights for 12,027 apartments. Participants had all registered for a studio, one- or two-bedroom apartment when the program was introduced in 2005. Eligibility was based on three requirements: (i) having resided in Addis Ababa the previous six months; (ii) not owning any other house or lease land; and (iii) having opened a savings account at the Commercial Bank of Ethiopia (CBE) and deposited the required savings for at least 29 months.<sup>5</sup>

Because supply and demand vary across unit type, separate lotteries are held for each type. Within each lottery, quotas exist for women (30 percent), civil servants (20 percent), and people with physical disabilities (5 percent). All quotas were decided upon after registration but before the lottery draw.

Upon winning the lottery, prospective homeowners were required to make a 20 percent down payment before they could sign the contract and receive the keys to their apartment. Around 95 percent of the winners initially drawn were able to do this. They are free to rent out their apartment, but are not allowed to sell it within the first five years. Despite these rules, a small share (4 percent) of the winners in our sample, in fact, managed to sell the apartment. A majority of the apartments are either rented out (31 percent) or still empty (32 percent), while only 30 percent have actually moved into their apartment two years after the lottery. Two percent answer other things, such as relatives living there for free or that they partly rent it out.

The Ethiopian housing lotteries are the also object of other studies: Franklin (2019) investigates how winners respond to the lottery and their willingness to move to their new homes, Andersen et al. (2022) documents the lottery effects on life satisfaction and psychological well-being, and Kotsadam and Somville (2021) reports how winning the lottery affects charitable giving.

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Glaeser, 2004; Luttmer and Singhal, 2011), institutions (Alesina and Fuchs-Schündeln, 2007), experiences with or prospects for mobility (Alesina and La Ferrara, 2005; Alesina et al., 2018; Fisman et al., 2015, 2020), inequality acceptance (Almås et al. (2010); Alesina and Giuliano (2011); Cohn et al. (2022); Fong (2001); Möllerström et al. (2015)), perceptions about inequality and relative position in society (Hvidberg et al., 2020; Kuziemko et al., 2015; Karadja et al., 2017; Hoy and Mager, 2021), beliefs about behavioral responses and economic effects (Ballard-Rosa et al., 2017; Cappelen et al., 2018), and actual experienced inequality, e.g. generated in lab experiments (Bechtel et al., 2018; Cassar and Klein, 2019).

<sup>5</sup>These criteria imply that the program targets relatively poor households but not the poorest. When we compare the wealth of the lottery participants to the Ethiopian population using an index based on questions about household assets, included both in our survey and in the latest Demographic and Health Survey (2016), we find that people enrolled in the lottery are indeed slightly poorer than the average household of Addis Ababa (a difference of 0.11 standard deviation in the wealth index), but richer than people in other urban areas.

### 3 Data

We sampled applicants who had registered in 2005 and were eligible for the 11<sup>th</sup> lottery in 2016. We disregarded applicants for three-bedroom apartments, because almost everyone in this group had already received an apartment by the time of sampling. As noted, there were special quotas for women, government employees and people with physical disabilities, so we needed to obtain information on these variables.

The Ethiopian Development Research Institute (EDRI) obtained two administrative lists from the Addis Ababa Housing Development and Administration Agency (AAHDAA), one for winners and one for losers. The list of winners contains information about apartment type, gender, and public sector employment at the time of the registration. It did not include information about physical disability status at registration, so we had to ask them about this during the survey.

The list of losers contains registrants who qualified for the 11<sup>th</sup> lottery, but did not win (and had not won in the 12<sup>th</sup> lottery either, cf. Appendix A). This list includes information about the type of apartment registrants applied for and about physical disability status. Gender could be inferred from the registrants' first names (and later confirmed during the interview) and employment status had to be obtained during the survey.

From these lists, we randomly sampled 2,200 losers and 2,200 winners with unique telephone numbers. Sampling was stratified by (assumed) gender within each apartment type, because the chances of winning differed across these variables.<sup>6</sup> We aggregated the samples of winners and losers, randomized the order, and created a new ID variable. The list sent to the data collection team contained only ID-numbers, names, and phone numbers. In this way, treatment status (winner or loser) was blinded for the enumerators and we avoid issues with confounding factors due to different timing and different enumerators. EDRI interviewed the sampled individuals by phone using the survey questionnaire developed by the research team. The survey took around 20 minutes to answer and the respondents were offered ETB 50 in compensation. The data collection team had been told to stop after around 3,000 completed interviews.

This sample size was set to ensure that we obtain precise enough estimates. For a continuous outcome, at the 0.05 level of significance, 3,000 observations allow us to detect an effect size of 0.1 standard deviations with a power of 0.8. For the binary outcomes, the power depends on the mean value in the control group. For the outcomes that we consider, the minimum detectable effect size varies between 0.036 and 0.051 percentage points, at the 0.05 level of significance and a power of 0.8. These ex-ante calculations do not take into account the potential gains in precision coming from the covariates.

In total, EDRI contacted 3,318 people and completed interviews with 3,049 individuals (1,485 winners and 1,564 losers). The response rate is, therefore, 92 percent. The share of people unwilling to be interviewed is significantly larger among winners than among losers. In Appendix E.1, we present the results from a pre-specified bounds analysis, and we show that our main results are robust to reasonable assumptions about the potential values of the missing observations.

#### 3.1 Survey measures

Our main outcome variables are related to preferences for redistribution, beliefs about the causes of poverty, and inequality acceptance.

We measure the respondents' preferences for redistribution with two main variables. At a more general

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<sup>6</sup>We were unable to stratify by employment and disability status at registration, because this information was not available for both winners and losers before the interview.

level, we ask whether they agree that “*In Ethiopia, the national government should aim to reduce the economic differences between the rich and the poor*”. This question comes from Almås et al. (2022). We then ask more specifically if “*In Ethiopia, the national government should have taxes on people owning houses to reduce the economic differences between the rich and the poor*”. Answers are given according to a four-point scale (from *Strongly disagree* to *Strongly agree*), and the variables are recoded into dummy variables by choosing the cutoff value that divides the losers sample into two groups of as equal size as possible. For the first question, this cutoff is between *Agree* and *Strongly agree*, with 73 percent (of the losers) falling into the latter category; for the housing tax question, the cutoff is between *Disagree* and *Agree*, with 60 percent agreeing to some extent. We later refer to these variables as “Redistribution (general)” and “Redistribution (housing)”.

We measure the causes of poverty with the question “*Why, in your opinion, are there people in this country who live in need? Here are two opinions: Which comes closest to your view? 1. People are poor because of laziness and lack of will power. 2. People are poor because of an unfair society.*” We create a dummy variable, “Individual/Society”, which equals one if people answer 1 and zero if they answer 2. This variable comes from the World Values Survey (<http://www.worldvaluessurvey.org>). We also include measures used in Almås et al. (2020b), where the respondent is asked to what extent the following factors cause people to become poor (to a small or to a large degree): competence, luck, poor character, effort, discrimination, lack of opportunities, poor family, poorly-educated parents, and lack of ambition. We group these factors in four categories, and construct one index per category: *luck*, *individual* (competence, poor character, effort, lack of ambition), *family* (poor family, poorly-educated parents) and *society* (discrimination, lack of opportunities). Each index is constructed as the average of the binary variables that compose the group (e.g. the *individual* index is equal to zero when the respondent thinks that none of the individual factors are important, it is equal to  $\frac{1}{4}$  if the respondent said that one of the four individual factors are important, ...). We present the results using the four categories in the main text. The effects on the dis-aggregated components are reported in Appendix K.

We create a measure of inequality acceptance based on the question: “*Which opinion about inequality comes closest to your view? 1. Large differences in people’s incomes are acceptable to properly reward differences in talents and efforts. 2. For a society to be fair, differences in people’s standard of living should be small.*” We create a dummy variable, “Meritocratic/Egalitarian”, which equals one if people answer 1 and zero if they answer 2. This variable is based on questions from the European Social Survey ([www.europeansocialsurvey.org](http://www.europeansocialsurvey.org)).

Finally, based on respondents’ reported asset values (including real estate) and liabilities, we calculate their housing-related wealth and net wealth. People were also asked whether they are richer today than five years ago, whether they expect to be richer in five years from now, and whether they perceive themselves as richer, equally rich, or poorer than other Ethiopians (where we have grouped together *richer* and *equally rich*). Finally, we construct an asset index based on whether the households own a radio, TV, refrigerator, car, computer, tablet, satellite dish, smartphone, or an electric mitad (a common cooking appliance).

The measures described thus far come from the survey of participants from the 11<sup>th</sup> lottery. However, we also include evidence from the 10<sup>th</sup> lottery, using survey data collected by Franklin (2019). Indeed, this survey contains questions that are directly relevant to this paper and have not been reported elsewhere. Respondents were asked which of the following statements best represent their view (on a scale of 1 to 10 with 1 representing the first view and 10 the second):

- “*In the long run, hard work usually brings a better life.*” vs. “*Hard work doesn’t usually bring success,*

*it's more a matter of luck and connections.”*

- *“Incomes should be made more equal.” vs. “We need larger income differences as incentives for individual effort.”*

In addition, respondents were asked how much they agreed with the following statements:

- *“It is the government’s responsibility to reduce differences between rich and poor”*
- *“The government should raise taxes to expand programs that help the poor”*

Finally, the survey asks respondents about the social class with which they most closely associate their parents and their own household.

We include these additional survey measures in the table with the main results as a way to further check the validity and the generality of our main findings on preferences for redistribution and beliefs about the causes of poverty.

### 3.2 Descriptive statistics and balance test

Table 1 presents descriptive statistics for the overall sample and for the winners and losers separately.

We see that 49 percent of the final sample are winners. As regards the strata variables, 42 percent of the respondents are female, while the shares registered for a studio, a one-, and a two-bedroom apartment are 20, 54, and 26 percent, respectively. As we used these strata variables when sampling winners and losers to maximize similarity, we would expect them to be balanced across the two groups.<sup>7</sup> The shares of civil servants and people with physical disabilities are, however, higher among winners (30 and 6 percent, respectively) than among losers (14 and 0 percent, respectively). We should expect differences with respect to these variables given the quotas for these groups. Because the information was not available for both winners and losers beforehand, we could not stratify sampling on these variables. We describe these issues in detail in Appendix Section E.2.1, where we also show that the coding choices have little consequence for the main results.

The mean age of respondents is around 43 years (which implies that they were on average 29–30 when they signed up in 2005), the most common religion is Orthodox (76 percent), the most common ethnic group is Amhara (37 percent), and the most common birth region is Addis Ababa (45 percent).

To check that winning is indeed random, we test for balance in the control variables across the winner and loser groups. We do this by regressing the “Winner” variable on the control variables described above while controlling for the strata fixed effects  $S_i$  (gender, government employment, disability, and apartment type). Based on the F-test (see note below Table 1) we reject the hypothesis that these variables jointly predict winning. In the Appendix, Table A.4, we also present t-tests for each variable, as well as the results from the multivariate estimation. While the F-test shows that there is balance in general, winners and losers differ on some variables. In Appendix E.3 we present alternative versions of our results where we include either the full set of control variables or a subset selected using a doubly robust LASSO procedure. Our results are relatively insensitive to including controls, in particular if we leave out certain variables with many missing values that reduce the sample size substantially (in a non-random way).

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<sup>7</sup>The share of females is slightly higher in the winner group (45 vs. 40 percent), because the gender variable is updated based on the interview. If we instead use the gender inferred from the name (as used in the sampling), the female share is 44–45 percent for both groups.

Table 1: Descriptive statistics.

	Total		Winner		Loser	
	Mean	SD	Mean	SD	Mean	SD
Winner	0.49	(0.50)	1.00	(0.00)	0.00	(0.00)
<i>Strata variables</i>						
Female	0.42	(0.49)	0.45	(0.50)	0.40	(0.49)
Public servant	0.22	(0.41)	0.30	(0.46)	0.14	(0.34)
Disabled	0.03	(0.17)	0.06	(0.23)	0.00	(0.06)
Studio	0.20	(0.40)	0.20	(0.40)	0.19	(0.39)
One-bedroom	0.54	(0.50)	0.53	(0.50)	0.55	(0.50)
Two-bedroom	0.26	(0.44)	0.26	(0.44)	0.26	(0.44)
<i>Other control variables</i>						
Age	42.81	(9.60)	43.38	(9.66)	42.26	(9.52)
Orthodox	0.76	(0.43)	0.77	(0.42)	0.74	(0.44)
Protestant	0.12	(0.32)	0.12	(0.33)	0.11	(0.31)
Muslim	0.11	(0.32)	0.09	(0.29)	0.13	(0.34)
Amhara	0.37	(0.48)	0.38	(0.49)	0.37	(0.48)
Gurage	0.17	(0.37)	0.15	(0.35)	0.18	(0.39)
Oromo	0.16	(0.37)	0.16	(0.36)	0.17	(0.38)
Tigray	0.08	(0.28)	0.09	(0.29)	0.07	(0.26)
Born in Addis	0.45	(0.50)	0.42	(0.49)	0.49	(0.50)
Born in Amhara	0.18	(0.38)	0.19	(0.39)	0.16	(0.37)
Born in Oromia	0.15	(0.36)	0.16	(0.36)	0.14	(0.35)
Born in SNNP	0.14	(0.35)	0.14	(0.34)	0.14	(0.35)
Born in Tigray	0.06	(0.24)	0.08	(0.27)	0.05	(0.22)
Earnings 2005 (at reg.)	5.13	(3.19)	5.22	(3.18)	5.05	(3.20)
Earnings 2015	7.05	(3.03)	7.14	(3.02)	6.97	(3.04)
Partner earnings 2005 (at reg.)	0.92	(2.47)	0.92	(2.45)	0.93	(2.48)
Partner earnings 2015	1.57	(3.25)	1.61	(3.28)	1.54	(3.21)
Partner 2005 (at reg.)	0.32	(0.46)	0.31	(0.46)	0.32	(0.47)
Partner 2015	0.50	(0.50)	0.49	(0.50)	0.52	(0.50)
N	3049		1485		1564	

*Notes:* An F-test of whether all “Other control variables” jointly predict winning, after controlling for the strata variables, returned a value of 0.42 ( $p = 0.52$ ). The earnings variables are measured as the inverse hyperbolic sine transformation of the monthly earnings in Ethiopian Birr.



## 4 Empirical strategy and results

To test the effects of winning the lottery on individual  $i$ 's outcomes, we regress the outcome of interest  $Y_i$  on  $T_i$ , a dummy variable equal to one if the individual has won the lottery, while controlling for the set of strata covariates  $S_i$  (gender, government employee, disabled, and apartment type):

$$Y_i = \beta T_i + \theta S_i + \varepsilon_i \quad (1)$$

This is our main specification as explained in the pre-analysis plan. Nonetheless, we also show results where we include the full set of control variables, and we check whether using the post-double LASSO selection approach of Belloni et al. (2014) increases precision (Appendix E.3). To the extent that one is worried about imbalance, the LASSO selection approach is also helpful since it precisely selects those variables that are correlated with both treatment and the outcomes. As the randomization is at the individual level, we use robust standard errors without any clustering.

When discussing the mechanisms, in Table 3, we also estimate equation 1 where  $T_i$  is decomposed in three categories: winners who moved into their new apartment, winners who did not move in and winners who sold the apartment. These decisions are taken after winning and are plausibly endogenous. We, therefore, do not give a causal interpretation of these estimates, but use the correlations in our discussion of the lottery's effects.

### 4.1 Effects of winning on wealth

As noted, we interpret the effects of winning the lottery in terms of a wealth effect. To substantiate this interpretation, we start by estimating the effect of winning the lottery on wealth.<sup>8</sup>

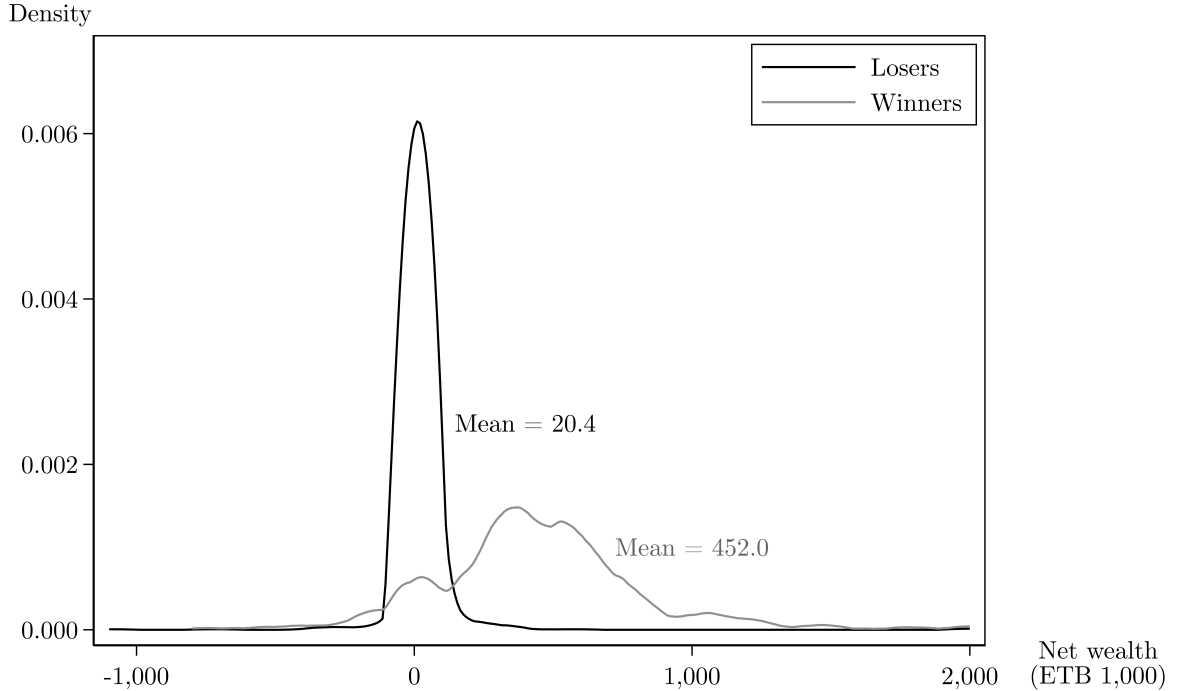
Figure 1 shows kernel (Epanechnikov) density estimates of the (net) wealth distribution of the losers and winners at the time of the survey (two years after the lottery). Net wealth is the sum of housing wealth and savings in cash and in the bank minus debt. The winners are clearly wealthier than the losers. Their average net wealth is ETB 452,038 (USD 15,120), which is more than 20 times larger than the wealth of losers (ETB 20,406 or USD 682). The difference corresponds to around 15 years of the average earnings in our sample.

We further test the effects of winning the lottery on different sources of wealth, on incomes and on expenditures (Appendix C). Winning increases both real-estate wealth (defined as the respondent's expected selling price of any housing units owned) and net wealth. Winners also perceive themselves to be richer than five years ago (the estimated effect is 6.5 percentage points relative to a mean of 71 percent among the losers) and expect to become even richer over the next five years. Finally, a larger share of winners than losers perceive themselves to be as rich as or richer than Ethiopians in general (74 vs. 63 percent). This analysis suggests that winning the lottery has a substantial impact on self-assessed wealth and perceived economic position. We find no effects on the household assets index described above, which may take longer to materialize. The winners also report larger expenditures, with an increase in mortgage payments larger than the reduction in rents. Their overall income, however, also increases, due to a sharp increase in rental income. In all, expenditures increase more than incomes which may make winners more liquidity constrained.

The main weakness of our wealth measures is missing values for part of the sample. In particular, some respondents were unable to provide an estimate of the market value for their real estate, and some simply refused to report their wealth. In Appendix Table A.13, we calculate bounds on the lottery effects and we

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<sup>8</sup>We have also reported this "first stage", the lottery's effect on wealth, in Andersen et al. (2022) and Kotsadam and Somville (2021).



*Note: The figure shows the distribution of wealth for winners and losers (in percentages).*

Figure 1: Distribution of wealth among the lottery winners and losers.

conclude that the estimated wealth effects remain large and statistically significantly different from zero even if we make very extreme assumptions about the values of the missing observations. The conclusions remain the same if we use the inverse hyperbolic sine transformation of wealth.

## 4.2 Main results

Having shown the substantial effect of winning on wealth, we now present the effects of winning on the main outcomes in Table 2. First, we see no effect on attitudes toward redistribution in general. The coefficient is very close to zero and using a 95 percent confidence interval we can reject that the effect is larger than 0.036 in any direction. That is, we can reject that the winners were more than 3.3 percentage points (4.9 percent of the mean) more or less likely to strongly agree that the government should intervene to reduce inequality. Turning to a specific type of redistribution that is salient to winners of the housing lottery, i.e. whether there should be a tax on people owning houses, we find a statistically significant negative effect. The point estimate shows that winners are 3.8 percentage points (6.3 percent of the mean) less likely to agree or strongly agree that taxing homeowners is a good idea. This suggests that, even though general support for redistribution is relatively stable, attitudes towards specific redistributive policies are, indeed, also driven by self-interest.

We find no effect on the variable measuring whether people ascribe poverty to an unfair society or to individual factors (Individual/Society), nor on the inequality acceptance measure (Meritocratic/Egalitarian). In Appendix Figure A.3 we show the distribution of attitudes across all possible responses, with comparisons between winners and losers, and we note that differences are generally small.

In Table 2, Panel B we show effects on more detailed questions about the causes of poverty. We see that

Table 2: Lottery effects on the main outcomes.

	(1)	(2)	(3)	(4)
<b>A. Support for redistribution &amp; Inequality aversion.</b>				
	Redistribution General	Redistribution Housing	Causes of poverty Individual/Society	Inequality aversion Meritocratic/Egalitarian
Winner	-0.003 (0.017)	-0.038** (0.019)	-0.002 (0.019)	-0.010 (0.017)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049
<b>B. Beliefs about the causes of poverty.</b>				
	Luck	Individual	Family	Society
Winner	-0.033** (0.015)	0.008 (0.009)	-0.024 (0.014)	0.011 (0.015)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049
<b>C. Results from the 10<sup>th</sup> lottery (agreement with statements).</b>				
	Success is due to luck	Income differences are necessary	Government should reduce inequality	Raise taxes to help poor
Winner	-0.065** (0.027)	0.003 (0.027)	-0.010 (0.021)	0.017 (0.019)
Mean (losers)	0.449	0.447	0.190	0.131
N	1375	1375	1343	1336

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the lottery stratification variables in all Panels. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

winner appear to be significantly less likely to attribute poverty to “bad luck”. When we disaggregate the categories, we also see that they are more likely to ascribe poverty to a “poor character”, one of the individual factors (Appendix Table A.63). These results suggest that beliefs appear to be subject to a self-serving bias.<sup>9</sup>

The fact that we find effects on the detailed questions about the causes of poverty but not on the main causes of poverty variable Individual/Society’ may seem surprising at first sight. The Individual/Society variable is, however, silent on luck, and asks the respondent to compare and choose between *laziness* and *fairness of society*. Respondents may think that both unfairness and laziness are important, in the same way as most respondents view both effort and discrimination, as well as opportunities and ambitions, as important causes of poverty (as seen in the mean values of the control group in Table A.63). Taken together, these findings suggest that winning leads people to believe that luck is less important in explaining poverty, whereas their relative weighting of laziness and fairness of society as explanatory factors does not change. It should also be noted that if we adjust the p-value for the effect on Luck for the fact that we are testing four hypotheses it is only statistically significant at the 10 percent level.<sup>10</sup>

We find more evidence corroborating our results on general attitudes and beliefs about the causes of poverty, using survey data from the 10<sup>th</sup> lottery in 2015, collected by Franklin (2019). This survey includes similar questions with a slightly different framing.<sup>11</sup> We show the effects of winning the lottery on these variables in Table 2, Panel C. Again, we see that winning the lottery makes people less likely to view luck as important for success. Indeed, winners are roughly 15% more likely to say that hard work, rather than luck, brings a better life.<sup>12</sup> There are no effects on broad measures of preferences for redistribution or taxation.<sup>13</sup>

We find further evidence in support of the self-justification effect. In the survey from the 10<sup>th</sup> lottery, respondents were also asked to report the class background of their parents, which obviously cannot be affected by the lottery. We find that winning the lottery leads respondents to significantly down-grade the class level with which they identify. In particular, they are more likely to identify as coming from the lowest social class. Our interpretation is that this type of selective recall creates a sense of entitlement that enables winners to exempt themselves from their own principles of fairness: they come from humble beginnings and, therefore, deserve to keep their newfound wealth (see Appendix Table A.58). Additionally, while most people do not perceive the lottery to be “fair and transparent”, there is a large difference whereby 90 percent of losers and 61 percent of winners do not think so.

## 5 Mechanisms and additional exploratory analysis

We have shown that winning the housing lottery increases people’s wealth substantially, reduces their support for real estate taxes, and changes their beliefs about the causes of poverty. But these effects are not necessarily a result of the changes in wealth only.

Changes in wealth do not occur in isolation. When people become wealthier, they typically adapt their consumption: for instance, they may move to a nicer house in a better neighborhood (and this of course is even more likely in our case), they may make new friends and acquaintances, they may get access to new

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<sup>9</sup>In Appendix section G we show that the effect on Luck does not seem to mediate the reduced form effect we find of winning on attitudes.

<sup>10</sup>Correcting the p-values for the fact that we are testing nine variables in the Appendix table, we note that only “poor character” is marginally statistically significant at conventional levels ( $p=0.05$ ).

<sup>11</sup>This data is from December 2017 to February 2018, around three years after the lottery.

<sup>12</sup>Specifically, winners are 15% more likely give a score of 1 or 2 on the scale from 1 to 10. The result is robust to discretizing the variable at other points in the scale, or looking at the raw response outcome. Figure A.4 in the appendix shows a leftward shift across the distribution of responses among winners.

<sup>13</sup>As seen in Appendix Tables A.57, these results are robust to adding additional household-level controls.

sources of information, and so on. Such changes in consumption could themselves have effects on preferences and beliefs. The observed effects may therefore be due to the immediate, direct effect of wealth, coupled with the indirect effects of wealth through changes in consumption or environment. It is difficult to know exactly what mechanisms underlie our results. Furthermore, it may be the case that winning the lottery has a direct effect on our outcomes, i.e. not via the effect on wealth. The most likely direct effect would be to move to a better neighborhood and house. We investigate this the following section.

## 5.1 Movers, sellers, and non-movers

Moving to a new neighborhood is a possible mediator for the effects of wealth and studies of cash prize lotteries find that people often move when they become wealthier. In our sample, only around 30 percent of the winners moved to the apartment they won.<sup>14</sup> As moving is a choice, it is endogenous and we are unable to distinguish between the direct effects of winning and the effects of winning mediated by moving. We can, however, conduct some exploratory analysis and investigate the effects for those who moved to the apartment they won, those who still own it but have not moved in (including those who rent out the apartment), and those who have sold it.

In Table 3, we split the winners into the three groups. We find that sellers are more favorable to taxing homeowners. Note that there are only 62 sellers in the sample, however. For winners who have not sold the apartment, the effect estimates are negative and not statistically significantly different from each other ( $p=0.17$ ). We interpret these findings as a clear indication that people’s attitudes towards redistribution may depend on the likelihood of having to pay for it themselves. The effects on the beliefs about the causes of poverty are also very similar in all three groups.<sup>15</sup> This analysis indicates that moving, and exposure to a new neighborhood, is unlikely to explain the lottery effects given that movers and non-movers display similar preferences and beliefs.

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<sup>14</sup>24% of all respondents moved to any new place after the lottery: 12% of the losers and 37% of the winners.

<sup>15</sup>In Appendix Section J we separate between non-movers who are renting out the apartment (“landlords”) and other non-movers (i.e., cases where the flat is still empty or a relative is staying there for free). The results are not very different for these groups, but the landlords appear to be less hostile toward housing taxes. A possible explanation is that a larger share of the landlords expect to sell the apartment with in some years.

Table 3: Effects on main outcomes for winners with different post-lottery behavior.

	(1)	(2)	(3)	(4)
<b><i>A. Support for redistribution &amp; Inequality aversion</i></b>				
	Redistribution General	Redistribution Housing	Causes of poverty Individual/Society	Inequality aversion Meritocratic/Egalitarian
Movers	0.008 (0.024)	-0.074*** (0.027)	0.014 (0.027)	0.013 (0.025)
Non-movers	-0.006 (0.019)	-0.035* (0.021)	-0.011 (0.021)	-0.016 (0.019)
Sellers	-0.020 (0.058)	0.141** (0.058)	0.008 (0.066)	-0.074 (0.055)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049
<b><i>B. Beliefs about the causes of poverty.</i></b>				
	Luck	Individual	Family	Society
Movers	-0.034 (0.021)	0.008 (0.013)	-0.034* (0.020)	-0.013 (0.022)
Non-movers	-0.032* (0.017)	0.005 (0.010)	-0.022 (0.016)	0.018 (0.016)
Sellers	-0.050 (0.048)	0.052 (0.032)	0.020 (0.054)	0.063 (0.045)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery, conditional on post-lottery behavior. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. The number of Movers are 438, Non-movers 985, and Sellers 62. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

## 6 Conclusion

Are attitudes toward redistribution stable or are they endogenous to material conditions? This question has puzzled social scientists for centuries and we offer new evidence based on a large-scale, preregistered, data collection of randomly assigned winners and losers of an Ethiopian housing lottery. We verify that winners and losers are similar in terms of baseline characteristics and show that winning entails a large increase in wealth.

Our main findings lend support to both the pocketbook theory of attitudes and the ideology perspective. As regards the first, we find that winning the lottery reduces support for a specific redistributive policy that would affect winners directly; namely a real estate tax. In support of the latter perspective, we find no effects on more general attitudes toward redistribution and inequality acceptance. We further show that care should be taken when separating ideology and pocketbook, because beliefs that are often seen as more profound and ideological can be endogenous to material conditions. In particular, we uncovered important changes in beliefs about the causes of poverty: lottery winners are less likely to think luck plays a role for poverty (and more likely to ascribe it to a “poor character”). This finding is consistent with a self-serving bias.

It is striking that the important observed changes in beliefs about the causes of poverty do not translate into more radical changes in support for redistribution. This is in line with recent evidence from the laboratory showing that changes in beliefs about the importance of luck and effort do not necessarily affect subsequent willingness to redistribute (Lobeck, 2021). It is also consistent with the recent finding that meritocratic views are much less prevalent in non-Western countries than in European and North-American societies (Almås et al., 2022). It could of course also be a matter of time, where beliefs change first and support for redistribution adapt later. But it may also be the case that distributional preferences are more stable than beliefs, as recently discussed in Fisman et al. (2020). This question deserves further inquiry and it seems to be an important avenue for future research.

Because winning the lottery is random, conditional on the strata variables, and given that we only compare individuals who participated in the same lottery, the internal validity of our findings is strong. In addition, we are able to replicate our results using survey data from a previous round of the lottery. How well these results generalize to other settings and other types of wealth gains is an open question. The lottery we study is different from a cash prize lottery in several dimensions. Winners in the lottery not only become wealthier, they also get access to better housing in a new neighborhood. We show, however, that only a minority of the winners have moved, and that movers and non-movers have similar preferences. As winners are also making down payments on their property and have to pay off their mortgage, it is possible that they are more liquidity constrained than the losers and this may also affect preferences. An additional feature of our setting is that being eligible for the lottery implies saving which the participants may interpret as effort, as such the winners may think of their wealth as partly stemming from effort and not luck alone. Furthermore, absent longitudinal data it is difficult to completely rule out that it is losing the lottery an additional time rather than winning it that induce differences in preferences. Finally, it is likely that wealth affects preferences more over a longer time horizon, and perhaps even across generations. We hope that future studies will investigate the effects of similar and different types of shocks in other settings so that we learn more about the general effects of wealth on attitudes and beliefs.

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## **APPENDIX: FOR ONLINE PUBLICATION**

This appendix provides additional information about the study and its context, establish the robustness of the results, and report additional results mentioned in the text.

## A The Lottery – in details

An estimated 70–90 percent of the households in Addis Ababa live in informal housing or slums, often characterized by a very high density and a lack of basic amenities such as running water and electric lighting.<sup>16</sup> As a means of improving housing conditions for the city’s residents—while at the same time stimulating the domestic construction sector and upgrading slum areas of the inner city—the Ethiopian government launched the Integrated Housing and Development Programme (IHDP) in 2005. Under this program, multistorey condominiums have been constructed, mostly on cheap plots of land at the outskirts of the city, and sold at highly subsidized prices.<sup>17</sup>

Given the excess demand for housing at the subsidized prices, the condominium apartments are allocated through a lottery among eligible registrants. The lottery is computer-based and held in a location open to the public (UN-HABITAT, 2010).<sup>18</sup> Lottery winners are required to pay at least 20 percent of the apartment price up front, and are offered access to finance for the remaining 80 percent through the Commercial Bank of Ethiopia (CBE). Due to this payment scheme, the program has been labeled the 20/80-program.<sup>19</sup> As we show in Section 3.2, the wealth gain associated with winning the lottery is substantial.

Despite a stated focus on facilitating access to quality housing for low- and middle-income groups, there is no means testing with respect to income.<sup>20</sup> Eligibility is based on three requirements: (i) having resided in Addis Ababa for at least the previous six months; (ii) not having any other house or lease land registered in one’s own (or spouse’s) name; and (iii) having opened a savings account at the CBE and deposited the required monthly savings for a specified period.<sup>21</sup>

During registration, applicants must select the desired apartment type (studio, one, two, or three bedrooms). As supply and demand vary across unit type, separate lotteries are held for each type. Within each lottery, quotas exist for women, civil servants, and people with disabilities. First, 30 percent of the winners are drawn from the pool of female applicants. Second, 20 percent of the winners are drawn from the pool of government employees. Third, there is a five-percent quota for people with physical disabilities. Finally, the remaining 45 percent are allocated among all applicants (i.e. regardless of gender, etc.). All quotas were decided upon after registration but before the lottery draw. Only one person per household is allowed to sign up for the program.

The IHDP is a large-scale and comprehensive program. During the initial registration in 2005, more than 300,000 households in Addis Ababa signed up for the program, corresponding to roughly half of the city’s population,<sup>22</sup> and at the time of writing 192,000 apartments have been allocated through 13 rounds of the lottery (see Appendix Tables A.1 and A.2).<sup>23</sup>

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<sup>16</sup>For a thorough description of housing conditions in Addis Ababa see e.g. UN-HABITAT (2010) and Franklin (2019).

<sup>17</sup>In the capital, the Addis Ababa Housing and Development Project Office (AAHDPO) is responsible for organizing and financing the construction of the apartments. The construction is financed through the issuing of bonds from the Commercial Bank of Ethiopia (CBE). In principle, the IHDP was launched as a nationwide program; however, outside of Addis Ababa, the program has been suspended for long periods; see UN-HABITAT (2010). We therefore focus exclusively on the Addis Ababa program, which is also the largest in scale by far.

<sup>18</sup>Formally, the Addis Ababa Housing Development and Administration Agency (AAHDAA) is responsible for allocating the apartments, and the lottery draw is carried out by the Information Network Security Agency (INSA).

<sup>19</sup>In 2013, two new schemes were introduced; the so-called 10/90-program (with a down payment of 10 percent) targeted at lower-income groups, and the 40/60-program (with a 40 percent down payment) intended for middle- and upper-middle class households as well as members of the Ethiopian diaspora.

<sup>20</sup>By contrast, applicants for the 10/90-program have to prove that they are low-income earners.

<sup>21</sup>The required monthly savings vary by apartment type, and the savings threshold applying to a particular lottery will depend on the supply and demand of the specific apartment type at the time of the lottery. For instance, in the 2018 lottery, the savings threshold was only three months for three-bedroom apartments, while it was 60 months for the other unit types.

<sup>22</sup>The applicant shares were highest in the four central subcities, which are characterized by densely populated slum areas; Addis Ketema (68 percent), Arada (76 percent), Kirkos (93 percent), and Lideta (87 percent).

<sup>23</sup>There was a new registration round for the 20/80-program in 2013, when the two new program types were also introduced.

In this paper, we focus on the 11<sup>th</sup> round of the lottery, which took place in 2016. The reason for this is that the 12<sup>th</sup> round of the lottery, conducted in 2018, was unusually small because only 2,607 apartments were allocated.<sup>24</sup> The 13<sup>th</sup> round of the lottery took place in March 2019 after data collection for the project was completed.

At the time of the 11<sup>th</sup> round of the lottery, 142,000 apartments had been allocated over the previous 10 years. This lottery allocated the purchase rights for 12,027 apartments (disregarding three-bedroom units). Only individuals who had registered in 2005 were included in the draw. In addition, applicants were required to have saved continuously for at least 29 months (with no breaks longer than six months). Upon winning the lottery, prospective homeowners were required to make the 20 percent down payment before they could sign the contract and receive the keys to their apartment. Around 95 percent of the winners initially drawn were able to do this. They are free to rent out their apartment, but are not allowed to sell it within the first five years. As noted, a small share (4 percent) of the winners in our sample in fact managed to sell the apartment, despite these rules. A majority of the apartments are either rented out (31 percent) or still empty (32 percent),<sup>25</sup> while only 30 percent have actually moved into their apartment two years after the lottery. Many respondents report that they will move to the apartment in the future.

Table A.1: Population and number of applicants from different subcities

Subcity	Population	Households	Applicants	Share of population	Share of households
Addis Ketema	255,092	62,218	42,024	16.5 %	67.5 %
Akaky Kaliti	181,202	44,196	8,037	4.4 %	18.2 %
Arada	212,009	51,710	39,491	18.6 %	76.4 %
Bole	308,714	75,296	23,329	7.6 %	31.0 %
Gullele	267,381	65,215	21,922	8.2 %	33.6 %
Kirkos	220,991	53,900	50,243	22.7 %	93.2 %
Kolfe Keranio	428,654	104,550	26,224	6.1 %	25.1 %
Lideta	201,613	49,174	42,636	21.1 %	86.7 %
Nifas Silk-Lafto	316,108	77,100	26,056	8.2 %	33.8 %
Yeka	346,484	84,508	27,500	7.9 %	32.5 %
Total	2,738,248	667,865	307,462	11.2 %	46.0 %

*Notes:* The reported number of inhabitants comes from the Ethiopian Population and Housing Census of 2007, and the number of households is based on a household size of 4.1 (which was the average for Addis Ababa in 2007).

In this round, existing registrants were also allowed to renew their subscription and change to a smaller unit type. It is estimated that 700,000 new registrants signed up for one of the three schemes during the second round.

<sup>24</sup>Furthermore, 1,200 of the apartments were three-bedroom units, and given the relatively low demand for this unit type, virtually all remaining applicants for this unit type won. This implies that only 1,400 units were allocated through an actual lottery.

<sup>25</sup>The most commonly reported reason for leaving the apartment empty is lack of basic infrastructure.

Table A.2: Apartments awarded through 13 rounds of the lottery

Round	Year	Studio	1-Bedroom	2-Bedroom	3-Bedroom	Total
1	2006	4,118	5,677	6,548	2,645	18,988
2	2007	2,592	5,070	6,263	1,106	15,031
3	2009	2,695	3,679	3,626	735	10,735
4	2010	2,797	6,755	4,108	1,372	15,032
5	2010	3,088	4,719	2,028	934	10,769
6	2011	1,255	4,467	2,747	1,531	10,000
7	2012	2,952	3,594	433	321	7,300
8	2013	1,326	4,665	2,952	1,155	10,098
9	2013	2,570	4,423	2,330	934	10,257
10	2015	6,734	15,670	7,309	4,327	34,040
11	2016	2,449	6,262	3,316	2,489	14,516
12	2018	246	1,041	125	1,195	2,607
13	2019	1,248	18,823	7,127	5,455	32,653
Total		34,070	84,845	48,912	24,199	192,026

*Notes:* So far, all winners have been drawn from among the 2005 registrants, with the exception of three-bedroom apartment winners of the 13<sup>th</sup> lottery, who were drawn from among the 2013-registrants, because the 2005 registrants for this apartment type had all received their apartment by round 12.

Table A.3: Housing cost, price, value, and subsidies.

	Studio	One-bedroom	Two-bedroom
	Mean	Mean	Mean
Construction costs	112	187	278
Land costs	67	112	166
Infrastructure costs	46	77	115
Provision cost (excl. infrastructure)	179	299	444
Estimated value	354	629	813
Purchase price	73	169	321
Subsidy (pct. - based on cost of provision)	145	77	38
Subsidy (pct. - based on estimated value)	379	275	155
N	299	793	393

*Notes:* Cost, price, and, value are in 1,000 ETB. Subsidy is given as percentage of purchase price. Provision costs estimates are based on Franklin (2018). Estimated value is obtained from the survey. Purchase price is calculated from the square-meter price for each unit type and the exact size of each unit.

## B Balance

In column one of Table A.4, we report the t-tests of equal means between losers and winners for each of the variables included in Table 1. The second column shows the estimates from regressing “winner” on all variables simultaneously. We see that some variables are correlated with winning. In particular, the bivariate correlation indicates that winners are slightly older, less likely to be Oromo, Muslim, and born in Addis Ababa, while they are more likely to be Tigray and born in the Tigray region. However, as shown in the right panel of Table A.4 the variables taken together do not predict winning (as seen by the F-test).



Table A.4: Balance test: Relationship between control variables and winning.

	(1) Winner (regressions one-by-one)	(2) Winner (multivariate regression)	(3) Winner (missing indicators)
Age	0.002** (0.001)	0.002 (0.001)	0.001 (0.001)
Orthodox	0.018 (0.020)	-0.026 (0.080)	-0.027 (0.071)
Protestant	0.034 (0.028)	-0.017 (0.084)	-0.004 (0.074)
Muslim	-0.077*** (0.027)	-0.087 (0.086)	-0.107 (0.075)
Amhara	0.004 (0.018)	-0.029 (0.031)	-0.033 (0.027)
Gurage	-0.032 (0.024)	-0.047 (0.038)	-0.048 (0.032)
Oromo	-0.048** (0.024)	-0.067* (0.036)	-0.074** (0.031)
Tigray	0.071** (0.032)	-0.113* (0.063)	-0.084 (0.053)
Born in Addis	-0.072*** (0.018)	-0.070 (0.075)	-0.047 (0.063)
Born in Amhara	0.034 (0.023)	-0.005 (0.078)	0.016 (0.066)
Born in Oromia	0.018 (0.025)	-0.018 (0.079)	0.020 (0.067)
Born in SNNP	0.018 (0.026)	0.033 (0.083)	0.046 (0.070)
Born in Tigray	0.137*** (0.036)	0.176* (0.095)	0.161** (0.079)
Earnings 2005 (at reg.)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Earnings 2015	0.000 (0.000)	0.000* (0.000)	0.000 (0.000)
Partner earnings 2005 (at reg.)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Partner earnings 2015	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Partner 2005 (at reg.)	-0.017 (0.019)	0.007 (0.033)	0.011 (0.029)
Partner 2015	-0.020 (0.018)	-0.031 (0.029)	-0.033 (0.026)
$R^2$	<i>NA</i>	0.087	0.088
$F$ -test ( $p$ -value)	<i>NA</i>	0.518	0.480
Mean	<i>NA</i>	0.495	0.487
N	<i>NA</i>	2311	3049

*Notes:* The first column shows the relationship between the covariates and winning, one by one, and then together. All regressions include the strata variables.

In Table A.5, we show the balance for the three types of winners discussed in the mechanism section.

Table A.5: Correlates of post-lottery behavior for winners.

	All controls			Missing indicators		
	(1) Movers	(2) Non-movers	(3) Sellers	(4) Movers	(5) Non-movers	(6) Sellers
Age	0.004** (0.002)	-0.002 (0.002)	-0.001** (0.001)	0.005*** (0.001)	-0.004*** (0.001)	-0.001* (0.001)
Orthodox	0.034 (0.097)	-0.076 (0.096)	0.042*** (0.012)	0.005 (0.092)	-0.058 (0.092)	0.053*** (0.012)
Protestant	0.109 (0.104)	-0.160 (0.103)	0.052** (0.020)	0.088 (0.098)	-0.147 (0.098)	0.059*** (0.018)
Muslim	-0.042 (0.105)	-0.030 (0.106)	0.071** (0.031)	-0.032 (0.100)	-0.034 (0.101)	0.066** (0.028)
Amhara	-0.005 (0.040)	0.019 (0.041)	-0.014 (0.017)	-0.001 (0.035)	0.020 (0.036)	-0.020 (0.015)
Gurage	-0.036 (0.049)	0.002 (0.053)	0.034 (0.029)	-0.041 (0.043)	0.012 (0.047)	0.029 (0.025)
Oromo	-0.042 (0.045)	0.047 (0.047)	-0.004 (0.020)	-0.041 (0.041)	0.043 (0.043)	-0.001 (0.017)
Tigray	-0.076 (0.074)	0.114 (0.074)	-0.037** (0.017)	-0.014 (0.071)	0.038 (0.073)	-0.023* (0.014)
Born in Addis	-0.248** (0.103)	0.269** (0.104)	-0.022 (0.047)	-0.154* (0.086)	0.169* (0.088)	-0.014 (0.036)
Born in Amhara	-0.134 (0.107)	0.148 (0.109)	-0.014 (0.047)	-0.044 (0.090)	0.039 (0.092)	0.005 (0.037)
Born in Oromia	-0.212** (0.107)	0.224** (0.109)	-0.012 (0.049)	-0.093 (0.091)	0.103 (0.094)	-0.010 (0.039)
Born in SNNP	-0.143 (0.112)	0.198* (0.115)	-0.055 (0.052)	-0.090 (0.094)	0.122 (0.098)	-0.032 (0.043)
Born in Tigray	0.094 (0.129)	-0.109 (0.130)	0.015 (0.046)	0.110 (0.113)	-0.114 (0.115)	0.004 (0.037)
Earnings 2005 (at reg.)	-0.001 (0.005)	-0.002 (0.005)	0.002 (0.002)	-0.003 (0.004)	0.001 (0.004)	0.002 (0.002)
Earnings 2015	-0.002 (0.006)	0.002 (0.006)	-0.000 (0.002)	0.003 (0.005)	-0.003 (0.005)	0.000 (0.002)
Partner earnings 2005 (at reg.)	0.010 (0.008)	-0.005 (0.009)	-0.005 (0.003)	0.004 (0.008)	-0.001 (0.008)	-0.004 (0.003)
Partner earnings 2015	-0.003 (0.006)	0.003 (0.006)	0.000 (0.003)	-0.002 (0.005)	-0.000 (0.006)	0.002 (0.003)
Partner 2005 (at reg.)	0.005 (0.045)	-0.026 (0.048)	0.021 (0.025)	0.007 (0.041)	-0.021 (0.043)	0.014 (0.023)
Partner 2015	0.111*** (0.039)	-0.117*** (0.041)	0.006 (0.022)	0.115*** (0.035)	-0.108*** (0.037)	-0.007 (0.020)
Mean	0.285	0.673	0.042	0.295	0.663	0.042
N	1145	1145	1145	1485	1485	1485

Notes: Multivariate regressions of dummies for “Movers” (column 1), “Non-movers” (column 2), and “Sellers” (column 3) on the set of covariates controlling for the strata variables.

## C Effects on wealth, expenditures and income

In this section we estimate the effects of winning the lottery on net wealth and different components of wealth (Table A.6), on expenditures (Table A.7), on incomes (Table A.8) and on labor supply (different professional activities, Table A.9).

Table A.6: Wealth outcomes.

	(1) Housing wealth	(2) Net wealth	(3) Richer than 5 years ago	(4) Richer in 5 years	(5) Perceived position	(6) Asset index
Winner	571.553*** (14.327)	418.667*** (19.232)	0.065*** (0.016)	0.014* (0.008)	0.104*** (0.017)	0.046 (0.034)
Mean (losers)	6.859	20.407	0.706	0.941	0.634	0.000
N	2298	1533	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Housing wealth and Net wealth are presented in 1000 ETB. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.7: Expenditures.

	(1) Rent	(2) Mortgage	(3) Other debt	(4) Total
Winner	-1.974*** (0.168)	6.456*** (0.127)	0.179*** (0.069)	2.239*** (0.129)
Mean (losers)	6.220	1.212	0.266	6.803
N	3028	3036	3030	3001

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ . Expenditures are presented as the inverse hyperbolic sine transformation of the amounts in Ethiopian Birr.

Table A.8: Income from various sources.

	(1) Labor earnings	(2) Rental income	(3) Self- employment	(4) Remit- tances	(5) Transfer income	(6) Pension income	(7) Other income	(8) Total income
Winner	0.039 (0.191)	3.166*** (0.130)	-0.211 (0.187)	0.249** (0.118)	-0.021 (0.035)	0.018 (0.082)	0.015 (0.019)	0.373*** (0.070)
Mean (losers)	6.392	0.092	3.848	0.910	0.108	0.400	0.014	9.978
N	2735	2851	2749	2825	2827	2825	2828	2648

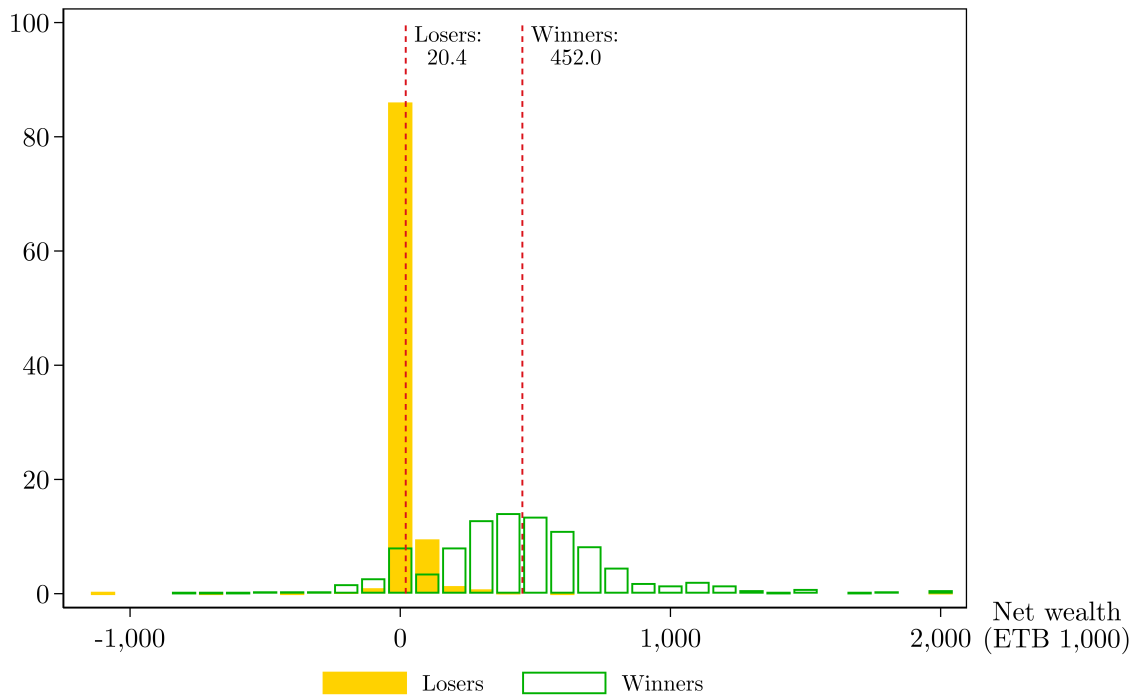
*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ . Income is presented as the inverse hyperbolic sine transformation of the amounts in Ethiopian Birr.

Table A.9: Income-generating activities.

	(1) Agri- culture	(2) Own business	(3) Manu- facturing	(4) Con- struction	(5) Service sector	(6) Public sector	(7) NGO job	(8) Other activities	(9) Any activities
Winner	-0.006 (0.007)	0.010 (0.018)	-0.000 (0.006)	-0.012 (0.008)	0.026 (0.019)	0.005 (0.013)	0.000 (0.008)	-0.023*** (0.007)	-0.023* (0.012)
Mean (losers)	0.039	0.332	0.022	0.047	0.314	0.166	0.040	0.040	0.879
N	2637	2637	2637	2637	2637	2637	2637	2637	3044

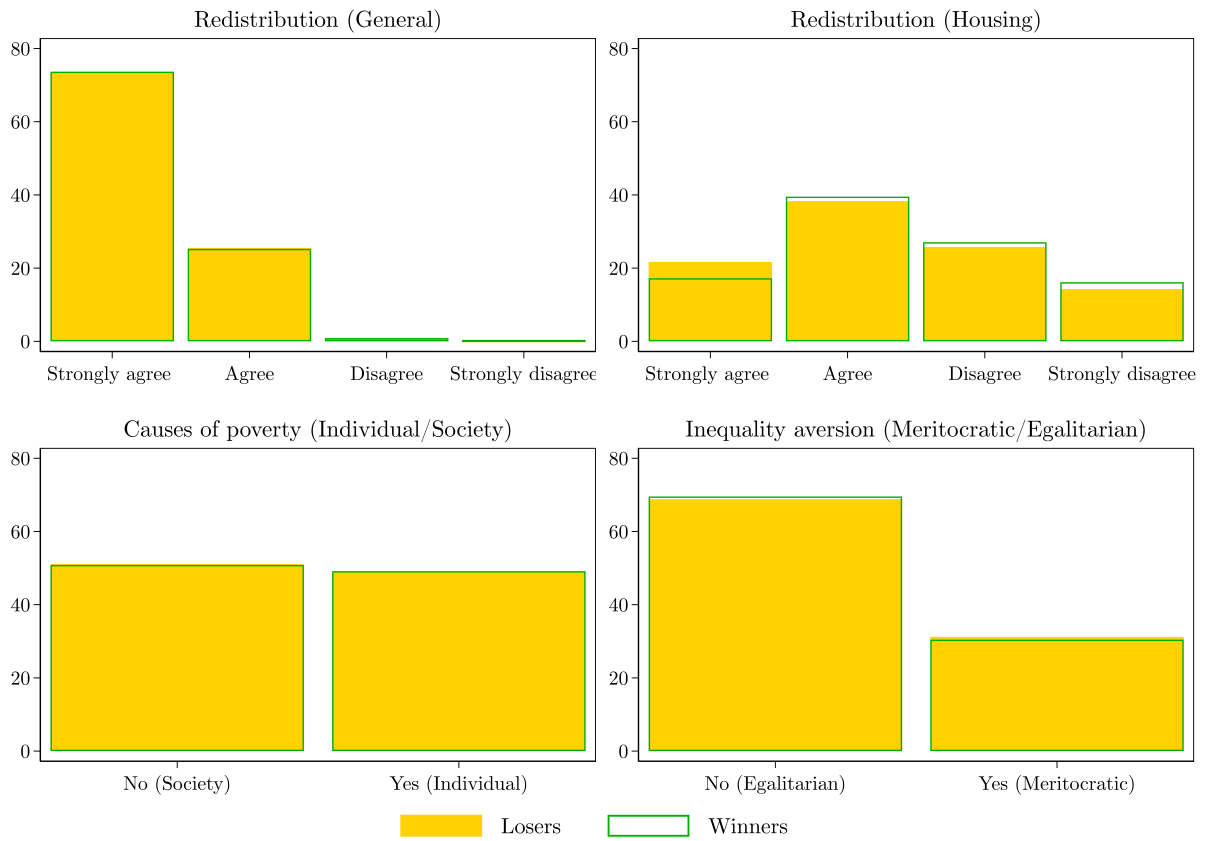
*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ . The category “other activities” primarily refers to the assistance from the Urban Productive Safety Net.

## D Additional figures



*Note:* The figure shows the distribution of net wealth for winners and losers (in percentages).

Figure A.2: Distribution of net wealth.



Note: The figure shows the distribution of answers for the main outcome variables for winners and losers (in percentages).

Figure A.3: Distribution of the answers for the main outcomes.

## E Robustness checks

This appendix is devoted to testing the robustness of our main results. We start with Section E.1, where we present the results from a pre-specified bounds analysis accounting for the differences in response rates between the losers and the winners. Section E.2 shows that there are no important differences to the results if we deviate from the pre-analysis plan and make other coding choices for the strata variables. In Section E.3, we show that the results are similar when using additional controls and when using an “optimal” set of controls, selected by means of a LASSO procedure. In Section F we show that there is little heterogeneity in the lottery effects with respect to baseline characteristics, and in Section H we explain why we cannot exploit the variation in wealth among winners in a treatment intensity analysis. The main arguments are that there is limited variation in the location of the apartment (where market values might differ), and that self-reported housing values, at the individual level, might be correlated with unobserved characteristics potentially correlated with our outcomes.

For completeness, when we assess the robustness of the lottery effects on the beliefs about the causes of poverty, we use the disaggregated version as in Table A.63. We do this because in Table 2, apart from *luck*, the estimates relating to the other factors are not significantly different from zero anyway.

Adjusting the p-values for multiple testing using the false discovery rate method developed by Benjamini and Hochberg (1995), the effect on redistribution via a housing tax and the effects on charitable giving are statistically significant at the 10 percent level.<sup>26</sup>

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<sup>26</sup>We test four primary outcomes in the present paper. In addition we test two outcomes related to well-being in a companion paper (Andersen et al., 2022) and one outcome related to donations in a dictator game that refers to a different literature (Kotsadam and Somville, 2021). With seven primary outcomes and a five percent significance level, our result with the lowest p-value should have a p-value lower than 0.007 (0.05/7). Our lowest p-value in the companion paper on well-being is lower than this. Our second lowest p-value should be lower than 0.014. The second most highly significant estimate is the effect on donations, for which the p-value is 0.021. It does not pass. Our third lowest p-value is 0.038 (redistribution via a housing tax). It does not pass either, as it should be lower than 0.021. All the effects mentioned above are, however, statistically significant at the 10 percent level even after adjustment for multiple testing.

## E.1 Addressing survey attrition and non-response

As discussed in Section 3, we did not manage to contact all the respondents initially sampled. If such “attrition” is correlated with winning the lottery, simply excluding these observations may introduce bias. In this section, we check whether this is a relevant concern by estimating the correlation between winning the lottery and survey attrition (controlling for the strata variables that are available for everyone, i.e. apartment type and gender). As reported in Table A.10, winners are three percentage points less likely to be interviewed. This is mostly due to unwillingness (column 2): whereas 94 percent of the contacted losers were willing to participate, this was only the case for 90 percent of the winners, and this difference is statistically significant.

Table A.10: Attrition and non-response.

	(1) Interviewed	(2) Unwilling	(3) Abroad	(4) Unavailable	(5) Passed away	(6) Wrong number
Winner	-0.036*** (0.010)	0.027*** (0.006)	0.001 (0.004)	0.003 (0.003)	0.004 (0.004)	0.001 (0.005)
Mean (losers)	0.937	0.014	0.014	0.004	0.008	0.023
N	3318	3318	3318	3318	3318	3318

*Notes:* The table reports the estimated differences between winners and losers as specified in Equation (1). Robust standard errors are in parentheses. Estimates that are statistically significantly different from zero are indicated by \*  $p < 0.1$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ . All regressions control for the strata-variables female and bedroom.

### E.1.1 Upper and lower bounds for main results

In order to take this differential attrition into account, we follow the correction approach suggested by Kling and Liebman (2004). We obtain the lower bounds of the lottery effect by replacing missing observations among the winners (losers) by that group’s mean value minus (plus) 0.05, 0.10, and 0.20 standard deviations of the losers group. The upper bounds of the effects are constructed in a symmetrical way. These results are presented in Table A.11. We see that the lottery effect on “Redistribution (housing)” remains significant (at the 5 percent level) after replacing the missing observations with the mean of the losers/winners  $\pm$  0.05 standard deviations. When imputing the mean values  $\pm$  0.10 standard deviations, the 95 percent confidence interval crosses zero, but the result is still statistically significant at the 10 percent level. None of the results are statistically significant when using the broadest bounds (i.e.  $\pm$  0.20 standard deviations).

### E.1.2 Upper and lower bounds for the wealth effect

One limitation of our wealth measures is that many people were unable to provide the market value of their real estate and many did not report the total value of their household debt, cash savings and bank savings. As a result, columns (1) and (2) of Table A.6 only include 2,298 and 1,533 observations.

In the Table below, we follow the same procedure as in the previous subsection and construct the lower bounds by replacing the missing values in the losers’ group by the losers’ mean plus 0.05 standard deviations and by replacing the missing values in the winners group by the losers’ mean minus 0.05 standard deviations. The higher bounds are obtained by replacing the missing values in the losers group by the losers’ mean minus 0.05 standard deviations and by replacing the missing values in the winners group by the losers’ mean plus 0.05 standard deviations. We repeat this process using 0.1 and 0.2 standard deviations instead of 0.05 to

Table A.11: Main results – bounded estimates.

	Correction	Bound	$\beta$		(SE)	Mean (losers)	$R^2$	N
Redistribution General	+/- 0.05 s.d.	Lower	-0.001		(0.015)	0.735	000	3318
		Upper	0.006		(0.015)	0.733	000	3318
	+/- 0.10 s.d.	Lower	-0.004		(0.015)	0.737	000	3318
		Upper	0.010		(0.015)	0.731	000	3318
	+/- 0.20 s.d.	Lower	-0.012		(0.015)	0.740	000	3318
		Upper	0.017		(0.015)	0.728	000	3318
Redistribution Housing	+/- 0.05 s.d.	Lower	-0.028	*	(0.016)	0.598	0.001	3318
		Upper	-0.036	**	(0.016)	0.601	0.001	3318
	+/- 0.10 s.d.	Lower	-0.024		(0.016)	0.597	0.001	3318
		Upper	-0.040	**	(0.016)	0.603	0.002	3318
	+/- 0.20 s.d.	Lower	-0.016		(0.016)	0.594	000	3318
		Upper	-0.048	***	(0.016)	0.606	0.003	3318
Causes of poverty Individual/Society	+/- 0.05 s.d.	Lower	-0.002		(0.017)	0.491	000	3318
		Upper	0.007		(0.017)	0.488	000	3318
	+/- 0.10 s.d.	Lower	-0.006		(0.017)	0.492	000	3318
		Upper	0.011		(0.017)	0.486	000	3318
	+/- 0.20 s.d.	Lower	-0.014		(0.017)	0.495	000	3318
		Upper	0.019		(0.017)	0.483	000	3318
Inequality acceptance Meritocratic/Egalitarian	+/- 0.05 s.d.	Lower	-0.004		(0.015)	0.311	000	3318
		Upper	-0.011		(0.015)	0.313	000	3318
	+/- 0.10 s.d.	Lower	000		(0.015)	0.309	000	3318
		Upper	-0.015		(0.015)	0.315	000	3318
	+/- 0.20 s.d.	Lower	0.007		(0.015)	0.306	000	3318
		Upper	-0.023		(0.015)	0.318	0.001	3318

*Notes:* The table reports upper and lower bounds on the estimated effects of winning the lottery corrected for the difference in non-response. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\* , and  $\leq 0.1$ \*.

assess the sensitivity of the results to even more unfavorable assumptions about the missing values.

It is clear from this exercise that the lottery effect on wealth is very strong, even under the most unfavorable assumptions.



Table A.12: Wealth outcomes – bounded estimates (ETB 1,000).

	Correction	Bound	$\beta$		(SE)	Mean (losers)	$R^2$	N
Housing wealth	+/- 0.05 s.d.	Lower	579.072	***	(7.994)	6.859	0.641	3049
		Upper	585.258	***	(7.994)	6.859	0.646	3049
	+/- 0.10 s.d.	Lower	575.979	***	(7.995)	6.859	0.638	3049
		Upper	588.351	***	(7.995)	6.859	0.648	3049
	+/- 0.20 s.d.	Lower	569.792	***	(800)	6.859	0.633	3049
		Upper	594.538	***	(800)	6.859	0.653	3049
Net wealth	+/- 0.05 s.d.	Lower	423.907	***	(7.085)	20.407	0.548	3049
		Upper	439.358	***	(7.085)	20.407	0.565	3049
	+/- 0.10 s.d.	Lower	416.181	***	(7.089)	20.407	0.538	3049
		Upper	447.084	***	(7.089)	20.407	0.574	3049
	+/- 0.20 s.d.	Lower	400.730	***	(7.104)	20.407	0.518	3049
		Upper	462.535	***	(7.104)	20.407	0.589	3049

*Notes:* The table reports upper and lower bounds on the estimated effects of winning the lottery corrected for the difference in non-response. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*

Table A.13: Wealth outcomes – bounded estimates (IHS-transformed).

	Correction	Bound	$\beta$		(SE)	Mean (losers)	$R^2$	N
Housing wealth	+/- 0.05 s.d.	Lower	12.317	***	(0.086)	0.130	0.875	3049
		Upper	12.384	***	(0.086)	0.130	0.876	3049
	+/- 0.10 s.d.	Lower	12.284	***	(0.086)	0.130	0.874	3049
		Upper	12.417	***	(0.086)	0.130	0.877	3049
	+/- 0.20 s.d.	Lower	12.217	***	(0.086)	0.130	0.873	3049
		Upper	12.484	***	(0.086)	0.130	0.878	3049
Net wealth	+/- 0.05 s.d.	Lower	3.744	***	(0.155)	7.417	0.160	3049
		Upper	4.308	***	(0.155)	7.417	0.201	3049
	+/- 0.10 s.d.	Lower	3.462	***	(0.155)	7.417	0.139	3049
		Upper	4.589	***	(0.155)	7.417	0.222	3049
	+/- 0.20 s.d.	Lower	2.899	***	(0.156)	7.417	0.101	3049
		Upper	5.153	***	(0.156)	7.417	0.262	3049

*Notes:* The table reports upper and lower bounds on the estimated effects of winning the lottery corrected for the difference in non-response. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*

## E.2 Treatment, strata and covariates

In order to check that there were no mistakes in the administrative lists of winners and losers that we received, we asked at the end of the interview whether the respondent had won the lottery (note that the interviewer did not know what list the respondent belonged to). Thirty individuals from the winners' list claimed that they did not win the lottery, while eight losers claimed that they did win. We can only speculate about the reason behind these answers. For instance, winners who were unable to acquire the money needed for the down payment may not have considered themselves to be winners, whereas people whose partners or close family members won may have done so. Regardless of the reasons behind this type of inconsistency, we treat everyone in accordance with their status from the list (and therefore estimate the intention-to-treat).

When estimating the impacts of winning the lottery, we control for the strata that are used in the lottery:

S1. A binary variable equal to one for female applicants. This is from the administrative register for winners and coded from names for the losers. We update the information for the losers with the enumerator coding of the respondent's gender during the interview (they asked at the end of the interview if they were unsure). While 151 of the 1,564 losers were misclassified, based on their name, 39 of the 1,485 winners were also misclassified in the registers.<sup>27</sup>

S2. A binary variable equal to one for government employees. This is from the administrative register for the winners and based on the following question for the losers: "What was your occupation in 2005 (at the time of housing registration)". We coded this as one if they reported to be a public employee and zero otherwise. The question about occupation in 2005 was asked to everyone. To check the correspondence between the two sources, we compared the answer to this question to the actual employment status registered for the winners. We see that more people were classified as government employees in the registers than in the survey. Of the 447 individuals who were registered as government employees, only 292 claimed to have been so in the survey. Furthermore, 70 of the 362 individuals who claimed that they were government employees in 2005 were not registered as such.

S3. A set of binary variables indicating which type of housing the applicant applied for (i.e., a studio, a one-, or a two-bedroom apartment). This is from the administrative registers for both winners and losers.

S4. A binary variable equal to one for people with physical disabilities. This is from the administrative register for the losers but for the winners it is based on the following question: "Did you have any physical disability at the time of registration (in 2005)?" Again, we compared the responses to the question with the actual registered status for the losers. The survey question appeared to overclassify people as disabled, perhaps because people are considering minor disabilities when answering the question. As many as 36 of the losers claimed to have had physical disabilities, while only five were registered as disabled. For comparison 86 of the winners claimed to have physical disabilities. In other words, according to the survey, the prevalence of disability is 2.5 times higher among winners, but if instead we use the list value for losers (as pre-specified), the prevalence among winners is 18 times as high.

### E.2.1 Main results with alternative coding of strata

Given the inconsistencies observed in relation to S2 and S4, we reproduce our main findings using two alternative specifications to check whether our coding of the strata variables matters for the results. In the first specification, the survey response is used for everyone, and in the second specification these two strata variables are omitted entirely. The main results obtained with these alternative definitions of the strata

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<sup>27</sup>The misclassification primarily concerns men being classified as women (30 and 102 cases, respectively). It is possible that some do this deliberately to increase their chance of winning.

variables are presented in the tables A.14, A.15, A.65 and A.66 below. As it can easily be verified, our results are not sensitive to using the survey responses for everyone, and even leaving out two of the strata variables entirely only has a small impact.

Due to the very large discrepancies in the classification of disabled, we also present a version of the results, where we exclude respondents who are classified as disabled either according to the list or according to the survey. These are presented in the tables A.16, A.67. Again, this does not affect our findings.

Table A.14: Main outcomes: Strata based on survey only.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.000 (0.016)	-0.036** (0.018)	-0.000 (0.018)	-0.009 (0.017)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.15: Main outcomes: S2 and S4 omitted.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.003 (0.016)	-0.032* (0.018)	0.002 (0.018)	-0.008 (0.017)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.16: Main outcomes: Excl. disabled.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	-0.003 (0.017)	-0.036* (0.019)	-0.001 (0.019)	-0.007 (0.017)
Mean (losers)	0.733	0.596	0.485	0.309
N	2926	2926	2926	2926

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.17: Beliefs about the causes of poverty: Strata based on survey only.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.037** (0.014)	0.007 (0.009)	-0.028** (0.014)	0.011 (0.014)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.18: Beliefs about the causes of poverty: S2 and S4 omitted.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.035** (0.014)	0.007 (0.009)	-0.024* (0.014)	0.012 (0.014)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.19: Beliefs about the causes of poverty: Excl. disabled.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.033** (0.015)	0.009 (0.009)	-0.020 (0.015)	0.009 (0.015)
Mean (losers)	0.208	0.729	0.228	0.777
N	2926	2926	2926	2926

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

### E.3 Results with control variables

In this section we present the main results where we include pre-specified covariates and optimal controls (Belloni et al., 2014) in the regressions. The pre-specified covariates are: the respondent’s age, ethnicity, place of birth, earnings in 2005 and 2015 (as recalled in 2016), civil status in 2005. We have also included a dummy for having a partner in 2015, because the partner earnings variable for 2015 would otherwise capture both whether the respondent has a partner, and how much the partner earns. To show that this does not matter for our findings, we reproduce our results without this dummy in section L. As anticipated, the recall questions are missing for a significant part of the sample, which is why we did not include them in our main specification according in the pre-analysis. As before, all estimations include the strata variables.

Despite the loss of many observations due to missing values, the results are overall in line with the main estimates, but they are less precise. When we remove the four control variables that contain the largest share of missing values (the recall questions about own and partner earnings in 2005 and 2015), the results are again as precise as before. In tables A.27 and A.28, we show that the inclusion of the covariates also makes little difference for our wealth outcomes.

Table A.20: Main outcomes with controls (missing-indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.010 (0.018)	-0.044** (0.022)	0.004 (0.021)	-0.016 (0.020)
Mean (losers)	0.766	0.569	0.435	0.319
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

Table A.21: Main outcomes with controls.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.010 (0.018)	-0.044** (0.022)	0.004 (0.021)	-0.016 (0.020)
Mean (losers)	0.766	0.569	0.435	0.319
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

Table A.22: Main outcomes with optimal controls.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.008 (0.018)	-0.041* (0.021)	0.003 (0.021)	-0.012 (0.020)
Mean (losers)	0.766	0.569	0.435	0.319
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.23: Beliefs about the causes of poverty with controls (missing-indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.033** (0.015)	0.006 (0.009)	-0.028* (0.014)	0.011 (0.015)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.24: Beliefs about the causes of poverty with controls.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.022 (0.017)	0.010 (0.011)	-0.040** (0.017)	0.029* (0.017)
Mean (losers)	0.201	0.728	0.246	0.778
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.25: Beliefs about the causes of poverty with optimal controls.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.021 (0.017)	0.014 (0.011)	-0.036** (0.017)	0.025 (0.017)
Mean (losers)	0.201	0.728	0.246	0.778
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.26: Wealth outcomes with controls (missing-indicator method).

	(1) Housing wealth	(2) Net wealth	(3) Richer than 5 years ago	(4) Richer in 5 years	(5) Perceived position	(6) Asset index
Winner	572.937*** (14.329)	420.281*** (19.286)	0.070*** (0.016)	0.017** (0.008)	0.105*** (0.017)	0.062* (0.032)
Mean (losers)	6.859	20.407	0.706	0.941	0.634	0.000
N	2298	1533	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*

Table A.27: Wealth outcomes with controls.

	(1) Housing wealth	(2) Net wealth	(3) Richer than 5 years ago	(4) Richer in 5 years	(5) Perceived position	(6) Asset index
Winner	563.844*** (16.466)	420.057*** (22.447)	0.065*** (0.019)	0.018** (0.009)	0.103*** (0.020)	0.056 (0.037)
Mean (losers)	7.310	21.341	0.702	0.948	0.636	-0.002
N	1734	1238	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*

Table A.28: Wealth outcomes with optimal controls.

	(1) Housing wealth	(2) Net wealth	(3) Richer than 5 years ago	(4) Richer in 5 years	(5) Perceived position	(6) Asset index
Winner	564.058*** (16.537)	419.353*** (22.293)	0.063*** (0.019)	0.017* (0.009)	0.100*** (0.020)	0.057 (0.037)
Mean (losers)	7.310	21.341	0.702	0.948	0.636	-0.002
N	1734	1238	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*

## F Heterogeneous effects

In this section, we test whether the lottery impacts vary along four dimensions: income above or below the median, age above or below the median, ethnicity and religion. We do not find particularly important heterogeneous effects along those dimensions.

Table A.29: Main results by earnings in 2015 (missing-indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	-0.003 (0.025)	-0.029 (0.028)	-0.009 (0.026)	0.009 (0.027)
Above median	0.028 (0.024)	0.060** (0.028)	0.026 (0.026)	-0.007 (0.028)
Winner*Above median	0.007 (0.033)	-0.022 (0.038)	-0.013 (0.036)	-0.012 (0.038)
Missing earnings	-0.154*** (0.040)	0.066* (0.040)	-0.055 (0.036)	0.301*** (0.037)
Winner*Missing earnings	-0.027 (0.060)	-0.010 (0.060)	-0.033 (0.051)	-0.034 (0.055)
Mean (losers)	0.734	0.600	0.312	0.489
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except earnings in 2015) in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\* , and  $\leq 0.1$ \*.

Table A.30: Main results by earnings in 2015.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.006 (0.027)	-0.039 (0.031)	-0.016 (0.028)	0.016 (0.030)
Above median	0.008 (0.029)	0.067** (0.033)	0.011 (0.031)	0.021 (0.033)
Winner*Above median	0.006 (0.036)	-0.016 (0.042)	-0.002 (0.039)	-0.025 (0.042)
Mean (losers)	0.734	0.600	0.312	0.489
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except earnings in 2015) in all estimations. P-values are  $\leq 0.01$ \*\*\* ,  $\leq 0.05$ \*\* , and  $\leq 0.1$ \*.



Table A.31: Beliefs about the causes of poverty by earnings in 2015 (missing-indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.011 (0.023)	0.009 (0.014)	-0.044* (0.023)	0.010 (0.023)
Above median	-0.028 (0.023)	0.019 (0.014)	-0.051** (0.022)	0.029 (0.021)
Winner*Above median	-0.037 (0.031)	-0.003 (0.019)	0.029 (0.030)	0.021 (0.029)
Missing earnings	-0.027 (0.034)	0.015 (0.017)	-0.145*** (0.028)	-0.052 (0.035)
Winner*Missing earnings	-0.037 (0.048)	-0.020 (0.026)	0.046 (0.041)	-0.097* (0.055)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except earnings in 2015) in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

Table A.32: Beliefs about the causes of poverty by earnings in 2015.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.007 (0.025)	0.015 (0.015)	-0.048* (0.025)	0.017 (0.025)
Above median	-0.008 (0.027)	0.024 (0.017)	-0.045* (0.027)	0.033 (0.026)
Winner*Above median	-0.028 (0.033)	-0.011 (0.021)	0.020 (0.033)	0.021 (0.032)
Mean (losers)	0.208	0.730	0.232	0.776
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except earnings in 2015) in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

Table A.33: Main results by age (missing-indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.019 (0.024)	-0.061** (0.028)	-0.005 (0.025)	0.008 (0.028)
Above median	-0.035 (0.023)	-0.011 (0.026)	0.085*** (0.024)	0.042 (0.026)
Winner*Above median	-0.035 (0.032)	0.039 (0.036)	-0.022 (0.033)	-0.014 (0.036)
Mean (losers)	0.734	0.600	0.312	0.489
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except age) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.34: Main results by age.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.006 (0.027)	-0.080** (0.033)	-0.005 (0.029)	0.025 (0.032)
Above median	-0.056** (0.026)	-0.027 (0.031)	0.077*** (0.029)	0.043 (0.031)
Winner*Above median	0.006 (0.035)	0.062 (0.042)	-0.018 (0.038)	-0.034 (0.042)
Mean (losers)	0.734	0.600	0.312	0.489
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except age) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.35: Beliefs about the causes of poverty by age (missing-indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.038* (0.022)	-0.011 (0.014)	-0.011 (0.021)	-0.011 (0.023)
Above median	-0.005 (0.022)	0.014 (0.013)	0.044** (0.021)	-0.012 (0.021)
Winner*Above median	0.010 (0.029)	0.027 (0.018)	-0.030 (0.028)	0.037 (0.029)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except age) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.36: Beliefs about the causes of poverty by age.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.032 (0.026)	-0.003 (0.017)	-0.012 (0.025)	0.019 (0.025)
Above median	-0.019 (0.025)	0.022 (0.016)	0.050** (0.024)	-0.010 (0.024)
Winner*Above median	0.018 (0.033)	0.023 (0.021)	-0.047 (0.033)	0.017 (0.032)
Mean (losers)	0.208	0.730	0.232	0.776
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except age) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.37: Main results by ethnic group (missing-indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.001 (0.033)	-0.022 (0.038)	0.002 (0.035)	-0.034 (0.038)
Amhara	-0.034 (0.031)	0.003 (0.036)	0.039 (0.033)	0.002 (0.036)
Gurage	0.003 (0.036)	-0.046 (0.042)	0.016 (0.039)	-0.033 (0.042)
Oromo	-0.055 (0.037)	-0.045 (0.042)	0.066* (0.039)	-0.032 (0.042)
Tigray	-0.059 (0.058)	-0.076 (0.065)	0.158** (0.062)	-0.076 (0.064)
Winner*Amhara	0.017 (0.042)	-0.034 (0.048)	-0.042 (0.044)	0.007 (0.047)
Winner*Gurage	-0.016 (0.051)	-0.055 (0.058)	0.005 (0.054)	0.088 (0.058)
Winner*Oromo	0.013 (0.051)	0.007 (0.059)	-0.038 (0.054)	0.070 (0.058)
Winner*Tigray	-0.110 (0.068)	0.057 (0.075)	0.013 (0.072)	0.074 (0.073)
Mean (losers)	0.734	0.600	0.312	0.489
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.38: Main results by ethnic group.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.028 (0.036)	-0.051 (0.046)	0.050 (0.042)	-0.005 (0.045)
Amhara	-0.037 (0.035)	0.017 (0.043)	0.059 (0.039)	0.016 (0.043)
Gurage	0.011 (0.040)	-0.048 (0.051)	0.019 (0.046)	-0.013 (0.050)
Oromo	-0.040 (0.041)	-0.061 (0.050)	0.060 (0.045)	-0.022 (0.050)
Tigray	-0.064 (0.070)	-0.091 (0.079)	0.168** (0.075)	-0.039 (0.076)
Winner*Amhara	-0.007 (0.046)	-0.030 (0.057)	-0.115** (0.052)	-0.028 (0.056)
Winner*Gurage	-0.057 (0.057)	-0.032 (0.070)	-0.039 (0.064)	0.057 (0.069)
Winner*Oromo	-0.004 (0.056)	0.090 (0.068)	-0.075 (0.063)	0.040 (0.067)
Winner*Tigray	-0.072 (0.079)	0.107 (0.088)	-0.033 (0.084)	0.047 (0.087)
Mean (losers)	0.734	0.600	0.312	0.489
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.39: Beliefs about the causes of poverty by ethnic group (missing-indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.024 (0.029)	0.025 (0.019)	-0.039 (0.029)	0.019 (0.031)
Amhara	0.004 (0.028)	0.012 (0.018)	-0.021 (0.028)	0.020 (0.029)
Gurage	0.060* (0.034)	-0.003 (0.022)	0.053 (0.035)	-0.013 (0.034)
Oromo	0.082** (0.034)	0.035 (0.022)	0.013 (0.031)	0.011 (0.033)
Tigray	0.076 (0.054)	0.029 (0.032)	0.001 (0.047)	0.006 (0.051)
Winner*Amhara	0.036 (0.037)	-0.021 (0.024)	0.024 (0.036)	-0.008 (0.038)
Winner*Gurage	-0.037 (0.047)	-0.017 (0.029)	-0.031 (0.046)	-0.019 (0.047)
Winner*Oromo	-0.064 (0.045)	-0.033 (0.029)	0.027 (0.044)	0.018 (0.045)
Winner*Tigray	-0.076 (0.059)	-0.033 (0.035)	0.035 (0.060)	-0.066 (0.062)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.40: Beliefs about the causes of poverty by ethnic group.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.025 (0.033)	0.027 (0.023)	-0.077** (0.036)	0.037 (0.035)
Amhara	-0.017 (0.032)	0.003 (0.022)	-0.058* (0.034)	0.007 (0.033)
Gurage	0.046 (0.040)	0.001 (0.027)	0.043 (0.042)	-0.034 (0.040)
Oromo	0.099** (0.040)	0.030 (0.026)	0.017 (0.039)	-0.002 (0.038)
Tigray	0.080 (0.065)	0.005 (0.040)	-0.030 (0.059)	-0.031 (0.062)
Winner*Amhara	0.065 (0.042)	-0.014 (0.029)	0.056 (0.043)	-0.008 (0.043)
Winner*Gurage	-0.006 (0.055)	-0.014 (0.035)	0.018 (0.057)	-0.008 (0.054)
Winner*Oromo	-0.074 (0.051)	-0.038 (0.034)	0.052 (0.053)	0.000 (0.051)
Winner*Tigray	-0.107 (0.067)	-0.031 (0.042)	0.047 (0.072)	-0.037 (0.071)
Mean (losers)	0.208	0.730	0.232	0.776
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.41: Main results by religion (missing-indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	-0.012 (0.111)	-0.030 (0.143)	-0.214 (0.132)	-0.124 (0.147)
Orthodox	-0.078 (0.073)	0.008 (0.094)	-0.134 (0.103)	-0.040 (0.098)
Protestant	-0.058 (0.079)	-0.019 (0.101)	-0.099 (0.108)	-0.034 (0.104)
Muslim	-0.032 (0.079)	0.016 (0.100)	-0.064 (0.108)	0.002 (0.104)
Winner*Orthodox	0.009 (0.110)	0.023 (0.142)	0.233* (0.130)	0.099 (0.145)
Winner*Protestant	0.047 (0.117)	-0.043 (0.150)	0.221 (0.138)	0.069 (0.153)
Winner*Muslim	-0.005 (0.119)	-0.012 (0.152)	0.156 (0.140)	0.077 (0.155)
Mean (losers)	0.734	0.600	0.312	0.489
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.42: Main results by religion.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.029 (0.103)	0.030 (0.163)	-0.141 (0.138)	0.119 (0.158)
Orthodox	-0.111 (0.072)	0.033 (0.111)	-0.029 (0.104)	0.088 (0.105)
Protestant	-0.139* (0.080)	0.012 (0.118)	0.014 (0.111)	0.076 (0.113)
Muslim	-0.098 (0.080)	0.058 (0.119)	-0.008 (0.111)	0.142 (0.113)
Winner*Orthodox	-0.023 (0.102)	-0.067 (0.161)	0.197 (0.135)	-0.117 (0.155)
Winner*Protestant	0.080 (0.112)	-0.142 (0.170)	0.201 (0.145)	-0.148 (0.164)
Winner*Muslim	0.008 (0.114)	-0.096 (0.172)	0.177 (0.147)	-0.155 (0.167)
Mean (losers)	0.734	0.600	0.312	0.489
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .



Table A.43: Beliefs about the causes of poverty by religion (missing-indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.244* (0.128)	0.066 (0.060)	-0.039 (0.130)	0.054 (0.100)
Orthodox	-0.230** (0.101)	0.032 (0.041)	-0.066 (0.088)	-0.033 (0.066)
Protestant	-0.278*** (0.104)	0.021 (0.044)	-0.126 (0.091)	-0.031 (0.071)
Muslim	-0.223** (0.105)	0.028 (0.045)	-0.092 (0.092)	-0.006 (0.072)
Winner*Orthodox	0.214* (0.127)	-0.044 (0.059)	-0.004 (0.128)	-0.033 (0.099)
Winner*Protestant	0.277** (0.132)	-0.025 (0.063)	0.024 (0.133)	-0.019 (0.105)
Winner*Muslim	0.217 (0.134)	-0.057 (0.065)	-0.015 (0.135)	-0.074 (0.108)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimate effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*

Table A.44: Beliefs about the causes of poverty by religion.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.286** (0.143)	0.083 (0.070)	-0.111 (0.140)	-0.000 (0.116)
Orthodox	-0.252** (0.113)	0.048 (0.045)	-0.025 (0.097)	-0.052 (0.073)
Protestant	-0.288** (0.117)	0.054 (0.049)	-0.100 (0.100)	-0.019 (0.077)
Muslim	-0.245** (0.119)	0.035 (0.050)	-0.045 (0.103)	-0.038 (0.080)
Winner*Orthodox	0.257* (0.143)	-0.054 (0.067)	0.029 (0.138)	0.050 (0.115)
Winner*Protestant	0.327** (0.148)	-0.063 (0.073)	0.081 (0.144)	-0.003 (0.122)
Winner*Muslim	0.237 (0.151)	-0.068 (0.074)	-0.004 (0.146)	0.027 (0.125)
Mean (losers)	0.208	0.730	0.232	0.776
N	2311	2311	2311	2311

*Notes:* The table reports the estimate effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*

## G Mediation analysis

To more directly test whether luck is mediating the relationship between winning and attitudes toward redistribution we conduct non preregistered mediation analyses. We focus on luck and redistribution via the housing tax since these are the only robustly significant effects we observe. These analyses consist of estimating three sets of regressions: 1) the reduced form effect of winning on attitudes toward redistribution with a housing tax; 2) the reduced form effect of winning on luck (the mediator); and 3) the effect of winning on attitudes while controlling for the mediator. If one is willing to assume *sequential ignorability*, that is that there is no correlation between the error terms in 2 and 3, the total effect can be decomposed into the direct effects of winning and the average causal mediation effect (ACME) (Imai et al., 2011). We find the sequential ignorability assumption to be strong as there should be no unobservable variable that affects both attitudes and the belief that luck is related to poverty. The assumption is, furthermore, not testable so we suggest that they are interpreted cautiously.

In Table A.45 we show the results. In panel A we only include the strata variables as controls and the reduced form effect of winning is -0.038 as before. The average effect of winning the lottery on the outcome that goes via luck (ACME) is 0.02 and is statistically significant. The estimate of the direct effect is -0.04. The share of the total effect that is mediated by luck is 6 percent. As such, under the assumptions of the model, we see that individuals induced by winning to think that luck is less important are actually more likely to think that there should be a housing tax. Adding controls, which is likely more important in the mediation analysis, we see in panel B that the ACME is not statistically significant. We conclude that the effects on the belief that luck is important for poverty does not seem to be an important mediator overall for our reduced form effects. In fact, the correlation between Luck and attitudes towards redistribution with a housing tax is negative.

Table A.45: Mediation analysis.

A. Luck as mediator (only strata controls) (N = 3,049):			
Effect	Mean	[95% Conf. Interval]	
ACME	.002	[-.0002	.005]
Direct Effect	-.04	[-.08	-.004]
Total Effect	-.038	[-.075	-.002]
% of Total Effect mediated	-.06	[-.33	-.03]
B. Luck as mediator (with controls) (N = 2,311):			
Effect	Mean	[95% Conf. Interval]	
ACME	.001	[-.0007	.004]
Direct Effect	-.05	[-.09	-.003]
Total Effect	-.044	[-.09	-.002]
% of Total Effect mediated	-.03	[-.18	-.01]

*Note:* The table shows the results of a mediation analysis where the total effect is divided into a direct effect and an ACME. The table also shows the percent of the total effect that is mediated by the mediator. All regressions control for the strata fixed effects. The dependent variable is redistribution via the housing tax.

## H Treatment intensity

Lottery winners are randomly assigned apartments in different areas, and due to local variations in real estate market prices, some winners may experience a larger wealth shock than others. In the pre-analysis plan, we wrote that we would use this variation to assess how the impact of winning depends on the size of the wealth shock. More specifically, we wrote that we would use a variable that ranks winners according to the estimated value of the apartment they won the opportunity to buy (at a given price). Because each winner’s own valuation of the apartment may depend on personality traits, such as optimism, which may be correlated with the outcomes, we suggested basing the ranking on the jack-knifed average valuation in each area (i.e. the average valuation among all winners assigned that area excluding the respondent’s own valuation).

Unfortunately, there turned out to be much less variation in area assignment than we had expected. In fact, more than 95 percent of the winners in our sample are distributed across just two areas; namely Bole Arabsa (71 percent) and Kelinto (24 percent). The remaining five percent are spread out across 19 different sites with only one or a few individuals assigned to each area. Hence, the pre-specified “treatment intensity” analysis is not feasible. In this section, we instead present the results of two alternative procedures for exploring heterogeneity with respect to the area assignment. First, we repeat our main result, where – instead of the usual treatment variable – we include dummies for winning in the two largest sites or in “other sites”. Second, we rank winners according to their own valuation of the apartment to assess the correlation between our outcomes and the size of the wealth shock, although we acknowledge that such a strategy has its limitations.

As shown in table A.46, the estimated market prices are slightly higher for Bole Arabsa than for Kelinto (the reference category), but the difference is not statistically significant. The five percent, who won an apartment in one of the 19 other areas in our sample, however, on average estimate the value of their apartment to be higher. However, given that the valuations in this category come from many different smaller sites, we might expect them to be less accurate than the valuations from the two large sites.

Table A.46: Impact of area assignment area on valuation.

	(1) Valuation (ETB 100,000)	(2) Valuation (IHS-transformed)
Bole Arabsa	0.312 (0.201)	0.034 (0.037)
Other sites	1.186*** (0.405)	0.185** (0.075)
Mean	6.100	13.905
N	683	683

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

To verify that the assignment to different areas is truly random, Table A.47 shows the correlation between winning an apartment in a given area and the control variables. When we only include the observations with complete information on all control variable (columns 1-3), winning in “other sites” appears to be correlated with the dummies for religion and ethnicity. This is likely due to these variables being correlated with non-

response to the earnings variables, however. If we include missing-indicators for non-response, such that the composition of the sample does not change due to missing values (columns 4-6), winning in different areas seems to be uncorrelated with the controls.<sup>28</sup>

Table A.47: Correlates of winning apartments in different areas.

	All controls			Missing-indicator method		
	(1) Bole Arabsa	(2) Kelinto	(3) Other sites	(4) Bole Arabsa	(5) Kelinto	(6) Other sites
Age	-0.001 (0.002)	0.000 (0.001)	0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.001 (0.001)
Orthodox	-0.061 (0.095)	0.032 (0.095)	0.028** (0.013)	0.008 (0.093)	-0.006 (0.089)	-0.002 (0.044)
Protestant	-0.083 (0.101)	0.018 (0.100)	0.065*** (0.025)	-0.026 (0.098)	-0.003 (0.094)	0.029 (0.047)
Muslim	-0.039 (0.104)	-0.006 (0.103)	0.045* (0.024)	0.011 (0.101)	-0.005 (0.097)	-0.006 (0.046)
Amhara	-0.008 (0.042)	0.002 (0.040)	0.006 (0.017)	-0.013 (0.036)	0.011 (0.034)	0.002 (0.016)
Gurage	0.041 (0.053)	-0.058 (0.051)	0.017 (0.022)	0.031 (0.046)	-0.035 (0.045)	0.004 (0.019)
Oromo	-0.042 (0.050)	0.041 (0.046)	0.001 (0.025)	0.001 (0.043)	0.001 (0.041)	-0.002 (0.021)
Tigray	0.002 (0.109)	-0.166** (0.082)	0.163** (0.077)	-0.023 (0.086)	-0.115 (0.070)	0.138** (0.058)
Born in Addis	0.002 (0.101)	0.029 (0.095)	-0.031 (0.054)	-0.043 (0.086)	0.060 (0.082)	-0.016 (0.042)
Born in Amhara	0.058 (0.105)	-0.002 (0.099)	-0.056 (0.054)	0.016 (0.090)	0.019 (0.086)	-0.035 (0.043)
Born in Oromia	0.076 (0.107)	-0.046 (0.099)	-0.030 (0.060)	0.012 (0.092)	0.008 (0.087)	-0.019 (0.048)
Born in SNNP	-0.013 (0.111)	0.057 (0.106)	-0.044 (0.054)	-0.046 (0.096)	0.047 (0.092)	-0.001 (0.045)
Born in Tigray	-0.010 (0.147)	0.171 (0.119)	-0.161 (0.100)	-0.046 (0.120)	0.168 (0.103)	-0.122 (0.075)
Earnings 2005 (at reg.)	-0.003 (0.005)	0.003 (0.005)	0.000 (0.002)	-0.003 (0.005)	0.001 (0.004)	0.002 (0.002)
Earnings 2015	0.004 (0.006)	-0.001 (0.005)	-0.003 (0.003)	0.006 (0.005)	-0.002 (0.005)	-0.004* (0.002)
Partner earnings 2005 (at reg.)	-0.006 (0.008)	0.007 (0.008)	-0.001 (0.004)	-0.005 (0.007)	0.005 (0.007)	0.000 (0.003)
Partner earnings 2015	0.002 (0.006)	0.000 (0.005)	-0.003 (0.002)	0.000 (0.005)	0.004 (0.005)	-0.004* (0.002)
Partner 2005 (at reg.)	0.026 (0.045)	-0.028 (0.042)	0.002 (0.022)	0.037 (0.041)	-0.012 (0.037)	-0.025 (0.021)
Partner 2015	-0.019 (0.041)	0.011 (0.039)	0.008 (0.018)	-0.007 (0.036)	-0.022 (0.033)	0.029 (0.018)
Mean	0.714	0.241	0.045	0.711	0.242	0.047
N	1145	1145	1145	1485	1485	1485

Notes: Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

<sup>28</sup>Members of the Tigray ethnic group still appear to be more likely to be assigned to “other sites” (and less likely to be settled in Kelinto); however, this is somewhat counterbalanced by the impact of being born in the Tigray region, which goes in the opposite direction. Unsurprisingly, there is a substantial overlap between the two variables: more than 90 percent of the respondents, who are born in Tigray, belong to the Tigray ethnic group, and more than 70 percent of the Tigrays in our sample are born in the Tigray region.

Even though valuations do not seem to differ much by area (at least for the two areas that 95 percent of the winners are assigned to), it might be interesting to assess whether the effects of winning differ across areas. In Table A.48, we see that the lower support for housing taxes is more pronounced among winners in the Kelinto district than among winners in the Bole Arabsa district, although the coefficient are not statistically different from one another. For winners in “other sites”, there is no evidence of an effect on this outcome. No effects are observed for any of the other main outcomes, regardless of the location of the apartment. As shown in Table A.50, we obtain qualitatively similar result across areas for beliefs about the causes of poverty; however, the negative effect for “Luck” is only statistically significant for the largest site, i.e. Bole Arabsa. Tables A.49 and A.51 show that these conclusions are robust to including the control variables (and missing indicators).

Table A.48: Main results for winning in different areas.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Bole Arabsa	−0.005 (0.018)	−0.035* (0.020)	−0.007 (0.020)	−0.022 (0.019)
Kelinto	0.003 (0.026)	−0.061** (0.029)	0.003 (0.030)	0.024 (0.028)
Other sites	−0.001 (0.056)	0.042 (0.060)	0.044 (0.061)	−0.011 (0.058)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.49: Main results for winning in different areas with controls (missing-indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Bole Arabsa	−0.004 (0.018)	−0.035* (0.020)	−0.004 (0.020)	−0.029 (0.019)
Kelinto	0.002 (0.026)	−0.063** (0.030)	0.006 (0.030)	0.018 (0.027)
Other sites	0.020 (0.055)	0.054 (0.059)	0.032 (0.059)	−0.033 (0.057)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Despite the limited variation in assignment areas, there is quite some variation in reported valuations even within sites. This may to some extent reflect actual value differences, e.g. related to the exact location within the (often large) sites or to other apartment specific features such as having a nice view. However, as discussed above, the individual valuations are also likely to be correlated with unobserved personality traits that might be correlated with our outcomes. Moreover, only about half of the winners provided a

Table A.50: Beliefs about the causes of poverty for winning in different areas.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Bole Arabsa	-0.035** (0.016)	0.013 (0.010)	-0.028* (0.016)	0.022 (0.016)
Kelinto	-0.032 (0.023)	0.002 (0.015)	-0.012 (0.023)	-0.026 (0.024)
Other sites	-0.013 (0.049)	-0.051 (0.031)	-0.014 (0.051)	0.048 (0.045)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.51: Beliefs about the causes of poverty for winning in different areas with controls (missing-indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Bole Arabsa	-0.035** (0.016)	0.011 (0.010)	-0.033** (0.016)	0.022 (0.016)
Kelinto	-0.030 (0.023)	0.001 (0.015)	-0.016 (0.023)	-0.028 (0.024)
Other sites	-0.019 (0.049)	-0.056* (0.031)	-0.011 (0.051)	0.061 (0.045)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

valuation of their apartment, and leaving us with a small and plausibly non-random sample. Indeed, this is confirmed Table A.52, which shows the correlates of the individual valuations. In the first column, we see that individuals with higher pre-lottery earnings were more likely to provide a valuation for the apartment.<sup>29</sup> In the second column, we regress a variable indicating the rank of the provided individual valuations (within apartment type) on the full set of control variables. The rank appears to be somewhat correlated with religion, ethnicity, and age.<sup>30</sup> Columns 3 and 4 show that we reach similar conclusions if we use the missing indicator method such that the composition of the sample does not change.

Table A.53 shows the results from regressing our main outcomes on the rank variable, while controlling for the strata variables. We see that individuals who value their apartment at a higher rate are less supportive of redistribution in general. They also tend to be more meritocratic and are more likely to attribute poverty to individual factors rather than to society. Interestingly, we find no evidence of an effect of the rank on the support for housing taxes. It should be noted that the type of housing taxes is not specified in the question, so we do not know if people think about a lump sum tax or a tax that depends on the value of the real estate. As shown in Table A.55, we do not observe any effect of the rank on the other belief outcomes. Most of these conclusions are robust to including the full set of control variables (and missing-indicators), as shown in the tables A.54 and A.56. Taken at face value, our results suggest that winners of larger amounts are less supportive of redistribution and tend to be more meritocratic than winners of smaller amounts. However, these results should be interpreted in light of the selected sample and the fact that the individuals valuations are likely to capture more than just the size of the wealth shock. On the other hand, one might argue that the *perceived* wealth shock might be more relevant for attitudes toward redistribution than the actual (and generally unknown) wealth shock is.

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<sup>29</sup>This might reflect that individuals with higher earnings often have a higher education level and a thus may have more capacity for estimating the value.

<sup>30</sup>The same holds true if we use the actual valuation instead of the valuation rank.

Table A.52: Correlates of valuation of the apartment among winners.

	All controls		Missing-indicator method	
	(1) Any valuation	(2) Valuation (rank)	(3) Any valuation	(4) Valuation (rank)
Age	-0.003 (0.002)	0.245** (0.120)	-0.003* (0.001)	0.169 (0.109)
Orthodox	-0.048 (0.121)	-12.062* (7.081)	-0.034 (0.103)	-11.517** (5.584)
Protestant	-0.054 (0.127)	-11.626 (7.319)	-0.030 (0.108)	-10.644* (5.812)
Muslim	-0.063 (0.130)	-12.558 (7.659)	-0.021 (0.112)	-7.368 (6.221)
Amhara	0.061 (0.045)	1.304 (2.621)	0.074* (0.039)	-0.115 (2.256)
Gurage	-0.046 (0.056)	-2.475 (3.456)	-0.061 (0.049)	-4.395 (2.932)
Oromo	-0.007 (0.053)	7.750*** (2.984)	-0.025 (0.046)	4.901* (2.754)
Tigray	0.048 (0.106)	1.107 (5.484)	0.041 (0.085)	-0.100 (4.178)
Born in Addis	0.092 (0.104)	1.985 (8.914)	0.039 (0.093)	2.685 (6.897)
Born in Amhara	-0.014 (0.108)	5.396 (9.016)	-0.079 (0.096)	5.583 (7.058)
Born in Oromia	0.083 (0.109)	0.772 (9.194)	0.006 (0.098)	1.136 (7.181)
Born in SNNP	0.124 (0.114)	5.029 (9.376)	0.073 (0.102)	3.014 (7.280)
Born in Tigray	0.078 (0.147)	5.677 (9.896)	0.034 (0.124)	4.822 (7.932)
Earnings 2005 (at reg.)	-0.006 (0.005)	-0.128 (0.312)	-0.004 (0.005)	0.001 (0.277)
Earnings 2015	0.023*** (0.006)	-0.143 (0.438)	0.024*** (0.005)	0.284 (0.363)
Partner earnings 2005 (at reg.)	0.001 (0.009)	-0.239 (0.484)	0.006 (0.008)	0.085 (0.430)
Partner earnings 2015	-0.006 (0.006)	0.164 (0.331)	-0.007 (0.006)	-0.152 (0.321)
Partner 2005 (at reg.)	0.024 (0.049)	-1.105 (2.970)	0.013 (0.044)	-0.267 (2.629)
Partner 2015	0.058 (0.044)	-0.559 (2.391)	0.062 (0.039)	1.616 (2.211)
Mean	0.464	54.143	0.460	54.763
N	1145	531	1485	683

Notes: Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.



Table A.53: Main results for valuation rank measure.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Valuation (rank)	-0.002** (0.001)	0.001 (0.001)	0.002* (0.001)	0.002* (0.001)
Mean	0.745	0.691	0.540	0.322
N	683	683	683	683

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.54: Main results for valuation rank measure with controls (missing indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Valuation (rank)	-0.002** (0.001)	0.001 (0.001)	0.001 (0.001)	0.002** (0.001)
Mean	0.745	0.691	0.540	0.322
N	683	683	683	683

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.55: Beliefs about the causes of poverty for valuation rank measure.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Valuation (rank)	0.000 (0.001)	0.000 (0.000)	-0.001* (0.001)	-0.001 (0.001)
Mean	0.133	0.736	0.196	0.784
N	683	683	683	683

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.56: Beliefs about the causes of poverty for valuation rank measure with controls (missing indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Valuation (rank)	0.000 (0.001)	0.000 (0.000)	-0.001 (0.001)	-0.001 (0.001)
Mean	0.133	0.736	0.196	0.784
N	683	683	683	683

*Notes:* Robust standard errors are in parentheses. We control for the stratification variables. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

# I Additional results from lottery round 10

Table A.57: Results from lottery round 10. Adding other controls

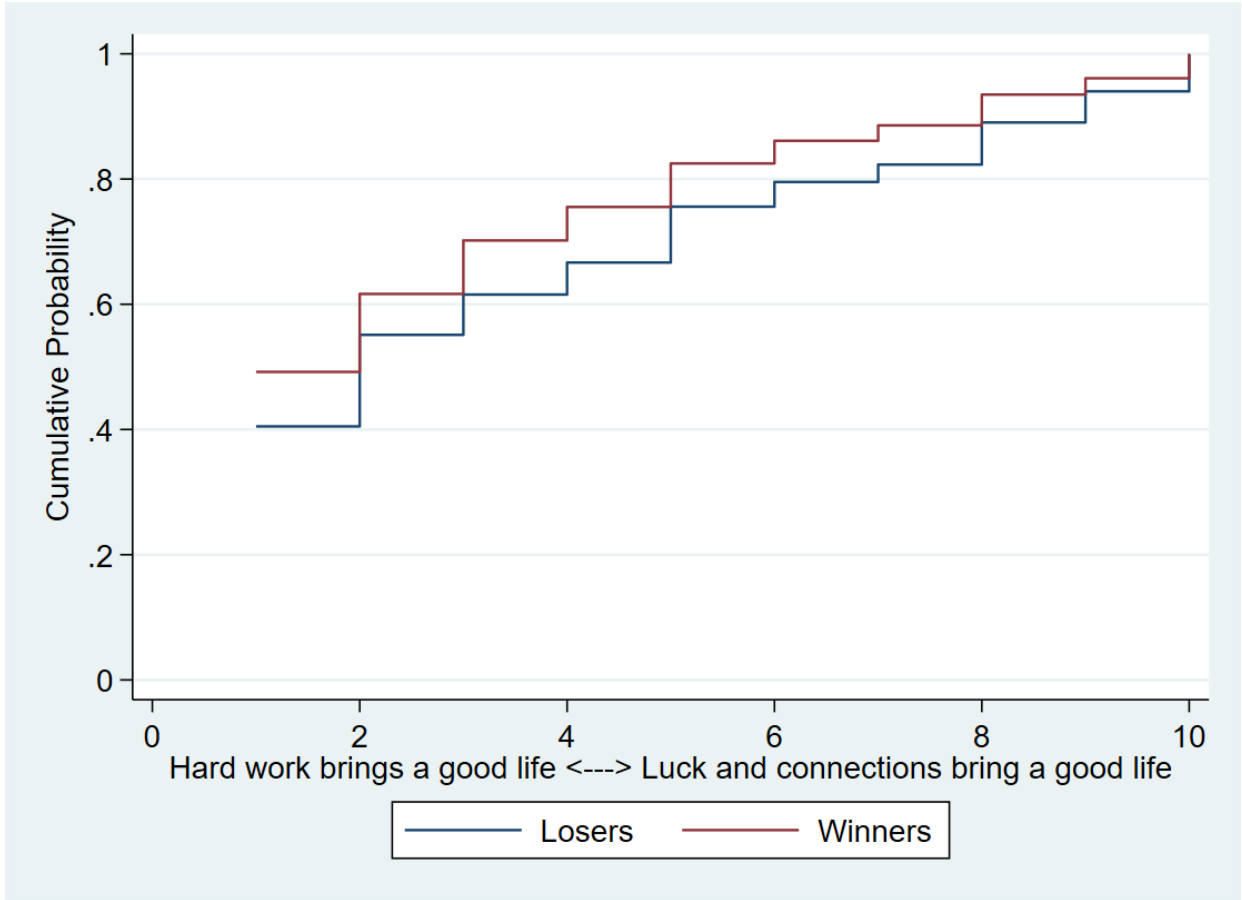
	(1) Success is due to luck	(2) Income differences are necessary	(3) Government should reduce inequality	Raise taxes to help poor
Winner	-0.075*** (0.028)	0.007 (0.028)	-0.002 (0.022)	0.010 (0.020)
Mean (losers)	0.449	0.447	0.190	0.131
N	1375	1375	1343	1336
Strata	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Additional controls	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>

*Notes:* The table reports the estimated effects of winning in the 10<sup>th</sup> round of the lottery based on data from Franklin (2019). We control for the stratification variables and additional covariates in all estimations. Robust standard errors are in parentheses. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.58: Impacts on class identification

Outcome	Control mean (1)	Winner Effect		
		N (2)	Coeff (3)	Std. Err. (4)
Description of own class (1-5, 5=highest)	1.447	1,374	-0.110**	0.045
Description of parent's class (1-5, 5=highest)	1.460	1,352	-0.135**	0.052
Identifies as upper/upper-middle class	0.073	1,564	-0.017	0.012
Identifies as lower middle class	0.370	1,564	-0.014	0.024
Identifies as working class	0.306	1,564	-0.006	0.023
Identifies as lower class	0.125	1,564	0.045**	0.018
Identifies parents as upper/upper-middle class	0.119	1,564	-0.020	0.016
Identifies parents as lower middle class	0.314	1,564	-0.014	0.023
Identifies parents as working class	0.266	1,564	-0.011	0.022
Identifies parents as lower class	0.161	1,564	0.054***	0.020

*Notes:* The table reports the estimated effects of winning in the 10<sup>th</sup> round of the lottery based on data from Franklin (2019). The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .



Note: The figure shows the cumulative distribution plot of responses on the scale of 1 to 10 where 1 represents , for both lottery winners and losers, from the 10<sup>th</sup> round of the lottery.

Figure A.4: Cumulative distribution: Work versus luck brings a good life.

## J Results separating between landlords and other non-movers

Table A.59: Main outcomes for winners with different post-lottery behavior, incl. landlords.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Movers	0.008 (0.024)	-0.074*** (0.027)	0.015 (0.027)	0.013 (0.025)
Landlords	-0.023 (0.025)	-0.012 (0.027)	0.018 (0.027)	0.005 (0.025)
Other non-movers	0.008 (0.022)	-0.054** (0.025)	-0.036 (0.025)	-0.033 (0.023)
Sellers	-0.020 (0.058)	0.140** (0.058)	0.008 (0.066)	-0.074 (0.055)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.60: Main outcomes for winners with different post-lottery behavior, incl. landlords (missing-indicator method).

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Movers	0.020 (0.024)	-0.076*** (0.028)	-0.002 (0.027)	-0.015 (0.025)
Landlords	-0.021 (0.024)	-0.012 (0.027)	0.025 (0.026)	0.002 (0.025)
Other non-movers	0.001 (0.022)	-0.054** (0.026)	-0.022 (0.025)	-0.029 (0.023)
Sellers	-0.029 (0.055)	0.144** (0.057)	0.023 (0.064)	-0.078 (0.057)
Mean (losers)	0.734	0.600	0.489	0.312
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.61: Beliefs about the causes of poverty for winners with different post-lottery behavior, incl. landlords.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Movers	-0.034 (0.021)	0.008 (0.013)	-0.034* (0.020)	-0.013 (0.022)
Landlords	-0.037* (0.021)	0.019 (0.014)	-0.020 (0.021)	0.027 (0.021)
Other non-movers	-0.028 (0.020)	-0.007 (0.013)	-0.024 (0.020)	0.011 (0.020)
Sellers	-0.050 (0.048)	0.052 (0.032)	0.020 (0.054)	0.063 (0.045)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.62: Beliefs about the causes of poverty for winners with different post-lottery behavior, incl. landlords (missing-indicator method).

	(1) Luck	(2) Individual	(3) Family	(4) Society
Movers	-0.037* (0.021)	-0.000 (0.013)	-0.046** (0.020)	-0.012 (0.022)
Landlords	-0.035* (0.021)	0.016 (0.014)	-0.021 (0.021)	0.025 (0.021)
Other non-movers	-0.027 (0.020)	-0.005 (0.013)	-0.025 (0.020)	0.011 (0.020)
Sellers	-0.046 (0.048)	0.053 (0.032)	0.012 (0.055)	0.059 (0.044)
Mean (losers)	0.208	0.730	0.232	0.776
N	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

## K Beliefs about the causes of poverty – disaggregated variables

In this section, we examine the lottery effects on the beliefs about the causes of poverty when we use the disaggregated variables underlying the indices used in Tables 2 and 3. In addition to its effect on the belief about the importance of *luck*, which we already identified in the earlier tables, we see that the lottery also significantly affects one component of the *individual* factors: having a *poor character*. This result indicates that lottery winners are more likely to attribute poverty to a poor character and less likely to attribute it to luck.

Table A.63: Beliefs about the causes of poverty (disaggregated).

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.018 (0.018)	-0.033** (0.015)	0.052*** (0.019)	0.009 (0.009)	0.009 (0.016)	0.013 (0.015)	-0.023 (0.015)	-0.024 (0.016)	-0.011 (0.016)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Each outcome variable is a dummy variable indicating that the respondent identifies the dependent variable as an important cause of poverty. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

### K.1 Movers and non-movers

Table A.64: Beliefs about the causes of poverty by post-lottery behavior (disaggregated).

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Movers	-0.012 (0.026)	-0.034 (0.021)	0.056** (0.027)	0.014 (0.012)	-0.009 (0.023)	-0.017 (0.023)	-0.035 (0.022)	-0.033 (0.022)	-0.027 (0.024)
Non-movers	-0.024 (0.020)	-0.032* (0.017)	0.042** (0.021)	0.007 (0.010)	0.013 (0.018)	0.024 (0.017)	-0.024 (0.017)	-0.021 (0.018)	-0.005 (0.018)
Sellers	0.032 (0.059)	-0.050 (0.048)	0.163*** (0.060)	0.000 (0.032)	0.069 (0.048)	0.056 (0.048)	0.054 (0.059)	-0.014 (0.055)	0.014 (0.054)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Each outcome variable is a dummy variable indicating that the respondent identifies the dependent variable as an important cause of poverty. P-values are  $\leq 0.01$ \*\*\*,  $\leq 0.05$ \*\*, and  $\leq 0.1$ \*.

## K.2 Alternative strata

Table A.65: Beliefs about the causes of poverty: Strata based on survey only.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.018 (0.017)	-0.037** (0.014)	0.044** (0.018)	0.010 (0.009)	0.010 (0.015)	0.013 (0.015)	-0.026* (0.015)	-0.030* (0.015)	-0.009 (0.016)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.66: Beliefs about the causes of poverty: S2 and S4 omitted.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.024 (0.017)	-0.035** (0.014)	0.045** (0.018)	0.011 (0.009)	0.011 (0.015)	0.012 (0.015)	-0.020 (0.015)	-0.028* (0.015)	-0.004 (0.015)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.67: Beliefs about the causes of poverty: Excl. disabled.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.022 (0.018)	-0.033** (0.015)	0.056*** (0.019)	0.008 (0.009)	0.007 (0.016)	0.010 (0.015)	-0.020 (0.015)	-0.021 (0.016)	-0.006 (0.016)
Mean (losers)	0.689	0.208	0.536	0.935	0.769	0.785	0.217	0.238	0.758
N	2926	2926	2926	2926	2926	2926	2926	2926	2926

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

### K.3 Heterogeneity results

Table A.68: Beliefs about the causes of poverty by earnings in 2015 (missing-indicator method).

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.030 (0.026)	-0.011 (0.023)	0.051* (0.027)	0.019 (0.014)	0.010 (0.024)	0.011 (0.023)	-0.046* (0.024)	-0.042* (0.024)	-0.005 (0.024)
Above median	-0.016 (0.027)	-0.028 (0.023)	0.033 (0.028)	0.037*** (0.014)	0.036 (0.023)	0.023 (0.023)	-0.067*** (0.023)	-0.036 (0.024)	0.023 (0.024)
Winner*Above median	0.026 (0.037)	-0.037 (0.031)	-0.008 (0.038)	-0.029 (0.018)	0.017 (0.032)	0.026 (0.031)	0.038 (0.032)	0.020 (0.033)	0.001 (0.034)
Missing earnings	0.155*** (0.034)	-0.027 (0.034)	-0.187*** (0.040)	-0.024 (0.024)	-0.034 (0.037)	-0.069* (0.037)	-0.146*** (0.029)	-0.145*** (0.030)	0.117*** (0.031)
Winner*Missing earnings	0.000 (0.051)	-0.037 (0.048)	0.001 (0.060)	-0.010 (0.035)	-0.096* (0.057)	-0.098* (0.057)	0.046 (0.044)	0.046 (0.045)	-0.072 (0.049)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except earnings in 2015) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.69: Beliefs about the causes of poverty by earnings in 2015.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.009 (0.029)	-0.007 (0.025)	0.060** (0.030)	0.015 (0.014)	0.013 (0.026)	0.020 (0.025)	-0.060** (0.026)	-0.036 (0.027)	-0.006 (0.027)
Above median	0.000 (0.032)	-0.008 (0.027)	0.021 (0.033)	0.033** (0.016)	0.040 (0.028)	0.026 (0.027)	-0.052* (0.028)	-0.038 (0.029)	0.041 (0.029)
Winner*Above median	0.012 (0.040)	-0.028 (0.033)	-0.018 (0.041)	-0.030 (0.019)	0.019 (0.035)	0.023 (0.034)	0.035 (0.035)	0.006 (0.036)	-0.006 (0.037)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except earnings in 2015) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.70: Beliefs about the causes of poverty by age (missing-indicator method).

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.063** (0.027)	-0.038* (0.022)	0.039 (0.028)	0.003 (0.015)	-0.018 (0.024)	-0.003 (0.024)	-0.003 (0.023)	-0.018 (0.023)	-0.022 (0.025)
Above median	0.019 (0.025)	-0.005 (0.022)	0.031 (0.026)	0.015 (0.014)	-0.014 (0.023)	-0.010 (0.022)	0.041* (0.022)	0.047** (0.023)	-0.010 (0.023)
Winner*Above median	0.074** (0.035)	0.010 (0.029)	0.013 (0.036)	0.004 (0.018)	0.045 (0.031)	0.028 (0.030)	-0.041 (0.030)	-0.020 (0.031)	0.018 (0.032)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except age) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.71: Beliefs about the causes of poverty by age.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.046 (0.032)	-0.032 (0.026)	0.050 (0.033)	-0.004 (0.016)	0.013 (0.027)	0.026 (0.026)	-0.012 (0.026)	-0.012 (0.028)	-0.011 (0.029)
Above median	0.039 (0.030)	-0.019 (0.025)	0.033 (0.031)	0.010 (0.015)	-0.012 (0.026)	-0.008 (0.026)	0.045* (0.026)	0.054** (0.027)	0.004 (0.027)
Winner*Above median	0.072* (0.041)	0.018 (0.033)	0.003 (0.042)	0.008 (0.019)	0.022 (0.035)	0.013 (0.034)	-0.054 (0.035)	-0.039 (0.036)	0.007 (0.037)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates (except age) in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .



Table A.72: Beliefs about the causes of poverty by ethnic group (missing-indicator method).

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	0.007 (0.035)	-0.024 (0.029)	0.082** (0.039)	0.021 (0.019)	0.012 (0.033)	0.027 (0.032)	-0.012 (0.030)	-0.067** (0.031)	-0.011 (0.034)
Amhara	-0.029 (0.034)	0.004 (0.028)	0.070* (0.037)	0.007 (0.019)	0.015 (0.031)	0.025 (0.030)	-0.003 (0.029)	-0.040 (0.031)	0.000 (0.033)
Gurage	-0.059 (0.040)	0.060* (0.034)	0.081* (0.043)	0.002 (0.022)	-0.010 (0.037)	-0.016 (0.036)	0.061* (0.036)	0.045 (0.038)	-0.035 (0.038)
Oromo	-0.018 (0.040)	0.082** (0.034)	0.133*** (0.042)	0.010 (0.022)	-0.004 (0.037)	0.025 (0.035)	0.015 (0.033)	0.011 (0.035)	0.013 (0.038)
Tigray	-0.020 (0.059)	0.076 (0.054)	0.132** (0.066)	-0.009 (0.034)	-0.002 (0.056)	0.014 (0.055)	0.057 (0.054)	-0.055 (0.051)	0.014 (0.056)
Winner*Amhara	-0.026 (0.045)	0.036 (0.037)	-0.019 (0.048)	-0.023 (0.024)	0.003 (0.041)	-0.019 (0.040)	-0.013 (0.039)	0.060 (0.040)	-0.016 (0.042)
Winner*Gurage	-0.054 (0.055)	-0.037 (0.047)	-0.047 (0.058)	0.018 (0.027)	-0.027 (0.051)	-0.012 (0.050)	-0.060 (0.049)	-0.003 (0.050)	0.014 (0.052)
Winner*Oromo	-0.036 (0.055)	-0.064 (0.045)	-0.087 (0.059)	-0.043 (0.030)	0.029 (0.049)	0.007 (0.046)	0.008 (0.046)	0.045 (0.048)	0.033 (0.050)
Winner*Tigray	-0.009 (0.070)	-0.076 (0.059)	-0.063 (0.075)	-0.036 (0.034)	-0.060 (0.066)	-0.071 (0.065)	-0.023 (0.063)	0.093 (0.064)	-0.023 (0.063)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.73: Beliefs about the causes of poverty by ethnic group.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.001 (0.044)	-0.025 (0.033)	0.108** (0.046)	0.023 (0.020)	0.033 (0.038)	0.041 (0.036)	-0.051 (0.037)	-0.103*** (0.039)	-0.022 (0.040)
Amhara	-0.034 (0.041)	-0.017 (0.032)	0.055 (0.043)	0.010 (0.021)	0.003 (0.036)	0.010 (0.034)	-0.040 (0.035)	-0.077** (0.037)	-0.020 (0.039)
Gurage	-0.081* (0.049)	0.046 (0.040)	0.105** (0.051)	0.014 (0.023)	-0.014 (0.043)	-0.053 (0.043)	0.058 (0.043)	0.029 (0.046)	-0.035 (0.046)
Oromo	-0.009 (0.047)	0.099** (0.040)	0.143*** (0.049)	0.003 (0.025)	-0.006 (0.042)	0.002 (0.040)	0.024 (0.040)	0.011 (0.043)	-0.016 (0.045)
Tigray	-0.052 (0.073)	0.080 (0.065)	0.125 (0.079)	-0.042 (0.044)	-0.031 (0.068)	-0.032 (0.066)	0.046 (0.068)	-0.106* (0.062)	-0.011 (0.067)
Winner*Amhara	0.004 (0.054)	0.065 (0.042)	-0.031 (0.056)	-0.027 (0.025)	0.000 (0.046)	-0.016 (0.044)	0.017 (0.046)	0.096** (0.047)	-0.001 (0.050)
Winner*Gurage	0.003 (0.067)	-0.006 (0.055)	-0.103 (0.068)	0.004 (0.028)	-0.034 (0.058)	0.017 (0.057)	-0.018 (0.059)	0.055 (0.061)	0.041 (0.062)
Winner*Oromo	-0.031 (0.065)	-0.074 (0.051)	-0.132* (0.068)	-0.048 (0.034)	0.000 (0.056)	-0.000 (0.052)	0.026 (0.056)	0.077 (0.058)	0.061 (0.058)
Winner*Tigray	0.017 (0.084)	-0.107 (0.067)	-0.072 (0.087)	-0.045 (0.035)	-0.031 (0.076)	-0.043 (0.075)	-0.018 (0.074)	0.113 (0.076)	-0.026 (0.072)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.74: Beliefs about the causes of poverty by religion (missing-indicator method).

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.058 (0.142)	-0.244* (0.128)	0.166 (0.145)	0.023 (0.019)	-0.009 (0.104)	0.116 (0.107)	-0.027 (0.131)	-0.050 (0.135)	0.132 (0.123)
Orthodox	0.091 (0.096)	-0.230** (0.101)	0.018 (0.105)	-0.065*** (0.011)	-0.081 (0.065)	0.016 (0.079)	-0.070 (0.089)	-0.063 (0.091)	0.084 (0.094)
Protestant	0.091 (0.101)	-0.278*** (0.104)	0.027 (0.111)	-0.065*** (0.021)	-0.085 (0.071)	0.023 (0.083)	-0.113 (0.093)	-0.139 (0.095)	0.031 (0.099)
Muslim	0.058 (0.101)	-0.223** (0.105)	0.089 (0.111)	-0.072*** (0.021)	-0.053 (0.071)	0.042 (0.084)	-0.075 (0.094)	-0.109 (0.096)	0.037 (0.098)
Winner*Orthodox	0.065 (0.141)	0.214* (0.127)	-0.078 (0.144)	-0.004 (0.015)	0.022 (0.103)	-0.087 (0.106)	0.013 (0.129)	-0.022 (0.133)	-0.158 (0.122)
Winner*Protestant	0.055 (0.147)	0.277** (0.132)	-0.058 (0.151)	0.018 (0.027)	0.050 (0.110)	-0.088 (0.113)	0.047 (0.135)	0.001 (0.138)	-0.116 (0.129)
Winner*Muslim	0.091 (0.150)	0.217 (0.134)	-0.176 (0.154)	-0.018 (0.033)	-0.025 (0.114)	-0.122 (0.116)	-0.014 (0.137)	-0.015 (0.141)	-0.126 (0.131)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.75: Beliefs about the causes of poverty by religion.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	0.014 (0.161)	-0.286** (0.143)	0.193 (0.169)	0.029 (0.022)	-0.075 (0.121)	0.075 (0.126)	-0.096 (0.140)	-0.126 (0.141)	0.096 (0.146)
Orthodox	0.120 (0.109)	-0.252** (0.113)	0.032 (0.122)	-0.057*** (0.011)	-0.113 (0.070)	0.009 (0.090)	-0.046 (0.097)	-0.005 (0.097)	0.096 (0.108)
Protestant	0.119 (0.115)	-0.288** (0.117)	0.085 (0.128)	-0.039** (0.018)	-0.081 (0.076)	0.043 (0.094)	-0.111 (0.101)	-0.088 (0.102)	0.050 (0.114)
Muslim	0.081 (0.117)	-0.245** (0.119)	0.097 (0.129)	-0.064*** (0.024)	-0.102 (0.079)	0.026 (0.097)	-0.053 (0.104)	-0.038 (0.104)	0.029 (0.115)
Winner*Orthodox	-0.013 (0.159)	0.257* (0.143)	-0.070 (0.166)	-0.002 (0.017)	0.119 (0.120)	-0.020 (0.125)	0.039 (0.138)	0.020 (0.138)	-0.130 (0.144)
Winner*Protestant	-0.049 (0.167)	0.327** (0.148)	-0.090 (0.175)	0.001 (0.026)	0.086 (0.127)	-0.092 (0.132)	0.108 (0.145)	0.054 (0.145)	-0.115 (0.153)
Winner*Muslim	0.024 (0.169)	0.237 (0.151)	-0.183 (0.178)	-0.043 (0.038)	0.095 (0.131)	-0.041 (0.136)	-0.004 (0.147)	-0.004 (0.148)	-0.071 (0.154)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

Notes: The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

## K.4 Results with controls

Table A.76: Beliefs about the causes of poverty with controls (missing-indicator method).

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.018 (0.018)	-0.033** (0.015)	0.047** (0.019)	0.005 (0.009)	0.009 (0.016)	0.013 (0.015)	-0.027* (0.015)	-0.030* (0.016)	-0.011 (0.016)
Mean (losers)	0.684	0.208	0.540	0.934	0.768	0.783	0.222	0.243	0.762
N	3049	3049	3049	3049	3049	3049	3049	3049	3049

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.77: Beliefs about the causes of poverty with controls.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.003 (0.021)	-0.022 (0.017)	0.051** (0.021)	0.001 (0.009)	0.025 (0.018)	0.033* (0.018)	-0.044** (0.018)	-0.035* (0.018)	-0.007 (0.019)
Mean (losers)	0.656	0.201	0.563	0.944	0.768	0.787	0.237	0.256	0.747
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.78: Beliefs about the causes of poverty with optimal controls.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.001 (0.020)	-0.021 (0.017)	0.054** (0.021)	0.005 (0.009)	0.022 (0.018)	0.028 (0.017)	-0.042** (0.018)	-0.030 (0.018)	-0.004 (0.019)
Mean (losers)	0.656	0.201	0.563	0.944	0.768	0.787	0.237	0.256	0.747
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

## **L Minor deviations from the pre-analysis plan**

The present version of the paper includes a slight modification, as compared to the pre-analysis plan, regarding the covariates relating to the partner. In this section we show that this change makes no qualitative difference for our results.

The plan included partner earnings in 2005 and 2015 and a dummy for having a partner in 2005, but no dummy for having a partner in 2015. This means that the variable “Partner earnings 2015” captures both whether or not the respondent has a partner and how much the partner earns. Because this makes the coefficients hard to interpret, and for the sake of symmetry, we have now included such a dummy in our list of control variables. This affects the balance test and the estimation results with controls, but as shown below it is of minor importance.

Table A.79: Balance test: Relationship between control variables and winning.

	(1) Winner (regressions one-by-one)	(2) Winner (multivariate regression)
Age	0.002** (0.001)	0.002 (0.001)
Orthodox	0.018 (0.020)	-0.028 (0.080)
Protestant	0.034 (0.028)	-0.019 (0.084)
Muslim	-0.077*** (0.027)	-0.092 (0.086)
Amhara	0.004 (0.018)	-0.029 (0.031)
Gurage	-0.032 (0.024)	-0.047 (0.038)
Oromo	-0.048** (0.024)	-0.068* (0.036)
Tigray	0.071** (0.032)	-0.111* (0.063)
Born in Addis	-0.072*** (0.018)	-0.071 (0.075)
Born in Amhara	0.034 (0.023)	-0.006 (0.078)
Born in Oromia	0.018 (0.025)	-0.019 (0.079)
Born in SNNP	0.018 (0.026)	0.029 (0.083)
Born in Tigray	0.137*** (0.036)	0.172* (0.095)
Earnings 2005 (at reg.)	-0.001 (0.003)	-0.000 (0.000)
Earnings 2015	0.003 (0.003)	0.000* (0.000)
Partner earnings 2005 (at reg.)	-0.004 (0.004)	-0.000 (0.000)
Partner earnings 2015	0.000 (0.003)	0.000 (0.000)
Partner 2005 (at reg.)	-0.017 (0.019)	-0.005 (0.031)
$R^2$	NA	0.086
$F$ -test ( $p$ -value)	NA	0.512
Mean	NA	0.495
N	NA	2311

Notes: The first column shows the relationship between the covariates and winning, one by one, and then together. All regressions include the strata variables.

Table A.80: Main outcomes with controls.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.010 (0.018)	-0.044** (0.022)	0.004 (0.021)	-0.017 (0.020)
Mean (losers)	0.766	0.569	0.435	0.319
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.81: Main outcomes with optimal controls.

	(1) Redistribution General	(2) Redistribution Housing	(3) Causes of poverty Individual/Society	(4) Inequality aversion Meritocratic/Egalitarian
Winner	0.008 (0.018)	-0.041* (0.021)	0.003 (0.021)	-0.012 (0.020)
Mean (losers)	0.766	0.569	0.435	0.319
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.82: Beliefs about the causes of poverty with controls.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.022 (0.017)	0.010 (0.011)	-0.039** (0.017)	0.029* (0.017)
Mean (losers)	0.201	0.728	0.246	0.778
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.83: Beliefs about the causes of poverty with optimal controls.

	(1) Luck	(2) Individual	(3) Family	(4) Society
Winner	-0.021 (0.017)	0.014 (0.011)	-0.036** (0.017)	0.025 (0.017)
Mean (losers)	0.201	0.728	0.246	0.778
N	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.84: Beliefs about the causes of poverty with controls.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.003 (0.021)	-0.022 (0.017)	0.050** (0.021)	0.001 (0.009)	0.024 (0.018)	0.033* (0.018)	-0.044** (0.018)	-0.035* (0.018)	-0.007 (0.019)
Mean (losers)	0.656	0.201	0.563	0.944	0.768	0.787	0.237	0.256	0.747
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.85: Beliefs about the causes of poverty with optimal controls.

	(1) Competence	(2) Luck	(3) Character	(4) Effort	(5) Discrimination	(6) Opportunities	(7) Poor family	(8) Parents' education	(9) Ambitions
Winner	-0.001 (0.020)	-0.021 (0.017)	0.054** (0.021)	0.005 (0.009)	0.022 (0.018)	0.028 (0.017)	-0.042** (0.018)	-0.030 (0.018)	-0.004 (0.019)
Mean (losers)	0.656	0.201	0.563	0.944	0.768	0.787	0.237	0.256	0.747
N	2311	2311	2311	2311	2311	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.86: Wealth outcomes with controls.

	(1) Housing wealth	(2) Net wealth	(3) Richer than 5 years ago	(4) Richer in 5 years	(5) Perceived position	(6) Asset index
Winner	563.852*** (16.452)	420.287*** (22.492)	0.064*** (0.019)	0.017* (0.009)	0.103*** (0.020)	0.052 (0.037)
Mean (losers)	7.310	21.341	0.702	0.948	0.636	-0.002
N	1734	1238	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the additional covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .

Table A.87: Wealth outcomes with optimal controls.

	(1) Housing wealth	(2) Net wealth	(3) Richer than 5 years ago	(4) Richer in 5 years	(5) Perceived position	(6) Asset index
Winner	564.058*** (16.537)	419.353*** (22.293)	0.066*** (0.019)	0.017* (0.009)	0.103*** (0.020)	0.063* (0.038)
Mean (losers)	7.310	21.341	0.702	0.948	0.636	-0.002
N	1734	1238	2311	2311	2311	2311

*Notes:* The table reports the estimated effects of winning the lottery. Robust standard errors are in parentheses. We control for the stratification variables and the optimal covariates in all estimations. P-values are  $\leq 0.01^{***}$ ,  $\leq 0.05^{**}$ , and  $\leq 0.1^*$ .