

Can community service grants foster social and economic integration for youth? A randomized trial in Kazakhstan*

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Abstract

The successful integration of young people into communities and labor markets is a major challenge across the developing world, and incentives for community service are an increasingly popular tool for enhancing these forms of youth engagement. In this paper, we evaluate the Kazakhstan Youth Corps (KYC) program, comprising cash grants for community service projects and non-cognitive skills training, using a randomized controlled trial including 4,000 youth. The outcomes of interest, pre-specified in a registered analysis plan, include non-cognitive characteristics, social capital, labor market engagement, human capital, and socioeconomic welfare.

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Our results suggest the interventions generally did not have positive effects on these outcomes as observed approximately one year post-intervention, and there is some evidence of a negative effect on labor market outcomes, particularly a decrease in income and the probability of reporting any income-earning activity. Further exploration of mechanisms suggests that these effects may be driven by a shift in preferences toward self-employment that leads youth to forgo opportunities in the labor market.

Keywords: Community service grants; non-cognitive skills training/mentorship; social integration; labor market integration; field experiment; Kazakhstan.

1 Introduction

Young people under the age of 25 constitute approximately 50 percent of the population of developing countries, the largest youth cohort in history (Bongaarts, 2009). Successfully integrating this cohort into society is a major challenge, and requires identifying innovative strategies to develop the skills youth require to engage productively in their communities and in the broader labor market. Evidence from a range of contexts suggests that young people with low levels of skill and low levels of engagement in their communities are potentially an important source of social discontent and economic and political dislocation (World Bank, 2006, 2013; Hilker and Fraser, 2009).

One strategy employed by governments to foster social and economic integration is the provision of grants or stipends for youth to engage in community-based service. A review conducted in 2010 listed publicly-supported community service programs in 101 countries across six continents (Innovations in Civic Participation, 2010), including Nigeria’s National Youth Service Corps, the Philippines’s National Youth Service, Brazil’s Civilian Volunteer Service, the United States’ AmeriCorps, and the German Bundesfreiwilligendienst. Proponents of these programs argue that they lead to increased civic engagement, improved non-cognitive skills and labor market success. However the existing evidence is minimal, drawn from observational studies conducted only in rich countries (Frumkin et al., 2009; Spera et al., 2013, 2015).

In developing countries, programs providing grants for youth have also increasingly supplemented these strategies with more targeted human development (e.g., training or mentorship), in order to encourage the development of skills and preferences conducive to economic engagement and pro-social behavior (Blattman et al., 2016, 2017; Lyall et al., 2020). However, the question of whether there are complementarities between targeted skills development and other youth interventions remains largely unanswered.

This paper presents evidence from a randomized control trial of the Kazakhstan Youth Corps (KYC), a program that provided grants for community-based service and non-cognitive skills training to youth aged 18 to 29 in Kazakhstan. Our trial was part of the

pilot phase of the program, implemented by the government of Kazakhstan between 2017 and 2018. The KYC program was comprised of two interventions. The first intervention was a grant for community-based service, in which a group of three to five youth received up to \$3000 to design and implement a community service project for six months, in addition to receiving a monthly wage of between \$100 and \$200. The second intervention involved non-cognitive skills training and mentorship, through which youth attended two week-long training sessions and interacted regularly with trained mentors over a period of six months, with the objective of developing non-cognitive skills such as critical thinking, goal-setting, collaboration, team-building, and creativity and innovation.

We evaluated these interventions in a randomized controlled trial using a two-by-two factorial design. The baseline sample included 3,783 youth, screened out of over 4,000 applicants, and constituted into 1,113 proposal groups that applied (as a group) for inclusion in the program. Randomization was conducted at the group level, with each group assigned to one of four experimental arms of approximately equal size: training only, grants only, grants plus training, and control. A follow-up survey collected detailed information from 3,367 youth (89% of the original sample) approximately twelve months following the conclusion of all program activities.

We begin by documenting participant engagement with the program and find evidence for generally high engagement in both interventions, though higher engagement in the grants intervention. Over 91% of participants who were randomized to an experimental arm including a grant successfully completed their proposed project. In addition, 88% of participants randomized into the grant and training treatment arm reported attending every mentorship meeting (98% attended at least one meeting), and 96% reported attending both week-long training sessions, conducted at the beginning and the end of the program. However, participants who were randomized into the training-only arm, which did not include financial incentives, reported lower engagement: 41% attended all mentorship meetings (though 80% attended at least one meeting), and 58% attended both training sessions.

We then estimate treatment effects for three families of primary outcomes and three families of secondary outcomes, following a registered pre-analysis plan. Primary outcomes include non-cognitive characteristics (including subjective well-being, teamwork and goal orientation), social capital and labor market engagement. Secondary outcomes include additional non-cognitive characteristics, human capital and economic welfare.

We find little evidence that either intervention provided as part of the KYC program had a positive effect on any of the measured outcomes. Effects on non-cognitive characteristics and social capital are generally small and statistically insignificant. The only exception is a small negative effect on non-cognitive characteristics for the training only

arm, where we observe a statistically significant decline of about .02 standard deviations. For labor market engagement, our results are suggestive of a small decrease in the labor market activities of program participants. Specifically, days worked, hours worked and income declined for youth randomized into any of the three treatment arms, though the coefficients are only statistically significant for the training-only arm. These results are overwhelmingly due to a decline in the probability that youth reported any economic activity; this probability declines by between three and six percentage points, relative to a mean in the control arm of 70%.

For secondary outcomes, we find evidence of small positive effects on human capital for the grants and grants-plus-training arms. However, these results should be interpreted cautiously, as they are largely due to shifts in a self-reported measure of skills, while the effects on reported level of education are small in magnitude. We also find no statistically significant evidence for effects on additional non-cognitive characteristics (encompassing risky behavior and self-control) or economic welfare.

To explore the mechanism behind the unexpected adverse effect on labor market outcomes, we conduct additional analysis that was not pre-specified. Using limited data on time allocation, we explore the hypothesis that respondents have substituted away from the labor market to invest more time in volunteerism and/or education, and find no evidence of any such pattern. We also analyze whether respondents in the treatment arms may have shifted their preferences toward employment with different characteristics, potentially with a higher salary or greater prestige. Here, we find some evidence of a shift toward a preference for self-employment that could be consistent with the observed deterioration in labor market outcomes, if youth reduce their job search intensity in the hope of pursuing self-employment opportunities.

Our results constitute early experimental evidence on the effect of grants for community engagement, with potentially important implications for policy. Public funding for community service activities is often justified, at least partially, by its supposed positive effects on community and civic engagement, non-cognitive skills, and labor market outcomes for participants (Innovations in Civic Participation, 2010; Spera et al., 2013).¹ The evidence presented in this paper suggests that, for the type of community service activities promoted by the KYC program, these effects may be small or non-existent. While this does not imply that service activities are generally unproductive, it suggests that they may need to be justified by their benefits for the recipients of services and not

¹For instance, a recent review of the World Bank’s community-driven development activities (Adams and Oshima, 2014) emphasizes the goal of fostering youth community engagement, but finds little existing evidence on this outcome, as most studies of community-driven development programs focus on the effects on the wider community rather than participants in the CDD process (e.g. Casey et al. (2012); King and Samii (2014); Nguyen and Rieger (2017)).

by their effects on those included in the program.

Our results also contribute to several strands of the academic literature. First, we contribute to the literature on effects of cash grants on non-economic outcomes such as non-cognitive skills, anti-social behavior, and civic participation. The evidence here is generally limited, and drawn primarily from post-conflict settings. Lyall et al. (2020) find that a combination of vocational training and cash grants increased pro-government sentiment among at-risk youth in Afghanistan. Blattman et al. (2013) find no evidence that cash grants distributed by the Ugandan Youth Opportunities Program had any effect on anti-social behavior, social cohesion or participation in protests; by contrast, Blattman et al. (2017) present evidence that cash diminishes crime and violence in the short-term in Liberia, and has persistent effects when offered in conjunction with therapy. Our results are most consistent with Blattman et al. (2013), and suggest that cash grants for community service are not necessarily more successful at enhancing non-cognitive and social capital outcomes vis-a-vis cash grants that support for-profit activities.

In addition, we contribute to the literature on the labor market effects of cash grants. Several studies in this literature have found that unconditional cash grants and grants that support business activities can have substantial positive effects on labor market outcomes presumably by alleviating persisting binding capital constraints. For example, Blattman et al. (2013) find that unconditional cash grants to youth groups that wanted to start a business in Uganda caused a substantial increase in hours worked and income. Haushofer and Shapiro (2016) find that unconditional cash transfers to poor households in Kenya had large positive effects on a wide range of outcomes, including asset ownership, consumption, and income from self-employment. These effects persisted three years after the cash transfer (Haushofer and Shapiro, 2018). Our results contribute to this literature by providing evidence that cash grants for non-profit activities may not have the same positive labor market effects as grants given unconditionally or for business development.

Finally, we contribute to a growing literature on the effects of non-cognitive skills training and mentoring. Blattman and Ralston (2015) note in their review paper that, in developing country contexts, soft skills or non-cognitive skills training has significant benefits for social outcomes, but not for labor market outcomes.² More specifically, Blattman et al. (2017) find that cognitive behavioral therapy targeting non-cognitive skills and preferences substantially reduced participation in crime and violence among a sample of at-risk Liberian youth, at least in the short-term; the effect was persistent when therapy was offered in conjunction with cash. Similarly, Ashraf et al. (2020) find that an intervention targeting negotiating skills among adolescent girls in Zambia signifi-

²There is also a growing number of studies on non-cognitive skills training and mentoring in industrialized countries, some of which find substantial positive effects on outcomes for at-risk youth (e.g. Rodriguez-Planas (2012); Lewis et al. (2016); Peaslee and Teye (2015)).

cantly enhanced educational and human capital outcomes over a three-year horizon, and Edmonds et al. (2020) similarly report a positive effect of non-cognitive skills training on reducing dropout among girls enrolled in early secondary school in rural India. Dhar et al. (2018) find that a participatory intervention targeting the development of equitable gender norms significantly shifts attitudes as well as behavior for both adolescent boys and girls in India. By contrast, we find no evidence that the non-cognitive training and mentoring component of the KYC program had a positive effect on the wide range of outcomes we measure.

However, the KYC interventions primarily targeted post-graduate youth that were no longer engaged in formal schooling, and were implemented in a context where baseline rates of pro-social behavior seem to be relatively high. In addition, almost none of these papers analyze economic outcomes such as labor market engagement and income, with the exception of Blattman et al. (2017), who conclude that cognitive behavioral therapy had no effect on the incomes or assets for poor young men in Liberia. Thus, our work is among the first to estimate the economic effects of a non-cognitive skills training program in a developing country.

The rest of the paper proceeds as follows. Section 2 provides background and an overview of the interventions of interest. Section 3 describes the experimental design. Section 4 presents empirical findings and analysis, and Section 5 discusses the mechanisms for the observed pattern. Section 6 concludes.

2 Background

2.1 Setting

Kazakhstan is the largest economy in Central Asia and has one of the fastest growing youth populations in the region. The share of youth out of school and out of work was estimated at 13% in 2009, a rate that compares favorably to other countries in the region, and the youth unemployment rate was estimated at a relatively low 6.1% in 2011. Nonetheless, there remain significant disparities across regions and income levels in youth employment opportunities, and there are also significant barriers to employment for young women. In addition, youth in Kazakhstan face significant challenges beyond obtaining employment, demonstrating high rates of disconnectedness from social institutions and high prevalence of risky behaviors.

In general, labor force participation in Kazakhstan ranges between 55% and 70%, and is somewhat higher in rural areas, a pattern that reflects higher engagement in education for urban youth (Nesporova, 2015); there are also significant disparities between men

and women. However, rural employment often entails low-income self-employment or engagement in household-based subsistence farming, and thus high rural youth employment may mask longer-run youth labor market challenges. A weak unemployment insurance system — just over 2% of all unemployed youth between the ages 16 and 29 received unemployment benefits in 2014 (OECD, 2017) — further encourages youth to engage in low-quality employment (OECD, 2015a).

In addition, minimal engagement by youth in their communities poses a significant challenge. Qualitative evidence from a recent report suggests that less than 10% of young people report that they are engaged in solving a community problem through volunteering, compared to 23% on average in OECD countries (OECD, 2015b), and only a quarter consider citizen engagement important (Umbetaliyeva et al., 2016). In addition, Kazakhstan ranks fifth worldwide in the youth suicide death rate: 19.7 deaths per 100,000, the highest rate in Central Asia (WHO, 2014).

2.2 Interventions

In response to these challenges, the government of Kazakhstan initiated the Youth Corps program (funded by the World Bank) with the objective of promoting social and labor market engagement of youth through grants for community service and training/mentorship to develop non-cognitive skills. The pilot phase of the program was implemented by the Coordinating Agency (CA), a consortium of non-governmental agencies engaged in youth development that managed the program under the oversight of the Ministry of Education and Sciences. Implementation of a pilot began in 2017 and targeted approximately 4000 youth across four regions (oblasts): Almaty, Pavlodar, South Kazakhstan and Karaganda, as shown in Figure 1. These regions were chosen for the pilot phase based on the following criteria: a high stock of vulnerable young people, a high share of young people relative to the total population, and a high share of rural youth (World Bank, 2014).³ (World Bank, 2014).

The program pilot was comprised of two separate interventions, evaluated both individually and jointly using a randomized controlled trial. The first intervention was a grant for community service, in which a group of three to five youth received up to \$3,000 to design and implement a community service project for six months. Each participant also received a monthly stipend, designed to be comparable to an entry-level wage (around \$200 for university graduates and \$100 for non-graduates). The primary goal of the grant

³Pavlodar and Karaganda are among the regions with the highest share of vulnerable young people in the country, with 56.2% and 46.7% of youth, respectively, earning less than a subsistence level of income (defined as \$68 a month, or \$2.2 a day). South Kazakhstan has also experienced the largest increase in “ruralization” of its youth population between 2010 and 2012 (World Bank, 2014).

intervention was to enhance social capital and social engagement by fostering ties between participating youth and their community. This goal fits into a broader youth development strategy for the government of Kazakhstan, focusing not only on youth employment, but also on other dimensions of youth welfare and social cohesion (World Bank, 2014).

The effects of the grants intervention on labor market engagement were anticipated to be less direct. However, the key hypothesis was that community service would assist in the development of non-cognitive skills, including a sense of initiative and effectiveness working in teams, that would be valuable when youth transitioned into employment. In particular, the project overview highlighted that providing “groups of young people the space and technical and financial support to try out an idea, even at the risk of failure, provides them with the platform to develop their experience in responsibility, autonomy, and collaboration.” The applicant-driven and team-based structure of the service grants was designed to encourage the development of project planning and collaborative skills, skills that may also have returns in the labor market (World Bank, 2014).

The second intervention in the KYC program entailed non-cognitive skills training and mentorship, through which youth interacted regularly with trained mentors. The main objective of this intervention was to develop behavioral and life skills, including critical thinking, goal-setting, collaboration, team-building, and creativity. This intervention had three phases: a one-week training module focused on life skills and project management, six bi-monthly sessions with a mentor, and a concluding one-week module aimed at planning future activities. Though this intervention included both training and mentoring aspects, for concision we will subsequently refer to it as the training intervention. This intervention was designed to reinforce the non-cognitive skills developed in the grant aspect of the KYC program. Again, the key hypothesis was that the training intervention, would both directly enhance non-cognitive skills and social capital and indirectly facilitate the transition into productive employment, presuming there are returns to these skills and/or characteristics in the labor market.

3 Empirical strategy

3.1 Evaluation design

The KYC interventions were rolled out in a two by two factorial randomized design in order to ascertain the effects of each intervention as well as their joint effects.

Randomization The randomization for this study followed an over subscription design. All young people between ages of 18 and 29 in pilot regions of Kazakhstan were

eligible to constitute a group of three to five people and apply to the program, as long as they officially resided in the pilot region and had been resident there over the preceding six months. Note that applicants were applying specifically for the full program, including community service grants. Following a two-month information campaign conducted through mass and social media, billboards, posters, and public meetings at universities and local youth centers in targeted regions, 1,320 project proposals were submitted. Following an evaluation of the social importance of the proposals by a committee of local stakeholders, 1,113 proposal groups were deemed eligible to enter the randomization stage. The 3,784 youth in those 1,113 groups constituted the sample of interest.

Randomization was conducted at the group level using Stata, assigning all individuals in a group to one of three treatment arms (grant only, training only and grant plus training) or the control arm. For administrative reasons, the minimum targeted number of individuals to receive grants was 2000. The randomization proceeded as follows: each group was assigned a random number and ranked accordingly, and the first n groups were randomized into receiving grants, such that these groups jointly constituted 2000 individuals. Ultimately, 589 groups were randomized to receive grants, while 524 groups were randomized into not receiving grants. Within the subsamples randomly allocated to receive grants or not, the first 50% of groups listed in each were assigned to receive the training and mentoring intervention.

Figure 2 summarizes the evaluation design and sample size across arms. Power calculations were conducted in order to estimate the minimum detectable effect size comparing each treatment arm vis-a-vis the control arm. Given varying assumptions about the intra-cluster correlation (ρ between .05 and .2), the minimum detectable effect size ranges between .15 and .2 standard deviations. These calculations are summarized in Table A1 in the Appendix.⁴

Data collection Data collection combined administrative data from the implementing agency (the Ministry of Education and Science) and a follow-up survey conducted approximately 12 months post-intervention. Due to time constraints linked to a rapid timeline for program launch, a full baseline survey was not conducted. Rather, a brief demographic questionnaire was administered to each respondent who submitted a program application. The follow-up survey was conducted between November 2018 and April 2019, with some mop-up surveying continuing through June. The survey firm collected

⁴Since randomization was conducted at the group level, the power calculations had to take into account possible intra-group clustering of outcomes. Out of 1,113 eligible groups, 63.7% consisted of three members, 19.2% consisted of four members and 17.1% consisted of five members; the average size of the groups was 3.5, with a variance of 0.59. We conduct power calculations for three scenarios with low, medium and high intra-group correlation ($\rho = 0.05, 0.1$ and 0.2 respectively), and present minimum detectable effects for both 80% and 90% power.

data using computer-assisted personal interviewing under the oversight of the research team. Figure 3 summarizes the timeline of the project and data collection.

At endline, the attrition rate was 11% (comprising 417 youth from the original baseline sample). Of the original sample, 5% attrited because they could not be located (usually, because contact information they had provided at the point of application to the Youth Corps was no longer valid), 2% could not be surveyed due to illness or death, military service, or permanent long-distance migration, and 4% declined consent for the survey. An extensive discussion of patterns of attrition across arms and analysis of potential bias is provided in Section 4.4.

3.2 Outcomes of interest

This evaluation seeks to analyze the effects of cash grants and non-cognitive training on three families of primary outcomes: social engagement, labor market engagement, and non-cognitive characteristics.⁵ The social capital family consists of seven indices, one for each of the following outcomes: organizational membership, contribution to collective action, interpersonal trust, attitudes around social inclusion, attitudes toward vulnerable groups, civic engagement, and political participation.⁶ The labor market engagement family of outcomes consists of the following three variables: hours worked in the last week, days worked in the last month, and income over the last month. To further explore the effects evident for these pre-specified outcomes, we also report three additional labor market variables that were not pre-specified: a binary variable capturing engagement in any income-generating activity, and binary variable capturing engagement in wage labor and self-employment. Finally, the non-cognitive characteristics family consists of the Cantril’s ladder question on self-reported well-being, as well as four indices that capture the following outcomes: self-esteem and aspirations, mental health, goal orientation, and propensity to work in groups.

We also analyze three families of secondary outcomes: additional non-cognitive characteristics, human capital, and economic welfare. For additional non-cognitive characteristics we analyze two indices: an index of risky and anti-social behavior and an index of self-control. (Non-cognitive characteristics were identified as primary or secondary based on their salience in the program’s theory of change, as identified by the implementing agency.) For human capital, we analyze three variables: the respondent’s reported years of education attained, a binary variable for whether the respondent received training, and

⁵The hypotheses and the primary and secondary outcomes of interest were pre-specified in an analysis plan registered prior to the initiation of analysis (Bhanot et al., 2019).

⁶The variable capturing political participation was originally included as part of the secondary non-cognitive outcomes family, but has been moved to social capital given that it is more congruent with the other social capital outcomes. This shift does not affect the results.

a binary variable for whether the respondent has skills they would like to use. Finally, for economic welfare, we analyze three variables: a summary index of consumption on basic and luxury goods over the past 30 days, an index of durable assets owned, and a self-reported poverty ranking.⁷

Both the primary and secondary outcome families of non-cognitive characteristics encompass indices that would traditionally be considered non-cognitive skills presumed to be relevant to the labor market (e.g., self-esteem and aspirations, goal orientation, and propensity to work in groups), indices that capture dimensions of psychological well-being (e.g., Cantril’s ladder and the mental health index), and measures of underlying preferences (anti-social behavior, self-control). Given this breadth, we preferentially use the term “non-cognitive characteristics.” Our measures are related to outcomes used in a number of recent papers and diversely described as non-cognitive skills, preferences, or social outcomes (Blattman et al., 2013, 2017; Edmonds et al., 2020).

Baseline balance At baseline, the implementing agency collected basic demographic information about youth applicants, including their age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area. This data allows us to test for balance of observable characteristics across experimental arms.

Table 1 reports the results from six regressions of baseline covariates on treatment groups. In general, we cannot reject the hypothesis that covariates are balanced across arms; the only exception is that the fraction of the sample that is urban is significantly lower in the training-only arm. In each column, we also report the p-value for hypothesis that characteristics are equal across all four experimental arms ($\beta_1 = \beta_2 = \beta_3 = 0$), and at the bottom of the table, we report the p-value for a joint test that all variables are balanced across all experimental arms. The hypothesis that the sample is balanced on observable characteristics at baseline cannot be rejected. This is true for the entire sample of program applicants, as well as for the sub-sample of individuals who participated in the follow-up survey (i.e., the non-attriters).

⁷Consumption is calculated as the sum of self-reported expenditure in the last 30 days on rent, food, medical expenses, transportation, utilities, communication, personal care items, education, leisure, clothes, other services, and forage for livestock and other animals. Given the salience of outliers, each subcomponent of consumption is trimmed above the 95th percentile. The assets index is calculated as the mean of the following variables, standardized to have a mean of 0 and a standard deviation of 1: the number of large assets owned (central water supply, toilet, car or motorcycle), the number of livestock owned, the number of electronic equipment owned, a dummy for house ownership, and a variable capturing the number of housing-related investments made over the past year (buying or building a new house, renovating a house, adding to a house, purchasing land, renting out a house, or investing in property).

4 Empirical findings

4.1 Program engagement

Before presenting the main results, we briefly present some evidence around perceptions of and engagement in the program among those youth randomized into the treatment arms. In the two treatment arms that included grants for community service, engagement was generally high. This pattern presumably reflects the fact that provision of stipends was contingent on strict reporting requirements.⁸ Out of the 589 groups that were randomized into a grant-receiving treatment arm, 536 (91%) successfully completed their projects.⁹ The most common service projects entailed the organization of a club (e.g., sports, music, arts and crafts) or extracurricular class (e.g., computer, languages, sewing) for children and adolescents, orphans, the elderly, or the disabled. Note that one condition of grant receipt was that all services be offered for free.

The youth groups that received a grant generally received around 1 million KZT (or \$3,000) per group for their project. On average, 95% of those disbursed grant amounts were spent by the end of the program.¹⁰ In addition, every youth member of a group that received a grant was entitled to a stipend based on their educational status, and roughly 94% of these planned stipend amounts were received by participants.

Among those youth randomized into the grant and training treatment arm, 88% reported attending every mentorship meeting out of the ten required (98% attended at least one meeting), and 96% reported attending both week-long training sessions at the initiation and conclusion of the program.¹¹ On the other hand, individuals who were randomized into the training-only treatment arm (and therefore did not have grant-related incentives) reported lower engagement. Specifically, only 41% attended all mentorship meetings (though 80% attended at least one meeting), and 58% attended both training sessions.¹²

In terms of participant perceptions, 88% of grant recipients rated the quality of cooperation in their groups as seven or higher (out of ten). In the follow-up survey, over 94% of grant recipients reported continued contact with some or all of the participants

⁸Recipients were required to report regularly on project activities and associated expenses, including photographic and written evidence of their attendance in training/mentorship sessions.

⁹Fifty three projects were canceled due to non-compliance in reporting or implementation of planned activities.

¹⁰Note that the grant amounts allocated varied by group, however; while 95% of youth groups received 900,000 KZT (around \$2,700) or more, there were projects that received as little as 332,000 KZT (around \$996).

¹¹Administrative data suggests 77% average attendance at mentorship sessions, and 90% average attendance at training.

¹²The administrative data reports significantly lower attendance, however, as those not receiving cash grants were not subject to the same level of monitoring.

from their project group. In addition, more than 70% of grant recipients reported that the skills and experiences gained from the program were very useful, while only 48% in the training-only treatment arm felt the same.

4.2 Empirical strategy

Given the experimental design, the primary specification of interest is an intent-to-treat specification. The outcomes of interest Y_{ig} for individual i in group g are regressed on three binary treatment variables: Tr_{ig} , Gr_{ig} , and $Joint_{ig}$ for the training only, grants only, and grants and training interventions respectively (for concision, the grants and training intervention arm will be referred to as the “joint arm” in this discussion.) The specification also controls for baseline covariates χ_{ig} and standard errors are clustered at the group level.

$$Y_{ig} = \beta_1 Tr_{ig} + \beta_2 Gr_{ig} + \beta_3 Joint_{ig} + \chi_{ig} + \epsilon_{ig} \quad (1)$$

In addition, we report the average standardized treatment effect (ASTE) across all variables within each outcome family. To estimate the ASTE, we first expressed all outcomes in terms of standard deviations from their control group mean. We then summed all standardized outcomes in a family into an index, switching signs if necessary to ensure the index can be interpreted in a consistent direction. We estimated the ASTE by using this index as the outcome in the regression described above.

Primary outcomes Tables 2 through 4 report the experimental effects for primary outcomes. Tables 2 and 3 show no evidence that the interventions of interest had any significant effect on non-cognitive characteristics or social capital. The self-esteem and aspirations index is weakly lower in all three treatment arms relative to the control (a decline of 1 to 2 percentage points on a mean of .9), and there is some evidence of a decline in civic engagement.¹³ However, the average standard treatment effects are generally insignificant for both families of outcomes. The only exception is a significant and negative average standard treatment effect for non-cognitive characteristics observed for the training-only arm, where we observe a decline of about .08 standard deviations.

For labor market outcomes, however, there is more robust evidence of adverse effects of the treatment. The first three columns of Table 4 report the pre-specified variables; hours worked, days worked, and income are all consistently lower in the treatment arms, though only the coefficients for the training-only arm are statistically significant.

¹³The decline in the self-esteem and aspirations index is primarily driven by a decline in positive responses to three component questions: do you feel you can solve problems by yourself; do you feel you have control over what happens in your life; and do you feel you can achieve anything if you are dedicated.

In Columns (4) through (6) of Table 4, we report treatment effects on additional outcome variables in order to explore these effects. It is evident that the decline in time worked and income is driven by a decline in the probability of any income-generating activity, and in particular wage employment; these effects are statistically significant for the training-only and (to a lesser extent) the joint intervention arms. The coefficients on self-employment, by contrast, are essentially zero and statistically insignificant, suggesting that there is no effect of the interventions on self-employment. The average standard treatment effect is reported for the pre-specified outcomes only (Columns (1) through (3)), and shows a coefficient that is negative and significant (magnitude around .1) for the training-only arm. For the other two arms, the coefficients are slightly smaller in magnitude and not statistically significant at conventional levels.

Secondary outcomes Tables 5 through 7 report the results for secondary outcomes. Table 5 reports the results for the secondary non-cognitive characteristics; in general, there is little evidence of any significant treatment effects. The average standardized treatment effect is calculated inverting the first index (the index of anti-social and risky behavior) such that both indices can be interpreted with a more positive value corresponding to a more positive welfare effect; there is no evidence of any significant effects on average.

Table 6 reports the results for human capital. Here, the coefficients are generally positive, but small in magnitude and noisily estimated. There is an increase in reported education level for the training-only arm, and an increase in the self-report of skills that the respondent would like to use in employment in the grant-only and joint treatment arms (albeit statistically significant only in the latter arm). The ASTE is significant and positive for the grants and joint treatment arms, suggesting an increase on average of .07-.09 standard deviations relative to the control arm. While potentially promising, these results should be interpreted cautiously given that they are substantially driven by shifts in a self-reported measure of skills, while the effects on level of education are small in magnitude.

Finally, Table 7 reports the results for three measures of economic welfare. Effects on consumption reported in Column (1) are noisy and insignificant; this pattern is also consistent if log consumption is employed as the dependent variable.¹⁴ In Column (2), there is some evidence of an increase in the assets index, while Column (3) shows no effect on self-reported poverty level. Column (1) also shows that the average standard treatment effects are again uniformly insignificant. In light of the increase in the assets index, Table 8 reports regressions for each component of the assets index. This analysis

¹⁴The results are also consistent if the simple consumption sum is employed, without trimming outliers.

was not pre-specified, but it suggests that the increase in the assets index is primarily driven by an increase in reported livestock owned, as well as an increase in housing-related investments. These positive effects on assets presumably reflects beneficiaries using stipends provided by the program in the grants arms to build up their asset stock. Overall, there is some weak evidence of enhanced economic welfare, but the effects seem to be small in magnitude and, if anything, only marginally significant.

4.3 Heterogeneous effects

The analysis plan pre-specified an analysis of heterogeneity with respect to gender, urban status and age. For reasons of concision, we pool the heterogeneity analysis of urban status and gender, analyzing the treatment effects for rural men, urban men, rural women and urban women in a single regression. The specification of interest is parallel to equation (1). We separately analyze heterogeneity with respect to age.

In addition, in all analysis of heterogeneous effects we utilize a single treatment indicator for pooled treatment. This makes it easier to interpret the results, and seems plausible in light of the previously presented evidence that there is minimal heterogeneity in effects across treatment arms.

Gender and urban status Tables A2 through A5 in the Appendix present the results. There is, in general, no clear pattern of heterogeneity for non-cognitive characteristics (presented in Appendix Table A2) and social capital (presented in Appendix Table A3), consistent with the previously presented null results, though there is some weak evidence that effects on social capital may be slightly positive for rural men. For labor market outcomes presented in Appendix Table A4, it seems clear that the observed negative effects are driven by urban residents (both men and women), who show a significant decline in days worked in Column (2), in any economic activity in Column (4), and in the probability of wage employment in Column (5), though the latter coefficient is statistically significant only for urban women. There is little evidence of any meaningful effects for rural men or women.

The results for heterogeneous effects for secondary outcomes are presented in Appendix Table A5. Again, the evidence of heterogeneity is somewhat sparse, but the positive effects on human capital seem to be concentrated among rural men and women: education level increases significantly only for rural men, and the self-report of skills desired for use in employment increases only for rural women. The assets index increases significantly only for rural men, consistent with the previous evidence that this is primarily driven by increases in livestock owned (an implausible asset for urban residents).

Overall, the evidence around heterogeneity is consistent with the hypothesis that the

KYC interventions had weakly positive effects for rural residents, both men and women: social capital may be somewhat enhanced, the labor market effects are null, and human capital and economic welfare show some minimal increases. The effects for urban residents seem to be clearly negative in the labor market, and null for other outcomes of interest. The potential mechanisms for these observed patterns are explored in more detail in Section 5 below.

Age In order to analyze heterogeneity with respect to age, we analyze a binary variable equal to one for youth who are under the age of 22, corresponding roughly to the target age for tertiary education. Our objective is to analyze whether the intervention had heterogeneous effects for youth for whom further education is a plausible outside option, vis-a-vis youth who are unlikely to pursue further education.

The results are reported in Tables A6 through A9 in the Appendix. In general, there is relatively little evidence of any systematic heterogeneity in experimental effects by age. Appendix Table A9 does suggest that positive treatment effects on secondary non-cognitive characteristics and human capital are entirely concentrated among older youth; these youth report an increased education level and are more likely to report having skills they would like to use, while there is no evidence of any such effects for younger youth. This constitutes tentative evidence that the intervention may be effective in stimulating the accumulation of human capital for youth above the traditional age range for higher education.

4.4 Attrition

At endline, 3,366 youth from the original sample were successfully surveyed, corresponding to an attrition rate of 11%. However, there are notable differences across arms. Among youth assigned to the control arm, attrition was significantly higher (15.7%) than for the treatment groups (11.1% in the training-only arm, and around 9% in both arms with grants). Anecdotally, the higher rates of attrition observed among youth who did not receive a grant reflects their reduced level of engagement with the KYC program, making it more challenging for the survey team to identify appropriate contact information or successfully encourage their participation in the survey.

While attrition is significantly higher in the control arm, the hypothesis that the rate of attrition is consistent across all three treatment arms cannot be rejected. To further analyze patterns of attrition, we estimate a series of specifications regressing a binary variable for attrition on treatment indicators, baseline covariates and the interaction

between the two, again clustering standard errors at the group level.

$$Attrited_{ig} = \sum_{i=1}^3 \beta_i Treat_g \times X_{ig} + \sum_{i=1}^3 \alpha_i Treat_g + X_{ig} + \epsilon_{ig} \quad (2)$$

The results are reported in Table 9. In general, the estimated coefficients on the interaction terms β_i are not statistically significant, with some exceptions. In Column (5), for example, it is evident that youth who are employed at baseline are significantly less likely to attrite, but this pattern is attenuated in the two arms including grants: i.e., relatively more employed youth are attriting in these two arms. In Column (6), it is evident that urban youth are significantly more likely to attrite (perhaps reflecting higher levels of mobility), but this pattern is attenuated in the joint intervention arm: urban youth are attriting with a lower probability in this arm.

We conduct two robustness tests to explore whether imbalance in attrition can explain the negative labor market effects of the KYC interventions. First, we explore regional differences in the extent and imbalance of attrition. Table A13 in the Appendix shows that attrition was substantially higher and more unbalanced across treatment and control groups in two of the four study regions: Karaganda and South Kazakhstan. To test whether our results are driven by imbalanced attrition, we restrict our sample to the other two regions, Almaty and Pavlodar, where attrition was low and balanced across experimental arms. Table A14 in the Appendix reports the average standardized treatment effects for the three primary outcome families (non-cognitive characteristics, social capital, and labor market outcomes) are similar when restricted to the regions that are not characterized by unbalanced condition; the ASTE for labor market outcomes remains negative, and significant at the ten percent level for the training only arm. (The ASTEs for the other outcome families remain insignificant.)

Second, in order to further evaluate potential bias introduced by attrition, we estimate bounds on the treatment effects using the method proposed by Lee (2009). This method entails trimming the sample in each treatment arm to generate a pattern in which an equal share of individuals are observed in each arm. To construct the upper bound, observations are dropped from the left tail of the distribution for each outcome; to construct the lower bound, observations are dropped from the right tail of the distribution for each outcome.

The results are reported in Tables A10 through A12 in the Appendix. For non-cognitive characteristics and social capital, primarily null effects were observed in the main results, and unsurprisingly the estimated bounds encompass zero. For labor market effects, in general the upper bounds are slightly negative and not statistically different from zero. However, for the training only arm, the estimated coefficient for the upper bound is negative and statistically significant for hours and days worked and the probabil-

ity of wage employment, suggesting that the observed pattern of adverse effects is robust to bias induced by attrition. For the intervention arms including grants, the evidence is more mixed, and the negative effects may partially reflect differential attrition.

5 Mechanisms

The primary results suggest that the Youth Corps program was generally not effective in enhancing desirable non-cognitive characteristics or building social capital for participants. There is some evidence of weakly positive effects on human capital and economic welfare, but there is also evidence of adverse effects in the labor market: youth who participated in the intervention are less likely to report engagement in economic activity, and report a lower level of income. As noted in the previous subsection, the hypothesis that these patterns of results are generated by differential attrition cannot be fully ruled out, but the adverse effects of the training-only intervention in particular seem robust to bias induced by attrition.

Relative to the existing literature, our results are not consistent with previous evidence that cash grants, either unrestricted or for entrepreneurial development, can have substantial positive effects for economic welfare and/or non-cognitive characteristics for households and youth in developing countries (Blattman et al., 2013; Haushofer and Shapiro, 2016; Blattman et al., 2017; Lyall et al., 2020); it seems that grants for community service do not have similar positive effects in this context. Our results are similarly inconsistent with previous evidence suggesting that there are positive effects of non-cognitive skills training for non-cognitive or social outcomes (Blattman and Ralston, 2015), though previous training programs have generally targeted youth in school (Ashraf et al., 2020; Edmonds et al., 2020; Dhar et al., 2018), or youth characterized by high levels of risky or antisocial behavior *ex-ante* (Blattman et al., 2017). Our evidence suggests that in a sample of older and predominantly out-of-school youth in a context not characterized by post-conflict disruptions or high levels of crime, training was ineffective in stimulating development of non-cognitive skills, and in fact had adverse effects on labor market engagement.

In interpreting these results, it may be useful to start with the theory of change, emphasizing the role of non-cognitive characteristics in shaping youth welfare and youth employment opportunities. There is arguably some tension in the experimental design between features that encourage the building of social capital, civic participation, and other-regarding preferences (particularly in the grants treatment arm), and features that encourage the development of more standard non-cognitive skills such as critical thinking, goal-setting, collaboration, team-building, and creativity. More specifically, an interven-

tion that is designed to encourage civic participation and other-regarding preferences may not necessarily have substantial labor market effects, and could even discourage labor market participation by encouraging the prioritization of other, non-economic goals. By contrast, the labor market returns for the development of more standard non-cognitive skills are more well-established (Carneiro et al., 2007; Heckman and Rubinstein, 2001; Heckman et al., 2006), though the evidence from developing countries is still nascent (Díaz et al., 2013; Glewwe et al., 2017; Macours and Laajaj, 2019).

Insofar as the YCP program sought simultaneously to develop two different dimensions of non-cognitive characteristics — those more oriented toward community engagement and those oriented toward labor market participation, respectively — these goals could potentially conflict. In practice, however, there is relatively little evidence in our primary outcome data that the interventions have a meaningful effect on any non-cognitive characteristics, with the caveat that these outcomes may be hard to measure.

We further hypothesize that the observed pattern of adverse labor market effects may be consistent with two primary channels. The first is a time allocation channel: given the emphasis of the KYC program on building social capital and engaging in community service, youth who were included in the program may have substituted away from labor market activity toward other forms of volunteerism. It is important to note that given that the primary results do not show any evidence of shifts in attitudes or norms linked to community service, this may be a priori implausible, but it is also possible the null effect for these attitudinal variables reflects challenges in measurement.

The second channel relates to aspirations: youth who were included in the program may have shifted their preferences around employment, and may be searching for different forms of employment or perhaps employment characterized by a higher salary or greater prestige. Depending on the underlying conditions in the labor market, this may result in these youth being less likely to be successfully employed.

We first explore the time allocation channel. The survey instrument did not collect detailed data on youth time allocation. However, respondents who were not currently employed were asked to report if they were currently searching or currently engaged in education, and all respondents reported if they had engaged in volunteerism or made a donation over the last 30 days. (Note that information about time allocated to education or employment searches was not collected from respondents who report that they are currently employed.) Using this information, we construct six binary variables, namely: a dummy for employment search (conditional on non-employment); a dummy for education (conditional on non-employment); a dummy for engaging in search or employment; a dummy for engaging in search, employment, or education; a dummy for reported volunteerism; and a dummy for reported donations. For each variable, we then re-estimate

specification (1).

The results are reported in Appendix Table A15. It is evident in Columns (1) and (2) that there is no significant effect on engagement in an employment search or education. There is some evidence of negative effects on the composite variables reported in Columns (3) and (4), consistent with the reduction in any economic activity reported in the primary results. In Columns (5) and (6), the estimated coefficients for volunteerism and donations are small in magnitude and insignificant. In general, the results do not suggest any evidence that the reduction in employment is associated with a shift into time allocated to another activity.

Next, we examine the second channel around aspirations. The survey includes a series of questions around employment aspirations: expected salary in the future, whether the respondent prefers salaried employment or self-employment, whether the respondent perceives that young people face challenges in obtaining ideal employment, and whether the respondent perceives that young people face challenges in starting a small business. However, all of these questions are characterized by substantial patterns of non-response, as between 20% and 25% of respondents state that they don't know or don't wish to respond to each question.

Accordingly, we examine five variables of interest: log of expected wage in the future, a dummy for the expected wage falling above the median of the distribution, and three binary variables for self-employment preference, perception of employment obstacles, and perception of self-employment obstacles. We also analyze the same variables with values imputed for those who declined to respond. We impute the median of the salary distribution, and assign the remaining binary variables to be equal to zero.

The results are reported in Appendix Table A16; Panel A reports the simple variables, and Panel B reports the imputed variables. In general, we observe in Columns (1) and (2) that the intervention did not increase salary expectations, and, in fact, salary expectations seem to be somewhat lower in the grants arm, an effect that is consistent with and without imputation. It is evident in Column (3) that there is a substantial increase in the stated preference for self-employment in the grant treatment arms. This probability is very high even in the control arm (80%), and it increases another 5 percentage points for youth exposed to grants. In Columns (4) and (5), there is no strong evidence that youth perceptions of challenges around obtaining employment or self-employment are significantly increased, though there is a significant increase only in the joint treatment arm when imputation is used.

Accordingly, one interpretation of the observed effects of the grant interventions on labor market outcomes is that youth exposed to these interventions shift their preferences toward self-employment and accordingly forgo opportunities in the labor market that they

might have otherwise accessed. At the same time, there is no evidence of an increase in self-employment, suggestive of other barriers in substituting into this sector. It is not clear whether this mechanism can also explain the labor market effects of the training-only treatment, since the increased preference for self-employment in this arm is substantially smaller and not statistically significant. It should, however, be noted that the confidence interval does not allow us to rule out an increase in self-employment preferences of over 5 percentage points in the training-only arm, approximately the same size as for the grant arms. We thus cannot rule out the hypothesis that youth in the training-only arm also shifted their preferences around employment, though it is possible that there is another mechanism at play.

6 Conclusion

This paper presents novel evidence around the effects of cash grants for community-based service and non-cognitive training in Kazakhstan, using a randomized evaluation of the Kazakhstan Youth Corps (KTC) program. The evaluation provides the first rigorous analysis of the effects of youth engagement in community service, a widespread intervention in both developing and developed countries, and adds to a small but growing literature analyzing the potential returns to non-cognitive skills training.

In general, the evidence suggests that the Youth Corps interventions were not effective in enhancing social integration or non-cognitive characteristics, and may have had negative effects on youths' labor market engagement. These effects are particularly noteworthy given that KYC was a relatively intensive program. The total program cost was estimated to be around \$1500 for each person receiving the grants intervention, plus \$330 for each person receiving the training intervention.¹⁵ For comparison, per capita income in Kazakhstan was roughly \$8,800 in 2016, according to the World Bank.

In the context of the broader literature, these results may be surprising given that other interventions have shown positive effects of interventions providing cash transfers (unrestricted or for entrepreneurial development) as well as non-cognitive skills training (in some contexts, offered in conjunction with cash). However, these evaluations have generally been conducted in sub-Saharan Africa (e.g., Liberia, Uganda, Kenya, and Zambia) or South Asia (India and Afghanistan). One intriguing hypothesis for future research is that Kazakhstan may simply be characterized by too high an income level for these interventions to be effective, particularly given that unemployment for youth aged 15-24

¹⁵The training and mentoring intervention included two full-scale trainings as well as weekly mentoring, with an estimated total cost of \$623,141, excluding administrative costs to develop training materials and quality monitoring. The grants intervention entailed an investment of around \$3,000 in each group, plus monthly stipends for each grantee of around \$130 per participant on average.

has been falling steadily in Kazakhstan and was estimated at less than 4% in 2017 (International Labor Organization, 2017). In this context, providing youth with grants and/or training may simply impede their engagement in the labor market.

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Figure 1: Map of Kazakhstan and coverage by regions in 2017 pilot phase



Figure 2: Evaluation design

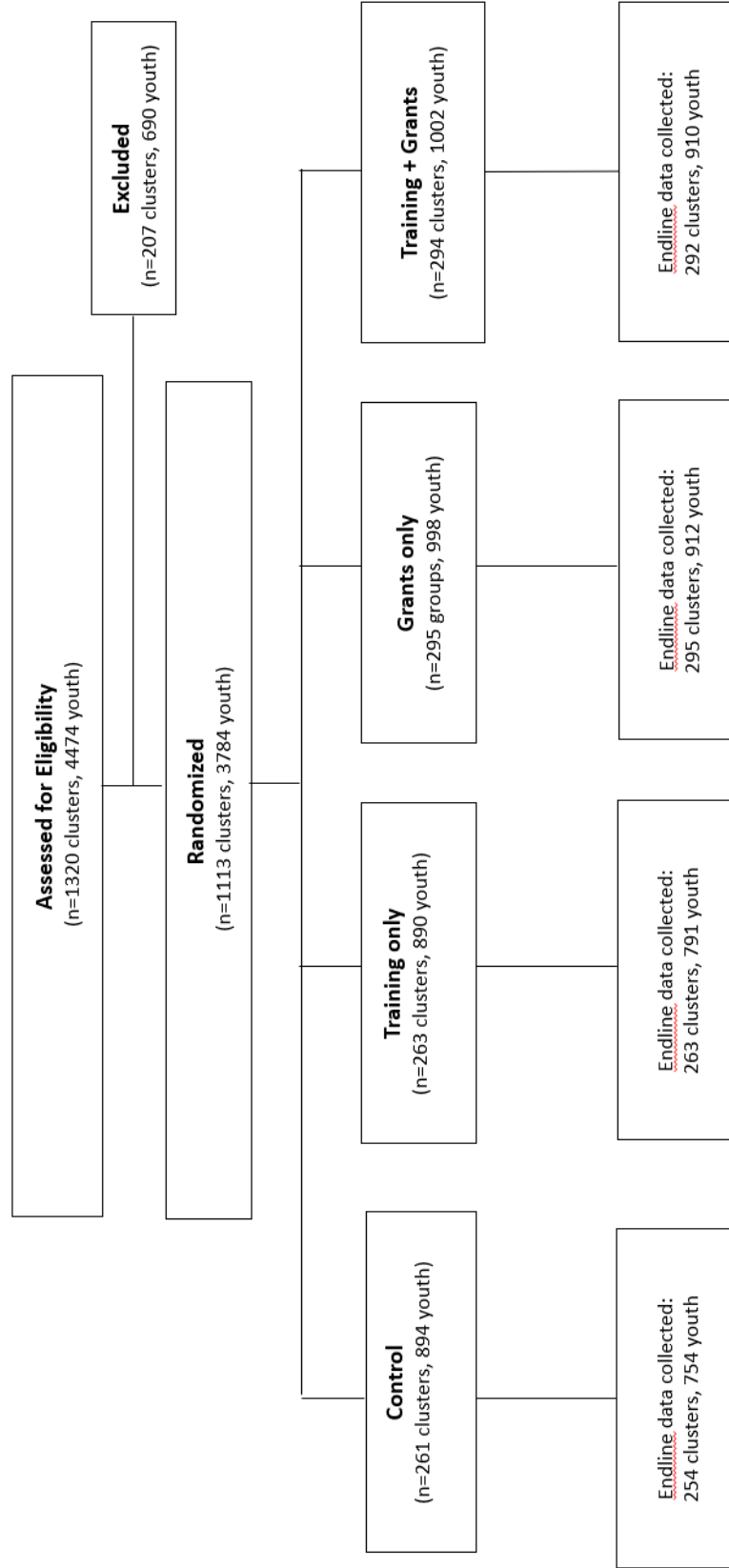


Figure 3: Kazakhstan Youth Corps impact evaluation timeline

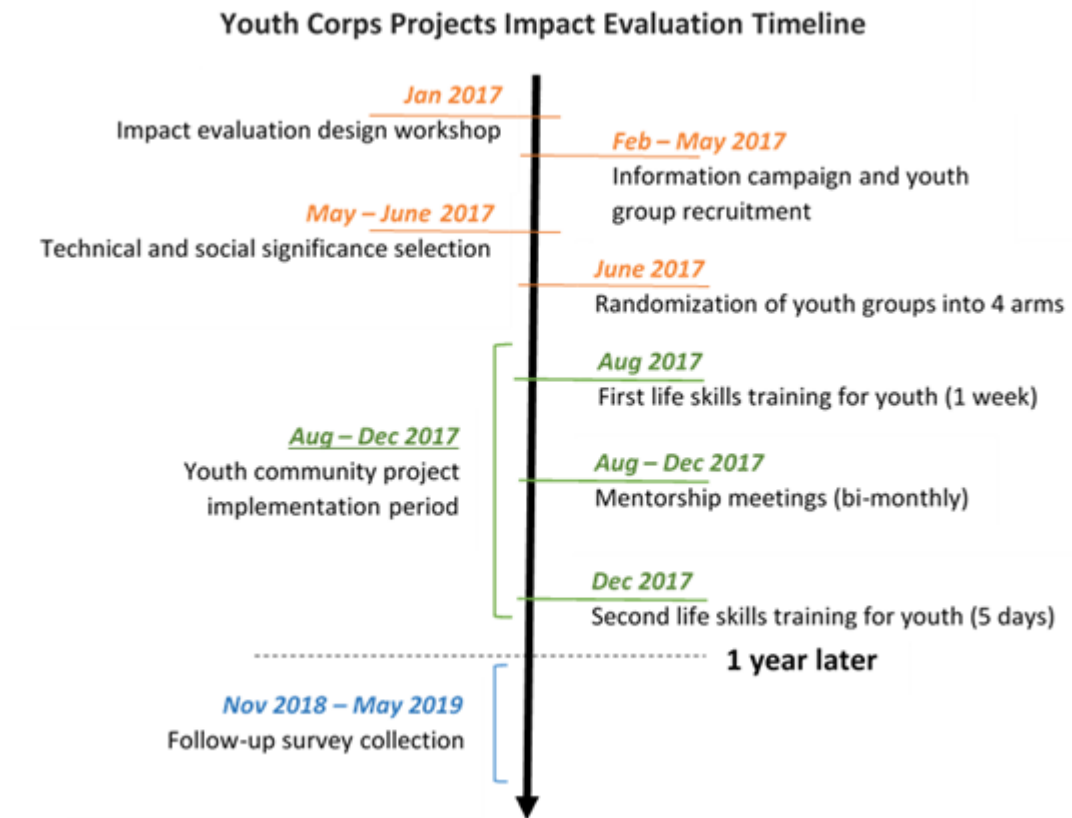


Table 1: Balance on baseline covariates

| | Age (1) | Male (2) | Married (3) | Higher educ. (4) | Employed (5) | Urban (6) |
|-----------------------------------|-----------------|------------------|-----------------|---------------------|-----------------|-------------------|
| Full sample | | | | | | |
| Training only | -.136 (.205) | .015 (.030) | -.013 (.028) | .020 (.029) | .013 (.030) | -.084** (.040) |
| Grant only | -.115 (.195) | -.0002 (.029) | -.014 (.026) | .024 (.029) | -.015 (.028) | .011 (.038) |
| Grants + training | -.142 (.196) | -.023 (.029) | .006 (.026) | .004 (.029) | -.011 (.029) | -.034 (.039) |
| $\beta_1 = \beta_2 = \beta_3 = 0$ | .877 | .672 | .821 | .809 | .78 | .075 |
| Obs. | 3780 | 3783 | 3782 | 3783 | 3782 | 3781 |
| Joint test | .877 | | | | | |
| Non-attrited sample | | | | | | |
| Training only | -.103 (.216) | .009 (.032) | -.026 (.029) | .033 (.031) | .004 (.032) | -.092** (.042) |
| Grant only | -.108 (.204) | -.003 (.030) | -.022 (.027) | .026 (.030) | -.032 (.030) | .017 (.040) |
| Grants + training | -.130 (.205) | -.036 (.031) | .0004 (.028) | .016 (.030) | -.025 (.031) | -.014 (.040) |
| $\beta_1 = \beta_2 = \beta_3 = 0$ | .924 | .518 | .671 | .736 | .554 | .040 |
| Obs. | 3364 | 3366 | 3366 | 3366 | 3366 | 3365 |
| Joint test | .924 | | | | | |

Notes: The dependent variable is the specified baseline covariate. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated clustering standard errors at the group level. In Panel A, the full sample is employed; in Panel B, the analysis is restricted to the non-attrited sample. Asterisks indicate significance at the ten, five and one percent level.

Table 2: Primary outcomes: Non-cognitive characteristics

| | Self-esteem and aspirations index (1) | Cantril's ladder (2) | Mental health index (3) | Goal orientation index (4) | Working in groups index (5) |
|-------------------------------|--|----------------------------|----------------------------------|-------------------------------------|--------------------------------------|
| β_1 : Training only | -.017** (.008) | -.106 (.115) | -.021 (.016) | -.006 (.012) | -.006 (.008) |
| β_2 : Grants only | -.016** (.007) | .146 (.105) | -.002 (.015) | -.008 (.011) | -.008 (.007) |
| β_3 : Grants + training | -.012* (.007) | -.014 (.104) | .003 (.015) | -.006 (.011) | .0006 (.007) |
| Mean control arm | .937 | 5.629 | .796 | .835 | .942 |
| St. dev. control arm | .121 | 1.777 | .261 | .220 | .127 |
| Obs. | 3321 | 3251 | 3334 | 3333 | 3301 |
| ASTE: β_1 | -.077** (.034) | | | | |
| ASTE: β_2 | -.029 (.030) | | | | |
| ASTE: β_3 | -.027 (.030) | | | | |

Notes: The dependent variables include five indices: an index capturing self-esteem and aspirations; Cantril's ladder capturing self-reported well-being; a mental health index; an index of goal orientation; and an index capturing the respondent's propensity to work in groups. The independent variables are binary variables allowing assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. We also report the average standard estimated effect (ASTE) across all variables presented, estimated by aggregating all outcomes in the table into a mean effects index following Kling et al. (2007) and estimating the effect of the treatments on this index. Asterisks indicate significance at the ten, five and one percent level.

Table 3: Primary outcomes: Social capital

| | Org. membership index | Contribution to coll action index | Interpersonal trust index | Social inclusion index | Attitudes toward vulnerable social groups index | Civic engagement index | Political participation index |
|-----------------------------------|-----------------------------|---|---------------------------------|------------------------------|--|------------------------------|-------------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| β_1 : Training only | .019 (.015) | .027 (.017) | .002 (.009) | -.006 (.005) | -.003 (.003) | -.027* (.014) | .007 (.005) |
| β_2 : Grants only | .014 (.014) | .025* (.015) | .003 (.009) | -.001 (.005) | -.0001 (.003) | -.019 (.014) | .009** (.005) |
| β_3 : Grants + training | .024* (.014) | .013 (.015) | .004 (.009) | -.003 (.005) | -.005 (.003) | .0001 (.013) | .001 (.004) |
| Mean control arm | .128 | .206 | .922 | .972 | .990 | .735 | .131 |
| St. dev. control arm | .250 | .275 | .175 | .092 | .060 | .227 | .082 |
| Obs. | 3363 | 3312 | 3326 | 3339 | 3292 | 3170 | 3343 |
| ASTE: β_1 ; ASTE: β_1 | .014 (.029) | | | | | | |
| β_2 ; ASTE: β_2 | .018 (.029) | | | | | | |
| ASTE: β_3 ; ASTE: β_3 | .003 (.028) | | | | | | |

Notes: The dependent variables include seven indices: an index of organizational membership; an index capturing contribution to collective action; an interpersonal trust index; an index of attitudes around social inclusion; an index of attitudes toward vulnerable social groups; an index of civic engagement; and an index of political participation. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. We also report the average standard estimated effect (ASTE) across all variables presented, estimated by aggregating all outcomes in the table into a mean effects index following Kling et al. (2007) and estimating the effect of the treatments on this index. Asterisks indicate significance at the ten, five and one percent level.

Table 4: Primary outcomes: Labor market outcomes

| | Hours worked | Days worked | Total income | Any econ. activity | Any wage | Any self- emp. |
|-------------------------------|----------------------|---------------------|--------------------------|--------------------------|--------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| β_1 : Training only | -3.087*** (1.164) | -1.662*** (.600) | -6285.974* (3433.271) | -.063*** (.024) | -.066*** (.025) | .004 (.016) |
| β_2 : Grants only | -1.512 (1.112) | -.984* (.545) | -3691.647 (3135.497) | -.030 (.022) | -.018 (.024) | -.002 (.016) |
| β_3 : Grants + training | -.952 (1.127) | -.651 (.588) | -4550.062 (3431.665) | -.034 (.024) | -.043* (.025) | .023 (.016) |
| Mean control arm | 27.871 | 15.003 | 57684.2 | .704 | .594 | .119 |
| St. dev. control arm | 21.913 | 11.178 | 60897.679 | .457 | .491 | .324 |
| Obs. | 3131 | 3160 | 2753 | 3324 | 3363 | 3363 |
| ASTE: β_1 | -.118** (.057) | | | | | |
| ASTE: β_2 | -.073 (.051) | | | | | |
| ASTE: β_3 | -.080 (.053) | | | | | |

Notes: The dependent variables include hours reported worked in the last week, days reported worked in the last month, income reported over the last month, a binary variable capturing engagement in any income-generating activity, a binary variable capturing engagement in wage labor, and a binary variable capturing engagement in self-employment. The variables in Columns (1) through (3) were pre-specified, and the variables in Columns (4) through (6) were not pre-specified. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. We also report the average standard estimated effect (ASTE) across all variables presented, estimated by aggregating all outcomes in the table into a mean effects index following Kling et al. (2007) and estimating the effect of the treatments on this index. Asterisks indicate significance at the ten, five and one percent level.

Table 5: Secondary outcomes: Additional non-cognitive characteristics

| | Risky / anti-social behavior (1) | Self- control (2) |
|-------------------------------|--|-------------------------|
| β_1 : Training only | .0008 (.002) | .011 (.015) |
| β_2 : Grants only | -.001 (.002) | .002 (.014) |
| β_3 : Grants + training | .001 (.002) | .016 (.014) |
| Mean control arm | .006 | .352 |
| St. dev. control arm | .035 | .243 |
| Obs. | 3337 | 3341 |
| ASTE: β_1 | .015 (.041) | |
| ASTE: β_2 | .020 (.035) | |
| ASTE: β_3 | .022 (.037) | |

Notes: The dependent variables include an index of risky and anti-social behavior and an index of self-control. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. We also report the average standard estimated effect (ASTE) across all variables presented, estimated by aggregating all outcomes in the table into a mean effects index following Kling et al. (2007) and estimating the effect of the treatments on this index. Asterisks indicate significance at the ten, five and one percent level.

Table 6: Secondary outcomes: Human capital

| | Education level (1) | Received training (2) | Skills to use (3) |
|-------------------------------|---------------------------|-----------------------------|-------------------------|
| β_1 : Training only | .096* (.050) | .013 (.018) | -.012 (.033) |
| β_2 : Grants only | .066 (.044) | .021 (.018) | .049 (.031) |
| β_3 : Grants + training | .006 (.044) | .021 (.018) | .079*** (.030) |
| Mean control arm | 4.732 | .118 | .601 |
| St. dev. control arm | .811 | .323 | .490 |
| Obs. | 3349 | 3255 | 2694 |
| ASTE: β_1 | .033 (.040) | | |
| ASTE: β_2 | .083** (.037) | | |
| ASTE: β_3 | .074** (.036) | | |

Notes: The dependent variables include the respondent's reported years of education attained, a binary variable for whether the respondent received training, and a binary variable for whether the respondent has skills s/he would like to use. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. We also report the average standard estimated effect (ASTE) across all variables presented, estimated by aggregating all outcomes in the table into a mean effects index following Kling et al. (2007) and estimating the effect of the treatments on this index. Asterisks indicate significance at the ten, five and one percent level.

Table 7: Secondary outcomes: Economic welfare

| | Consumption | Assets index | Self-reported poverty ranking |
|-------------------------------------|------------------------|------------------|-------------------------------|
| | (1) | (2) | (3) |
| β_1 : Training only | 147.267 (3300.180) | .054** (.027) | -.052 (.050) |
| β_2 : Grants only | 67.737 (3126.275) | .032 (.025) | .0002 (.048) |
| β_3 : Grants + training | 3457.976 (3132.978) | .050** (.025) | -.029 (.047) |
| Mean control arm | 80159.996 | .236 | 3.742 |
| St. dev. | 55280.588 | .416 | .821 |
| Obs. | 3366 | 3366 | 3274 |
| ASTE: β_1 : Training only | .030 (.044) | | |
| ASTE: β_2 : Grants only | .024 (.041) | | |
| ASTE: β_3 : Grants + training | .050 (.041) | | |

Notes: The dependent variables include a summary index of consumption on basic and luxury goods over the past 30 days, an index of durable assets owned, and a self-reported poverty ranking. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. We also report the average standard estimated effect across all variables presented in Panel A, estimated by aggregating all outcomes in the table into a mean effects index following Kling et al. (2007) and estimating the effect of the treatments on this index. Asterisks indicate significance at the ten, five and one percent level.

Table 8: Variables constituting asset index

| | Major assets (1) | Livestock (2) | Electronic goods (3) | Owns house (4) | Housing-related investments (5) |
|------------------------------|------------------------|------------------|----------------------------|----------------------|---------------------------------------|
| β_1 : Training only | .050 (.052) | .064 (.047) | .108 (.136) | -.0007 (.025) | .061* (.034) |
| β_2 : Grant only | .012 (.049) | .031 (.042) | .014 (.132) | .018 (.022) | .046 (.033) |
| β_3 : Grant + training | .011 (.048) | .084* (.043) | .133 (.128) | .011 (.023) | .035 (.032) |
| Mean control arm | 2.028 | .337 | 7.415 | .78 | .281 |
| St. dev. control arm | .852 | .785 | 2.100 | .415 | .581 |
| Obs. | 3366 | 3366 | 3366 | 3307 | 3366 |

Notes: The dependent variables include the following: the number of large assets owned (central water supply, toilet, car or motorcycle), the number of livestock owned, the number of electronic equipment owned, a dummy for house ownership, and a variable capturing the number of housing-related investments made over the past year (buying or building a new house, renovating a house, adding to a house, purchasing land, renting out a house, or investing in property). Note these variables are the components of the index of durable assets owned, and were not pre-specified for separate analysis. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table 9: Attrition

| | Age | Male | Married | Higher educ. | Employed | Urban |
|---|-----------------|--------------------|--------------------|-------------------|--------------------|-------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Attrition by treatment arm | | | | | | |
| Covariate | -.006 (.004) | -.025 (.028) | -.063** (.031) | .006 (.031) | -.087*** (.023) | .052* (.030) |
| Covariate x Training only | -.003 (.006) | .020 (.035) | .053 (.039) | -.051 (.041) | .031 (.031) | .029 (.037) |
| Covariate x Grants only | -.001 (.005) | .009 (.034) | .031 (.037) | -.008 (.036) | .059** (.029) | -.022 (.035) |
| Covariate x Grants + training | -.001 (.005) | .045 (.033) | .021 (.036) | -.049 (.037) | .050 (.030) | -.074** (.037) |
| Training Only | .020 (.134) | -.056** (.028) | -.060** (.024) | -.011 (.033) | -.056** (.026) | -.057** (.026) |
| Grants Only | -.047 (.124) | -.075*** (.027) | -.079*** (.023) | -.065** (.030) | -.092*** (.024) | -.057** (.026) |
| Grants + Training | -.042 (.126) | -.087*** (.026) | -.071*** (.023) | -.032 (.031) | -.084*** (.024) | -.020 (.029) |
| Obs. | 3780 | 3783 | 3782 | 3783 | 3782 | 3781 |
| Attrition with respect to pooled treatment arm | | | | | | |
| Covariate | -.006 (.004) | -.025 (.028) | -.063** (.031) | .006 (.031) | -.087*** (.023) | .052* (.030) |
| Covariate x Any Treatment | -.002 (.005) | .025 (.030) | .034 (.033) | -.036 (.033) | .048* (.026) | -.025 (.032) |
| Any Treatment | -.024 (.110) | -.074*** (.024) | -.071*** (.021) | -.037 (.027) | -.078*** (.022) | -.044* (.024) |
| Covariate | Age | Male | Married | Higher educ. | Employed | Urban |
| Obs. | 3780 | 3783 | 3782 | 3783 | 3782 | 3781 |

Notes: The dependent variables is a dummy equal to one if the respondent attrited from the sample. The independent variables are the specified covariate, the covariate interacted with the specified treatment indicator, and the treatment indicator. All regressions include standard errors clustered at the group level. Asterisks indicate significance at the ten, five and one percent level.

Appendix

Table A1: Power calculations

| Significance level | Power | Number of clusters per arm | Mean cluster size | Variance cluster size | Intra-cluster correlation | MDE (st. dev.) |
|--------------------|-------|----------------------------|-------------------|-----------------------|---------------------------|----------------|
| 0.05 | 0.8 | 260 | 3 | 0.59 | 0.05 | 0.15 |
| 0.05 | 0.9 | 260 | 3 | 0.59 | 0.05 | 0.18 |
| 0.05 | 0.8 | 260 | 3 | 0.59 | 0.1 | 0.16 |
| 0.05 | 0.9 | 260 | 3 | 0.59 | 0.1 | 0.19 |
| 0.05 | 0.8 | 260 | 3 | 0.59 | 0.2 | 0.18 |
| 0.05 | 0.9 | 260 | 3 | 0.59 | 0.2 | 0.21 |

Notes: This table reports power calculations conducted for the primary outcomes of interest.

Table A2: Heterogeneous effects (gender and urban status): Non-cognitive characteristics

| | Self-esteem and aspirations index (1) | Cantril's ladder (2) | Mental health index (3) | Goal orientation index (4) | Working in groups index (5) |
|------------------|--|-------------------------|----------------------------|-------------------------------|--------------------------------|
| Urban men | -.010 (.009) | .037 (.140) | -.015 (.019) | -.020 (.015) | -.020** (.010) |
| Urban women | -.015 (.010) | .050 (.156) | -.0001 (.021) | -.007 (.015) | -.004 (.009) |
| Rural men | -.009 (.013) | -.046 (.163) | -.013 (.025) | -.006 (.019) | .010 (.011) |
| Rural women | -.030** (.012) | -.015 (.157) | .007 (.026) | .016 (.018) | .002 (.012) |
| Mean control arm | .937 | 5.629 | .796 | .835 | .942 |
| Obs. | 3321 | 3251 | 3334 | 3333 | 3301 |

Notes: The dependent variables include five indices: an index capturing self-esteem and aspirations; Cantril's ladder capturing self-reported well-being; a mental health index; an index of goal orientation; and an index capturing the respondent's propensity to work in groups. The independent variables are binary variables for assignment to any treatment, interacted with binary variables for rural men, urban men, rural women, and urban women. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A3: Heterogeneous effects (gender and urban status): Social capital

| | Org. membership index | Cont. to coll action index | Interpersonal trust index | Social inclusion index | Attitudes vulnerable social groups index | Civic engagement index | Political participation index |
|------------------|-----------------------------|----------------------------------|---------------------------------|------------------------------|---|------------------------------|-------------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Urban men | .028 (.027) | .007 (.021) | -.016 (.011) | -.012* (.007) | -.007 (.005) | -.004 (.019) | .010* (.006) |
| Urban women | .017 (.026) | .014 (.021) | .008 (.013) | .002 (.008) | .001 (.005) | -.023 (.018) | -.001 (.005) |
| Rural men | .062** (.031) | .049** (.024) | .007 (.014) | -.002 (.007) | -.004 (.004) | -.020 (.021) | .010 (.008) |
| Rural women | .045 (.028) | .025 (.023) | .021 (.016) | -.001 (.008) | -.002 (.005) | -.013 (.021) | .007 (.008) |
| Mean control arm | .128 | .206 | .922 | .972 | .990 | .735 | .131 |
| Obs. | 2684 | 3312 | 3326 | 3339 | 3292 | 3170 | 3343 |

Notes: The dependent variables include seven indices: an index of organizational membership; an index capturing contribution to collective action; an interpersonal trust index; an index of attitudes around social inclusion; an index of attitudes toward vulnerable social groups; an index of civic engagement; and an index of political participation. The independent variables are binary variables for assignment to any treatment, interacted with binary variables for rural men, urban men, rural women, and urban women. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A4: Heterogeneous effects (gender and urban status): Labor market outcomes

| | Hours worked | Days worked | Total income | Any econ. activity | Any wage | Any self- emp. |
|------------------|-------------------|-------------------|--------------------------|--------------------------|-------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Urban men | -2.347 (1.509) | -1.238* (.737) | -7781.153 (5544.711) | -.054* (.028) | -.036 (.034) | .017 (.025) |
| Urban women | -2.446 (1.525) | -1.324* (.800) | -7661.786* (4062.341) | -.063* (.035) | -.069** (.034) | .002 (.018) |
| Rural men | -.931 (1.912) | -.641 (.980) | -4294.122 (5277.981) | -.006 (.039) | -.003 (.041) | .007 (.027) |
| Rural women | -.877 (1.760) | -.898 (.948) | 2636.801 (4640.909) | -.027 (.040) | -.047 (.042) | .007 (.023) |
| Mean control arm | 27.871 3131 | 15.003 3160 | 57684.2 2753 | .704 3324 | .594 3363 | .119 3363 |

Notes: The dependent variables include hours reported worked in the last week, days reported worked in the last month, income reported over the last month, a binary variable capturing engagement in any income-generating activity, a binary variable capturing engagement in wage labor, and a binary variable capturing engagement in self-employment. The variables in Columns (1) through (3) were pre-specified, and the variables in Columns (4) through (6) were not pre-specified. The independent variables are binary variables for assignment to any treatment, interacted with binary variables for rural men, urban men, rural women, and urban women. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A5: Heterogeneous effects (gender and urban status): Secondary outcomes

| | (1) | (2) | (3) | (4) | (5) |
|---|------------------------------------|------------------|--------------------|----------------------|------------------|
| Panel A: Non-cognitive characteristics and human capital | | | | | |
| | Risky / anti-social behavior | Self- control | Education level | Received training | Skills to use |
| Urban men | -.0006 (.004) | .008 (.018) | .044 (.063) | .015 (.025) | .007 (.042) |
| Urban women | -.002 (.002) | .008 (.021) | -.004 (.061) | .027 (.024) | .040 (.043) |
| Rural men | .002 (.002) | .006 (.021) | .124* (.073) | -.002 (.025) | .029 (.049) |
| Rural women | .003 (.002) | .019 (.022) | .086 (.070) | .036 (.029) | .110** (.051) |
| Mean control arm | .006 | .352 | 4.732 | .118 | .601 |
| Obs. | 3337 | 3341 | 3349 | 3255 | 2694 |
| Panel B: Economic welfare | | | | | |
| | Consumption | Self ranking | Assets index | | |
| Urban men | 4815.157 (4082.090) | -.013 (.062) | .035 (.034) | | |
| Urban women | 1940.349 (4520.616) | -.062 (.064) | .012 (.030) | | |
| Rural men | -323.701 (4783.513) | -.023 (.077) | .098** (.043) | | |
| Rural women | -4022.840 (4632.399) | .013 (.076) | .053 (.043) | | |
| Mean control arm | 80159.996 | .236 | 3.742 | | |
| Obs. | 3363 | 3271 | 3363 | | |

Notes: The dependent variables in Panel A include an index of risky and anti-social behavior, an index of self-control, the respondent's reported years of education attained, a binary variable for whether the respondent received training, and a binary variable for whether the respondent has skills s/he would like to use. The dependent variables in Panel B include a summary index of consumption on basic and luxury goods over the past 30 days, an index of durable assets owned, and a self-reported poverty ranking. The independent variables are binary variables for assignment to any treatment, interacted with binary variables for rural men, urban men, rural women, and urban women. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A6: Heterogeneous effects (age): Non-cognitive characteristics

| | Self-esteem and aspirations index (1) | Cantril's ladder (2) | Mental health index (3) | Goal orientation index (4) | Working in groups index (5) |
|--------------------------|--|----------------------------|----------------------------------|-------------------------------------|--------------------------------------|
| Treatment | -.014** (.007) | -.025 (.109) | -.012 (.016) | -.004 (.012) | -.004 (.007) |
| Treatment x Age 18–22 | -.002 (.010) | .095 (.157) | .014 (.024) | -.007 (.019) | -.001 (.011) |
| Mean control arm | .937 | 5.629 | .796 | .835 | .942 |
| Obs. | 3321 | 3251 | 3334 | 3333 | 3301 |

Notes: The dependent variables include five indices: an index capturing self-esteem and aspirations; Cantril's ladder capturing self-reported well-being; a mental health index; an index of goal orientation; and an index capturing the respondent's propensity to work in groups. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. The independent variables are binary variables for assignment to any treatment, interacted with a binary variable for age 18–22 at baseline. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A7: Heterogeneous effects (age): Social capital

| | Org. membership index (1) | Cont. to coll action index (2) | Interpersonal trust index (3) | Social inclusion index (4) | Attitudes vulnerable social groups index (5) | Civic engagement index (6) | Political participation index (7) |
|-------------------|------------------------------------|---|--|-------------------------------------|--|-------------------------------------|--|
| Treatment | .038* (.020) | .029* (.016) | -.0009 (.009) | -.006 (.004) | -.007** (.003) | -.0009 (.014) | .005 (.005) |
| Treatment x young | -.007 (.029) | -.019 (.025) | .009 (.015) | .006 (.008) | .010* (.006) | -.034* (.020) | .002 (.007) |
| Mean control arm | .128 | .206 | .922 | .972 | .990 | .735 | .131 |
| Obs. | 2684 | 3312 | 3326 | 3339 | 3292 | 3170 | 3343 |

Notes: The dependent variables include seven indices: an index of organizational membership; an index capturing contribution to collective action; an interpersonal trust index; an index of attitudes around social inclusion; an index of attitudes toward vulnerable social groups; an index of civic engagement; and an index of political participation. The independent variables are binary variables for assignment to any treatment, interacted with a binary variable for age 18-22 at baseline. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A8: Heterogeneous effects (age): Labor market outcomes

| | Hours worked | Days worked | Total income | Any econ. activity | Any wage | Any self- emp. |
|--------------------------|--------------------|------------------|-------------------------|--------------------------|-------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Treatment | -2.111* (1.183) | -.850 (.619) | -6319.745 (3923.286) | -.033 (.023) | -.053** (.027) | .026 (.018) |
| Treatment x age 18–22 | .785 (1.884) | -.534 (1.008) | 3708.902 (5188.522) | -.022 (.041) | .029 (.042) | -.044 (.027) |
| Mean control arm | 27.871 | 15.003 | 57684.2 | .704 | .594 | .119 |
| Obs. | 3131 | 3160 | 2753 | 3324 | 3363 | 3363 |

Notes: The dependent variables include hours reported worked in the last week, days reported worked in the last month, income reported over the last month, a binary variable capturing engagement in any income-generating activity, a binary variable capturing engagement in wage labor, and a binary variable capturing engagement in self-employment. The variables in Columns (1) through (3) were pre-specified, and the variables in Columns (4) through (6) were not pre-specified. The independent variables are binary variables for assignment to any treatment, interacted with a binary variable for age 18–22 at baseline. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A9: Heterogeneous effects (age): Secondary outcomes

| | (1) | (2) | (3) | (4) | (5) |
|---|------------------------------------|------------------|--------------------|----------------------|-------------------|
| Panel A: Non-cognitive characteristics and human capital | | | | | |
| | Risky / anti-social behavior | Self- control | Education level | Received training | Skills to use |
| Treatment | .0007 (.002) | .017 (.015) | .114** (.048) | .018 (.019) | .085** (.033) |
| Treatment x age 18–22 | -.001 (.003) | -.019 (.021) | -.145** (.070) | .003 (.029) | -.114** (.048) |
| Mean control arm | .006 | .352 | 4.732 | .118 | .601 |
| Obs. | 3337 | 3341 | 3349 | 3255 | 2694 |
| Panel B: Economic welfare | | | | | |
| | Consumption | Self ranking | Assets index | | |
| Treatment | -1110.331 (3338.977) | -.068 (.053) | .024 (.024) | | |
| Treatment x Age 18–22 | 5684.459 (4921.375) | .104 (.074) | .052 (.040) | | |
| Mean control arm | 80159.996 | .236 | 3.742 | | |
| Obs. | 3363 | 3271 | 3363 | | |

Notes: The dependent variables in Panel A include an index of risky and anti-social behavior, an index of self-control, the respondent's reported years of education attained, a binary variable for whether the respondent received training, and a binary variable for whether the respondent has skills s/he would like to use. The dependent variables in Panel B include a summary index of consumption on basic and luxury goods over the past 30 days, an index of durable assets owned, and a self-reported poverty ranking. The independent variables are binary variables for assignment to any treatment, interacted with a binary variable for age 18–22 at baseline. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A10: Lee bounds: Non-cognitive characteristics

| | Self-esteem and aspirations index (1) | Cantril's ladder (2) | Mental health index (3) | Goal orientation index (4) | Working in groups index (5) |
|-------------------------|--|----------------------------|----------------------------------|-------------------------------------|--------------------------------------|
| β_1 : Lower bound | -.021** (.008) | -.315*** (.108) | -.032** (.016) | -.015 (.012) | -.010 (.008) |
| β_1 : Upper bound | .007 (.006) | .085 (.107) | .014 (.015) | .020* (.011) | .018*** (.006) |
| β_2 : Lower bound | -.022*** (.007) | -.146 (.099) | -.018 (.015) | -.021* (.011) | -.013* (.007) |
| β_2 : Upper bound | .011* (.006) | .389*** (.102) | .047*** (.013) | .032*** (.010) | .018*** (.006) |
| β_3 : Lower bound | -.017** (.007) | -.260*** (.098) | -.012 (.015) | -.018 (.012) | -.004 (.007) |
| β_3 : Upper bound | .014** (.006) | .213** (.099) | .048*** (.014) | .033*** (.010) | .026*** (.006) |
| Mean control arm | .937 | 5.629 | .796 | .835 | .942 |
| Obs.: Lower bound | 3163 | 3096 | 3175 | 3174 | 3143 |
| Obs.: Upper bound | 3166 | 3099 | 3178 | 3177 | 3146 |

Notes: The dependent variables include five indices: an index capturing self-esteem and aspirations; Cantril's ladder capturing self-reported well-being; a mental health index; an index of goal orientation; and an index capturing the respondent's propensity to work in groups. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. The upper and lower bound corresponded to estimated Lee bounds are presented. Asterisks indicate significance at the ten, five and one percent level.

Table A11: Lee bounds: Social capital

| | Org. membership index | Contribution to coll action index | Interpersonal trust index | Social inclusion index | Attitudes toward vulnerable social groups index | Civic engagement index | Political participation index |
|-------------------|-----------------------------|---|---------------------------------|------------------------------|--|------------------------------|-------------------------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Lower: β_1 | -.007 (.012) | -.009 (.015) | -.001 (.009) | -.008 (.006) | -.004 (.003) | -.041*** (.014) | -.008** (.004) |
| Upper: β_1 | .027** (.013) | .038** (.017) | .026*** (.008) | .011** (.004) | .010*** (.002) | .003 (.013) | .011** (.005) |
| Lower: β_2 | -.022* (.011) | -.025* (.014) | -.003 (.009) | -.004 (.005) | -.0009 (.003) | -.040*** (.014) | -.012*** (.004) |
| Upper: β_2 | .030** (.013) | .042*** (.016) | .036*** (.007) | .020*** (.004) | .011*** (.002) | .021* (.013) | .015*** (.005) |
| Lower: β_3 | -.015 (.012) | -.034** (.013) | -.002 (.009) | -.005 (.005) | -.006* (.003) | -.018 (.013) | -.016*** (.004) |
| Upper: β_3 | .038*** (.013) | .028* (.015) | .036*** (.008) | .016*** (.004) | .011*** (.002) | .035*** (.012) | .006 (.004) |
| Mean control arm | .128 | .206 | .922 | .972 | .990 | .735 | .131 |
| Obs.: Lower bound | 3602 | 3153 | 3167 | 3180 | 3135 | 3018 | 3184 |
| Obs.: Upper bound | 3605 | 3157 | 3170 | 3183 | 3139 | 3021 | 3187 |

Notes: The dependent variables include seven indices: an index of organizational membership; an index capturing contribution to collective action; an interpersonal trust index; an index of attitudes around social inclusion; an index of attitudes toward vulnerable social groups; an index of civic engagement; and an index for political participation. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. The upper and lower bound corresponded to estimated Lee bounds are presented. Asterisks indicate significance at the ten, five and one percent level.

Table A12: Lee bounds: Labor market outcomes

| | Hours worked | Days worked | Total income | Any econ. activity | Any wage | Any self- emp. |
|-------------------------|----------------------|---------------------|-----------------------------|--------------------------|-------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| β_1 : Lower bound | -5.282*** (1.120) | -2.448*** (.596) | -14608.990*** (3063.365) | -.080*** (.025) | -.056** (.025) | -.034*** (.013) |
| β_1 : Upper bound | -1.977* (1.177) | -1.068* (.611) | -3941.148 (3465.178) | -.034 (.024) | -.013 (.025) | .013 (.015) |
| β_2 : Lower bound | -4.759*** (1.030) | -2.120*** (.545) | -13172.810*** (2855.147) | -.053** (.023) | -.008 (.024) | -.060*** (.011) |
| β_2 : Upper bound | .229 (1.122) | -.099 (.560) | -329.726 (3193.132) | .015 (.023) | .058** (.024) | .016 (.015) |
| β_3 : Lower bound | -3.960*** (1.074) | -1.766*** (.584) | -15852.870*** (2901.938) | -.054** (.024) | -.034 (.025) | -.031** (.013) |
| β_3 : Upper bound | .648 (1.144) | .171 (.590) | -1550.579 (3508.578) | .006 (.024) | .029 (.025) | .037** (.015) |
| Mean control arm | 27.871 | 15.003 | 57684.2 | .704 | .594 | .119 |
| Obs.: Lower bound | 2981 | 3009 | 2620 | 3166 | 3602 | 3603 |
| Obs.: Upper bound | 2984 | 3012 | 2623 | 3168 | 3605 | 3606 |

Notes: The dependent variables include hours reported worked in the last week, days reported worked in the last month, income reported over the last month, a binary variable capturing engagement in any income-generating activity, a binary variable capturing engagement in wage labor, and a binary variable capturing engagement in self-employment. The variables in Columns (1) through (3) were pre-specified, and the variables in Columns (4) through (6) were not pre-specified. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. The upper and lower bound corresponded to estimated Lee bounds are presented. Asterisks indicate significance at the ten, five and one percent level.

Table A13: Attrition by region

| | Attrition | Almaty | Karaganda | Pavlodar | South Kazakhstan |
|-------------------------------|--------------------|-----------------|-------------------|----------------|---------------------|
| | (1) | (2) | (3) | (4) | (5) |
| β_1 : Training only | -.044** (.020) | -.025 (.029) | .006 (.062) | .014 (.017) | -.188*** (.056) |
| β_2 : Grants only | -.073*** (.018) | -.033 (.027) | -.106* (.055) | .008 (.015) | -.247*** (.054) |
| β_3 : Grants + training | -.066*** (.019) | -.036 (.027) | -.116** (.058) | .022 (.017) | -.213*** (.059) |
| Obs. | 3779 | 1394 | 503 | 1228 | 654 |

Notes: The table reports average standard treatment effects for the three primary outcome families (non-cognitive characteristics, social capital, and labor market outcomes) for the restricted sample in Almaty and Pavlodar, the regions in which no selective attrition was observed. Asterisks indicate significance at the ten, five and one percent level.

Table A14: Average standardized treatment effects: Restricted sample

| | Non-cognitive characteristics | Social capital | Labor market |
|-----------------|----------------------------------|----------------|------------------|
| | (1) | (2) | (3) |
| ASTE: β_1 | -.048 (.04) | .005 (.029) | -.112* (.064) |
| ASTE: β_2 | -.001 (.033) | .032 (.029) | -.058 (.058) |
| ASTE: β_3 | -.011 (.036) | -.012 (.03) | -.085 (.061) |
| Obs. | 2412 | 2625 | 2371 |

Notes: This table reports average standard treatment effects for the three primary outcome families of interest, restricting the sample to Almaty and Pavlodar provinces. Asterisks indicate significance at the ten, five and one percent level.

Table A15: Time allocation

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------------------|-----------------|-----------------|------------------------------|--------------------------------------|----------------|----------------|
| | Searching | Educ. | Any activity or searching | Any activity, searching, educ. | Donated | Volunteered |
| β_1 : Training only | -.019 (.042) | -.022 (.054) | -.046* (.024) | -.036* (.020) | .022 (.025) | .012 (.020) |
| β_2 : Grants only | .015 (.040) | .023 (.052) | -.020 (.022) | -.012 (.018) | .027 (.025) | .010 (.019) |
| β_3 : Grants + training | .011 (.040) | -.051 (.052) | -.029 (.023) | -.036* (.020) | .007 (.024) | .002 (.018) |
| Mean control arm | .276 | .367 | .785 | .868 | .284 | .128 |
| Obs. | 1087 | 1092 | 3327 | 3327 | 3278 | 3292 |

Notes: The dependent variables include six binary variables: a dummy for employment search (conditional on non-employment); a dummy for education (conditional on non-employment); a dummy for engaging in search or employment; a dummy for engaging in search, employment, or education; a dummy for reported volunteerism; and a dummy for reported donations. The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.

Table A16: Aspirations

| | High expected wage (1) | Log expected wage (2) | Prefer self emp. (3) | Challenges emp. (4) | Challenges business (5) |
|---|---------------------------------|--------------------------------|-------------------------------|---------------------------|-------------------------------|
| Panel A: Restricted sample | | | | | |
| β_1 : Training only | -.017 (.030) | .0009 (.054) | .004 (.025) | .002 (.026) | .009 (.027) |
| β_2 : Grants only | -.070** (.029) | -.158*** (.055) | .054** (.023) | -.010 (.025) | -.006 (.025) |
| β_3 : Grants + training | -.037 (.029) | -.084 (.056) | .047** (.023) | .021 (.024) | .019 (.025) |
| Mean control arm | .59 | 12.697 | .791 | .781 | .784 |
| Obs. | 2839 | 2838 | 2939 | 2700 | 2453 |
| Panel B: Larger sample with imputed observations | | | | | |
| β_1 : Training only | -.009 (.029) | .004 (.045) | -.004 (.028) | .012 (.029) | .017 (.029) |
| β_2 : Grants only | -.054** (.027) | -.130*** (.047) | .051* (.026) | -.012 (.027) | .011 (.026) |
| β_3 : Grants + training | -.024 (.027) | -.069 (.047) | .060** (.026) | .056** (.027) | .057** (.026) |
| Mean control arm | .493 | 12.683 | .687 | .614 | .553 |
| Obs. | 3363 | 3362 | 3363 | 3363 | 3363 |

Notes: The dependent variables include a dummy for the expected wage falling above the median of the distribution, the expected log wage in future, and three binary variables for self-employment preference, perception of challenges in wage employment, and perception of challenges in self-employment. In Panel A, missing observations are excluded; in Panel B, missing variables have values imputed for those who declined to respond. (We impute the median of the salary distribution, and assign the remaining binary variables to be equal to zero.) The independent variables are binary variables for assignment to the training only, grants only, or grants and training treatment arms. All regressions are estimated conditional on baseline covariates (age, gender, marital status, whether or not they had pursued higher education, whether they were employed at baseline, and whether they were resident in an urban area), clustering standard errors at the group level. Asterisks indicate significance at the ten, five and one percent level.