Material resources and well being — Evidence from an Ethiopian housing lottery

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Material resources and well-being — Evidence from an Ethiopian housing lottery [*]

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Abstract

Do better material conditions improve well-being and mental health? Or does any positive relationship merely reflect that psychological well-being promotes economic success? We supply new responses to these questions by comparing winners and losers from a large Ethiopian housing lottery in a preregistered analysis. Winners gain access to better housing, experience a substantial increase in wealth, and report higher levels of overall life satisfaction and lower levels of financial distress. However, we find no effects of winning on psychological distress, suggesting that depression and anxiety involve other causal determinants and are less sensitive to economic conditions than life satisfaction is.

I Introduction

Ever since the United Nations included mental health and well-being among its Sustainable Development Goals, they have become a major policy concern internationally. As a consequence, researchers are increasingly emphasizing the prevalence of common mental disorders (CMDs) and poor well-being in low and middle-income countries and highlighting poverty as both a cause and a consequence (Deaton, 2008; Lund et al., 2010; Olesen et al., 2013; Patel et al., 2018; Alloush, 2020; Ridley et al., 2020). But a question remains as to the extent to which better material conditions reduce the prevalence of CMDs and improve well-being. The response to this question has important policy implications, but requires stronger evidence than that currently available.

To inform this debate, we survey around 3,000 winners and losers of an Ethiopian housing lottery two years after the draw. This lottery allocates purchase rights for new subsidized apartments to low- and middle-income households in Addis Ababa and is part of an ambitious urbanization program. Given that winning is random, we interpret the differences between winners and losers as the causal effect of winning the lottery. While winners gain access to better housing, they also experience a substantial increase in wealth through the ownership of real estate. According to our estimates, winners are on average 20 times wealthier than losers two years after the lottery. We report estimates of how winning the lottery and becoming substantially richer affects people's mental health and well-being.

In addition to standard socioeconomic variables, we measure overall life satisfaction using standard questions from the World Value Survey, and psychological distress using the Kessler K10 scale (Kessler et al., 2002, 2003).[1] We also include a set of survey questions to measure financial distress. We find that winning the lottery increases overall life satisfaction on average by 0.2 standard deviations. This increase appears mostly driven by greater satisfaction

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[1]We use the Amharic version of the K10, tested and used in Ethiopia by Fekadu et al. (2014); Tesfaye et al. (2010, 2016), and which Charlotte Hanlon and Markos Tesfaye graciously shared with us.

with housing, neighborhood, and personal finances. Winners also report significantly lower levels of financial distress. More specifically, they are less likely to have inadequate means to cover household expenses, to have outstanding bills, and to have recently experienced financial difficulties more generally.

However, we identify no effects of winning on psychological distress. In fact, the point estimate is remarkably close to zero and sufficiently precise that we can reject an effect of just 0.1 standard deviations. This null finding also does not appear to be masking positive effects in some groups and negative effects in others. Employing the "generic machine learning approach" of Chernozhukov et al. (2018), we can also reject the presence of heterogeneous treatment effects overall. These findings are robust to the inclusion of a large set of control variables, as well as the use of machine learning to select optimal controls. The results are also robust to different coding choices, and a bounds analysis — accounting for possible selective nonresponse — does not alter our main conclusions.

However, as mentioned, through the lottery, winners simultaneously become wealthier and obtain access to better housing, and we cannot fully disentangle the effects of these changes.[2] When we exploit the fact that only a minority of winners have actually relocated into the apartment won at the time of the interview, we find that the estimates for overall life satisfaction are very similar for both movers and non-movers. We also find that both movers and non-movers are more satisfied with their houses and neighborhoods (especially movers) and with their financial situation. Of course, we must interpret this with caution given the risk of selection bias, but it nevertheless suggests that both greater wealth and better housing conditions drive our results.

The positive correlation between economic resources and life satisfaction and well-being

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[2]Better housing and neighborhood quality have been repeatedly identified as associated with a lower prevalence of CMDs and better well-being (Abas and Broadhead, 1997; Alloush and Bloem, 2020; Amoran et al., 2005; Cattaneo et al., 2009; Danaci et al., 2002; Gureje et al., 2007; Kim et al., 2002; Lund et al., 2010; Patel et al., 1998, 2006; Sabin et al., 2003; Ludwig et al., 2012).

is an almost universal finding (Frijters et al., 2004, 2006; Deaton, 2008; Howell and Howell, 2008; Diener et al., 2010; Haushofer and Fehr, 2014; Clark, 2017; Killingsworth, 2021). There is also increasing evidence of the negative association between poverty and mental health (Tampubolon and Hanandita, 2014; Schilbach et al., 2016; Karimli et al., 2019; Ridley et al., 2020). Nonetheless, existing evidence highlights that income is more strongly correlated with so-called *evaluative* measures of well-being, such as life satisfaction, than with more *affective* measures, such as questions about the frequency of various positive or negative feelings (Kahneman and Deaton, 2010). Our findings contribute to this literature by providing causal evidence of the relationship between material conditions and mental health and well-being in a low-income country.

Nevertheless, this is not the first analysis to move beyond descriptive correlations to make causal claims. Likewise, some other studies have exploited variations in economic resources from natural experiments. For example, using tax rebates, Lachowska (2017) finds that increased income reduces stress and worry in the US. Also in the US, Schwandt (2018) employs stock price fluctuations and reveals that increases in wealth improve mental health. There is also evidence of mental health effects from variations in income from casinos among Native Americans (Costello et al., 2003, 2010; Wolfe et al., 2012).

Finally, a few studies have used lotteries to investigate the effects of monetary gains on well-being and mental health. In the UK Gardner and Oswald (2007) and Apouey and Clark (2015) and in Sweden Lindahl (2005) find that large lottery wins lead to improvements in mental health. However, these studies compare winners from different lotteries and lack information about how much people played. It is therefore unclear if the drawing of the winners of different amounts are from the same distribution. The sample sizes in these studies are also small (ranging from just 137 to 674 winners). In contrast, Kuhn et al. (2011) find no effect on happiness of winning a Dutch lottery where they were able to compare 223 winners and 477 losers in the same lottery, even though they were unable to reject large

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effects.

Using data from an earlier Ethiopian housing lottery, Franklin (2019) reports exploratory results for well-being and mental health among lottery participants. He finds that winning reduces anxiety and depression among winners, but the effect of -0.11 is only statistically significant at the 10 percent level (the statistical power to detect an effect of 0.1 is only 0.47 given the sample size in his analysis). The best evidence from lotteries to date is from Sweden, where Lindqvist et al. (2020) are able to compare winners with equal probabilities of winning in a large sample using a preregistered analysis. They find a persistent positive relationship between the lottery amount won and overall life satisfaction. Like us, however, they identify no significant effects on mental health.

We also contribute to the literature on economic resources and mental health in low-income countries, where most of the causal evidence is from cash transfer programs.[3] In a recent meta-analysis of 38 cash transfer studies covering the period 2000–2020, McGuire et al. (2020) find a positive effect of 0.1 standard deviations on a composite index of mental health and well-being, whereas the effect is smaller for mental health in isolation. The fact that the main source of heterogeneity in the effects is the size of the transfer highlights the need for studies of more radical changes in economic conditions, such as those presented here. Ridley et al. (2020) focus on mental health and also include poverty-alleviating programs other than cash transfers.[4] As in McGuire et al. (2020), they find an overall positive effect of about 0.1 standard deviations.[5]

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[3]Studies that have assessed the effects of cash transfers on psychological well-being and mental health include Alzua et al. (2019); Angeles et al. (2019); Baird et al. (2013); Bando et al. (2020); Blattman et al. (2017, 2020); Chen et al. (2019); Egger et al. (2019); Galama et al. (2017); Galiani et al. (2016); Han and Gao (2020); Haushofer and Shapiro (2016, 2018); Haushofer et al. (2020a,b); Heath et al. (2020); Hjelm et al. (2017); Kilburn et al. (2016, 2018, 2019); Macours et al. (2012); Ohrnberger et al. (2020b,a); Ozer et al. (2011); Paxson and Schady (2010); Salinas-Rodríguez et al. (2014); Schatz et al. (2012). Rather than discussing all of these, we refer the interested reader to recent reviews by McGuire et al. (2020) and Ridley et al. (2020).

[4]Their meta-analysis includes 12 cash transfers and six multifaceted anti-poverty programs.

[5]Our study is also designed to detect an effect of 0.1 standard deviations with a power of 0.8 at the 0.05 level of significance.

The present study differs from this existing body of work along several dimensions. As mentioned, the lottery winners in our sample see an exceptionally significant increase in wealth, which is presumably permanent and relatively certain given the stability of the real estate market in a fast-growing city such as Addis Ababa. This is in contrast to the relatively small short-term income changes induced by temporary cash transfers. As well-being and mental health are influenced by uncertainty and worries (Ridley et al., 2020), a permanent increase in wealth could exert even stronger effects on well-being and mental health than could temporary transfers. The fact that we observe a reduction in financial distress among winners also suggests that we could expect a beneficial effect from fewer worries. In light of this, our null result on psychological distress is quite stark. In comparison to the cash transfer results in the literature, a crucial difference may be that our policy is not targeted to the very poorest individuals in society.

The remainder of the paper is structured as follows. Section II describes the lottery and the context and Section III presents the data. Section IV provides the empirical strategy and discusses the results. We conclude the analysis in Section VI.

II   The lottery

The housing lottery we consider is part of a large-scale urbanization policy known as The Integrated Housing and Development Programme (IHDP). This program oversees the construction and allocation of high-quality condominium apartments in Ethiopia's capital city of Addis Ababa. The apartments are sold at highly subsidized prices and — given excess demand — purchase rights are allocated through a lottery.[6]

There are few formal requirements for participation in the lottery, and nearly half of the city's population signed up for it when the program was introduced in 2005. Participants must have resided in Addis Ababa for at least the last two years prior to the lottery, must

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[6]The program is more thoroughly described in Andersen et al. (2020) and Franklin (2019). We include a more detailed description in Appendix Section A.1 for the reader's convenience.

not already own any house or piece of land, and must have opened a savings account with the Commercial Bank of Ethiopia (CBE) and saved regularly. Upon winning the lottery, they must make a down payment corresponding to 20 percent of the sales price, and they are then offered financing for the remaining 80 percent through the CBE. Around 95 percent of the winners initially drawn were able to make the down payment.

The particular lottery we study took place in 2016 and allocated the purchase rights for more than 12,000 apartments. Participants had all registered for a studio or one- or two-bedroom apartment when the program was introduced in 2005, and separate lotteries were held for each type of apartment given the prevailing differences in the supply and demand. Within each lottery, quotas exist for women (30 percent), government employees (20 percent), and people with physical disabilities (5 percent). All quotas were decided upon after registration but before the lottery draw, so participants had no motive for making false claims when registering.

Winners are free to rent out their apartment, but are not permitted to sell it within the first five years of ownership. At the time of the survey, 30 percent of winners had moved into their apartment, 31 percent were renting them out, 32 percent of apartments were currently empty, but with the owner planning to move in (21 percent) or rent it out (11 percent), and in 2 percent of cases relatives were freely using the apartment.[7]

III   Data

We designed and collected survey data for the winners and losers of the lottery in collaboration with the Ethiopian Development Research Institute (EDRI). In this section we describe our main measures. Refer to Andersen et al. (2020) for an in-depth description of the sampling and to the Appendix Section A.2 for a discussion of attrition and the results from a prespecified bounds analysis showing that our main results are robust to reasonable

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[7]A small number of respondents (4 percent) also say that they sold their apartments, despite this not being allowed.

assumptions about the potential values of the missing observations.

A) Survey measures

Our two first outcome variables measure psychological well-being. In addition, we examine the effects on financial distress and also collect data on features that serve as control variables. We here describe the coding choices.[8]

Our first two outcomes are *overall life satisfaction* and *psychological distress*. For *overall life satisfaction*, we use the standard measure from the World Value Survey, which asks respondents: "*Using a scale from 0 to 10, where 0 means 'not at all satisfied', and 10 is 'completely satisfied', how satisfied are you with your life as a whole these days?*". We standardize the responses by subtracting the mean and dividing by the standard deviation (both from the control group).

To further explore this dimension, we also include measures of domain-specific satisfaction. In particular, we question respondents about how satisfied they are with their health, leisure time, financial situation, friends, relatives, home, neighborhood, work, and with Ethiopian society. Responses are given on a scale from 0 to 5, where 0 is *very dissatisfied* and 5 is *very satisfied*. These variables are standardized in the same manner as the responses to the overall life satisfaction question.[9]

We measure *psychological distress* using the Kessler K10 scale (Kessler et al., 2002, 2003). This scale contains 10 questions concerning experienced symptoms of depression and anxiety in the past 30 days. Respondents are asked how often they have felt:

(i) ...tired out for no good reason

(ii) ...nervous

(iii) ...so nervous that nothing could calm them down

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[8]The full survey is available in Appendix Section A.10.

[9]In the pre-analysis plan, we stated that we would dichotomize each variable by choosing the cut-off that would divide the control group into two groups of as equal sizes as possible. We have included these results in Appendix Section A.7 to show that it makes no qualitative difference for our estimates.

(iv) ...hopeless

(v) ...restless or fidgety

(vi) ...so restless they could not sit still

(vii) ...depressed

(viii) ...that everything was an effort

(ix) ...so sad that nothing could cheer them up

(x) ...worthless

Responses are given on a 5-point scale ranging from *none of the time* to *all of time*. The range of scores is between 10 and 50, where higher scores indicate higher distress (Andersen et al., 2011; Andrews and Slade, 2001). The Kessler scale is widely used, including in the World Mental Health Survey, and has been translated and validated in many different contexts, including in Ethiopia (Tesfaye et al., 2010, 2016; Fekadu et al., 2014).[10] The K10 scale is highly correlated with other screening scales for common mental disorders (Patel et al., 2008) and has the advantage of being short and concise. The internal consistency of the index is high; we obtain a Cronbach's alpha of 0.9 using our data which exactly matches the value reported by Tesfaye et al. (2010). For comparability, we standardize the overall K10 score in the same way as for the life satisfaction question. To explore various aspects of distress, we also report effect estimates for the individual items on the scale (also standardized).

It is common in the literature to separate the levels of distress using cut-off scores. Suggested score categories are: 10–19 (individual is likely well), 20–24 (indicating mild mental disorder), 25–29 (indicating moderate mental disorder) and 30–50 (indicating severe mental disorder). According to these cut-offs, 78 percent of the control group show no signs of mental disorder, 14 percent have mild mental disorders, and 8 percent suffer from moderate to severe mental disorders. The literature has emphasized that women bear a disproportionate share of the burden of mental illness (James et al., 2018), and this is also

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[10]We employ an Amharic version shared by Hanlon and Tesfaye.

the case in our sample, where the shares of women falling into each category of mental disorder are 73, 15, and 12 percent, whereas the corresponding shares for men are 81, 13, and 6 percent, respectively. We did not pre-specify the use of cut-off scores, but in Appendix Section A.7 we show that our conclusions are the same when applying thresholds. We also show that alternatively using the Kessler K6 scale — nested in the K10 scale but including only six of the above 10 items — also does not affect our conclusions.

In order to assess the effect of winning the lottery on economic resources, we measure the *wealth* and experienced *financial distress* of respondents. Based on the reported asset values (including real estate) and liabilities, with all currency values in Ethiopian birr (ETB), we calculate their housing-related wealth and net wealth.[11] We also asked respondents about whether they were richer today than five years ago, whether they expected to be richer five years from now, and whether they perceived themselves as richer, equally rich, or poorer than other Ethiopians. In addition, we constructed an asset index based on whether the households owned a radio, TV, refrigerator, car, computer, tablet, satellite dish, smartphone, or an electric mitad (a common cooking appliance like a grill in Ethiopia).

Finally, because economic distress may be an important channel through which economic circumstances affect well-being, we include four commonly used measures of financial distress. We first ask *"If you suddenly ended up in an unforeseen situation, where you have to raise ETB 20,000, would you be able to?"*. We code the response as a binary indicator equal to one if the answer is *no*. We then ask three questions about the economic situation of each respondent's family during the last six months. Specifically, we ask whether they have had inadequate money to cope with family expenses (*never, rarely, sometimes, always*),

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[11]It should be noted that the values for these variables are missing for about 40 and 60 percent of respondents because of missing or inconsistent information on one or more of the variables, respectively. As specified in the pre-analysis plan, we calculate the bounds on the effect of winning the lottery on wealth. Appendix Table A.6 shows that the difference in wealth between winners and losers of the lottery is still large and significantly different from zero, even if we make very extreme assumptions about the values of the missing observations.

if they have delayed the payment of bills due to financial difficulty (*never, rarely, some-times, always*), and what the economic condition of the family has been like (*no-, some-, considerable-, or much financial difficulty*).

For comparability with our main outcomes, we standardize each of the items relating to financial distress by subtracting the mean and dividing by the standard deviation of the control group. We then construct a financial distress index by adding the four standardized items together and standardizing the sum in the same way. The four items are highly correlated, and the internal consistency of the index, as measured by Cronbach's alpha, is 0.81. We present the effect of winning on this financial distress index along with our main results, because it is seen as a key channel for the effects of economic resources on distress.[12]

B) Descriptive statistics and balance test

In this section, we describe the sample across some important dimensions and check whether we can identify any noteworthy differences between winners and losers prior to the draw. Table 1 presents descriptive statistics for all individuals and for the winners and losers separately. We can see that 49 percent of the final sample are winners. Regarding the strata variables, 42 percent of the respondents are female, while the shares registered for a studio and a one- or two-bedroom apartment are 20, 54, and 26 percent, respectively.

Although we stratified the sample by gender, the share of females is slightly higher in the winner group (45 vs. 40 percent). This is because the gender inferred from respondent names is not always accurate, and the gender was updated during the interview.[13] As expected, given the quotas for these groups, the shares of government employees and those with physical disabilities are higher among the winners (30 and 6 percent, respectively) than among the losers (14 and 0 percent, respectively). Given that this information was not

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[12]In the pre-analysis plan, we stated that we would dichotomize each of the financial distress items and we show in Appendix Section A.7 that this makes no qualitative difference to our main results. We chose to present a standardized index in the main paper to ease comparisons across outcomes.

[13]If we instead use the gender variable based on the names (as we did for the sampling), we find that the shares are similar for both groups (44–45 percent).

available beforehand, we could not stratify the sampling on these variables. We describe these issues in detail in Appendix Section A.4, where we also show that alternative 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 years when they signed up in 2005), and the most common religions are Orthodox Christianity (76 percent), Protestantism (12 percent), and Islam (11 percent).[14] The most common ethnic groups are Amhara (37 percent), Gurage (17 percent), Oromo (16 percent), and Tigray (8 percent), while the most common regions of birth are Addis Ababa (45 percent), Amhara (18 percent), Oromia (15 percent), SNNP (14 percent), and Tigray (6 percent).

We test for balance in the control variables across the winner and loser groups by regressing the "winner" variable on the control variables described while controlling for the strata fixed effects S_i (gender, government employee, disabled, and apartment type). Based on the F-test (see note below Table 1), we reject the hypothesis that these variables jointly predict winning. In Appendix Table A.8, we also present regressions of the treatment on each variable individually and together, while controlling for the strata variables. While the F-test shows that there is balance in general, there are differences between the winners and losers with some variables. As explained in the following section, we therefore also present our results where we control for all control variables as well as for a subset of variables selected through a double robust LASSO procedure.

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[14]For all categorical variables, we pool small groups accounting for less than 5 percent of the population.

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)
Strata variables						
Female	0.42	(0.49)	0.45	(0.50)	0.40	(0.49)
Government employee	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)
Other control variables						
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)
Muslim	0.11	(0.32)	0.09	(0.29)	0.13	(0.34)
Protestant	0.12	(0.32)	0.12	(0.33)	0.11	(0.31)
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 Ababa	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: The table shows the means and standard deviations of individual characteristics over the whole sample and separately among the lottery winners and losers. An F-test of whether all "Other control variables" jointly predict winning after the strata variables are controlled for returned a value of 0.42 ($p = 0.52$).

IV   Empirical strategy and main 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, public sector employment, disability, and apartment type):

$$Y_i = \beta T_i + \theta S_i + \varepsilon_i \tag{1}$$

This is our main specification as described in the pre-analysis plan. We show that the results are robust to including the full set of control variables, as well as to a subset of control variables selected using the post-double LASSO approach of Belloni et al. (2014).[15] Because the treatment is randomized at the individual level, we use robust standard errors without any clustering.

A)   Effects of winning on wealth and disposable income

As noted, we interpret the effects of winning the lottery primarily in terms of a wealth effect. To substantiate this interpretation, we begin by summarizing the effect of winning on wealth. These results were documented in Andersen et al. (2020), which uses the same sample to investigate the effects of winning on attitudes towards inequality.[16] For the reader's convenience, we reproduce the evidence from Andersen et al. (2020) in Appendix Section A.5.

While winners gain the ownership of a house, they will often need to borrow money to finance the down payment as well as the mortgage payments. The economic impact of winning is therefore a massive increase in wealth but also reduced savings and increased debt. However, the net wealth effect of winning the lottery is substantial, corresponding

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[15]To the extent there is concern about imbalance, the LASSO selection approach is also helpful as it precisely selects those variables that are correlated with both the treatment and the outcomes.

[16]Franklin (2019) also documents large wealth effects arising from an earlier round of the same lottery.

to 15 years of average earnings, and winners are 20 times wealthier than losers on average. Winners of course realize this, and they are more likely than losers to report being wealthier than five years ago and being wealthier than other Ethiopians generally.

B)   Main results

Having shown that treatment status indeed appears to be randomly assigned conditional on the strata and that there is a substantial effect of winning on wealth, we now turn to our well-being outcomes. Our primary pre-specified outcomes are life satisfaction and psychological distress, and we also present results on financial distress in this section as it is a likely channel through which economic resources potentially affect well-being.

To obtain a first impression of the general correlates of well-being, Table 2 details how the outcomes correlate with the strata and other control variables in the control group (i.e., the lottery losers). As shown in column 1, overall life satisfaction tends to be lower for women and the disabled while those who registered for larger and more expensive apartment units display higher levels of overall satisfaction. In column 2, we can see that Protestants and other religious groups are more satisfied than Orthodox Christians (the reference group) and Muslims. Conversely, belonging to the Gurage ethnic group is associated with lower levels of overall life satisfaction. Finally, we see that there is a strong positive association between earnings prior to the lottery (in 2015) and overall life satisfaction.

In columns 3 and 4 we provide the correlates for financial distress and in columns 5 and 6 those for psychological distress. These correlations are almost a mirror image of the results for life satisfaction, although the correlations appear weaker. Women and those with disabilities tend to be more financially distressed and to score higher on the Kessler scale, indicating higher levels of distress. There is a strong positive association between earnings prior to the lottery (in 2015) and well-being, as implied by a negative correlation between financial distress and the K10 score. Individuals who signed up for the most expensive apartment type also exhibit less distress.

Table 2: Correlates of well-being

	(1) Overall life satisfaction	(2) Overall life satisfaction	(3) Financial distress	(4) Financial distress	(5) Psychological distress	(6) Psychological distress
Female	−0.170***	−0.149**	0.280***	0.273***	0.216***	0.132*
	(0.051)	(0.073)	(0.050)	(0.067)	(0.052)	(0.070)
Public employee	0.046	−0.005	−0.054	0.051	−0.147**	−0.050
	(0.068)	(0.079)	(0.072)	(0.080)	(0.068)	(0.082)
Disabled	−1.477***	−1.492***	0.703**	0.756***	1.294***	1.301***
	(0.260)	(0.212)	(0.317)	(0.215)	(0.411)	(0.423)
One bedroom	0.250***	0.189**	−0.497***	−0.512***	−0.144**	−0.078
	(0.068)	(0.082)	(0.063)	(0.072)	(0.069)	(0.084)
Two bedroom	0.407***	0.284***	−0.851***	−0.758***	−0.301***	−0.234**
	(0.077)	(0.094)	(0.073)	(0.091)	(0.075)	(0.095)
Age		−0.007*		0.004		0.004
		(0.004)		(0.003)		(0.004)
Orthodox		−0.415**		0.260		−0.127
		(0.193)		(0.162)		(0.226)
Muslim		−0.421**		0.322*		−0.168
		(0.213)		(0.184)		(0.249)
Protestant		−0.043		0.142		−0.286
		(0.209)		(0.180)		(0.236)
Amhara		0.005		−0.076		−0.169*
		(0.093)		(0.083)		(0.090)
Gurage		−0.307***		0.087		0.041
		(0.103)		(0.098)		(0.101)
Oromo		0.095		−0.045		−0.144
		(0.103)		(0.088)		(0.103)
Tigray		0.178		−0.148		−0.164
		(0.198)		(0.179)		(0.132)
Born in Addis Ababa		0.045		−0.318		−0.076
		(0.214)		(0.230)		(0.263)
Born in Amhara		−0.112		−0.075		0.054
		(0.221)		(0.238)		(0.276)
Born in Oromia		−0.113		−0.245		0.005
		(0.225)		(0.242)		(0.280)
Born in SNNP		0.099		0.017		−0.030
		(0.238)		(0.252)		(0.283)
Born in Tigray		−0.028		−0.268		0.096
		(0.275)		(0.290)		(0.302)
Earnings 2005 (at reg.)		−0.013		0.012		0.008
		(0.011)		(0.010)		(0.011)
Earnings 2015		0.032***		−0.065***		−0.039***
		(0.011)		(0.011)		(0.013)
Partner earnings 2005 (at reg.)		−0.002		0.008		0.003
		(0.017)		(0.015)		(0.018)
Partner earnings 2015		0.006		−0.039***		−0.005
		(0.012)		(0.011)		(0.012)
Partner 2005 (at reg.)		−0.156		0.102		0.092
		(0.099)		(0.083)		(0.094)
Partner 2015		0.108		0.215***		−0.067
		(0.087)		(0.073)		(0.078)
N	1564	1166	1564	1166	1564	1166

Notes: The table shows OLS estimates of the correlation between the main outcomes and baseline characteristics for the control group. Robust standard errors are in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^{*}$. The dependent variables are standardized (a mean of zero and a standard deviation of one).

Our data point to a strong correlation between economic resources and well-being. But to what extent is this a causal relationship? Figure 1 depicts the distribution of the main outcome variables for winners and losers. We can see that winners tend to report higher life satisfaction than losers, whereas the reverse is true for financial distress. By contrast, the distributions for psychological distress are more similar across winners and losers.
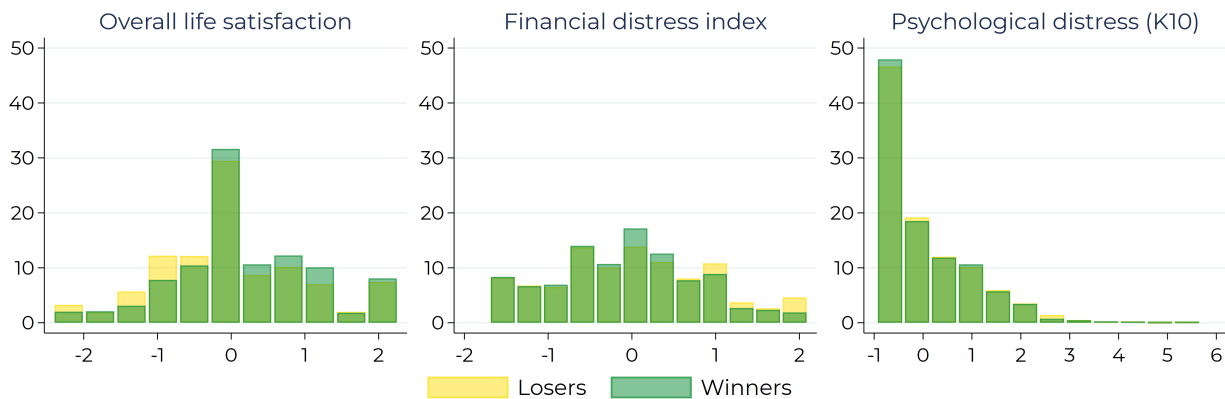
Note: The figure depicts the distribution of the main outcome variables for winners and losers (in percentages).

Figure 1: Distribution of the main outcomes.

There are, however, major differences between the two groups, and some of these (the strata variables) are correlated with the probability of winning. To properly account for this, we turn to our treatment effect estimates. Table 3 provides the treatment effects with and without controls and we also present these results graphically and for each subindex in Figure 2.

We first report the effect of winning the lottery on the standardized satisfaction outcomes. As shown, overall life satisfaction increases with winning by 0.19 standard deviations (column 1). This effect is significant and is, for instance, larger than the gender gap in satisfaction. Considering the subindices, we identify similar effects on financial and neighborhood satisfaction, but with a smaller effect on satisfaction with leisure, whereas the effect on the domain "home" is almost twice as large as the effect on overall satisfaction.

We then provide the results for financial distress, where the overall effect on the additive

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Table 3: Effects of winning on well-being.

	(1) Overall life satisfaction	(2) Overall life satisfaction	(3) Financial distress	(4) Financial distress	(5) Psychological distress	(6) Psychological distress
Winner	0.190***	0.197***	−0.116***	−0.106***	−0.039	−0.047
	(0.036)	(0.041)	(0.034)	(0.038)	(0.036)	(0.042)
N	3049	2311	3049	2311	3049	2311
Strata	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Additional controls	*No*	*Yes*	*No*	*Yes*	*No*	*Yes*

Notes: The table details OLS estimates of the effect of winning the lottery on the main outcomes. Robust standard errors are in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^{*}$. All regressions control for the strata fixed effects. The dependent variable is standardized using the mean and standard deviation of the loser group.

index is 0.12 standard deviations (column 3). In considering the subindices, we see that winning the lottery affects all four outcomes related to financial distress in that winners are less likely to have inadequate money for household expenses, to have delayed bills, and to have experienced financial difficulty. However, on one outcome the effect goes in the opposite direction. When asked about whether they would be able to raise a large amount of money (ETB 20,000) in a brief time if needed, 7 percent more winners than losers report that they would be unable to. Although this may seem contradictory at first, it is consistent with the observation in Appendix Table A.13 that winners have lower savings and more debt than losers. Indeed, most winners have already raised money by borrowing from friends, etc., whereas losers are preparing to finance the down payment in case they win a lottery in the future.

Finally, in columns 5 and 6 and in the lower part of Figure 2, we show the effect of winning on the Kessler scale (K10). The effect on the overall score is negative but small and not statistically significantly different from zero. The same applies to most of the individual items. We also note that the confidence intervals are relatively precise. Using an equivalence testing approach of two one-sided t-tests (TOST), and a 5 percent significance level, we can reject reductions in the K10 index as large or larger than 0.1 standard deviations. Furthermore, when we compare the levels on the Kessler scale for winners and losers while

controlling for the strata variables, we see that losers score 15.46 on the full index in the range of 10–50 while the winners score 15.24. These results are in Appendix Table A.20, where we can also see that the coefficients for winning on mild, moderate, and severe mental distress are also negligible. We note that adding all controls does not change any of these findings, and in Appendix Section A.6 we show that this is also the case when adding optimal controls.

C) Additional robustness and heterogeneity

Overall, we can see that winning the lottery resulted in large increases in wealth and reduced financial distress and provided higher life satisfaction but had no effect on psychological distress. These results are robust to different sets of control variables and alternative coding choices and the conclusions are similar if we conduct a bounds analysis accounting for selective nonresponse by winners (see Appendix Sections A.2, A.4, A.6, and A.7, respectively). In Appendix Section A.8 we show that there are no heterogeneous treatment effects if we interact winning with gender, earnings before the lottery, religion, or ethnicity. Nor are there any detectable heterogeneity effects when we apply the machine learning methods in Chernozhukov et al. (2018).

We can also adjust our p-values for the fact that we are testing multiple hypotheses. We are testing two main hypotheses in this paper, but additionally we have used the data to test for the effects on five different attitudes in a companion paper (Andersen et al., 2020).[17] We prespecified an adjustment of the p-values for multiple testing using the false discovery rate method developed by Benjamini and Hochberg (1995). Despite the outcomes of the various analyses being quite different, we believe it is prudent to adjust the p-values based on all tests with the same treatment and this is what we prespecified. With seven primary

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[17]This paper is part of a larger project focusing on different effects of the Ethiopian housing lottery. We documented the effects of the lottery on views about inequality and on support for redistribution in Andersen et al. (2020). We decided to prepare this as a separate paper as it responds to different research questions and relates to separate strands of the literature.
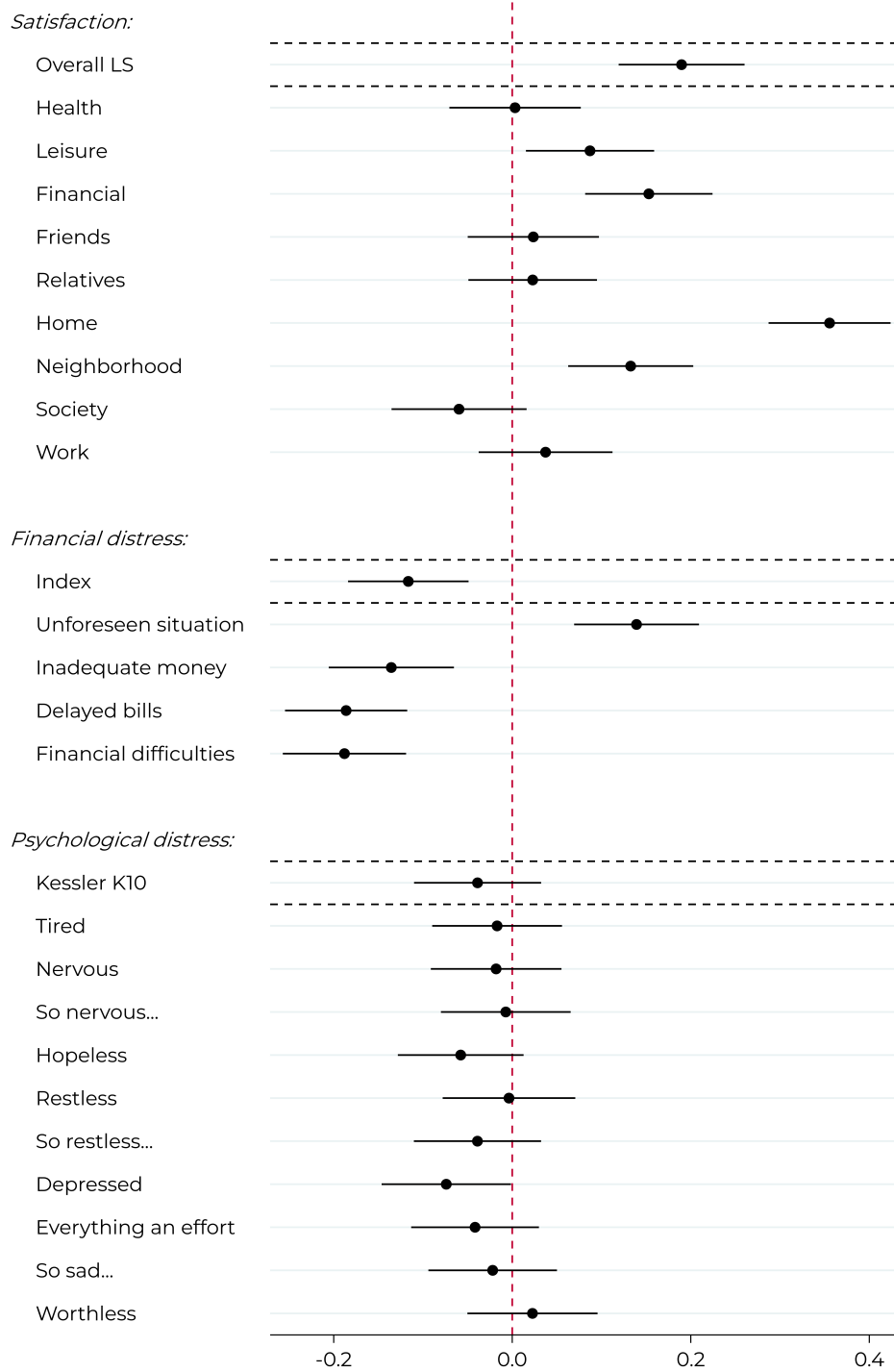
Note: The figure depicts the estimated effects of winning on the main outcomes and on the decomposition of the outcomes for the subindices. The bars denote 95 percent confidence intervals around the point estimates. All models include the strata variables.

Figure 2: Effect on the main outcomes and subindices.

outcomes and a 5 percent significance level, our result with the lowest p-value should have a p-value lower than 0.007 (0.05/7). Our p-value for life satisfaction has a p-value lower than 0.001.

V   Mechanisms

In our analysis, we mostly interpret the effects of winning the lottery in terms of a wealth effect. However, the observed effects on life satisfaction for the domains "home" and "neighborhood" suggest that moving may indeed drive part of the effect. In order to investigate this hypothesis further, Figure 3 illustrates the treatment effect estimates for subgroups of winners: those who moved into their new apartment ("movers") and those who did not ("non-movers").[18] Because moving is not random, and Table A.9 reveals that movers are less likely to be born in Addis Ababa and more likely to have a partner, we have included a version of this figure in the Appendix Section A.6, where the full set or a subset of optimally chosen control variables are included in the regressions.

We can see that the effect of winning on overall satisfaction is almost the same for movers and non-movers. We also observe similar effects on neighborhood satisfaction, while movers exhibit higher satisfaction with their home, and non-movers — who generally rent out their units — have higher financial satisfaction. This suggests that even though winners have different priorities and spend their economic resources in dissimilar ways, the effects on overall life satisfaction are the same. The fact that both groups of winners have higher satisfaction with their homes and neighborhoods could be a compositional effect driven by the least satisfied people moving, and becoming happier with their housing conditions, which would lead to the non-moving group also having higher satisfaction with their homes than the control group.

With respect to financial and psychological distress, the effects for movers and non-

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[18]"Movers" are all winners who actually moved into the apartment they won and "non-movers" are all other winners, including those who chose to rent out the apartment they won.

movers are even more similar. While being aware of the risk of self-selection bias, we believe these findings strengthen the interpretation that the effects are running via both wealth and moving to better houses and neighborhoods.
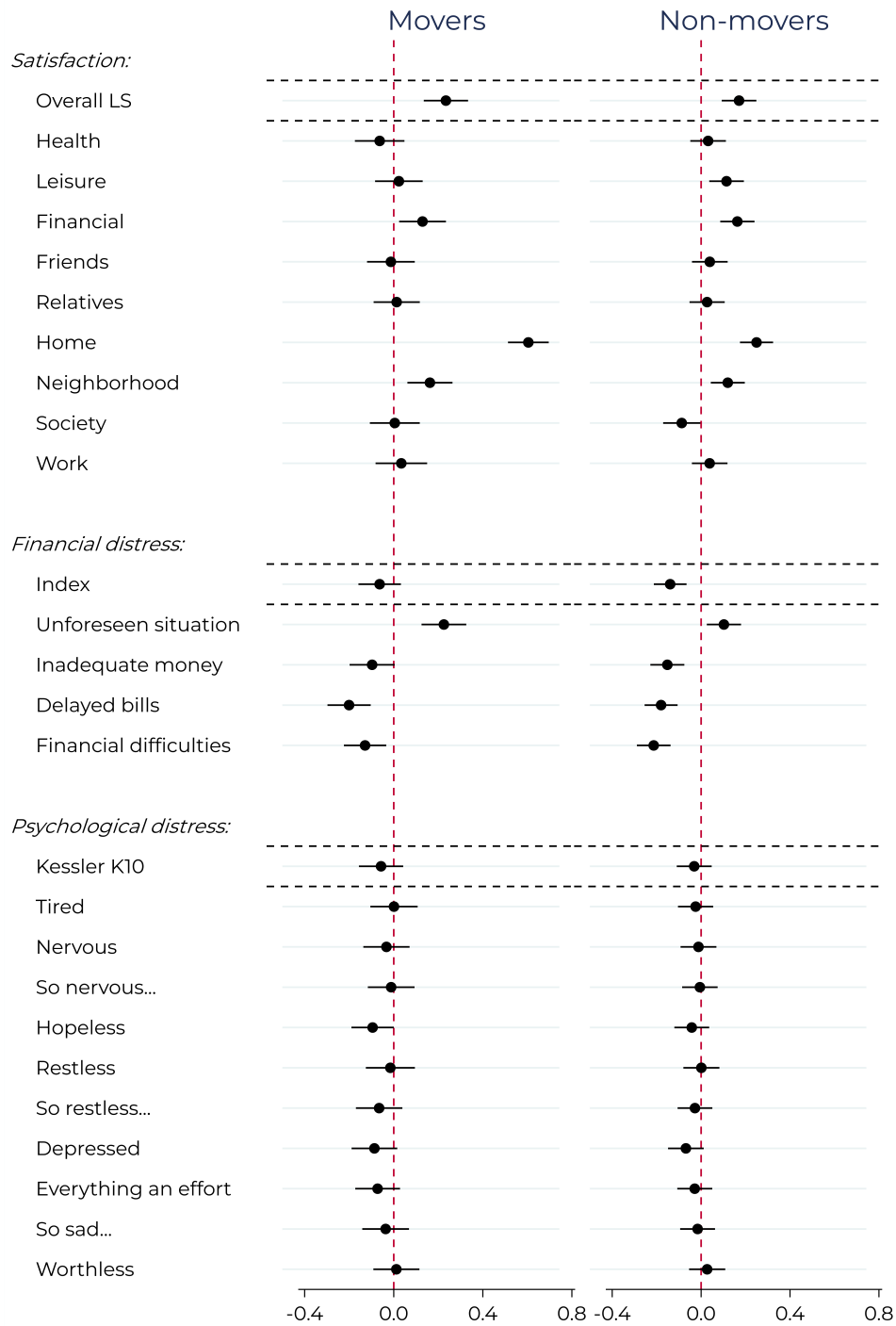
Note: The figure depicts the estimated effects of winning on the main outcomes and on the decomposition of the outcomes in the subindices. The bars denote 95 percent confidence intervals around the point estimates. All the models include the strata variables.

Figure 3: Effect on the main outcomes and subindices by mover status.

VI   Conclusion

The question of whether material conditions affect well-being has a long history in the social sciences. On the one hand, economic resources can be used to obtain desired goods and services, and it would seem obvious that they should increase well-being. On the other hand, not everything of value in life can be bought, and humans have a remarkable ability to adapt to their material circumstances. Adding to the lack of clear theoretical predictions is that it is not straightforward whether material conditions affect well-being, whether well-being affects material conditions, or whether there is some third factor affecting both.

We identify the causal effects of a housing lottery in Ethiopia, which made winners substantially wealthier, on different dimensions of well-being. We find that winning increases life satisfaction but does not affect psychological distress. In fact, we can reject even relatively small effects (0.1 standard deviations) on psychological distress. Winning the lottery affects things other than wealth; it particularly also affects housing conditions and neighborhood characteristics. Given that only 30 percent of the lottery winners actually moved, and that we find similar results for both movers and non-movers, we believe that the effects we identify on life satisfaction are at least partly due to a wealth effect. The fact that both movers and non-movers are happier with their houses and their neighborhoods suggests that these aspects of winning the housing lottery also matter.

Previous studies that have managed to identify the effects of material conditions are mostly from rich countries and have used tax rebates (Lachowska, 2017), stock market fluctuations (Schwandt, 2018), and lotteries (Apouey and Clark, 2015; Gardner and Oswald, 2007; Lindqvist et al., 2020). These studies generally find that material resources increase happiness and life satisfaction. In a Swedish study, Lindqvist et al. (2020) also find that winning a lottery improves life satisfaction but not mental health. It has been argued that the absence of mental health effects in Sweden could be because of the country's comprehensive

welfare system guaranteeing economic security for most citizens (Ridley et al., 2020). From this perspective, it is remarkable that we find qualitatively the same results in a context where there is no welfare state or economic security. Our evidence rather hints at the presence of different factors determining mental health and life satisfaction, as also suggested in the existing literature (Kahneman and Deaton, 2010; Weich et al., 2011). In particular, life satisfaction has lower heritability and as such is more influenced by environmental factors than many other dimensions of well-being (Bartels, 2015; Røysamb and Nes, 2018; Røysamb et al., 2018).

Other studies from low-income countries have, however, identified the positive effects of economic resources on mental health and well-being. These studies typically investigate the effects of cash transfers or antipoverty programs on the extremely poor (see Ridley et al., 2020; McGuire et al., 2020, for recent reviews). One important difference to our case is that the previously studied interventions are targeting very poor individuals. While our respondents are certainly not rich, they are neither among the poorest Ethiopians. We do not find heterogeneous effects in our sample with respect to income, but it is of course possible that we would have found different effects if our sample had included poorer individuals. We also note that McGuire et al. (2020) document generally smaller effects on mental health than on life satisfaction. We trust that future studies continue to investigate the effects of material conditions on mental health and well-being for different types of populations so that we can reach a better understanding of this important relationship.

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APPENDIX: FOR ONLINE PUBLICATION

A.1   The lottery — in detail

The Integrated Housing and Development Programme (IHDP) aims at facilitating access to quality housing for low- and middle-income groups in Addis Ababa, Ethiopia.[19] In the IHDP, the Addis Ababa Housing and Development Project Office (AAHDPO) is responsible for organizing and financing the construction of condominium apartments. The apartments are sold at highly subsidized prices and homebuyers are given ready access to finance through the Commercial Bank of Ethiopia (CBE). The Addis Ababa Housing Development and Administration Agency (AAHDAA) is responsible for allocating the apartments. Given the excess demand for housing at subsidized prices, condominium apartments are allocated through a lottery among eligible registrants. The lottery is computer based and carried out by the Information Network Security Agency (INSA).

Eligibility for the lottery is based on three requirements: (i) having resided in Addis Ababa for at least the previous two years, (ii) not having any other house or lease land registered (in one's own or a spouse's name), and (iii) having opened a savings account at the CBE and deposited the required monthly savings for at least 29 months (with no breaks in saving longer than six months).

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.[20] When registering for the program, applicants must select the desired apartment type (studio, one-, two-, or three-bedroom apartments). As supply and demand varies by unit type, separate lotteries are held for each type of apart-

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[19]While the IHDP was launched as a nationwide program, it has been suspended for long periods outside Addis Ababa; see UN-HABITAT (2010). We therefore focus exclusively on the Addis Ababa program, which is also the largest sized by far.

[20]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).

ment. Within each lottery, quotas exist for women, the disabled, and government employees. First, 30 percent of the winners are drawn from among female applicants. Then 20 percent of the winners are drawn from among government employees. Finally, there is a 5 percent quota for those with physical disabilities. All quotas were decided upon after registration but before the lottery draw.

As of now, there have been two rounds of registration and 13 lotteries. We focus on the first round of registration and the 11th lottery round, which took place in 2016.[21]

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 CBE. Given this payment scheme, the program has been labeled the 20/80-program.[22]

At the time of the 11th 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 (excluding three-bedroom units).[23] Only individuals who had registered in 2005 were included in the draw. 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 then free to rent out their apartment, but are not allowed to sell it within the first five years.[24] At the time of the survey, 30 percent of the winners had moved into their apartment, 31 percent were renting them out, 32 percent were currently empty, but with the owner planning to move in (21 percent) or rent it out (11 percent), and in 2 percent of the cases the apartment was used for free by relatives.

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[21]The 12th round, conducted in 2018, was unusually small with only 2,607 apartments and the 13th round took place in March 2019 after data collection for the project was completed.

[22]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.

[23]We excluded applicants for three-bedroom apartments, because almost everyone in this group had received an apartment at the time of sampling.

[24]A small share (4 percent) of the winners in our sample in fact managed to sell the apartment, despite these rules.

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 is 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).

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: To date, all winners have been drawn from among the 2005 registrants, with the exception of three-bedroom apartment winners in the 13th lottery drawn from among the registrants in 2013, because the 2,005 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 costs (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 as a percentage of the purchase price. Provision costs estimates are based on Franklin (2018). Estimated value is from the survey. Purchase price is from the price per square meter for each unit type and the exact size of each unit.

A.2 Sampling and attrition

EDRI obtained lists of winners and losers of the 11th round of the lottery which took place in 2016. As noted above, there were special quotas for women, government employees and those with physical disabilities, and winning is random only, *conditional* on those characteristics. As the lists of winners and losers did not contain information on all of these variables, we captured the missing information during the interviews.

The winners list contained information about gender and public sector employment at the time of the registration. Given we did not have information about physical disability status, we had to ask respondents about this separately during the interview.

The losers list included information about physical disability status at registration. It did not include information about gender but this was inferred from the respondent's first name and later confirmed during the interview. We had to ask about employment status at registration during the interview.

From the lists, we randomly sampled 2,200 winners and 2,200 losers with unique phone numbers who had registered for a studio or a one- or two-bedroom apartment during the first registration round of 2005. The samples were stratified by gender within each apartment

type.

Before sending the samples to the data collection team at EDRI, we aggregated the winner and loser samples, rerandomized the order, and created a new ID variable. We deleted all information apart from the ID, the name, and the phone number, so that treatment status (winner or loser) was blinded to the enumerators. EDRI interviewed the sampled individuals by phone using the survey questionnaire developed by the research team (see Appendix Section A.10). The survey took around 20 minutes to complete, and the respondents were offered ETB 50 (PPP-adjusted USD 5) in appreciation of their participation in the survey (transferred with mobile money immediately following the interview). EDRI was told to cease the surveys after about 3,000 completed interviews.

A.2a)   Attrition and nonresponse

EDRI started with a random list of 4,400 individuals, but 1,082 of the telephone numbers turned out to be invalid.[25] There was no difference between winners and losers in the probability of having an invalid number. 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. As shown in Table A.4, the share of those declining to be interviewed (unwilling) is significantly larger among the winners. There is no difference between winners and losers in the share of people who moved abroad, were never available to complete the survey, had passed away, or for which the person answering said it was a wrong number. We present the results from a prespecified bounds analysis in the next subsection, and show that our main results are robust to reasonable assumptions about the potential values of the missing observations.

As we did not manage to contact all the respondents initially, sample nonresponse appears

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[25]This was expected given that the lottery participants registered in 2005, i.e. 13 years prior to the data collection. Note that the lottery draws are subject to intense media coverage and the list of winners is published (both in print and online), so that winners can themselves contact the authorities to claim their apartment in case their phone number is no longer valid.

Table A.4: Attrition.

	(1) Interviewed	(2) Unwilling	(3) Abroad	(4) Unavailable	(5) Passed away	(6) Wrong number
Winner	−0.036∗∗∗	0.027∗∗∗	0.001	0.003	0.004	0.001
	(0.010)	(0.006)	(0.004)	(0.003)	(0.004)	(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 difference in response rates (and the various reasons for not responding) for winners and losers as specified in equation (1). Robust standard errors are in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^{*}$. All regressions include control for the stratification variables *female* and *apartment type*.

to be correlated with winning the lottery. More losers (94 percent) than winners (90 percent) were willing and able to take part, and this difference is statistically significant (controlling for the vector of stratification variables). In the results presented below, we follow the correction of Kling and Liebman (2004) to account for this difference in nonresponse.

A.2b) Upper and lower bounds for main results

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 loser group. The upper bounds of the effects are constructed in a symmetrical fashion. We present these results in Table A.5. As shown, the lottery effect on "Redistribution (real estate)" remains significant (at the 5 percent level) after replacing the missing observations with the mean of the losers/winners +/− 0.05 standard deviations. When imputing the mean values +/− 0.10 standard deviations, the 95 percent confidence interval crosses zero, but the result remains statistically significant at the 10 percent level. None of the results are statistically significant when using the broadest bounds (i.e., +/− 0.20 standard deviations).

A.2c) Upper and lower bounds for the wealth effect

One limitation of our wealth measures is that many respondents were unable to provide the market value of their real estate, and others did not report the total value of their household debt, cash savings, and bank savings. As a result, the wealth results only comprise

Table A.5: Main results with bounded estimates.

	Correction	Bound	β	(SE)		Mean (losers)	R^2	Obs.
Overall satisfaction	+/− 0.05 s.d.	lower	.178	(.033)	***	.003	.038	3318
		upper	.194	(.033)	***	-.003	.04	3318
	+/− 0.1 s.d.	lower	.169	(.033)	***	.006	.037	3318
		upper	.203	(.033)	***	-.006	.041	3318
	+/− 0.2 s.d.	lower	.153	(.033)	***	.013	.035	3318
		upper	.22	(.033)	***	-.013	.043	3318
Psychological distress (K10)	+/− 0.05 s.d.	lower	-.155	(.191)		15.438	.03	3318
		upper	-.251	(.191)		15.474	.03	3318
	+/− 0.1 s.d.	lower	-.107	(.191)		15.42	.029	3318
		upper	-.299	(.191)		15.492	.031	3318
	+/− 0.2 s.d.	lower	-.011	(.191)		15.384	.029	3318
		upper	-.395	(.191)	**	15.528	.032	3318

Robust standard errors are in parentheses. Statistical significance of the differences between the estimates and zero is indicated by $* \, p < 0.1$, $** \, p < 0.05$, and $*** \, p < 0.01$. In all the estimations, we include the strata variables.

2,298 and 1,533 observations.

In Table A.6, we follow the same procedure as in the previous subsection and construct the lower bounds by replacing the missing values for the losers group by the loser mean plus 0.05 standard deviations and by replacing the missing values in the winners group by the loser mean minus 0.05 standard deviations. The higher bounds are obtained by replacing the missing values in the losers group by the loser mean minus 0.05 standard deviations and by replacing the missing values in the winners group by the loser mean plus 0.05 standard deviations. We repeat this process using 0.1 and 0.2 standard deviations instead of 0.05 to 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.6: Wealth effects with bounded estimates.

	Correction	Bound	β	(SE)		Mean (losers)	R^2	Obs.
Housing wealth	+/−0.05 s.d.	lower	12.319	(.09)	***	.13	.876	3049
		upper	12.385	(.09)	***	.13	.877	3049
	+/−0.1 s.d.	lower	12.286	(.09)	***	.13	.875	3049
		upper	12.419	(.09)	***	.13	.878	3049
	+/−0.2 s.d.	lower	12.219	(.09)	***	.13	.874	3049
		upper	12.485	(.09)	***	.13	.879	3049
Net wealth	+/−0.05 s.d.	lower	3.79	(.161)	***	7.417	.161	3049
		upper	4.353	(.161)	***	7.417	.202	3049
	+/−0.1 s.d.	lower	3.508	(.161)	***	7.417	.141	3049
		upper	4.635	(.161)	***	7.417	.223	3049
	+/−0.2 s.d.	lower	2.945	(.162)	***	7.417	.102	3049
		upper	5.198	(.162)	***	7.417	.263	3049

Robust standard errors are in parentheses. Statistical significance of the differences between the estimates and zero is indicated by $* \, p < 0.1$, $** \, p < 0.05$, and $*** \, p < 0.01$. In all estimations, we include the strata variables.

A.3 Variables and balance

In Table A.7 we describe the coding of our control variables.

Table A.7: Coding of control variables.

Variable	Source	Explanation and recoding
Female, Government employee, Disabled	Registration*	Dummy variables
Studio, One-bedroom, Two-bedroom	Registration	Dummy variables
Age	Survey	In years (in 2018)
Orthodox, Protestant, Muslim, Other religion	Survey	Dummy variables
Amhara, Gurage, Oromo, Tigray, Other ethnicity	Survey	Dummy variables
Born in Addis/Amhara/Oromia/SNNP/Tigray	Survey	Dummy variables
Earnings 2005/2015	Survey	Monthly earnings (hyperbolic sine transformation)
Partner earnings 2005/2015	Survey	Monthly partner earnings (hyperbolic sine transformation)
Partner in 2005/2015	Survey	Dummy variables

Notes: *For winners, information about physical disability is obtained in the survey. For losers, employment status at registration is obtained during the interview, and gender was first inferred from the respondent's name and later confirmed during the interview. See Section A.4.

In column one of Table A.8, we report 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.8, the variables taken together do not predict winning (as seen by the F-test).

Table A.8: Balance test: Relationship between control variables and winning.

	(1) Winner (regressions one by one)	(2) Winner (multivariate regression)
Age	0.002**	0.002
	(0.001)	(0.001)
Orthodox	0.018	−0.026
	(0.020)	(0.080)
Muslim	−0.077***	−0.087
	(0.027)	(0.086)
Protestant	0.034	−0.017
	(0.028)	(0.084)
Amhara	0.004	−0.029
	(0.018)	(0.031)
Gurage	−0.032	−0.047
	(0.024)	(0.038)
Oromo	−0.048**	−0.067*
	(0.024)	(0.036)
Tigray	0.071**	−0.113*
	(0.032)	(0.063)
Born in Addis Ababa	−0.072***	−0.070
	(0.018)	(0.075)
Born in Amhara	0.034	−0.005
	(0.023)	(0.078)
Born in Oromia	0.018	−0.018
	(0.025)	(0.079)
Born in SNNP	0.018	0.033
	(0.026)	(0.083)
Born in Tigray	0.137***	0.176*
	(0.036)	(0.095)
Earnings 2005 (at reg.)	−0.001	−0.004
	(0.003)	(0.004)
Earnings 2015	0.003	0.007*
	(0.003)	(0.004)
Partner earnings 2005 (at reg.)	−0.004	−0.008
	(0.003)	(0.006)
Partner earnings 2015	0.000	0.006
	(0.003)	(0.004)
Partner 2005 (at reg.)	−0.017	0.007
	(0.019)	(0.033)
Partner 2015	−0.020	−0.031
	(0.018)	(0.029)
Mean	NA	0.50
N	NA	2311
R-squared	NA	0.09
F-test (p-value)	NA	0.42(0.52)

Notes: The table shows the relationship between the covariates and winning, one by one (column 1) and together (column 2). All regressions include the strata variables.

In Table A.9, we show the balance for the different types of winners discussed in the mechanism section.

Table A.9: Balance test for winners: Relationship between control variables and moving status.

	(1) Mover (regressions one by one)	(2) Mover (multivariate regression)
Age	0.007***	0.004**
	(0.001)	(0.002)
Orthodox	−0.024	0.034
	(0.028)	(0.097)
Muslim	−0.056	−0.042
	(0.039)	(0.105)
Protestant	0.084**	0.109
	(0.038)	(0.104)
Amhara	0.016	−0.005
	(0.024)	(0.040)
Gurage	−0.056*	−0.036
	(0.032)	(0.049)
Oromo	−0.054*	−0.042
	(0.031)	(0.045)
Tigray	0.175***	−0.076
	(0.044)	(0.074)
Born in Addis Ababa	−0.138***	−0.248**
	(0.024)	(0.103)
Born in Amhara	0.088***	−0.134
	(0.031)	(0.107)
Born in Oromia	0.012	−0.212**
	(0.033)	(0.107)
Born in SNNP	−0.010	−0.143
	(0.034)	(0.112)
Born in Tigray	0.232***	0.094
	(0.047)	(0.129)
Earnings 2005 (at reg.)	0.005	−0.001
	(0.004)	(0.005)
Earnings 2015	−0.003	−0.002
	(0.005)	(0.006)
Partner earnings 2005 (at reg.)	0.013**	0.010
	(0.005)	(0.008)
Partner earnings 2015	0.008*	−0.003
	(0.004)	(0.006)
Partner 2005 (at reg.)	0.113***	0.005
	(0.026)	(0.045)
Partner 2015	0.121***	0.111***
	(0.024)	(0.039)
Mean	NA	0.28
N	NA	1145

Notes: The table shows the relationship between the covariates and moving (for winners), one by one (column 1) and together (column 2). All regressions include the strata variables.

A.4 Treatment and strata variables

To check that there were no mistakes in the administrative lists of winners and losers we received, we asked at the end of the interview whether the respondent had actually won the lottery (note that the interviewer did not know to which list the respondent belonged). 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 possible reasons behind these responses. For instance, winners unable to acquire the money needed for the down payment may not have considered themselves to be winners, whereas those whose partners or close family members won may have done so. Regardless of the reasons behind this type of inconsistency, we treat all in accordance with their status from the list.

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 the names of the losers. We update the information for the losers with the enumerator coding of the respondent's gender during the interview (interviewers 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.[26]

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 government employee and zero otherwise. The question about occupation in 2005 was delivered to everyone. To check the correspondence between the two sources, we compared the response to this question to the actual employment status registered for the

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[26]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 chances of winning.

winners. We see that more people were classified as government employees in the registers than in the survey. Of the 447 individuals registered as government employees, only 292 claimed to have been so in the survey. Furthermore, 70 of the 362 individuals that 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 and 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 respondents 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 questions overclassified people as disabled, perhaps because some were also considering only minor disabilities when responding to the question. As many as 36 individuals claimed to have had physical disabilities, while only five were registered as disabled.

To check whether our coding of the strata variables matters for the results, we also used a version of the strata variables where the survey responses are used for everyone. Given the inconsistencies observed in S2 and S4, we also use two alternative specifications in our estimations: one where the survey response is used for everyone, and another where these two strata variables are omitted. The main results obtained with these alternative definitions of the strata variables are presented in Tables A.10, A.11, and A.12.

Table A.10: Overall life satisfaction with alternative coding of strata variables.

	(1) Overall life satisfaction	(2) Overall life satisfaction	(3) Overall life satisfaction	(4) Overall life satisfaction	(5) Overall life satisfaction	(6) Overall life satisfaction
Winner	0.196***	0.196***	0.181***	0.179***	0.173***	0.177***
	(0.035)	(0.040)	(0.035)	(0.040)	(0.036)	(0.041)
Mean (losers)	−0.000	0.039	−0.000	0.039	0.015	0.060
Strata	Alt.1	Alt.1	Alt.2	Alt.2	Alt.3	Alt.3
Controls	No	Yes	No	Yes	No	Yes
Obs	3049	2311	3049	2311	2926	2213

The table reports the estimate of the effect of winning the lottery for alternative codings of the strata variables (with and without controls). In alternative 1, the strata variables are based entirely on the survey. In alternative 2, only unit type is included in the strata. Robust standard errors are in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^{*}$.

Table A.11: Financial distress with alternative codings of the strata variables.

	(1) Financial distress	(2) Financial distress	(3) Financial distress	(4) Financial distress	(5) Financial distress	(6) Financial distress
Winner	−0.114***	−0.097***	−0.107***	−0.090**	−0.108***	−0.096**
	(0.034)	(0.038)	(0.033)	(0.037)	(0.035)	(0.039)
Mean (losers)	−0.000	−0.001	−0.000	−0.001	−0.010	−0.012
Strata	Alt.1	Alt.1	Alt.2	Alt.2	Alt.3	Alt.3
Controls	No	Yes	No	Yes	No	Yes
Obs	3049	2311	3049	2311	2926	2213

The table reports the estimate of the effect of winning the lottery for alternative codings of the strata variables (with and without controls). In alternative 1, the strata variables are based entirely on the survey. In alternative 2, only unit type is included in the strata. Robust standard errors are in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^{*}$.

Table A.12: Psychological distress with alternative codings of the strata variables.

	(1) Psychological distress	(2) Psychological distress	(3) Psychological distress	(4) Psychological distress	(5) Psychological distress	(6) Psychological distress
Winner	−0.043	−0.045	−0.036	−0.029	−0.024	−0.031
	(0.035)	(0.041)	(0.036)	(0.041)	(0.036)	(0.042)
Mean (losers)	0.000	−0.055	0.000	−0.055	−0.017	−0.076
Strata	Alt.1	Alt.1	Alt.2	Alt.2	Alt.3	Alt.3
Controls	No	Yes	No	Yes	No	Yes
Obs	3049	2311	3049	2311	2926	2213

The table reports the estimate of the effect of winning the lottery for alternative codings of the strata variables (with and without controls). In alternative 1, the strata variables are based entirely on the survey. In alternative 2, only unit type is included in the strata. Robust standard errors are in parentheses. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^{*}$.

A.5   Wealth and income

We define *net wealth* as the total reported value of any real estate owned plus savings minus debt of any sort. According to this measure, lottery winners are clearly wealthier than losers. At the time of the interview (two years after the lottery), the average net wealth reported by winners is around ETB 450,000 (roughly USD 45,000 PPP adjusted). This is more than 20 times the amount reported by losers (ETB 20,000 or less than USD 2,000 PPP adjusted), and the difference corresponds to around 15 years of average earnings in our data. The net wealth distribution for the two groups is illustrated in Figure A.4.

Notes: The figure depicts (Gaussian) kernel density estimates of the net wealth distribution of the losers and winners, respectively, at the time of the survey (i.e. two years after the lottery). Net wealth is calculated as the combined (self-reported) value of savings, real estate, and other assets minus bank debt and other liabilities.

Figure A.4: Wealth distribution among losers and winners.

Table A.13 confirms that winning reduces savings by more than ETB 8,700 and increases

debt by ETB 124,000. This large decrease in net savings is, however, more than offset by the increase in housing wealth (defined as the respondent's expected selling price of any housing units owned), which increases by ETB 570,000. As a consequence, net wealth increases significantly (by nearly ETB 420,000).

Table A.13: Effects of winning on wealth, mobility, and assets.

	(1) Total savings	(2) Total debt	(3) Housing wealth	(4) Net wealth	(5) Richer than 5 years ago	(6) Richer in 5 years	(7) Perceived position	(8) Asset index
Winner	−8.711***	124.013***	571.553***	418.667***	0.065***	0.014*	0.104***	0.046
	(1.508)	(5.864)	(14.327)	(19.232)	(0.016)	(0.008)	(0.017)	(0.034)
Mean (losers)	18.014	7.329	6.859	20.407	0.706	0.941	0.634	0.000
N	2116	2614	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 in all estimations. P-values are $\leq 0.01^{***}$, $\leq 0.05^{**}$, and $\leq 0.1^{*}$. Wealth-related variables in (1)–(4) are in 1,000 ETB.

The main weakness of our wealth measures is missing values for a substantial part of the sample. This is because many respondents were unable to supply a specific market value for their real estate, and because some did not report their wealth during the interview. In Appendix Table A.6, we calculate bounds on the lottery effects, and we 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.

Turning to the more qualitative aspects, Table A.13 shows that 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)[27] and expect to become even richer over the next five years (1.4 percentage points). Finally, a larger share of winners perceives themselves to be as rich as or richer than Ethiopians in general (10 percentage points). This analysis suggests that winning the lottery has a substantial impact on self-assessed wealth and economic position.

We find no effects on household assets, perhaps because such an effect takes longer

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[27]This and the following figures in parentheses refer to the lottery effect estimates, and the means refer to the mean among the losers.

to materialize. Another explanation may be that winners have not invested in household assets because they spend a large share of their income on mortgage payments, and that their disposable income is almost unaffected by winning (at least in the short run). This is confirmed by Tables A.14 and A.15, which show how winning affects household expenditures and income (using the inverse hyperbolic sine transformation of the outcomes).

Table A.14: Impact on household expenditures in the past six months (per capita).

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

The table reports the estimate of the effect 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: Impact on various sources of income in the past six months (per capita).

	(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	3.166***	−0.211	0.249**	−0.021	0.018	0.015	0.373***
	(0.191)	(0.130)	(0.187)	(0.118)	(0.035)	(0.082)	(0.019)	(0.070)
N	2735	2851	2749	2825	2827	2825	2828	2648
Strata	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additional controls	No	No	No	No	No	No	No	No

The table reports the estimate of the effect 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 $\leq 0.1^{*}$.

A.6 Main results with control variables

In this section we present the main results when adding prespecified covariates and optimal controls (Belloni et al., 2014). The prespecified covariates are the respondent's age, ethnicity, place of birth, earnings in 2005 and 2015 (as recalled in 2016), and civil status in 2005 and 2015.

Table A.16: Wealth outcomes with controls.

	(1) Total savings	(2) Total debt	(3) Housing wealth	(4) Net wealth	(5) Richer than 5 years ago	(6) Richer in 5 years	(7) Perceived position	(8) Asset index
Winner	−8.468***	129.158***	563.844***	420.057***	0.065***	0.018**	0.103***	0.056
	(1.726)	(7.032)	(16.466)	(22.447)	(0.019)	(0.009)	(0.020)	(0.037)
Mean (losers)	18.014	7.329	6.859	20.407	0.706	0.941	0.634	0.000
N	1685	2047	1734	1238	2311	2311	2311	2311

The table reports the estimate of the effect 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.17: Wealth outcomes with optimal controls.

	(1) Total savings	(2) Total debt	(3) Housing wealth	(4) Net wealth	(5) Richer than 5 years ago	(6) Richer in 5 years	(7) Perceived position	(8) Asset index
Winner	−8.814***	128.495***	564.058***	419.353***	0.063***	0.017*	0.100***	0.057
	(1.691)	(7.134)	(16.537)	(22.293)	(0.019)	(0.009)	(0.020)	(0.037)
Mean (losers)	18.651	8.508	7.310	21.341	0.702	0.948	0.636	−0.002
N	1685	2047	1734	1238	2311	2311	2311	2311

The table reports the estimate of the effect 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 $\leq 0.1^{*}$.
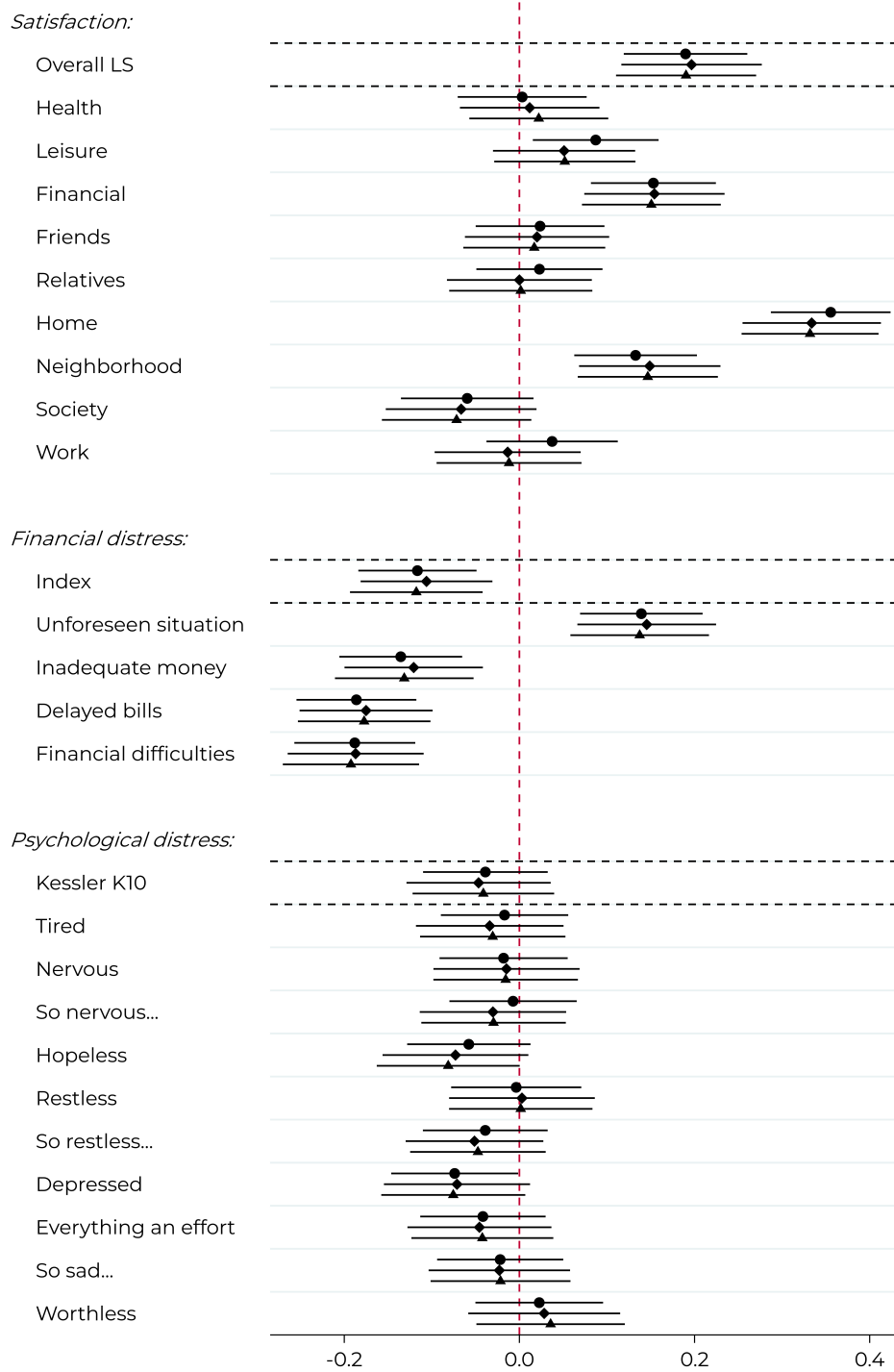
Note: The figure depicts the estimated effects of winning on the main outcomes and on the decomposition of the outcomes for the subindices. The bars denote 95 percent confidence intervals around the point estimates. All the models include the strata variables.

Figure A.5: Effect on the main outcomes and subindices — with controls.
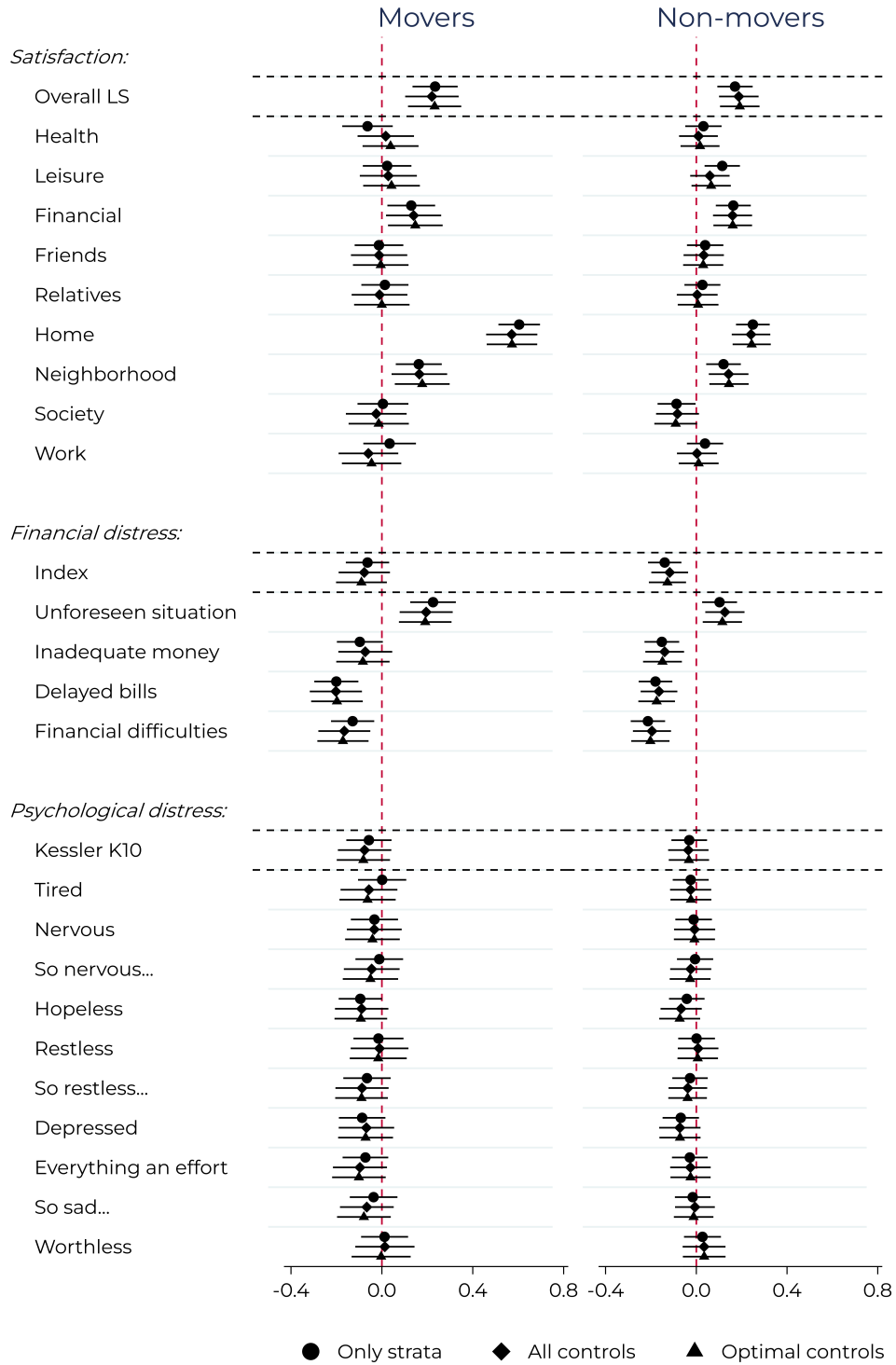
Note: The figure depicts the estimated effects of winning on the main outcomes and on the decomposition of the outcomes for the subindices. The bars denote 95 percent confidence intervals around the point estimates. All the models include the strata variables.

Figure A.6: Effect on the main outcomes and subindices by mover status — with controls.

A.7 Prespecified and alternative codings of outcomes

Table A.18: Impact on satisfaction.

	(1) Overall	(2) Health	(3) Leisure	(4) Financial	(5) Friends	(6) Relatives	(7) Home	(8) Neighborhood	(9) Society	(10) Work
Winner	0.190***	−0.000	0.038**	0.060***	0.009	0.004	0.155***	0.046**	−0.003	0.011
	(0.036)	(0.018)	(0.019)	(0.018)	(0.018)	(0.019)	(0.019)	(0.019)	(0.018)	(0.020)
Mean (losers)	−0.00	0.59	0.49	0.56	0.36	0.42	0.42	0.52	0.35	0.43
N	3049	3049	3049	3049	3036	3042	3049	3049	3049	2698
Strata	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Additional controls	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*

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

Table A.19: Impact on psychological distress (Kessler scale).

	(1) K10	(2) Tired	(3) Nervous	(4) So nervous	(5) Hopeless	(6) Restless	(7) So restless	(8) Depressed	(9) An effort	(10) So sad	(11) Worthless
Winner	−0.223	−0.017	−0.018	−0.005	−0.045	−0.003	−0.026	−0.073**	−0.029	−0.016	0.010
	(0.208)	(0.037)	(0.037)	(0.028)	(0.028)	(0.028)	(0.024)	(0.037)	(0.025)	(0.027)	(0.016)
Mean (losers)	15.46	1.84	2.04	1.47	1.42	1.42	1.33	2.05	1.37	1.41	1.11
N	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049	3049
Strata	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Additional controls	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*

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

Table A.20: Impact on psychological distress (Kessler scale).

	(1) K10	(2) K10 Mild	(3) K10 Moderate	(4) K10 Severe	(5) K6	(6) K6 Mild	(7) K6 Moderate	(8) K6 Severe
Winner	−0.223	−0.007	−0.016	−0.007	−0.101	0.003	−0.003	0.001
	(0.208)	(0.016)	(0.010)	(0.005)	(0.120)	(0.018)	(0.013)	(0.004)
Mean (losers)	15.46	0.22	0.08	0.03	8.77	0.65	0.12	0.01
N	3049	3049	3049	3049	3049	3049	3049	3049
Strata	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Additional controls	*No*	*No*	*No*	*No*	*No*	*No*	*No*	*No*

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

A.8 Heterogeneity

As presented, winning the lottery implies a substantial increase in wealth and in some measures of well-being. But are there different effects for distinct types of people? We first test whether there are heterogeneous treatment effects on our two main outcome variables as well as their components by people with different earnings. We see in Tables A.21 and A.22 that there is no heterogeneity along this aspect. Nor is there any heterogeneity in the treatment effects by gender nor along religion and ethnic dimensions (Tables A.23-A.28. We further explored heterogeneity using the "generic machine learning approach" in Chernozhukov et al. (2018). This method includes an omnibus test of heterogeneity in the treatment effects, and we cannot reject the null hypothesis that there is no heterogeneity.

In the pre-analysis plan, we stated that we would use the variation in housing prices across areas to assess whether our results depended on the size of the wealth shock. Such an analysis has however proven infeasible. As it turns out, 95 percent of the winners were assigned to only two areas, for which the estimated housing prices are almost identical. With such limited variation, using the dispersal across areas has not been fruitful.

Table A.21: Satisfaction outcomes by income.

	(1) Overall	(2) Health	(3) Leisure	(4) Financial	(5) Friends	(6) Relatives	(7) Home	(8) Neighborhood	(9) Society	(10) Work
Winner	0.132	−0.139	0.227*	0.189*	0.031	0.048	0.426***	0.248**	0.045	−0.102
	(0.105)	(0.132)	(0.118)	(0.110)	(0.114)	(0.120)	(0.103)	(0.104)	(0.112)	(0.163)
Earnings 2015	0.037***	0.048***	0.053***	0.058***	0.026***	0.022**	0.018*	0.025**	0.016	0.070***
	(0.010)	(0.011)	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.014)
Winner*Earnings 2015	0.007	0.020	−0.022	−0.006	−0.003	−0.006	−0.012	−0.017	−0.016	0.012
	(0.013)	(0.016)	(0.015)	(0.014)	(0.015)	(0.015)	(0.013)	(0.014)	(0.014)	(0.020)
Mean (losers)	−0.00	0.00	−0.00	−0.00	0.00	−0.00	0.00	−0.00	0.00	0.00
N	2479	2479	2479	2479	2468	2473	2479	2479	2479	2200

The table reports the estimate of the effect 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: Distress outcomes by income.

	(1) K10	(2) Tired	(3) Nervous	(4) So nervous...	(5) Hopeless	(6) Restless	(7) So restless...	(8) Depressed	(9) An effort	(10) So sad...	(11) Worthless
Winner	0.051	0.061	0.047	0.125	0.095	0.024	0.038	−0.087	0.045	−0.037	0.135
	(0.133)	(0.123)	(0.120)	(0.128)	(0.129)	(0.125)	(0.129)	(0.120)	(0.129)	(0.133)	(0.159)
Earnings 2015	−0.044***	−0.039***	−0.040***	−0.027**	−0.028**	−0.025**	−0.024**	−0.043***	−0.022*	−0.034***	−0.032***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.012)	(0.012)
Winner*Earnings 2015	−0.013	−0.012	−0.008	−0.019	−0.021	−0.003	−0.011	0.003	−0.012	0.002	−0.015
	(0.017)	(0.016)	(0.015)	(0.016)	(0.016)	(0.016)	(0.016)	(0.015)	(0.016)	(0.017)	(0.019)
Mean (losers)	0.00	0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	0.00	−0.00	−0.00
N	2479	2479	2479	2479	2479	2479	2479	2479	2479	2479	2479

The table reports the estimate of the effect 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.23: Satisfaction by ethnic group.

	(1) Overall	(2) Health	(3) Leisure	(4) Financial	(5) Friends	(6) Relatives	(7) Home	(8) Neighborhood	(9) Society	(10) Work
Winner	0.276***	−0.029	0.033	0.189**	0.031	0.009	0.222**	0.043	−0.106	−0.088
	(0.088)	(0.071)	(0.086)	(0.086)	(0.084)	(0.086)	(0.088)	(0.094)	(0.100)	(0.087)
Amhara	−0.047	−0.103	−0.068	0.100	0.080	0.046	0.007	0.033	0.079	−0.095
	(0.086)	(0.069)	(0.081)	(0.084)	(0.080)	(0.083)	(0.086)	(0.090)	(0.089)	(0.084)
Gurage	−0.244**	−0.073	−0.024	−0.054	−0.153	−0.135	−0.122	−0.073	−0.199*	−0.211**
	(0.097)	(0.082)	(0.094)	(0.100)	(0.103)	(0.105)	(0.102)	(0.099)	(0.102)	(0.097)
Oromo	0.023	−0.140*	−0.052	0.021	0.006	−0.110	−0.076	0.015	0.009	−0.091
	(0.099)	(0.082)	(0.093)	(0.096)	(0.090)	(0.094)	(0.101)	(0.099)	(0.098)	(0.098)
Tigray	0.132	−0.247*	−0.218	0.009	−0.020	0.059	0.179	−0.041	−0.014	0.084
	(0.163)	(0.135)	(0.161)	(0.147)	(0.171)	(0.145)	(0.146)	(0.172)	(0.166)	(0.166)
Winner*Amhara	−0.078	0.084	0.029	−0.093	−0.051	−0.119	0.111	0.112	−0.016	0.124
	(0.109)	(0.094)	(0.106)	(0.106)	(0.105)	(0.107)	(0.107)	(0.114)	(0.121)	(0.108)
Winner*Gurage	0.099	0.047	0.066	0.061	0.173	0.128	0.250*	0.260**	0.178	0.255*
	(0.130)	(0.119)	(0.130)	(0.128)	(0.138)	(0.142)	(0.132)	(0.132)	(0.148)	(0.131)
Winner*Oromo	−0.221*	−0.032	−0.046	−0.048	−0.160	−0.034	0.144	−0.004	0.052	−0.042
	(0.133)	(0.123)	(0.132)	(0.131)	(0.128)	(0.132)	(0.131)	(0.135)	(0.141)	(0.135)
Winner*Tigray	−0.349**	0.052	0.038	−0.005	0.116	0.263	0.054	0.283	0.093	−0.119
	(0.162)	(0.162)	(0.173)	(0.162)	(0.167)	(0.166)	(0.163)	(0.176)	(0.174)	(0.174)
F-test: Amhara winner	0.00	0.40	0.34	0.13	0.75	0.10	0.00	0.02	0.08	0.58
F-test: Gurage winner	0.00	0.85	0.32	0.01	0.07	0.22	0.00	0.00	0.51	0.10
F-test: Oromo winner	0.58	0.55	0.90	0.16	0.19	0.80	0.00	0.69	0.58	0.22
F-test: Tigray winner	0.59	0.88	0.64	0.18	0.31	0.06	0.04	0.03	0.92	0.17
Mean (losers)	−0.00	0.00	−0.00	−0.00	0.00	−0.00	0.00	−0.00	0.00	0.00
N	2311	2311	2311	2311	2300	2305	2311	2311	2311	2057

The table reports the estimate of the effect 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 ≤ 0.01***, ≤ 0.05**, and ≤ 0.1*.

Table A.24: Distress by ethnic group.

	(1) K10	(2) Tired	(3) Nervous	(4) So nervous...	(5) Hopeless	(6) Restless	(7) So restless...	(8) Depressed	(9) An effort	(10) So sad...	(11) Worthless
Winner	−0.060	−0.135	0.041	0.014	−0.049	−0.103	−0.071	−0.118	−0.108	0.016	0.188∗∗
	(0.093)	(0.089)	(0.091)	(0.095)	(0.094)	(0.092)	(0.093)	(0.092)	(0.091)	(0.088)	(0.088)
Amhara	−0.143∗	−0.054	0.034	−0.128	−0.127	−0.206∗∗	−0.161∗	−0.120	−0.205∗∗	−0.158∗∗	0.071
	(0.085)	(0.084)	(0.086)	(0.086)	(0.085)	(0.085)	(0.085)	(0.086)	(0.085)	(0.080)	(0.071)
Gurage	0.037	0.033	0.149	0.002	0.024	−0.108	−0.012	0.073	−0.050	0.034	0.092
	(0.099)	(0.100)	(0.095)	(0.100)	(0.099)	(0.099)	(0.104)	(0.101)	(0.106)	(0.097)	(0.085)
Oromo	−0.097	−0.051	0.013	−0.074	0.028	−0.243∗∗	−0.196∗∗	0.003	−0.152	−0.113	0.025
	(0.097)	(0.098)	(0.097)	(0.099)	(0.101)	(0.096)	(0.094)	(0.099)	(0.100)	(0.089)	(0.076)
Tigray	−0.092	0.168	0.122	−0.124	−0.077	−0.337∗∗∗	−0.371∗∗∗	−0.108	−0.285∗∗	0.101	0.160
	(0.133)	(0.155)	(0.161)	(0.138)	(0.151)	(0.124)	(0.110)	(0.151)	(0.120)	(0.162)	(0.177)
Winner*Amhara	0.083	0.182∗	−0.007	−0.022	−0.003	0.143	0.069	0.123	0.174	−0.001	−0.179
	(0.112)	(0.110)	(0.112)	(0.114)	(0.113)	(0.112)	(0.112)	(0.112)	(0.112)	(0.108)	(0.114)
Winner*Gurage	−0.227∗	0.038	−0.280∗∗	−0.230∗	−0.105	−0.074	−0.229∗	−0.193	−0.137	−0.249∗	−0.308∗∗
	(0.134)	(0.135)	(0.132)	(0.139)	(0.140)	(0.134)	(0.133)	(0.135)	(0.134)	(0.131)	(0.141)
Winner*Oromo	0.103	0.106	0.060	0.049	−0.098	0.291∗∗	0.157	0.108	0.047	0.080	−0.128
	(0.133)	(0.132)	(0.133)	(0.138)	(0.136)	(0.139)	(0.130)	(0.138)	(0.132)	(0.131)	(0.133)
Winner*Tigray	−0.003	0.087	−0.239	−0.101	0.121	0.142	0.021	0.140	0.098	−0.159	−0.221
	(0.187)	(0.179)	(0.184)	(0.181)	(0.190)	(0.160)	(0.166)	(0.177)	(0.178)	(0.188)	(0.230)
F-test: Amhara winner	0.73	0.49	0.62	0.90	0.42	0.54	0.97	0.94	0.32	0.81	0.90
F-test: Gurage winner	0.00	0.35	0.01	0.03	0.14	0.07	0.00	0.00	0.01	0.02	0.27
F-test: Oromo winner	0.66	0.77	0.30	0.53	0.14	0.07	0.35	0.92	0.53	0.32	0.54
F-test: Tigray winner	0.70	0.76	0.22	0.58	0.66	0.77	0.72	0.89	0.95	0.39	0.88
Mean (losers)	0.00	0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	0.00	−0.00	−0.00
N	2311	2311	2311	2311	2311	2311	2311	2311	2311	2311	2311

The table reports the estimate of the effect 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 ≤ 0.01***, ≤ 0.05**, and ≤ 0.1*.

Table A.25: Satisfaction by religion.

	(1) Overall	(2) Health	(3) Leisure	(4) Financial	(5) Friends	(6) Relatives	(7) Home	(8) Neighborhood	(9) Society	(10) Work
Winner	−0.186	−0.114	−0.015	0.076	−0.082	−0.021	0.609**	0.258	−0.100	−0.157
	(0.284)	(0.232)	(0.297)	(0.271)	(0.272)	(0.243)	(0.267)	(0.231)	(0.324)	(0.272)
Orthodox	−0.372*	−0.213	−0.165	−0.222	−0.087	−0.097	0.126	0.036	0.095	−0.240
	(0.197)	(0.133)	(0.191)	(0.172)	(0.186)	(0.163)	(0.220)	(0.181)	(0.195)	(0.195)
Protestant	0.000	0.019	−0.019	−0.018	0.063	−0.111	0.195	0.108	0.085	−0.090
	(0.212)	(0.144)	(0.207)	(0.190)	(0.201)	(0.184)	(0.233)	(0.197)	(0.214)	(0.209)
Muslim	−0.366*	−0.219	−0.252	−0.211	0.003	−0.154	0.026	−0.068	0.034	−0.491**
	(0.214)	(0.156)	(0.207)	(0.190)	(0.200)	(0.185)	(0.233)	(0.196)	(0.213)	(0.213)
Winner*Orthodox	0.376	0.150	0.046	0.074	0.091	−0.039	−0.305	−0.123	−0.009	0.129
	(0.287)	(0.236)	(0.299)	(0.274)	(0.275)	(0.248)	(0.270)	(0.236)	(0.327)	(0.275)
Winner*Protestant	0.391	0.023	0.047	0.028	0.124	0.164	−0.267	−0.176	0.139	0.087
	(0.306)	(0.255)	(0.317)	(0.296)	(0.296)	(0.270)	(0.291)	(0.261)	(0.345)	(0.296)
Winner*Muslim	0.471	0.066	0.227	0.169	0.160	0.270	−0.120	0.046	0.202	0.337
	(0.308)	(0.259)	(0.320)	(0.297)	(0.295)	(0.272)	(0.289)	(0.256)	(0.346)	(0.301)
F-test: Orthodox winner	0.00	0.45	0.51	0.00	0.84	0.22	0.00	0.00	0.03	0.57
F-test: Protestant winner	0.07	0.39	0.78	0.39	0.72	0.22	0.00	0.49	0.75	0.56
F-test: Muslim winner	0.02	0.68	0.08	0.04	0.50	0.04	0.00	0.01	0.40	0.16
Mean (losers)	−0.00	0.00	−0.00	−0.00	0.00	−0.00	0.00	−0.00	0.00	0.00
N	2311	2311	2311	2311	2300	2305	2311	2311	2311	2057

The table reports the estimate of the effect 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.26: Distress by religion.

	(1) K10	(2) Tired	(3) Nervous	(4) So nervous...	(5) Hopeless	(6) Restless	(7) So restless...	(8) Depressed	(9) An effort	(10) So sad...	(11) Worthless
Winner	−0.271	−0.410	−0.293	0.131	−0.240	−0.211	−0.343	−0.281	−0.222	−0.164	0.409
	(0.311)	(0.332)	(0.289)	(0.293)	(0.324)	(0.259)	(0.293)	(0.301)	(0.306)	(0.339)	(0.286)
Orthodox	−0.149	−0.192	−0.187	0.008	−0.149	−0.061	−0.163	−0.067	−0.117	−0.195	0.180***
	(0.225)	(0.256)	(0.199)	(0.209)	(0.251)	(0.211)	(0.257)	(0.220)	(0.230)	(0.220)	(0.048)
Protestant	−0.309	−0.225	−0.345	−0.090	−0.307	−0.204	−0.334	−0.106	−0.226	−0.386*	0.056
	(0.234)	(0.267)	(0.212)	(0.223)	(0.261)	(0.220)	(0.264)	(0.233)	(0.238)	(0.227)	(0.076)
Muslim	−0.145	−0.246	−0.233	0.029	−0.269	0.014	−0.087	−0.028	−0.069	−0.195	0.232*
	(0.245)	(0.270)	(0.216)	(0.229)	(0.266)	(0.233)	(0.276)	(0.236)	(0.247)	(0.237)	(0.119)
Winner*Orthodox	0.241	0.388	0.294	−0.133	0.146	0.219	0.307	0.252	0.186	0.136	−0.378
	(0.315)	(0.336)	(0.293)	(0.297)	(0.328)	(0.264)	(0.297)	(0.305)	(0.309)	(0.342)	(0.291)
Winner*Protestant	0.324	0.315	0.383	−0.143	0.299	0.341	0.396	0.201	0.274	0.343	−0.283
	(0.331)	(0.353)	(0.310)	(0.315)	(0.345)	(0.283)	(0.313)	(0.325)	(0.328)	(0.357)	(0.309)
Winner*Muslim	0.048	0.430	0.103	−0.400	0.194	0.082	0.123	−0.034	0.042	−0.018	−0.547*
	(0.334)	(0.355)	(0.312)	(0.318)	(0.347)	(0.290)	(0.320)	(0.324)	(0.326)	(0.357)	(0.314)
F-test: Orthodox winner	0.53	0.65	0.98	0.96	0.06	0.87	0.43	0.55	0.45	0.56	0.55
F-test: Protestant winner	0.63	0.42	0.42	0.91	0.61	0.25	0.63	0.51	0.67	0.11	0.26
F-test: Muslim winner	0.06	0.87	0.11	0.03	0.71	0.32	0.07	0.01	0.11	0.11	0.27
Mean (losers)	0.00	0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	0.00	−0.00	−0.00
N	2311	2311	2311	2311	2311	2311	2311	2311	2311	2311	2311

The table reports the estimate of the effect 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: Satisfaction by gender.

	(1) Overall	(2) Health	(3) Leisure	(4) Financial	(5) Friends	(6) Relatives	(7) Home	(8) Neighborhood	(9) Society	(10) Work
Winner	0.173***	−0.016	0.069	0.219***	−0.005	0.012	0.354***	0.132***	−0.068	−0.003
	(0.048)	(0.046)	(0.049)	(0.049)	(0.051)	(0.051)	(0.048)	(0.048)	(0.053)	(0.049)
Female	−0.203***	−0.332***	−0.067	0.007	−0.117**	0.034	0.050	−0.024	−0.002	−0.100*
	(0.058)	(0.057)	(0.059)	(0.059)	(0.059)	(0.060)	(0.058)	(0.057)	(0.059)	(0.061)
Winner*Female	0.068	0.087	0.051	−0.121	0.085	0.034	−0.013	−0.006	−0.011	0.051
	(0.074)	(0.076)	(0.076)	(0.075)	(0.077)	(0.077)	(0.072)	(0.074)	(0.079)	(0.079)
F-test: Female winner	0.00	0.25	0.04	0.09	0.19	0.44	0.00	0.03	0.19	0.46
Mean (losers)	−0.00	0.00	−0.00	−0.00	0.00	−0.00	0.00	−0.00	0.00	0.00
N	2761	2761	2761	2761	2749	2754	2761	2761	2761	2471

The table reports the estimate of the effect 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: Distress by gender.

	(1) K10	(2) Tired	(3) Nervous	(4) So nervous...	(5) Hopeless	(6) Restless	(7) So restless...	(8) Depressed	(9) An effort	(10) So sad...	(11) Worthless
Winner	−0.050	−0.041	−0.010	−0.055	−0.053	−0.048	−0.062	−0.059	−0.033	−0.008	0.030
	(0.046)	(0.048)	(0.049)	(0.048)	(0.048)	(0.048)	(0.047)	(0.049)	(0.046)	(0.045)	(0.048)
Female	0.178***	0.239***	0.132**	0.118**	0.097	0.040	0.062	0.131**	0.174***	0.178***	0.086
	(0.058)	(0.058)	(0.059)	(0.059)	(0.059)	(0.058)	(0.057)	(0.059)	(0.060)	(0.060)	(0.059)
Winner*Female	0.017	0.007	−0.013	0.098	0.016	0.096	0.018	−0.028	−0.021	−0.015	−0.031
	(0.078)	(0.078)	(0.077)	(0.079)	(0.077)	(0.079)	(0.076)	(0.078)	(0.079)	(0.080)	(0.082)
F-test: Female winner	0.61	0.58	0.70	0.50	0.55	0.46	0.48	0.16	0.41	0.72	1.00
Mean (losers)	0.00	0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	0.00	−0.00	−0.00
N	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761	2761

The table reports the estimate of the effect 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 $\leq 0.1^{*}$.

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A.9 Effects on expenditures and income

Table A.29: Impact on income-generating activities.

	(1) Agriculture	(2) Own business	(3) Manufacturing	(4) Construction	(5) Service	(6) Government job	(7) NGO job	(8) Other activities	(9) Any activities
Winner	−0.006	0.010	−0.000	−0.012	0.026	0.005	0.000	−0.023***	−0.024*
	(0.007)	(0.018)	(0.006)	(0.008)	(0.019)	(0.013)	(0.008)	(0.007)	(0.013)
Mean (losers)	0.039	0.332	0.022	0.047	0.314	0.166	0.040	0.040	0.878
N	2637	2637	2637	2637	2637	2637	2637	2637	3049

The table reports the estimate of the effect 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 $\leq 0.1^{*}$.

A.10 The survey

Living conditions and neighborhood survey

I. Consent

Read: My name is _____ and I am working with the Ethiopian Development Research Institute (EDRI). We are conducting a phone survey to study the neighborhoods, social networks and livelihood in Ethiopia. We got your number from the housing agency. The survey usually takes between 20 and 25 minutes to complete. To compensate for your time, we will provide a 50 birr worth air time. Participation in this survey is voluntary and no information that may identify you will be shared to a third person. ስሜ _____ ሲሆን የምደውለው ከኢትዮጵያ ልማት ምርምር ኢንስቲትዩት (ኢ.ል.ም.ኢ) ነው። በኢትዬጵያ ውስጥ መኖሪያን፤ ማህበራዊ ትስስሮች እና አኗኗርን ለማጥናት ጥረት እያደረግን ነው። ስልክ ቁጥርዎን ከቤቶች ኤጀንሲ ያገኘነው ሲሆን ይህ የስልክ ዳሰሳ ጥናት ከ20 እና 25 ደቂቃዎች ጊዜ ይወስዳል። ከኛ ጋር ለሳለፉት ጊዜ እንደምስጋና 50 ብር የሞባይል ካርድ ቃለ-መጠይቁ እንዳለቀ የምንልክ ይሆናል። በዚህ የዳሰሳ ጥናት ተሳታፊነት በፈቃደኝነት ላይ የተመሰረተ ነው። የእርሶን ማንነት መለያ የሆኑ መረጃዎች ለሶስተኛ ወገን አይተላለፉም።

If voluntary, start the interview.
ለመሳተፍ ፈቃደኛ ከሆኑ ቃለ-መጠይቁን ይጀምሩ።

Date of Interview (dd/mm.yyyy)   ……/………./………
ቃለ-መጠይቁ የተካሄደበት ቀን እና ሰዓት

General Instruction
Please use the following codes for missing values:
እባክዎ የሚከተሉትን ኮዶች ይጠቀሙ።
-77 = Not applicable (including skipped questions)
-88 = Refusal
-99 = Don`t know

Please use the **Ethiopian calendar and time** throughout the survey.
እባክዎ የኢትዮጵያን የቀን መቁጠሪያ እና ጊዜ ለቃለ-መጠይቁ ይጠቀሙ።

Section A: Identification and tracking information

A.1.a	Enumerator name: የጠያቂ ስም		A.1.b	Supervisor name የተቆጣጣሪ ስም	
A.2.a	Participant full name የተሳታፊው ሙሉ ስም		A.2.b	Participant ID የተሳታፊው መለያ ቁጥር	
A.3.	How many times did you have to call? ምን ያህል ጊዜ መደወል ነበረብሽ ከማግኘትሽ በፊት?				
A.4.	Was it the correct participant answering? የስልክ ጥሪውን የመለሰው ትክክለኛው/ስሙ የተጠቀሰው ተሳታፊ ነው? (ትክክለኛው/ስሙ የተጠቀሰው ተሳታፊ ካልሆነ ቃለ-መጠይቁ ይቋም::)				
A.5.	Did the person ask where their number was found? ተሳታፊው ስልክ ቁጥሩ ከየት እንደተገኘ ጠይቀዋል?				
A.6.	Phone number 1 of respondent የተሳታፊው ስልክ ቁጥር (አንድ)				
A.7.	Phone number 2 of respondent የተሳታፊው ስልክ ቁጥር (ሁለት)				
A.8.	Phone number of close contact የተሳታፊው የቅርብ ቤተሰብ/ጓደኛ ስልክ ቁጥር				
A.9.	What is your address where you are currently living? አሁን የሚኖሩበት አድራሻ የት ነው?	A10.a Region ክልል			
		A10.b Sub city/town ክፍለ ከተማ/ከተማ			
		A10.c Woreda/Kebele ወረዳ/ቀበሌ			
A.10.	How long have you lived there? ከላይ በተጠቀሰው ቦታ ለምን ያህል ጊዜ ኖርህ/ሽ?	A.11.a	Months ወራት		| __ __ |
		A.11.b	Years አመታት		| __ __ |
A.11.	Do you have previous place of residence?				
A.12.	What is the address of your previous place of residence?	A.12.a	Region ክልል		

	ቀደም ሲል የመኖሪያ በታዎ አድራሻ የት ነበር?	A.12.b	Sub city/town ክፍለ ከተማ/ከተማ	
		A.12.c	Woreda/Kebele ወረዳ/ቀበሌ	
A.13.	Place of birth የትውልድ ስፍራህ/ሽ የት ነው?	01 = Afar አፋር 02 = Tigray ትግራይ 03 = Amhara አማራ 04 = Oromia ኦሮሚያ 05 = SNNP ደቡብ ህዝቦች 06 = Addis Ababa አዲስ አበባ 07 = Dire Dawa ድሬዳዋ 08 = Harari ሀረሪ 09 = Benishangul-Gumuz ቤንሻንጉል ጉሙዝ 10 = Gambella ጋምቤላ 11 = Somali እትዮ ሶማሌ 12 = Other (Specify) ሌላ ከሆነ ይገለፅ	| ___ ___ |
A.14.	Do you have a concrete plan to move within the next years? በሚቀጥሉት ዓመታት ውስጥ የመኖሪያ በታ የመቀየር ሊተገበር የሚችል እቅድ አሎት? (0=No 1=Yes) (0 = የመቀየር እቅድ የለኝም 1 =አዎ የመቀየር እቅድ አለኝ		
A.15.	If yes, what kind of housing do you expect to move into? ለጥያቄA.13 መልስዎ አዎ ከሆነ፤ ወደ ምን አይነት መኖሪያ ቤት እገባለው ብለው ይጠብቃሉ?	01 = Kebele house የቀበሌ ቤት 02=Government owned house የመንግስት ቤት 03= Merge/shared room የጋራ መኖሪያ ቤት 04= Private rental የግል ኪራይ ቤት 05=Condominium house ኮንደሚኒየም 06= Own house የራስ ቤት 07= Family house የቤተሰብ ቤት 08=Other (Specify) ሌላ ከሆነ ይገለፅ	| ___ ___ |
A.16.	If yes, when do you expect to move? (mm.yyyy) ለጥያቄ A.13 መልስዎ አዎን ከሆነ፤ መቼ እቀይራለው ብለው ይጠብቃሉ? (ወር፤ ዓመተ ምህረት)	(mm, yyyy)	

Section B. Socio-demographic questions

B.1.   Do you have a spouse or a partner that you live with? |____| (Yes = 1, No = 0)

አብረዎት የሚኖር የትዳር ጓደኛ አለ? |____| (አዎ አለ = 1 አይ የለም = 0)

B.2.   How long have you lived together?   B.2.a Months | ___ ___ |

አብራቹ ለምን ያህል ጊዜ ኖራችኃል?   ወራት

B.2.b Years | ___ ___ |

አመታት

I will know ask some questions about you and your partner:

አሁን ስለ እርስዎ እና ስለ የትዳር ጓደኛዎ የተወሰኑ ጥያቄዎችን እጠይቆታለው።

		Respondent ተጠያቂው	Partner የትዳር ጓደኛዎ
B.3.	How old are you? (completed years) ዕድሜዎ ስንት ነው? (የተጨረሱት/ያለቁት አመታት ብቻ ይቆጠሩ)	| ___ ___ |	| ___ ___ |
B.4.	What is your ethnicity? ብሄርዎ ምንድነው? 1 = Oromo ኦሮሞ 2 = Amhara አማራ 3 = Tigray ትግሬ 4 = Harari ሀረሬ 5 = Somalia ሶማሌ 6 = Gurage ጉራጌ 7 = Sidama ሲዳማ 8 = Welayta ወላይታ 9 = Other (specify)ሌላ ከሆነ ይገለፅ 10 =Mixed ድብልቅ	| ___ ___ |	| ___ ___ |
B.5.	What is your religion? የትኛዉ ሃይማኖት ተከታይ ነዎት? 1 = Orthodox ኦርቶዶክስ 2 = Muslim ሙስሊም 3 = Protestant ፕሮቴስታንት 4 = Catholic ካቶሊክ 5 = Other (specify)ሌላ ከሆነ ይገለፅ 6 = Traditional ባህላዊ 7 = No religion ሃይማኖት የለኝም	| ___ ___ |	| ___ ___ |

B.6.	How many years of education have you completed? ምን ያህል ዓመት ትምህርት አጠናቀዋል?	| _code__ ___ |	| ___code ___ |
B.7.	During the last 12 months, have you engaged in any income generating activities? (0 = No1 = Yes) ባለፉት 12 ወራት ውስጥ ገቢ የሚያስገኝ ማንኛውም እንቅስቃሴ አድርገዋል? (0 = አላደረኩም 1 = አዎ አድርጌያለው)	| ___ ___ |	| ___ ___ |
B.8.	If yes, what kind of (main) activities? ለጥያቄ B.7 መልስዎ አዎ ከሆነ፤ የዋነኛ ስራው አይነት ምንድነው? (Probe: main in terms of income and time) (ዋነኛ ስራ በገቢ እና በሚወስደው ጊዜ የሚበልጠውን ማለት ነው።) 1 = Farming including urban agriculture ግብርና (የከተማ ግብርናን ጨምሮ) 2 = Non-farm own business including sale of home produced goods ከግብርና ውጪ የግል ስራ (ቤት የተመረቱ እቃዎችን መሸጥ ጨምሮ) 3 = Wage employment in manufacturing sector (private) በማምረቻ ኢንዱስትሪ ዘርፍ የቅጥር ሥራ (የግል) 4 = Wage employment in construction sector, private በግንባታ ኢንዱስትሪ ዘርፍ የቅጥር ሥራ (የግል) 5 = Wage employment in the service sector, private በአገልግሎት ዘርፍ የቅጥር ሥራ (የግል) 6 = Government Job የመንግስት ስራ 7 = NGO job መንግስታዊ ያልሆነ ድርጅት ስራ 8 = Other(specify) _____ ሌላ ካለ ይገለፅ	| ___ ___ |	| ___ ___ |

B.9. How many household members are there in your household in total? |____|
በጠቅላላው ቤተሰብዎ ውስጥ ስንት የቤተሰብ አባላት አሉ?

B.10. How many children do you have? |____|
ስንት ልጆች አለዎት

B.10.a If any children, ask the following questions about your children:
(If more than 8, take the 8 youngest children)

ልጆች ካላቸው ስለልጆቻቸው የሚከተሉትን ጥያቄዎች ይጠይቁ፡፡

(ጠያቂ፡- ብዛታቸው ከስምንት በላይ ልጆች ካላቸው 8 በእድሜ ትንሾቹን በመውሰዱ
ይመዝግቡ፡፡)

	Sex ፆታ	Age ዕድሜ	Years of education completed so far ያጠናቀቁት የትምህርት አመታት	How many years of education do you expect this child to complete? ይህ ልጅ እንዲያጠናቅቅ የሚጠብቁት የትምህርት አመታት?
Child 1 ልጅ 1				
Child 2 ልጅ 2				
Child 3 ልጅ 3				
Child 4 ልጅ 4				
Child 5 ልጅ 5				
Child 6 ልጅ 6				
Child 7 ልጅ 7				
Child 8 ልጅ 8				

Section C. Intra-household income

C.1.   Who was the primary breadwinner of the household during the last six months?

|____|

(1 = You 2 = Partner 3 = other person)

ባለፉት ስድስት ወራት የቤተሰቡ ዋነኛ ገቢ አስገቢ ማን ነበር?

(1 =ተጠያቂው 2 =የትዳር ጓደኛ 3 =ሌላ ሰው)

C.2.   Who was the secondary breadwinner of the household during the last six months?

|____|

(1 = You   2 = Partner   3 = other person)

ባለፉት ስድስት ወራት የቤተሰቡ በሁለተኛ ደረጃ ገቢ አስገቢ ማን ነበር?

(1 =ተጠያቂው 2 =የትዳር ጓደኛ 3 =ሌላ ሰው)

C.3. How much income (cash and in kind) did you and other household members obtain from the following sources during the last six months:

ባለፉት ስድስትወራትምንያህልገቢ(በገንዘብእናበአይነት)

እርስዎእናሌሎችየቤተሰብአባላትከሚከተሉትምንጮችአግኝተዋል?

Net income (in birr)	Respondent	Partner	Other
1. Wage employment ከቅጥር ደሞዝ			
2. Rental income (e.g. from renting out a flat) ከቤት ኪራይ ገቢ (ቤትን ከማከራየት የሚገኝ ገቢ)			
3. Self- employment or own business ከግልስራወይም ከግልንግድ			
4. Remittances (individual transfers) ከውጭ አገር የሚመጣ ገንዘብ (ሰው ከላከው)			
5. Government or NGO transfers ከመንግስት /መንግስታዊ ካልሆነ ድርጅት ድጋፍ			
6. Other (specify) _____ ሌላ ካለ ይገለፅ			
7. Pension ጡረታ			

C.4. How much have your household spent on the following items during the last six months:

ባለፉት ስድስት ወራት ቤተሰብዎ ለሚከተሉት ምን ያህል ወጪ አውጥተዋል?

Net expenditure (in birr) ወጪ(በብር)	Household ቤተሰቡ ያወጣው ወጪ(በብር)
1. Rent of home ለቤት ኪራይ	
2. Other rents ለሌላ ኪራይ	
3. Mortgage repayments (incl. interest) በብድር የተገዛ ቤት ክፍያ (ወለድን ጨምሮ)	
4. Repayment of other debt to (incl. interest) የብድር ክፍያ (ወለድን ጨምሮ)	

C.5 Do you own a house/apartment etc? (0 = No1 = Yes)

የግል ቤት አለዎት? (ይህ ኮንዶሚኒየምንም ይጨምራል) (0 = የለኝም 1 = አለኝ)

C.5.0 If yes to C.5, How many houses/apartments do you own? _____

ስንት የግል ቤቶች አሉዎት? (ይህ ኮንዶሚኒየምንም ይጨምራል)

C.5.1 If yes to C.5.0, If you were to sell it, how much do you think you would get for it.

	Selling price of the house/apartment
House1	
House2	
House3	
House4	
House5	

ለጥያቄ C.5 መልስዎ አዎ አለኝ ከሆነ፤ መሽጥ ቢፈልጉ ምን ያህል አገኛለው ብለው ያስባሉ?

C.5.2. Do you own any land or other real estate (0 = No1 = Yes)

C.5.3 If yes to C.5.2, what would you estimate the value of this to be in birr?

C.6 How much debt does your household have in total

ቤተሰቡ በአጠቃላይ ምን ያህል ዕዳ አለበት? (የግል ብድር፡ የቤት ብድር፡ የባንክ ብድር፡ የአራጥ ብድር))

C.7 How much savings does your household have in cash

ቤተሰቡ በአጠቃላይ ምን ያህል በጥሬ ገንዘብ የቆጠቡት ስንት ብር አለዎት (በእጅ)?

C.8 How much savings does your household have in the bank

ቤተሰቡ በአጠቃላይ በባንክ ውስጥ ምን ያህል ቀጠባ(ብር) አለው?

C.9. Does your household have the following… (Yes/No)?
ቤተሰቡ ከሚከተሉት ውስጥ የትኛው አለው? (አለ/የለም)

1. Radio
   ራዲዮ
2. Television
   ቴሌቪዥን
3. Refrigerator
   ፍሪጅ/ማቀዝቀዣ
4. Car
   መኪና
5. Computer
   ኮምፒውተር
6. Tablet
   ታብሌት
7. Satellite dish
   ዲሽ

8. Smartphone
ስማርት ፎን/ስማርት ስልክ
9. Electric mitad
የኤሌክትሪክ ምጣድ

C.10 Does any member of this household have a bank account?
ከቤተሰቡ አባላት የባንክ ሂሳብ ያለው አለ? 1=Yes 2=No -
Change the order, before C8

C.11 Using a scale from 0 to 10, where 0 means not at all satisfied, and 10 is completely satisfied,
how satisfied are you with your life as a whole these days? |____|
ከ 0 ወደ 10 ደረጃ ያለው መሰላል ያስቡ፤ 0 ማለት ምንም እርካት የሌለው ቢሆን እና 10 ደግሞ ሙሉ እርካታ አለው ብለን
ብንወስድ አሁን ላይ በአጠቃላይ በህይወትዎ የትኛው ደረጃ ላይ ይገኛሉ?

C.12 Enumerator: "Now follow some questions on how satisfied or dissatisfied you are with some different areas of your life. How satisfied or dissatisfied are you with. . ." አሁንበህይወትዎውስጥእርስዎምንያህልደስተኛእንደሆኑወይምደስተኛእንዳልሆኑ(ምንያህልእንደረኩ) አንዳንድጥያቄዎችንእጠይቅታለሁ፡፡ምንያህል ....ደስተኛ ነዎት? (0 = Very dissatisfied 1 = Rather dissatisfied 2= Somewhat dissatisfied 3=Somewhat satisfied 4=Rather satisfied 5=Very satisfied 6=Not applicable) (0 = በጣም አልረካhም 1 = ይልቁንም አልረካhም 2= በተወሰነ ደረጃ አልረካhም 3= በተወሰነ ደረጃ ረክቻለሁ 4= ይልቁንም ረክቻለሁ 5= በጣም ረክቻለሁ 6=አይመለከተውም)	
. . . . your health? .....በጤናዎ	|____|
. . . . your leisure time? .....በእረፍት ጊዜዎ	|____|
. . . . your personal economy? ....በግል ኢኮኖሚዎ	|____|
. . . . your friends? ....በጓደኞችዎ	|____|
. . . . your relatives? ....በዘመዶችዎ	|____|
. . . . the home that you live in? ....በሚኖሩበት ቤት	|____|
. . . . the neighborhood that you live in? ....በሚኖሩበት ሰፈር/መኖሪያ ሰፈር	|____|
. . . . Ethiopian society? ....በኢትዮጵያ ማህበረሰብ	|____|
. . . . your work? (Not working=6) ....በስራዎ (ስራ ከሌለ 6 ይቀመጥ)	|____|

C.13 Think about the people Ethiopia in general. Do you think you are richer, equally rich, or poorer than the majority of them? |_____|

(1 = Richer 2 = Equally rich 3 = Poorer)

ኢትዮጵያ ውስጥ ያለውን ህብረተሰብ ያስቡ፡፡እርስዎ ከአብዛኛው ጋር ሲወዳደሩ የበለጡ ሀብታም፤ እኩል ሀብታም ወይም

ከነእርሱ ያነስኩ ድሃ ነኝ ብለው ያስባሉ?

(1 =የበለጡ ሀብታም 2 = እኩል ሀብታም   3 = ከማህበረሰቡ ያነስኩ ድሃ)

C.14. Do you think you will be richer or poorer in 5 years from now?

1 = Richer   2 = poorer

ከአምስት አመታት በኃላ የበለጡ ሀብታም እሆናለው ወይስ እደኸያለው ብለህ ያስባሉ?

1 = የበለጡ ሀብታም 2 = እደኸያለው

C.15. Are you richer than 5 years ago?

 ከአምስት አመታት በፊት ጋር ሲወዳደር የበለጡ ሀብታም ነዎት?

Yes Or No Option here!

C.16. If you suddenly ended up in an unforeseen situation where you have to raise 20,000 Birr would you be able to? (Y/N)

ባልታሰበ ሁኔታ ድንገተኛ ጉዳይ ቢያጋጥምዎት እና 20,000 ብር ማግኘት ቢኖርበት፤ ይህን ያህል ብር ማግኘት ይችላሉ? (እችላለው/አልችልም)

C.17 In the past six months, has your family had inadequate money to cope with the family expenses? (Never, Rarely, Sometimes, Always)

ባለፉት ስድስት ወራት ቤተሰብዎ የቤተሰብ ወጪዎችን ለመሸፈን በቂ ገንዘብ አልነበራቸውም? (በፍፁም፤ አልፎ አልፎ፤ አንዳንዴ፤ ሁልጊዜ)

C.18 In the past six months, has your family delayed the payment of bills because of financial difficulty? (Never, Rarely, Sometimes, Always)

ባለፉት ስድስት ወራት ቤተሰብዎ ያለበትን ሂሳብ ባለት የገንዘብ ችግር ምክንያት ክፍያ አዘግይቷል?(በፍፁም፤ አልፎ አልፎ፤ አንዳንዴ፤ ሁልጊዜ)

C.19 What has been the economic condition of your family in the past six months? (No financial difficulty, some financial difficulty, Considerable financial difficulty, much difficulty)

ባለፉት ስድስት ወራት ቤተሰብዎ የነበረበት የኢኮኖሚ ሁኔታ ምንድነው? (ምንም የኢኮኖሚ ችግር አልነበረም፤ የተወሰነ የኢኮኖሚ ችግር ነበር፤ በዛ ያለ የኢኮኖሚ ችግር ነበር ፤ በጣም ብዙ የኢኮኖሚ ችግር ነበር)

Section D. Attitudes and Health

D.1.   Generally speaking, would you say that most people can be trusted or that you must be very careful in dealing with people? |_____|

(1 = Most people can be trusted2 = Must be very careful)

በአጠቃላይ ሲታይ አብዛኛው ሰዎች እምነት ሊጣልባቸው ይችላሉ ወይስ ከሰዎች ጋር በሚያደርጉት ግንኙነት በጣም

መጠንቀቅ ይኖርቦታል?

(1 =አብዛኛው ሰዎች እምነት ሊጣልባቸው ይችላሉ 2 =በጣም መጠንቀቅ ያስፈልጋል)

D.2.	Enumerator: "I will read some statements about men and women. Please say whether you strongly disagree, disagree, agree or strongly agree with these statements."
(1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree)	
ጠያቂ: "ስለ ወንድ እና ሴቶች አንዳንድ ዓረፍተ አሳቦችን አነባለሁ። በእነዚህ አሳቦች ላይ ምን ያህል እንደሚስማሙም በጣም እስማማለሁ ፤ እስማማለሁ ፤ አልስማማም እና በጣም አልስማማም በማለት ይግለፁ።"	
(1 = በጣም እስማማለሁ 2 = እስማማለሁ 3 = አልስማማም 4 = በጣም አልስማማም)	
1. It is okay for women to work outside of the home ሴቶች ከቤት ውጭ ቢሰሩ ችግር የለውም።	|____|
2. It is okay for women to earn more money than their partners ሴቶች ከትዳር ጓደኛቸው በላይ ገቢ/ገንዘብ ቢያገኙ ችግር የለውም።	|____|
3. A husband justified in beating his wife if she neglects the children? አንድ ባል ሚስት ልጆችን ቸለ ካለች ሚስቱን መምታት ትክክል ነው።	|____|

D.3.   "Why, in your opinion, are there people in this country who live in need? |____|
Here are two opinions: Which comes closest to your view?
በአገር ውስጥ ሰዎች በአስቸጋሪ ሁኔታ/በድህነት ውስጥ ለምን ይኖራል ብለው ያስባሉ?
ቀጥለው ሁለት አሳቦች አሉ። ለአንተ የሚቀርበው ሃሳብ የቱ ነው?
1. People are poor because of laziness and lack of will power
ሰዎች ድሃ የሚሆኑት በስንፍና እና በፍላጎት ማነስ/እጥረት ምክንያት ነው።
2. People are poor because of an unfair society"

ሰዎች ድሃ የሚሆኑት ፍትሃዊ ባልሆነ ማህበረሰብ ምክንያት ነው።

D.4.   "In your opinion, do most poor people in this country have a chance of escaping from poverty (1), or is there very little chance of escaping it (2)?" |____|
በእርስዎ ሃሳብ በዚህች አገር የሚኖሩ ድሆች ከድህነት:-
(1) የመውጣት ዕድል አላቸው ወይስ
(2) ከዚህ ድህነት ለማምለጥ ዕድል የላቸውም?

D.5.   "Please say whether you strongly agree, agree, disagree, or strongly disagree with these statements:
(1 = Strongly agree   2 = Agree   3 = Disagree   4= Strongly disagree)
እባክዎ በቀጠዩ ዓረፍተ ሃሳቦች *በጣም እስማማለው ፤ እስማማለው፤ አልስማማም* ወይም *በጣም አልስማማም* በማለት ይመልሱ።
(1 =በጣም እስማማለው   2 =እስማማለው   3 = አልስማማም   4= በጣም አልስማማም)

D.6 In Ethiopia, the economic differences between the rich and poor are unfair.
|____|

በኢትዮጵያ በሀብታምና በድሃ መካከል ያለው የኢኮኖሚ/የሀብት ልዩነት ፍትሃዊ አይደለም።

D.7 In Ethiopia, the national government should aim to reduce the economic differences

between the rich and the poor. |____|

የኢትዮጵያ መንግስት በሀብታም እና በድሃ መካከል ያለውን የኢኮኖሚ/የሀብት ልዩነት ለመቀነስ ማቀድ አለበት።

D.8   In Ethiopia, the national government should have taxes on people owning
houses to reduce the economic differences between the rich and the poor.
|____|

የኢትዮጵያ መንግስት በሀብታሞችና በድሆች መካከል ያለውን የኢኮኖሚ/የሀብት ልዩነት ለመቀነስ የቤት

ባለቤቶች ላይ ግብር መጣል አለበት።

D.9. "In your opinion, to what degree do each of the following factors currently cause people to become poor?

(0 = To a small degree   1 = To a large degree)

በአንት አስተያየት ከሚከተሉት ምክንያቶች ሰዎች ድሃ እንዲሆኑ በምን ያህል ደረጃ ምክንያት ይሆናሉ?

(0 =በትንሽ ደረጃ   1 =በከፍተኛ ደረጃ)

Lack of ability of competence|____|

የችሎታ ብቃት አለመኖር/ማነስ

Bad luck |____|

መጥፎ እድል

Poor character|____|

ጥሩ ያልሆነ ባህሪ/ፀባይ

Lack of individual effort|____|

የግለሰብ ጥረት አለመኖር/ማነስ

Biases or discrimination in society|____|

በህብረተሰብ ውስጥ አድሎ ወይም መድልዎች

Lack of equal opportunity in society|____|

በህብረተሰብ ውስጥ እኩል ዕድል አለመኖር

Disadvantage of the economic system|____|

የኢኮኖሚው ስርዓት/መዋቅር ችግሮች

A too low education level |____|

በጣም ዝቅተኛ የትምህርት ደረጃ

Growing up in a poor family|____|

በድሃ ቤተሰብ ውስጥ ማደግ

Having poorly educated parents|____|

ያልተማሩ ወላጆች መኖር

Lack of ambition |____|

የትልቅ ግብ/ ምኞት አለመኖር/ማነስ

D.10 Enumerator: "These questions concern how you have been feeling over the past 30 days. **During the last 30 days, about how often did** " ጥያቄ፡ እነዚህ ጥያቄዎች ባለፉት 30 ቀናት የተሰማዎትን ስሜቶች ይመለከታሉ፡፡ ባለፉት 30 ቀናት ምን ያህል ጊዜ…………..ተሰምቶዎታል?	
(1 = None of the time2 = A little of the time 3 = Some of the time 4 = Most of the time 5=All of the time) (1 = ምንም ጊዜ 2 = ትንሽ ጊዜ 3 = አንዳንዴ 4 = አብዛኛው ጊዜ 5 = ሁልጊዜ)	
1. you feel tired out for no good reason? ምንም ያህል ሳይሰሩ የመድከም ስሜት	|____|
2. you feel nervous? የመረበሽ ስሜት	|____|
3. you feel so nervous that nothing could calm you down? በጣም ከመረበሽ የተነሳ ምንም ነገር ሊያረጋጋዎት ያልቻለበት ሁኔታ	|____|
4. you feel hopeless? ተስፋ የመቁረጥ ስሜት	|____|
5. you feel restless or fidgety? የመቁነጥነጥ ወይም እረፍት የማጣት ስሜት	|____|
6. you feel so restless you could not sit still? ከመቁነጥነጥ የተነሳ አንድ ቦታ መቀመጥ ያለመቻል	|____|
7. you feel depressed? የመደበር/ የመከፋት ስሜት	|____|

8. you feel that everything was an effort?
    ሁሉንም ነገር (ለምሳሌ መናገር፤ መነሳት፤መሄድ የመሳሰሉት)
    የግድዋን ያደርጉ እንደነበር
	|____|

9. you feel so sad that nothing could cheer you up? በጣም ከመከፋትዎ የተነሳ ምንም ነገር ሊያስደስትዎ ያልቻለበት ሁኔታ	|____|
10. you feel worthless? ለማንም አልጠቅምም (ዋጋ የለኝም) የሚል ስሜት	|____|

D.11 *Which opinion about inequality comes closest to your view?*
ስለ ተበላላጭነት/ስለ እኩል አለመሆን የትኛው ሃሳብ ከእርስዎ ሃሳብ ጋር በጣም የተቀራረበ ነው?
  1. Large differences in people's incomes are acceptable to properly reward differences
      in talents and efforts.
በሰዎች መካከል ትልቅ የገቢ ልዩነት የችሎታ እና የጥረት ልዩነትን ተገቢ እውቅና ለመስጠት የመጣ
በመሆኑ
ተቀባይነት አለው፡፡
  2. For a society to be fair, differences in people's standard of living should be small.
ማህበረሰብ ፍትሃዊ የሚሆነው በሰዎች መካከል ያለው የኑሮ ደረጃ/ሁኔታ ልዩነት ትንሽ ሊሆን
ይገባል፡፡

Section E: Payment

E1a. Ask for respondent with odd numbered ID, As we stated in the start, you will be given 50 birr in airtime that we send to your phone. You are given the possibility to donate a share of this money to Mekodonia (disabled and elderly association). If you want to donate, we will send the money to the organization. Do you want to donate any of the airtime? 1=Yes   2= No

E2a. if yes, how much? |_____birr|

በመጀመሪያ እንደገለጽኩት የ50 ብር ካርድ ወደ ስልክዎ እንልካለን::ከዚህ ገንዘብ ላይ ለMekodonia (ለአካል ጉዳተኞች እና ለአዛውንት እርዳታ ማህበር) እርዳታ መስጠት እንዲችሉ እድሉ ተሰጦታል:: እርዳታውን መስጠት ክፈለጉ ገንዘቡን አኛ ለድርጅቱ እንልካለን:: ከሞባይል ካርዱ ላይ መርዳት ይፈልጋሉ?

መልስዎ አዎ ከሆነ ምን ያህል ብር ይሰጣሉ?

E1b. Ask respondents with even numbered ID, As we stated in the start, you will be given 50 birr in airtime that we send to your phone. You are given the possibility to donate a share of this money to Mary Joy (an organization supporting poor people). If you want to donate, we will send the money to the organization. Do you want to donate any of the airtime? 1=Yes   2= No

E2b. if yes, how much? |_____birr|

በመጀመሪያ እንደገለጽኩት የ50 ብር ካርድ ወደ ስልክዎ እንልካለን::ከዚህ ገንዘብ ላይ ለሜሪ ጆይ (ለድሃ የማህበረሰቡ ክፍል ድጋፍ የሚሰጥ ድርጅት) እርዳታ መስጠት እንዲችሉ እድሉ ተሰጦታል:: እርዳታውን መስጠት ክፈለጉ ገንዘቡን አኛ ለድርጅቱ እንልካለን:: ከሞባይል ካርዱ ላይ መርዳት ይፈልጋሉ?

መልስዎ አዎ ከሆነ ምን ያህል ብር ይሰጣሉ?

Section F: The housing lottery

Now follows some final questions. We received your number from a list of applicants/participants in the low cost condominium housing lottery.

አሁን የመጨረሻ ጥያቄዎችን እጠይቃለሁ:: የእርስዎን ስልክ ቁጥር ከጋራ ህንጻ ቤት(ኮንዶሚኒየም) ተሳታፊዎች ዝርዝር ላይ ነው ያገኘነው::

F.1.a	Did you win the lottery? የቤት እጣው ደርሶታል?	01=yes 02=no 01=አዎ ደርሶኛል 02=አልደረሰኝም
F1.b	What was your occupation in 2005 (at time of housing registration) በ 1997 ዓ.ም ምዝገባ ጊዜ ምን አይነት ስራ ይሰፉ ነበር? 1. Government የመንግስት	

	2. Wage Employed (Private firm) የቅጥር ስራ (የግል)	
	3. Own business የግል ስራ	
	4. NGO መንግስታዊ ያልሆነ ድርጅት ስራ	
	5. House wife የቤት እመቤት	
	6. No job ስራ አልነበረኝም	
	7. Pension ጡረታ	
	8. Other (Specify) ሌላ ካለ ይገለፅ	
F1.c	Did you have any physical disability at time of registration(2005)?

በ 1997 ዓ.ም ምዝገባ ጊዜ የአካል ጉዳት ነበረብዎት?

01=yes   02=no
01= አዎ ነበረብኝ 02= አልነበረብኝም | |
| F1.d1 | What was your earnings per month at the time of the registration in 2005?
በ1997 ምዝገባ ጊዜ ወርሃዊ ገቢዎ ምን ያህል ነበር?
That is, the earnings you reported on the registration form in2005 ?
|_____| -99: Do not know
በ1997 ምዝገባ ጊዜ የሞሉት ወርሃዊ የገቢ መጠን ምን ያህል ነበር? | |
| F1.d2 | What was your earnings per month in 2015 (i.e. three years ago)?
|_____| -99: Do not know | |
| F1.e1: | What was the earnings of your partner, if you had one at the time, per month at the time of the registration in 2005? |_____| -99: Do not know. -77: Not applicable
በ1997 ምዝገባ ጊዜ የትዳር ጓደኛ ከነበሮት፤ የትዳር ጓደኛዎ ወርሃዊ የገቢ መጠን ምን ያህል ነበር? | |
| | | |

F1.e2	What was the earnings of your partner per month in 2015 (i.e. three years ago), if you had one at the time? |____| -99: Do not know	
F1.f	Did you have a spouse or partner that you lived with at the time of registration in 2005 ? |____| (Yes = 1, No = 0) በ1997 ምዝገባ ጊዜ የትዳር ጓደኛ ነበሮት? 1= አዎ ነበረኝ 0= አልነበረኝም	
F1.g	Write up if respondent is a man or a woman. Ask if unsure. Are you a man or a woman. 1 woman 2 man የተጠያቂው ፆታ ምንድነው? (እርግጠኛ ካልሆኑ ይጠይቁ፡፡) 1= ሴት 2= ወንድ	
F1.h:	Do you perceive the lottery to be fair and transparent? Yes/No የዕጣ አወጣጡ ፍትሃዊ እና ግልፅ ነው ብለው ይረዳሉ? 1= አዎ 2=አይ	
If no to question F1.a, skip to question F8 **If yes to F1.a answer questions F2-F7 and then stop.**		
F.2	Are you living in the condominium that you won, or have you sold it, or rented it out? ለF.1.a መልስዎ አዎ ከሆነ እርስዎ ባሸነፉበት የጋራ ህንፃ ውስጥ እየኖሩ	01 = I am living in it 04 = The flat is still empty, but 01 = እየኖርኩበትነው I will move in 02 = I am renting it out

	ነው ወይንስ ሸጠውታል ወይስ አከራይተውታል?	02 = አከራይቻያለው 03 = I have sold it 03 = ሸጭዋለው	04 = ቤቱ አሁንም ባዶ ሲሆን በቀጣይ እገባበታለው 05 = The flat is empty, but I plan to rent it out. 05 =ቤቱ ባዶ ነው ላከራየው አቅጃያለው 06 = A relative is living there for free 06 = ዘመድ በነፃ እየኖረበት ነው 07 = I am living in it and partly rent it out.
F2.1a	If the answer for F2 is 02 or 07 ask ,How much do you earn per month from renting out the flat? ለF.2 መልስዎ 02 ከሆነ፤ ከቤቱ ኪራይ በወር ምን ያህል ታገኛለህ?		
F2.1b	Did you include the rental earnings from this flat when listing all your rental earnings before? 1 Yes, 2 No ከዚህ ቤት የሚገኘውን የኪራይ ገቢ ቅድም የኪራይ ገቢዎችን ስጠይቆ አካተውት ነበር? 1= አዎ አካትቼዋለው 2=አይ አላካተትኩትም		

F2.3	How much do you expect to earn per month from renting out the flat? ለF.2 መልስዎ 05 ከሆነ፤ ከቤቱ ኪራይ በወር ምን ያህል አገኛለው ብለው ይጠብቃሉ?	
F2.f	Do you have a plan to move in the condominium that you won? ወደፊት እርስዎ ባሸነፉት ኮንዶሚኒየም ቤት ውስጥ የመግባት/የመኖር እቅድ አሎት?	
F.3m	If you have not moved yet , when do you plan to move in to your own condo? (Month) ለF.2 መልስዎ-02, 04, 05 or 06 ከሆነ፤ እስከ አሁን ድረስ ካልገቡበት መቼ ይገባሉ? (ወር)	
F3.y	If you have not moved yet , when do you plan to move in to your own condo? (Year) ለF.2 መልስዎ-02, 04, 05 or 06 ከሆነ፤ እስከ አሁን ድረስ ካልገቡበት መቼ ይገባሉ? (አመት)	
F4	If not moved to your flat/condo, why have you not moved into your condo/flat? ለF.2 መልስዎ-02, 04, 05 or 06 ከሆነ፤ እስከ አሁን ድረስ ካልገቡበት፤ ለምን?	1. Cannot afford ውድ በመሆኑ 2. Too far from work Place ለስራ ፉቅ በመሆኑ 3. No adequate transport system from my work place ከስራ ቦታ በቂ የሆነ ትራንስፖርት ባለመኖሩ 4. Too far from community

		ከማህበረሰቡ ስለሚርቅ
		5. Not attractive
		ቤቱ ሳቢ/ቆንጆ ባለመሆኑ
		6. Lack of basic infrastructure such as water and electricity እንደ ውሃ እና መብራት ያሉ መሰረተ ልማቶች ያለመሟላት
		7. Never interested in moving የመግባት ፍላጎት የለኝም
F5	IF 03 ON E.2, For how much did you sell it? ለF.2 መልስዎ 03 ከሆነ፤ ቤቱን በምን ያህል ሸጡት?	
F6	IF 02 ON E.2, Do you plan to move in after you have rented it out? ለF.2 መልስዎ02 ከሆነ፤ ከአከራዩት በኋላ ወደ ቤቱ የመግባት ዕቅድ አሎት?	01=yes 02=no 01=አዎ አለኝ 02=የለኝም
F7a	If you have not sold the house/flat/condo, how much do you think you would get for it if you were to sell it? ለF.2 መልስዎ 01, 02, 04, 05 or 06 ከሆነ፤ ቤቶን ካልሸጡት፤ ብሸጠው ምን ያህል ብር ያወጣል ብለው ያስባሉ?	
F7b	Did you include this value when we asked you about all your houses before? 1 Yes, 2 No ይህ የነገሩን የቤት ዋጋ ቅድም ስለግል ቤትዎ ስንጠይቆት አካተውታል?	

	1= አዎ አካትቼዋለው 2=አይ አላካተትኩትም	
	9.	

F.8. How likely on a scale from 1 to 10, where 1 is extremely unlikely and 10 is extremely likely, do you think it is that you will win the lottery in the future?

[1-10]

ከ 1 ወደ 10 ባለው ደረጃ ፤ 1 ማለት የመሆን ዕድሉ በጣም ጠባብ ማለት ሲሆን 10 ደግሞ ማለት የመሆን ዕድሉ በጣም ሰፊ ነው ብለን ብናስብ፤ ወደፊት የቤት ዕጣ አሽንፋለው ብለው በየትኛው ደረጃ ያስባሉ?F.9. How much do you think a flat in the lottery is worth if you were to win it and then sell it?[XX Birr]

የተመዘገቡት ቤት/እጣ የሚወጣው ቤት ቢደርስዎት እና ቢሸጡት ምን ያህል ዋጋ አለው ብለው ያስባሉ?

F.10. Do you know people that have won?

የቤት እጣ የደረሰው ሰው ታውቃለህ?

No

አላውቅም

Yes, partner

አዎ፤ የትዳር ጓደኛ

Yes, family member

አዎ፤ የቤተሰብ አባል

Yes, relative

አዎ፤ ዘመድ

Yes, friend.

አዎ፤ ጓደኛ

Yes, other.

አዎ፤ ሌላ

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