# CESIFO WORKING PAPERS

8247 2020

April 2020

## Cash Transfer Programs and Household Labor Supply

Daniela Del Boca, Chiara Pronzato, Giuseppe Sorrenti



#### **Impressum:**

**CESifo Working Papers** 

ISSN 2364-1428 (electronic version)

Publisher and distributor: Munich Society for the Promotion of Economic Research - CESifo

GmbH

The international platform of Ludwigs-Maximilians University's Center for Economic Studies and the ifo Institute

Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de

Editor: Clemens Fuest

https://www.cesifo.org/en/wp

An electronic version of the paper may be downloaded

from the SSRN website: <a href="https://www.SSRN.com">www.SSRN.com</a>from the RePEc website: <a href="https://www.RePEc.org">www.RePEc.org</a>

· from the CESifo website: <a href="https://www.cesifo.org/en/wp">https://www.cesifo.org/en/wp</a>

### Cash Transfer Programs and Household Labor Supply

#### **Abstract**

Employment contributes to reduce the risk of poverty. Through a randomized controlled trial, we evaluate the impact of a conditional cash transfer program (CCT) to low-income families with dependent children on household members' labor supply. The attendance of labor-market-oriented mentoring courses constitutes the condition to obtain the transfer. One year after admission to the program, fathers assigned to the CCT program are more likely to work (+14 percent) than fathers assigned to an unconditional cash transfer program or to a pure control group. No effect arises for mothers. Increased paternal investments in activities enhancing labor market opportunities and improved family networks seem to explain the results.

JEL-Codes: I100, I200, J240, I310.

Keywords: conditional cash transfers, poverty, household labor supply, mentoring courses.

Daniela Del Boca University of Turin / Italy CHILD, Collegio Carlo Alberto daniela.delboca@carloalberto.org

Chiara Pronzato
University of Turin / Italy
CHILD, Collegio Carlo Alberto
chiaradaniela.pronzato@unito.it

Giuseppe Sorrenti University of Amsterdam / The Netherlands CHILD, Collegio Carlo Alberto g.sorrenti@uva.nl

March 19, 2020

We wish to thank seminar and conference audiences at San Diego, Munich, NYU, Keio, Hitotsubashi, University of Turin, and Collegio Carlo Alberto, University of Hamburg, IRVAPP, LISER, SIEP, PAA, Pop Days. We also thank Ainhoa Aparicio Fenoll, Larry Aber, Mauricio Avendano, Christopher Flinn, James Riccio, and Orla Doyle for helpful comments and suggestions. A special thank is due to Willim Revello, Silvia Cordero, and Claudia Mandrile who helped us with the design and implementation of intervention. The research is partly supported by Compagnia di San Paolo and Collegio Carlo Alberto. The randomized controlled trial object of this study was registered in the AEA RCT registry, AEARCTR-0001476.

#### 1 Introduction

Are conditional cash transfer programs (CCT) more effective than unconditional cash transfer programs (UCT) in reducing family poverty? In the last few decades, the majority of programs targeted to reduce poverty have taken the form of UCTs. Although these programs have helped to reduce family poverty in the short-term, their long-term effects are more mixed (Elango et al., 2015; Fernald, 2013; Gertler et al., 2013). Recent studies have shown that a more effective way to reduce the intergenerational persistence of poverty is to link economic support to "productive" behaviors such as investments in human and physical capital through CCTs (see Baird et al., 2011; Attanasio et al., 2012; Attanasio et al., 2015; Del Boca et al., 2016; Behrman et al., 2011; Behrman et al., 2012).

The main argument in favor of CCT programs is that poverty constraints may often cause disadvantaged families to underinvest in human and physical capital. Families from disadvantaged backgrounds are not only limited by financial constraints that reduce their ability to save money or invest in human capital and health, they are also often uninformed of the returns of these investments (Cunha et al., 2013). Because low-income family members may be unaware of these limitations and not seek for more information, CCT programs could become important to improve behavior and decision-making. After an initial prevalence in developing countries, CCT programs have recently been also implemented in high-income countries where the economic situation of families has worsened since the 2007 economic crisis. In these contexts, where the large majority of families already use educational and health services, CCT programs are designed to provide more-accessible information and to incentivize a better use of resources (Miller et al., 2015).

This paper evaluates the impact of a CCT program on low-income household members' labor market outcomes and family economic conditions and well-being. We designed and implemented the CCT program in the Italian metropolitan area of Turin in 2016. The intervention targeted low-income families with a dependent child aged 0-6 and expanded an existing UCT program running since 2008. The CCT program we designed conditions the provision of the income transfer on recipients' attendance of mentoring courses on job-seeking and reconciliation between work and family tasks.

<sup>&</sup>lt;sup>1</sup>Fiszbein and Schady (2009) and Baird et al. (2014) provide extensive reviews on the impacts of CCT programs on schooling outcomes in low- and middle-income countries. CCT programs appear to have longer-term effects than UCTs (Baez and Camacho, 2011; Barham et al., 2017).

Employment reduces family's risk of poverty (OECD, 2009). Therefore, courses targeting individual labor market opportunities are among the most-natural candidates to positively affect family economic conditions in both the short- and the long-run. For this reason, we introduced courses providing information with the potential to improve labor market opportunities and we analyze the impact of the intervention on individuals' labor market outcomes and family well-being.<sup>2</sup>

We designed a randomized controlled trial (RCT) to compare the effectiveness of a conditional cash transfer program that requires the attendance of mentoring courses versus a typical unconditional cash transfer program. We randomly assigned 1,500 families eligible for the cash transfer program to one of the three experimental groups. A first group of families was entitled to receive an unconditional cash transfer (UCT), a second group of families received the same cash transfer conditional on the attendance of mentoring courses (CCT), and, a third control group (CG) was excluded from both the cash transfer and the courses.<sup>3</sup> One year after admission to the program (or exclusion for the CG), we administered to each family in the sample a comprehensive survey on household members' labor supply, well-being, and economic conditions.

The intervention displays two main effects. First, the provision of the cash transfer complemented by mentoring courses (CCT) induces improvements in parental labor market outcomes such as employment or hours worked in the pre-interview week.<sup>4</sup> We do not find any effect for households assigned to the UCT. On top of the labor supply effect, the CCT seems also effective in improving household economic conditions and well-being. Post-intervention, CCT families become more likely to collect some savings and report lower levels of financial dependency from people outside the household. A similar effect does not arise for the UCT group. Second, the treatment has different effects on mothers and fathers. The CCT treatment effect on labor market outcomes is almost exclusively driven by fathers. In the pre-interview week, fathers in the CCT group are more likely to work, i.e. +14 percent, and to work more than fathers in the

<sup>&</sup>lt;sup>2</sup>The intervention contemplated four different courses. Given the extremely high unemployment rate experienced by families in the sample, (almost) the totality of families were assigned to at least one course related with labor supply. We provide more details of the intervention and courses in Section 2.

<sup>&</sup>lt;sup>3</sup>Our experiment left the total umber of cash transfer beneficiaries unaltered as compared to previous years.

<sup>&</sup>lt;sup>4</sup>Due to the child-oriented eligibility criterion to receive the cash transfer, we refer to mothers and fathers of the youngest child in the household as units of observation of the analysis. For simplicity, we label as fathers also mothers' partners that are not the biological fathers of the youngest child in the household.

UCT and in the CG. Wage seems unaffected by the intervention. There is no CCT treatment effect for mothers.

We investigate the possible potential mechanisms underlying the CCT treatment effect. CCT fathers invest more in activities enhancing labor market opportunities, e.g. enrollment in courses teaching informatics skills. Moreover, CCT families have better family networks than UCT or CG families. These networks might simplify access to (better) labor market opportunities and, consequently, improve family well-being.

We contribute to the existing literature on cash transfers in a threefold way. First, our research evaluates a cash transfer program in a developed country. This setting contrasts to most studies that focus on developing countries. Cash transfers experiments in Europe are rare and might help in illustrating their effectiveness in a context in which families face different sets of economic and information constraints. Second, we evaluate the impact of both a CCT and a UCT program in the same framework. Our design helps with the understanding of which approach might be more effective in reducing family poverty. Finally, we shed lights on potential gender-specific heterogeneous treatment effects of cash transfer programs on labor market outcomes.

In the remainder of the paper, Section 2 describes the intervention and the experimental design. Section 3 provides details on the data and the randomization protocol. Section 4 reports the baseline analysis. Section 5 discusses the mechanisms underlying the baseline results. Section 6 concludes.

#### 2 The Intervention

The Experimental Design. Our intervention complemented a preexisting income support program AOS (Accoglienza Orientamento Supporto) financed by Ufficio Pio in the metropolitan area of Turin since  $2008.^5$  AOS represents a typical unconditional cash transfer program. Upon reception of the cash transfer, no (desirable) behavior is required of recipients. AOS eligibility depends on two eligibility criteria: each family must have a family income below  $\in 7,000$  as measured by the Indicator of the Equivalent Economic Situation (ISEE) and (at least) a dependent child under the age of six.<sup>6</sup>

Applications are accepted on a rolling basis with families that can apply to the

<sup>&</sup>lt;sup>5</sup>Turin is one of the largest metropolitan areas in Italy with about 2 million inhabitants.

<sup>&</sup>lt;sup>6</sup>ISEE measures family economic condition in a standardized way and is calculated based on family composition, family members' earnings and other sources of income, and assets. The ISEE is issued through a certificate by the Italian National Pension System (INPS).

program at any time of the year. Every two weeks, the Ufficio Pio collects the applications, determines whether eligibility criteria are met, and then establishes a rank of families that are eligible to receive the cash transfer. Applications from families fulfilling the admission criteria but that do not receive the cash transfer remain valid until December of the application year. If the family is not selected to receive the cash transfer by the end of the year, it is required to submit a new application to be reconsidered.

The yearly cash transfer amounts to  $\leq 2,500-3,500.^7$  This amount constitutes a sizable income shock. For the average family that received the cash transfer in 2016, the year of the intervention, the transfer covered up to 75 percent of the family yearly labor income.

In 2015, the Ufficio Pio contacted us to request a proposal for re-designing AOS to improve the program effectiveness in combating poverty. In April 2016, we extended AOS by adding a conditional cash transfer component into the existing program. Since employment contributes to reduce poverty, the objective of our intervention was to constrain the provision of the cash transfer to household members' exposure to information regarding dimensions of family behavior with particular emphasis on labor supply. To receive the cash transfer, recipients of the conditional cash transfer had to attend two mentoring courses.

The original design of the intervention included four courses: job-seeking, conciliation between work and family tasks, use of money, and parenting. As only three percent of families that applied were made by two working parents, the totality of individuals in the conditional cash transfer group were assigned by an algorithm developed by the Ufficio Pio to the course on job-seeking or work-family conciliation. For this reason, in this study we analyze the effectiveness of the provision of cash transfers conditional on exposure on mentoring courses covering topics related with individuals' labor market opportunities.

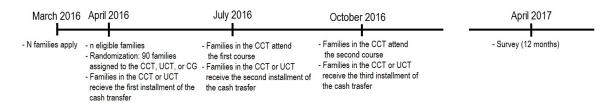
To evaluate whether the provision of mentoring courses and a cash transfer is more effective that simply providing monetary resources, we implemented a RCT based on the random assignment of 1,500 families eligible for the AOS program across three different experimental groups.<sup>8</sup> The first group, consisting of 500 families, is entitled to receive the conditional cash transfer upon attendance of two mentoring courses. One course covers labor market related topics. From now on, we label this group as the

<sup>&</sup>lt;sup>7</sup>The amount of the transfer varies according to the number of dependent children in the household.

<sup>&</sup>lt;sup>8</sup>We use here illustrative groups sizes that are close to the ones obtained in the experimental setting.

CCT. The second group, consisting of another 500 randomly selected families, receives an unconditional cash transfer. Families within this group, the UCT hereinafter, receive the same amount of money as the CCT, but they are uninformed, and therefore not required to attend, about the existence of the mentoring courses offered to the CCT. Finally, a third group of 500 families constitutes the control group. This group, although eligible to receive the transfer, does not receive any cash transfer for the entire period covered by our analysis. We label this group as CG.

Figure 1: The Timeline of the Experiment



Notes: This figure shows the timeline of the experiment for representative families that applied in March 2016 and who were admitted to the program in April 2016. The same schedule, with a relative shift in months, applies to all families who applied for benefits from April through November 2016.

Figure 1 summarizes the timeline of the experiment. Applications were received and evaluated on a rolling basis. To obtain a population of around 1,500 families, our experiment covered those families admitted to the program during the 9-month period from April to December 2016. For simplicity, Figure 1 illustrates the case of families that applied in March 2016 for admission to the program since April 2016.

The process started with the application to the program by families. Every two weeks the Ufficio Pio analyzed the N applications received and selected the n families  $(n \leq N)$  that were eligible to receive the cash transfer. The number of eligible families was usually close to 90 units every two weeks  $(n \simeq 90)$ . Once selected, we randomly assigned each of the n families  $(randomization\ group)$  to one of the three experimental groups. Immediately afterward, families assigned to the CCT or the UCT received the first installment of the cash transfer of  $\in 500$ . Families in the CCT were also informed about the course attendance requirement and the specific courses each family was assigned to. Families had no power to choose or change the courses assigned by the Ufficio Pio.

After three months since program admission, the second installment of the cash transfer of  $\leq 1,000-1,500$  was paid to families in the CCT and in the UCT. In order to receive the transfer, families in the CCT were required to attend the first assigned

course. Payment was made upon verification by the Ufficio Pio that a family member attended 75 percent or more of the scheduled meetings. Six months after admission to the program, the third installment of  $\leq 1,000-1,500$  was paid to the CCT and the UCT.

Twelve months after the assignment to experimental groups, a final survey covering aspects related to household members' labor market outcomes, family well-being, and economic conditions was administered.

The Courses: Assignment and Content. Courses take-up rate was extremely high with more than 85 percent of families in the CCT participating in each class and virtually all families fulfilling the requirement to receive the cash transfer. Each course was made by five two-hour meetings. Only one family member was required to participate in the meetings. The course instructors was helped by translators assisting individuals with imperfect knowledge of the Italian language.

The assignment to courses was made by the Ufficio Pio on the basis of an algorithm that aimed to match specific family characteristics to appropriate courses. The assignment did not consider family preferences and families could neither choose nor change courses. As the totality of families were characterized by extremely low level of labor force participation, 93 percent of families were assigned to one of the two courses with labor market emphasis.

The course on job-seeking aims to enhance participants' labor market opportunities in two main ways. First, the course has the objective to provide participants with information on how to find suitable job opportunities. Second, the course aims to foster participants' ability to recognize and evaluate their own skills and competencies. In one specific activity, the instructor describes employers' typical recruitment procedures. Course participants learn about the functioning of work agencies, of websites to match job seekers profiles with job advertisements, and how to search for internships or training support. In another activity, the attention is focused on skills to enhance labor market opportunities, e.g. fluency in the Italian language or the ability to perform simple tasks with a computer. The activity provides information on specific external courses that participants can attend to acquire these skills. In another activity, participants learn how to prepare an effective profile or resume. The instructor provides each participant practical guidance on how to prepare a resume.

The course on work-family reconciliation covers topics similar to the course on job-

seeking but it also emphasizes information and practices on how to conciliate work and family tasks. The course starts with a summary of the content of the job-seeking course, e.g. job-search techniques and opportunities. Then, the course provides participants with basic information on services with the potential to optimize the time devoted to family tasks. In one of the activities, participants receive information on the supply of formal childcare (or similar services) in the municipality of Turin. Through this activity, participants learn about the availability and the very low cost of such services. Another proposed activity focuses more on practical helps to families. Each course participant is helped in the preparation of the documentation to apply for childcare or other services with the potential to simplify the work-family conciliation. Finally, the course also covers topics related with the parent-child relationship and the possible benefits of a gender-neutral division of family tasks.

#### 3 Data and Randomization

The Endline Survey. We administered the endline survey twelve months after assignment to the experimental groups to families in the CCT, UCT and the CG. Each family was asked to fill out the same survey, which took approximately 40 minutes to complete. In order to prevent logistic problems, families completed the survey at home or at a public place of their choice. Students enrolled in the master programs in economics and statistics of the University of Turin conducted the interviews. Translators assisted migrant families or other families with a limited knowledge of the Italian language. The mother of the youngest child in the household was interviewed. Families in the control group were offered a €100 food voucher as an incentive to fill out the questionnaire.

The survey consists of two main sections. A first section collects general and demographics information for all household members. The main area of the second section of the survey covers household members' labor supply, job-seeking activities, and initiatives to enhance their professional profile. This section of the survey also covers topics related with family members' social inclusion, use of services provided by the city, health status, and financial problems. Finally, mothers are asked about their

<sup>&</sup>lt;sup>9</sup>For families eligible for the income support program, formal childcare would be free of charge.

<sup>&</sup>lt;sup>10</sup>Single mothers constitute around 30 percent of our sample. We interviewed the mother of the youngest child in the household to ensure the same respondent across families.

children's enrollment in childcare or school, peers' relationship, and health conditions. 11

The Sample and the Randomization Protocol. Table 1 shows the characteristics of the CCT, UCT, and CG in the baseline (pre-participation, columns 1 to 3) and in the final sample (post-participation, columns 4 to 6). Table A.1 reports the baseline characteristics of the 1,481 families part of the initial sample.

Table 1 highlights two main facts. First, families in our sample are disadvantaged in terms of socio-economic conditions. Half families are made by two unemployed parents and only one percent of couples are made by two working parents. The disadvantaged economic background is reflected by family income (ISEE). The average ISEE in the sample amounts to about  $\leq 900$ , a level that corresponds to a family of two parents and two children, with a monthly rent of  $\leq 200$ , and yearly labor earnings of  $\leq 4,700$ . The extremely low employment rate of family members supports the provision of courses with emphasis on labor market opportunities.<sup>12</sup>

Second, the randomization protocol was correctly implemented. In the table, we report the average values of observable characteristics by experimental groups as well as the statistical significance of the difference-in-mean across the different groups. We test household composition, household members' demographics, education, employment status and family income. Columns (1)-(3) test the initial (pre-participation) balancing. The 15 baseline characteristics measured at the time of the application process are balanced across groups, similar in absolute value, and any statistically significant difference arises across the three groups. For continuous variables, we show in Figure A.1 that the three experimental groups are balanced not only in terms of average values but also in their whole distribution. Indeed, the distribution of parents' age, age of the youngest child in the household, and family income are remarkably similar for the CCT, the UCT, and the CG.

Balancing across experimental groups is preserved post-participation. In columns (4)-(6) we investigate possible selective attrition in the final sample (post-participation). The final sample is made by families for which information from the endline survey is available. In our specific framework, attrition might depend on families that: (i) are untraceable after the intervention so they do not take the endline survey; (ii) dropped out during the intervention; (iii) refused to take the final survey. Columns (4)-(6) re-

<sup>&</sup>lt;sup>11</sup>Refer to LINK for the whole survey.

<sup>&</sup>lt;sup>12</sup>Our sample is characterized by a sizable fraction of about 75 percent of families with some migrant background.

veal that the initial random assignment is preserved post-participation. The response rate one year after admission to the program is about 72 percent and is similar across groups: 70 percent for the CCT, 74 percent for the UCT, and 73 percent for the CG. The analysis also suggests the absence of selective attrition. We perform 45 comparisons across experimental groups. Under random assignment, we would expect to observe 0.5 comparisons statistically significant at the one percent level, 2.3 comparisons significant at the five percent level, and 4.5 comparisons significant at the ten percent level. In our framework, only the difference between the CCT and the CG in the share of fathers with education completed in Italy appears as statistically significant at the ten percent level. Figure A.2 shows that post-participation balancing across experimental groups holds also in terms of distribution of baseline characteristics. Any significant difference in the distribution of baseline parental age, age of the youngest child in the household, or family income is observed for the sample of family that filled the endline survey. Appendix A.2 provides a formal test for selective attrition that further confirms the post-participation balancing.

#### 4 Empirical Model and Baseline Results

Equation 1 represents our reference empirical model:

$$y_i = \beta_0 + \beta_1 CCT + \beta_2 UCT + \mathbf{X_i}' \beta_3 + \alpha_i + \epsilon_i \quad , \tag{1}$$

where i is the mother or the father of the youngest child in the household or, for family-level outcomes, the family.  $y_i$  is a set of outcomes covering labor market outcomes or measures for family economic conditions. Outcomes are measured through the endline survey administered twelve months after assignment to the experimental groups. CCT is an indicator variable taking the value of one for families randomly assigned to the CCT. UCT is an indicator variable taking the value of one for families randomly assigned to the UCT. The CG represents the reference category. The vector  $\mathbf{X}_i$  contains a set of control variables for family income, number of household members under age 18, and indicator variables for mother's Italian citizenship and completed secondary education.  $\alpha_i$  represents the randomization group fixed effects to take into account the rolling basis nature of the application process.  $\epsilon_i$  represents the error term of the model. We are interested in the estimates of the parameters  $\beta_1$  and  $\beta_2$  that represent the CCT and the UCT treatment effect with respect to the CG.

Household Labor Supply. Table 2 shows the treatment effect of the intervention on household members' labor supply. We focus on mothers in columns (1)-(5) and on fathers in columns (6)-(10). Our outcomes of interest are: at least one hour worked in the pre-interview week (indicator, columns 1 and 6), number of days (columns 2 and 7) and hours (columns 3 and 8) worked in the pre-interview week, hourly wage (columns 4 and 9), and being employed with a regular contract (indicator, columns 5 and 10). We estimate OLS specifications with standard errors robust to heteroskedasticity.<sup>13</sup>

The analysis indicates no treatment effect on mothers' labor market outcomes. Column (1) highlights that the intervention does not increase, neither for the CCT nor for the UCT, the probability to have worked in the pre-interview week. The analysis of days and hours worked (columns 2 and 3) display the same pattern with the CCT and the UCT that perform similarly to the CG. Maternal wage (column 4) is also unaffected by the intervention as well as the probability to work with a regular contract (column 5).

The intervention significantly affects fathers' labor market outcomes. One year after admission to the program, fathers in the CCT group become more likely to work than fathers in the CG. Column (6) highlights that the CCT treatment increases the probability to have worked by eight percentage points. This effect is economically relevant and it represents a 14 percent increase with respect to the CG mean. The treatment effect on father's labor supply is confirmed in terms of labor intensity: CCT fathers work, on average, half day more (+20 percent, column 7) or 4.5 additional hours (+34 percent, column 8) than fathers in the CG. The increase in labor supply for CCT fathers is not mirrored by an improvement in labor market conditions. Column (9) points to the absence of treatment effect on hourly wage with respect to the average hourly wage of €9.5 for the CG. Also the probability to work with a regular work contract (column 10) does not change in response to the intervention.

Fathers in the UCT seem unaffected by the pure cash transfer received. For all investigated outcomes, the labor market performance of fathers in the UCT group is similar to the performance of the CG. Moreover, as shown by the p-values for the test of equality between the CCT and the UCT treatment effect, the performance of fathers

<sup>&</sup>lt;sup>13</sup>In Appendix A.2, we show that results are robust to the use of clustered at the randomization group level standard errors. The existence of 16 clusters might raise concerns of bias induced by the relatively small number of clusters. For this reason, we present this analysis as a sensitivity check for baseline results.

in the UCT is statistically worse than the one of fathers in the CCT. The difference in performance between the CCT and the UCT program suggests the possible importance of mentoring courses in shaping the intervention treatment effect. In Section 5 we investigate the possible mechanisms underlying this difference.

Other Effects of the Intervention: Economic Conditions and Well-being. Our intervention potentially affects household economic conditions and well-being through the cash transfer, the content of information covered by mentoring courses, and the labor supply effect previously documented. In Table 3, we analyze the intervention effect on family economic conditions and well-being by means of collection of some savings during the last year, problems with the payment of utility bills in the last year, having an internet connection at home or on the cell phone, necessity for financial help from people outside the household in the last year, and worries about the future. All outcomes are expressed as indicator variables. We estimate linear probability models with standard errors robust to heteroskedasticity.

The intervention significantly improves CCT families' economic conditions and well-being. Indeed, CCT families tend to accumulate more savings (column 1), they experience less problems with utility bills (column 2), they are more likely to have internet at home or on their phone (columns 3 and 4). These effects translate in lower financial dependency from people outside the household (column 5) and in lower levels of worries about future (column 6). To provide an idea of size effects, families in the CCT experience a seven percentage points increase in the probability to have saved some money and an eight percentage point decrease in arrears with utility bills. CCT families are eight percentage points less likely to be financially dependent from people outside the household.

The UCT intervention seems ineffective in improving family economic conditions and well-being. The (statistically) different performance between the CCT and the UCT suggests that improvements in family economic conditions and well-being are likely driven by the attendance of mentoring courses and by the intervention effect on labor supply.

Robustness. Appendix A.2 provides a robustness analysis for our baseline results. We replicate the baseline analysis of labor market outcomes by using inverse probability weighting to address potential residual concerns on selective attrition. We test the

sensitivity of our results the use of different standard errors. Finally, we test whether families selected to receive the cash transfer or mentoring courses misreport socially desirable behaviors. We select a subsample of outcomes characterized by social desirability and we show no treatment effect on these outcomes.

#### 5 Potential Mechanisms

This section investigates two potential mechanisms through which mentoring courses might have fostered household members' labor supply and family economic conditions and well-being. On the one hand, mentoring courses provide individuals with a better knowledge of activities fostering labor market opportunities. On the other hand, the attendance of courses with other individuals with similar socio-economic backgrounds might improve the family network. An improved family network is likely to increase knowledge and availability of labor market opportunities as well as financial and non-financial resource at family disposal.

Content of Courses and Job-Seeking Practices. Panel (a) of Table 4 displays the treatment effect of the intervention on important determinants of a successful job-seeking initiative. All outcome variables of this analysis are expressed as indicator variables and measured one year after the assignment to the experimental groups. We estimate linear probability models with standard errors robust to heteroskedasticity.

We start with the analysis of mothers in columns (1)-(5). We observe marginal intervention effects on maternal investments. While the assignment to the CCT increases mothers' likelihood with respect to CG to have a written CV (column 1) or to have attended courses teaching computer skills (column 3), no effect is detected for attendance of courses of the Italian language (column 2) or professional courses, (column 4) and for job-search activities (column 5).<sup>14</sup> The pure income transfer received by UCT mothers does not affect any of the investigated outcomes. The limited intervention effects on maternal investments in both the CCT and the UCT might underlie some strict family ties in the sample of families covered by the cash transfer program, as well as gender norms about child-rearing roles difficult to eradicate.

<sup>&</sup>lt;sup>14</sup>The courses analyzed in Table 4 are not the courses taken by CCT families as part of the intervention. The courses analyzed here are provided by external institutions and independently chosen and attended by individuals part of our sample. Professional courses teach skills to perform specific jobs.

The analysis of fathers in columns (6)-(10) displays a sizable intervention effect. While the effect on the probability to have a CV (column 6) is statistically insignificant, CCT fathers significantly increase investments in skills useful to compete in the labor market. To provide an example, they become six percentage points more likely to take part in courses of Italian language (column 7), four percentage points more likely to attend courses teaching informatics skills (column 8), and five percentage points more likely to attend professional courses (column 9). The UCT seem unaffected by the intervention. Interestingly, both CCT and UCT fathers appear as less active than CG fathers in job-search initiatives (column 10). The decrease amounts to a nine and a seven percentage points decrease with respect to the 70 percent baseline of the CG. This effect might be a pure-income effect induced by the cash transfer or, for the case of the CCT, a labor supply effect. The treatment effect of the intervention on labor supply might indeed induce a reduction in the necessity to find a job.

Family Network. Families assigned to the CCT group attend mentoring courses together with other families with similar socio-economic backgrounds. The attendance of group courses makes it easier to meet new people and improve the family network. Networks are particularly important for families targeted by the AOS income support program. As three-quarters of households eligible for AOS have some migrant background, linguistic and cultural barriers often constitute an obstacle for integration. Furthermore, improvements in family network simplify access to labor market opportunities.<sup>16</sup>

Panel (b) of Table 4 investigates the intervention treatment effect on the quality and size of a family network by means of different outcomes measured one year after assignment to the experimental groups. Unless differently specified, all outcome variables are expressed as indicator variables. We estimate OLS specifications with standard errors robust to heteroskedasticity.

CCT families report better networks. In particular, they are significantly more

<sup>&</sup>lt;sup>15</sup>Admittedly, the *p*-values for the difference in the CCT versus UCT treatment effect is never statistically significant at the conventional levels. However, point estimates for the UCT are never statistically significant and are always smaller in size than the ones for the CCT. From a quantitative perspective, the CCT and the UCT treatment effects are usually (statistically) indistinguishable. From a qualitative perspective, the CCT usually over-performs the UCT.

<sup>&</sup>lt;sup>16</sup>This is particularly true for the case of low-skilled jobs for which practices such as word of mouth or individual ties usually play a central role. About 40 percent of individuals in our sample work without a regular contract. For this typology of workers, the importance of networks is even more salient as official calls for these types of jobs are (obviously) unavailable.

likely than the CG to have an email account (column 1), to use WhatsApp (column 2) or Facebook (column 3). The effect for the UCT is statistically insignificant. The analysis of the number of Facebook contacts (column 4) reveals that, in line with the effect on the probability to have an account, the CCT has 21—imprecisely estimated—additional contacts with respect to the CG average of 69 contacts. The increase for the UCT amounts to eight contacts. The increase in the level of connections for treated families likely mirror an improved availability of information at family level. Both the CCT and the UCT seem to use internet to search information more frequently (column 5) than the CG, although the CCT effect almost double the UCT effect.<sup>17</sup>

#### 6 Conclusions

We analyze the effect on labor market outcomes and family economic conditions of a randomized controlled trial run in the Italian municipality of Turin and targeting low-income families with at least a dependent child. The intervention we designed allows to compare a CCT versus a UCT program. The CCT program conditioned the provision of the cash transfer on recipients' attendance of mentoring courses on job-seeking and work-family reconciliation. One year after random assignment to experimental groups, the CCT appears to be more effective than the cash transfer alone in (positively) affecting household members' labor market outcomes. The effect is visible and sizable for fathers in the sample and it is negligible for mothers. A positive CCT-effect also arises on outcomes proxying family economic conditions such as the capacity to collect some savings or to pay utility bills on time.

The difference in performance between the CCT and the UCT program suggests the importance of mentoring courses in shaping the treatment effects of the analysis. Our findings add to the growing evidence on the impact of CCTs versus UCTs and to the literature concerning multidimensional incentive programs. Future research should shed lights on the long-run persistence of the treatment effects shown in this study.

<sup>&</sup>lt;sup>17</sup>The CCT positive effect on family network shown in Panel (b) of Table 4 seems to outperform, i.e. larger point estimates, the pure income effect observed for the UCT. However, the *p*-values for the difference in treatment effect for the CCT versus the UCT is statistically significant only for the probability of having an email account.

#### References

- [1] Attanasio O., E. Battistin and A. Mesnard, 2012. "Food and Cash Transfers: Evidence from Colombia," *Economic Journal* 122 (559), 92–124.
- [2] Attanasio O., V. Oppedisano and M. Vera-Hernández, 2015. "Should Cash Transfers Be Conditional? Conditionality, Preventive Care, and Health Outcomes," *American Economic Journal: Applied Economics* 7 (2), 35–52.
- [3] Baez, J. E. and A. Camacho, 2011. "Assessing the Long-Term Effects of Conditional Cash Transfers on Human Capital: Evidence From Colombia," Policy Research working paper 5681. Washington, DC: World Bank.
- [4] Baird, S., F.H.G. Ferreira, B. Özler and M. Woolcock, 2014. "Conditional, Unconditional and Everything in Between: A Systematic Review of the Effects of Cash Transfer Programmes on Schooling Outcomes," *Journal of Development Effectiveness* 6 (1), 1–43.
- [5] Baird S., C. McIntosh and B. Özler, 2011. "Cash or Condition? Evidence From a Cash Transfer Experiment," Quarterly Journal of Economics 126 (4), 1709–1753.
- [6] Barham T., K. Macours and J. Maluccio, 2017. "Are Conditional Cash Transfers Fulfilling Their Promise? Schooling, Learning, and Earnings After 10 Years," CEPR Discussion Papers 11937.
- [7] Behrman J. R., J. Gallardo-García, S.W. Parker, P. E. Todd and V. Vélez-Grajales, 2012. "Are Conditional Cash Transfers Effective in Urban Areas? Evidence From Mexico," *Education Economics* 20 (3), 233–259.
- [8] Behrman J., S. W. Parker and P. E. Todd, 2011. "Do Conditional Cash Transfers for Schooling Generate Lasting Benefits? A Five-Year Follow-Up of PRO-GRESA/Oportunidades," *Journal of Human Resources* 46(1), 93–122.
- [9] Cunha F., I. Elo and J. Culhane, 2013. "Eliciting Maternal Expectations About the Technology of Cognitive Skill Formation" NBER Working Paper 19144.
- [10] Del Boca D., C. Flinn and M. Wiswall, 2016. "Transfers to Households with Children and Child Development," *Economic Journal* 126 (596), F136–F183.

- [11] Elango S., J. L. García, J. J. Heckman and A. Hojman, 2015. "Early Childhood Education," NBER Working Paper 21766.
- [12] Fernald L. C., 2013. "Promise, and Risks, of Conditional Cash Transfer Programmes," *Lancet* 382, 7–9.
- [13] Fiszbein A., and N. Schady, 2009. "Conditional Cash Transfers: Reducing Present and Future Poverty," Washington, DC: World Bank.
- [14] Gertler P., J. J. Heckman, R. Pinto, A. Zanolini, C. Vermeersch, S. Walker, S. M. Chang and S. Grantham-McGregor, 2013. "Labor Market Returns to Early Childhood Stimulation: A 20-Year Follow-Up to an Experimental Intervention in Jamaica," NBER Working Paper 19185.
- [15] Miller C., J. Riccio, N. Verma, S. Nuñez, N. Dechausay and E. Yang, 2015. "Testing a Conditional Cash Transfer Program in the U.S.: The Effects of the Family Rewards Program in New York City," IZA Journal of Labor Policy 4 (11).
- [16] OECD, 2009. "Is work the Best Antidote to Poverty?," OECD Employment Outlook 2009–Tackling the Jobs Crisis, 165–210.

#### **Tables**

Table 1: Balancing Tests Across Treatment Groups Pre- and Post-Participation

|                               | Pre-p | articip | ation | Post-       | particij | oation |
|-------------------------------|-------|---------|-------|-------------|----------|--------|
|                               | ССТ   | UCT     | CG    | CCT         | UCT      | CG     |
|                               | (1)   | (2)     | (3)   | (4)         | (5)      | (6)    |
|                               |       |         |       |             | 0.00     |        |
| In a couple                   | 0.70  | 0.67    | 0.68  | 0.70        | 0.68     | 0.68   |
| Age mother                    | 34.9  | 35.0    | 35.1  | 35.4        | 34.9     | 35.4   |
| Age father                    | 41.6  | 41.6    | 41.3  | 41.8        | 41.2     | 41.3   |
| No Italian citizenship mother | 0.71  | 0.73    | 0.70  | 0.75        | 0.74     | 0.71   |
| Number of children            | 2.12  | 2.15    | 2.09  | 2.05        | 2.12     | 2.08   |
| Age youngest child            | 2.91  | 3.01    | 2.94  | 2.89        | 3.16     | 2.94   |
| Secondary education mother    | 0.40  | 0.39    | 0.39  | 0.41        | 0.39     | 0.38   |
| Education in Italy mother     | 0.35  | 0.38    | 0.33  | 0.36        | 0.38     | 0.33   |
| Secondary education father    | 0.42  | 0.42    | 0.39  | 0.41        | 0.41     | 0.39   |
| Education in Italy father     | 0.25  | 0.30    | 0.30  | 0.24*       | 0.30     | 0.31   |
| In a couple, both work        | 0.01  | 0.01    | 0.01  | 0.01        | 0.01     | 0.01   |
| In a couple, one works        | 0.48  | 0.45    | 0.46  | 0.48        | 0.48     | 0.46   |
| In a couple, no one works     | 0.51  | 0.54    | 0.53  | 0.51        | 0.51     | 0.54   |
| Single parent works           | 0.01  | 0.04    | 0.16  | 0.31 $0.17$ | 0.01     | 0.04   |
| Family income (ISEE, in $€$ ) | 883   | 893     | 935   | 833         | 897      | 913    |
| Observations                  | 503   | 500     | 478   | 350         | 370      | 351    |

Notes: This table shows the average characteristics and the balancing tests across experimental groups. Columns (1)-(3) show the pre-participation analysis, namely right after the random assignment of families to groups. Columns (3)-(6) show the post-participation analysis, therefore only including those families filling the endline survey and part of the sample of the baseline analysis. CCT stands for the conditional cash transfer group, UCT stands for the unconditional cash transfer group, and CG stands for the control group. \*, \*\*\*, \*\*\* indicate statistical significance for difference in average values with respect to the CG at the 10%, 5%, and 1% levels, respectively. [\*], [\*\*\*] indicate statistical significance for difference in average values between the CCT group and the UCT group at the 10%, 5%, and 1% levels, respectively.

Table 2: The Effect of Different Forms of Cash Transfers on Parental Labor Supply

|  |                   |                     | Mother               |                 |                      |                         |                     | Father               |                 |                       |
|--|-------------------|---------------------|----------------------|-----------------|----------------------|-------------------------|---------------------|----------------------|-----------------|-----------------------|
| ,  | Work one hour (1) | Days<br>work<br>(2) | Hours<br>work<br>(3) | Hourly wage (4) | Regular contract (5) | Work<br>one hour<br>(6) | Days<br>work<br>(7) | Hours<br>work<br>(8) | Hourly wage (9) | Regular contract (10) |
| CCT                                      | -0.02 (0.03)      | -0.05 (0.15)        | 0.03 (0.77)          | -0.45 (1.53)    | -0.03                | 0.08**                  | 0.47** $(0.20)$     | 4.55*** (1.61)       | -1.05 (1.37)    | 0.05 $(0.04)$         |
| UCT                                      | -0.02 $(0.03)$    | -0.08 (0.14)        | 0.19 $(0.74)$        | -0.04 (2.31)    | 0.00 (0.03)          | 0.02 $(0.04)$           | 0.03 $(0.20)$       | 0.36 (1.38)          | 0.53 $(1.53)$   | 0.02 $(0.04)$         |
| Mean CG                                  | 0.30              | 1.10                | 4.48                 | 9.10            | 0.17                 | 0.56                    | 2.36                | 13.29                | 9.56            | 0.35                  |
| $p$ -value $(\beta_{CCT} - \beta_{UCT})$ | 0.94              | 0.79                | 0.84                 | 0.81            | 0.28                 | 0.09                    | 0.03                | 0.01                 | 0.26            | 0.37                  |
| Observations                             | 1,071             | 1,071               | 1,070                | 219             | 1,070                | 874                     | 874                 | 856                  | 268             | 850                   |

Notes: This table shows the effect of the intervention on parental labor market outcomes. Columns (1)-(5) show the analysis for mothers. Columns (6)-(10) show the analysis for fathers. Dependent variables: at least one hour worked in number of hours worked in the pre-interview week (columns 3 and 8), hourly wage (columns 4 and 9), employment with a regular contract (indicator, columns 5 and 10). CCT stands for the conditional cash transfer group, UCT stands for OLS. The CG is the reference category for the estimates. All models include control variables for family income, number of household members under age 18, and indicator variables for mother's Italian citizenship and completed secondary education. All models also include randomization group fixed effects. Standard errors are robust to heteroskedasticity the pre-interview week (indicator, columns 1 and 6), number of days worked in the pre-interview week (columns 2 and 7), the unconditional cash transfer group, and CG stands for the control group. Dependent variables are collected through an endline survey administered one year after assignment to the experimental groups. All models are estimated through and reported in parentheses. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 3: The Intervention Effect on Family Economic Conditions and Well-Being

|  | Savings (1)       | Arrears Bills (2)  | Internet<br>Home<br>(3) | Internet<br>Phone<br>(4) | Need<br>Financial<br>Help<br>(5) | Worried<br>Future<br>(6) |
|--|-------------------|--------------------|-------------------------|--------------------------|----------------------------------|--------------------------|
| CCT                                      | 0.07***<br>(0.02) | -0.08***<br>(0.03) | 0.10***<br>(0.04)       | 0.06*<br>(0.03)          | -0.08**<br>(0.04)                | -0.07**<br>(0.03)        |
| UCT                                      | $0.02 \\ (0.02)$  | -0.05*<br>(0.03)   | $0.02 \\ (0.04)$        | 0.02 $(0.03)$            | $0.06 \\ (0.04)$                 | -0.03<br>(0.03)          |
| Mean CG                                  | 0.08              | 0.89               | 0.33                    | 0.72                     | 0.57                             | 0.79                     |
| $p$ -value $(\beta_{CCT} - \beta_{UCT})$ | 0.09              | 0.33               | 0.03                    | 0.28                     | 0.00                             | 0.34                     |
| Observations                             | 1,064             | 1,068              | 1,067                   | 1,068                    | 1,064                            | 1,064                    |

Notes: This table shows the effect of the intervention on family economic conditions and well-being. Dependent variables: collection of some savings in the last year (column 1), arrears with payment of utility bills in the last year (column 2), having internet at home (column 3), having internet on the phone (column 4), need for financial help from people outside the household in the last year (column 5), being worried about the future (column 6). All outcome variables are expressed as indicator variables. CCT stands for the conditional cash transfer group, UCT stands for the unconditional cash transfer group, and CG stands for the control group. Dependent variables are collected through an endline survey administered one year after assignment to the experimental groups. All models are estimated through OLS. The CG is the reference category for the estimates. All models include control variables for family income, number of household members under age 18, and indicator variables for mother's Italian citizenship and completed secondary education. All models also include randomization group fixed effects. Standard errors are robust to heteroskedasticity and reported in parentheses. \*, \*\*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 4: Potential Mechanisms

Panel (a): Content of Courses and Job-Seeking

|  |                 |                          | Mother              |                        |                  |                  |                          | Father              |                        |                   |
|--|-----------------|--------------------------|---------------------|------------------------|------------------|------------------|--------------------------|---------------------|------------------------|-------------------|
|  | CV<br>(1)       | Italian<br>course<br>(2) | Computer course (3) | Prof.<br>course<br>(4) | Look for job (5) | CV<br>(6)        | Italian<br>course<br>(7) | Computer course (8) | Prof.<br>course<br>(9) | Look for job (10) |
| CCT                                      | 0.06*<br>(0.04) | 0.02<br>(0.03)           | 0.05**<br>(0.02)    | 0.00<br>(0.03)         | 0.00<br>(0.04)   | $0.05 \\ (0.04)$ | 0.06*<br>(0.03)          | 0.04**<br>(0.02)    | 0.05*<br>(0.03)        | -0.09**<br>(0.04) |
| UCT                                      | 0.01 $(0.04)$   | -0.01<br>(0.03)          | $0.01 \\ (0.02)$    | -0.02<br>(0.03)        | -0.03<br>(0.04)  | 0.03 $(0.04)$    | 0.04 $(0.03)$            | $0.02 \\ (0.02)$    | 0.02 $(0.03)$          | -0.07*<br>(0.04)  |
| Mean CG                                  | 0.64            | 0.23                     | 0.06                | 0.50                   | 0.55             | 0.72             | 0.13                     | 0.05                | 0.11                   | 0.70              |
| $p$ -value $(\beta_{CCT} - \beta_{UCT})$ | 0.15            | 0.33                     | 0.11                | 0.14                   | 0.40             | 0.48             | 0.54                     | 0.37                | 0.28                   | 0.64              |
| Observations                             | 1,065           | 1,068                    | 1,066               | 1,065                  | 1,071            | 874              | 854                      | 848                 | 846                    | 874               |

Panel (b): Family Network

|   | Email (1)        | Whats<br>App<br>(2) | Facebook (3)     | Nr. cont.<br>Facebook<br>(4) | Internet<br>for info<br>(5) |
|---|------------------|---------------------|------------------|------------------------------|-----------------------------|
| CCT   | 0.09**<br>(0.04) | 0.06*<br>(0.03)     | 0.09**<br>(0.04) | 21.14<br>(21.99)             | 0.11***<br>(0.03)           |
| UCT   | 0.02 $(0.04)$    | $0.05 \\ (0.03)$    | $0.05 \\ (0.04)$ | 7.95<br>(16.06)              | 0.06*<br>(0.03)             |
| Mean CG                                     | 0.48             | 0.79                | 0.46             | 69.25                        | 0.63                        |
| $p	ext{-value} \ (eta_{CCT} - \ eta_{UCT})$ | 0.07             | 0.70                | 0.38             | 0.53                         | 0.18                        |
| Observations                                | 1,063            | 1,066               | 1,071            | 974                          | 1,069                       |

Notes: This table shows the effect of the intervention on parental job-seeking practice (Panel a) and on family network (Panel b). In Panel (a), columns (1)-(5) show the analysis for mothers and columns (6)-(10) show the analysis for fathers. In Panel (a), the dependent variables: having a written CV (columns 1 and 6), attendance of courses of Italian language (columns 2 and 7), attendance of courses teaching informatics and computer skills (columns 3 and 8), attendance of professional courses (columns 4 and 9), active job-search initiatives (columns 5 and 10). All outcome variables are expressed as indicator variables. In Panel (b), the dependent variables are: availability an email account (indicator, column 1), use of WhatsApp (indicator, column 2), use of Facebook (indicator, column 3), number of Facebook contacts (column 4), use of internet in the last year to find information (indicator, column 5). In both panels, CCT stands for the conditional cash transfer group, UCT stands for the unconditional cash transfer group, and CG stands for the control group. Dependent variables are collected through an endline survey administered one year after assignment to the experimental groups. All models are estimated through OLS. The CG is the reference category for the estimates. All models include control variables for family income, number of household members under age 18, and indicator variables for mother's Italian citizenship and completed secondary education. All models also include randomization group fixed effects. Standard errors are robust to heteroskedasticity and reported in parentheses. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

#### Appendix: Additional Material

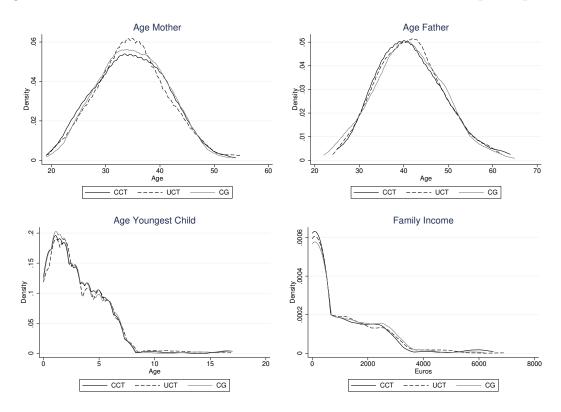
#### A.1 Additional Tables and Figures

Table A.1: Summary Statistics - The Initial Sample

|  | Mean (1)                                     | St. Dev. (2)                                 |
|--|--|--|
| In a couple Age mother Age father No Italian citizenship mother Number of children Age youngest child              | 0.69<br>35.0<br>41.5<br>0.71<br>2.12<br>2.96 | 0.46<br>6.87<br>7.78<br>0.45<br>1.11<br>2.51 |
| Secondary education mother<br>Education in Italy father<br>Secondary education mother<br>Education in Italy father | 0.39<br>0.35<br>0.41<br>0.28                 | 0.49<br>0.48<br>0.49<br>0.45                 |
| In a couple, both work In a couple, one works In a couple, no one works Single parent works                        | 0.01<br>0.47<br>0.53<br>0.14                 | 0.08<br>0.50<br>0.50<br>0.35                 |
| Family income (ISEE, in €) Observations  | 903<br>1                                     | 1,200<br>,481                                |

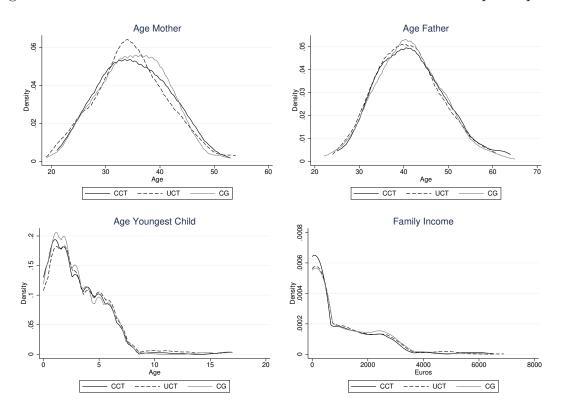
Notes: This table shows the summary statistics for the initial sample of this study.

Figure A.1: Additional Evidence on the Randomization Process - Pre-participation



Notes: This figure shows the pre-participation distribution of a set of observable baseline (pre-treatment) characteristics across experimental groups. The top-left panel shows the distribution of mother's age. The top-right panel shows the distribution of father's age. The bottom-left panel shows the distribution of age of youngest child in the household. The bottom-right panel shows the distribution of family income (ISEE, in €). All panels show on the y-axis the univariate Kernel density estimations. For each panel, the black solid line represents the distribution for the CCT, the black dashed line represents the distribution for the UCT, and the gray solid line represents the distribution for the CG. CCT stands for the conditional cash transfer group, UCT stands for the unconditional cash transfer group, and CG stands for the control group.

Figure A.2: Additional Evidence on the Randomization Process - Post-participation



Notes: This figure shows the post-participation distribution of a set of observable baseline (pretreatment) characteristics across experimental groups. The post-participation sample only includes those families filling the endline survey and part of the baseline analysis. The top-left panel shows the distribution of mother's age. The top-right panel shows the distribution of father's age. The bottom-left panel shows the distribution of age of youngest child in the household. The bottom-right panel shows the distribution of family income (ISEE, in  $\in$ ). All panels show on the y-axis the univariate Kernel density estimations. For each panel, the black solid line represents the distribution for the CCT, the black dashed line represents the distribution for the UCT, and the gray solid line represents the distribution for the CG. CCT stands for the conditional cash transfer group, UCT stands for the unconditional cash transfer group, and CG stands for the control group.

#### A.2 Robustness Analysis

In this appendix, we provide a set of robustness tests for our baseline results. We start with the analysis of selective attrition. Second, we test the robustness of our findings to a different choice in terms of standard errors. Finally, we study positive response bias to check whether families selected to receive the cash transfer or mentoring courses misreport socially desirable behaviors.

Selective Attrition. In order to preserve the validity of the random assignment, we would need the assignment to one specific experimental group not to affect the probability that a family fills the endline survey. We provide a dual test for selective attrition. First, in Table 1 (complemented by Figure A.2) in the text we compare baseline characteristics across the three experimental groups of families part of the final sample. Second, we implement here a formal regression analysis for selective attrition. Precisely, we estimate whether the assignment to a specific experimental group determines the probability to observe that a family fills the endline survey. Then we re-estimate our baseline models with inverse probability weighting to take into account possible selective attrition.

In Table A.2 we analyze the possible effect of a family's assignment to one specific experimental group on the probability to observe attrition. Under the assumption of absence of selective attrition, we should find that the (random) assignment to a specific experimental group does not predict attrition. We estimate four different specifications to test selective attrition. The dependent variable is an indicator that takes the value of one if the family is not part of the final sample. In columns (1) and (2), we estimate a logistic regression model. The specification in column (1) does not contain control variables, in column (2) we replicate the same model with the inclusion of baseline control variables measured at the time of application to the program. In columns (3) and (4), we perform the OLS estimates without and with control variables, respectively. The vector of control variables in columns (2) and (4) includes all the baseline characteristics that are available for all families in the sample, namely family income, being in a couple, the number of children in the household, the age of the youngest child in the household, mother's citizenship, education, and working status at time of application to the program. As about one third of mothers are single, we do not include father's characteristics as control variables.

The analysis in Table A.2 suggests that neither the assignment to the CCT, nor

Table A.2: Testing for Selective Attrition

|              | Inc             | licator fo     | or Attrit       | ion           |
|--------------|-----------------|----------------|-----------------|---------------|
|              | Logit (1)       | Logit (2)      | OLS (3)         | OLS<br>(4)    |
| CCT          | 0.19<br>(0.14)  | 0.16<br>(0.14) | 0.04 $(0.03)$   | 0.03 $(0.03)$ |
| UCT          | -0.03<br>(0.15) | 0.00           | -0.01<br>(0.03) |               |
| Controls     | No              | Yes            | No              | Yes           |
| Observations | 1,481           | 1,455          | 1,481           | 1,455         |

Notes: This table shows the estimates for the effect on attrition of the assignment to a specific treatment condition. Dependent variable: indicator for attrition. Columns (1) and (2) report the estimates of a logistic regression model. Columns (3) and (4) report the OLS estimates. Models in columns (1) and (3) do not include control variables. Models in columns (2) and (4) include baseline control variables for family income, twoparent household, number of household members under age 18, the age of the youngest child in the household, mother's Italian citizenship, education, and working status. CCT stands for the conditional cash transfer group, UCT stands for the unconditional cash transfer group, and CG stands for the control group. The CG is the reference category for the estimates. Standard errors are robust to heteroskedasticity and reported in parentheses. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

the assignment to the UCT explain statistically significant changes in the probability to take part in the final survey. If anything, the CCT group seems marginally more likely (+3 percentage points) than the CG to make attrition. This effect is statistically insignificant.

Table A.3: Inverse Probability Weighting - Parental Labor Supply

|  |                   |                     | Mother               |                 |                      |                         |                     | Father               |                 |                       |
|--|-------------------|---------------------|----------------------|-----------------|----------------------|-------------------------|---------------------|----------------------|-----------------|-----------------------|
| ,  | Work one hour (1) | Days<br>work<br>(2) | Hours<br>work<br>(3) | Hourly wage (4) | Regular contract (5) | Work<br>one hour<br>(6) | Days<br>work<br>(7) | Hours<br>work<br>(8) | Hourly wage (9) | Regular contract (10) |
| CCT                                      | -0.02 (0.03)      | -0.07 (0.15)        | -0.15 $(0.76)$       | -0.55 (1.56)    | -0.03 $(0.03)$       | 0.08**                  | 0.48** $(0.20)$     | 4.53*** (1.63)       | -0.88 (1.33)    | 0.05 $(0.04)$         |
| UCT                                      | -0.02 $(0.03)$    | -0.09 (0.14)        | 0.16 $(0.75)$        | -0.00 (2.46)    | -0.00 $(0.03)$       | 0.02 $(0.04)$           | 0.04 $(0.20)$       | 0.48 $(1.39)$        | 0.66 (1.51)     | 0.02 $(0.04)$         |
| Mean CG                                  | 0.31              | 1.10                | 4.51                 | 9.13            | 0.17                 | 0.56                    | 2.37                | 13.34                | 9.56            | 0.35                  |
| $p$ -value $(\beta_{CCT} - \beta_{UCT})$ | 0.95              | 0.89                | 0.71                 | 0.77            | 0.31                 | 0.13                    | 0.03                | 0.01                 | 0.27            | 0.44                  |
| Observations                             | 1,051             | 1,051               | 1,050                | 214             | 1,050                | 898                     | 898                 | 851                  | 268             | 845                   |

are collected through an endline survey administered one year after assignment to the experimental groups. All models weighting. Each observation is weighted with weights obtained through the model in column (2) of Table A.2. Columns (1)-(5) show the analysis for mothers. Columns (6)-(10) show the analysis for fathers. Dependent variables: at least one hour worked in the pre-interview week (indicator, columns 1 and 6), number of days worked in the pre-interview week group, UCT stands for the unconditional cash transfer group, and CG stands for the control group. Dependent variables are estimated through OLS. The CG is the reference category for the estimates. All models include control variables for Notes: This table shows the effect of the intervention on parental labor market outcomes with inverse probability (columns 2 and 7), number of hours worked in the pre-interview week (columns 3 and 8), hourly wage (columns 4 and 9), employment with a regular contract (indicator, columns 5 and 10). Columns (5) and (10) only include mothers (fathers) with fathers (mothers) who worked less than 20 hours in the previous week. CCT stands for the conditional cash transfer family income, number of household members under age 18, and indicator variables for mother's Italian citizenship and completed secondary education. All models also include randomization group fixed effects. Standard errors are robust to heteroskedasticity and reported in parentheses. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table A.4: Inverse Probability Weighting - Economic Conditions and Well-Being

|  | Savings (1)       | Arrears Bills (2)  | Internet<br>Home<br>(3) | Internet<br>Phone<br>(4) | Need<br>Financial<br>Help<br>(5) | Worried<br>Future<br>(6) |
|--|-------------------|--------------------|-------------------------|--------------------------|----------------------------------|--------------------------|
| CCT                                      | 0.07***<br>(0.02) | -0.08***<br>(0.03) | 0.10***<br>(0.04)       | 0.05 $(0.03)$            | -0.08**<br>(0.04)                | -0.06*<br>(0.03)         |
| UCT                                      | 0.02 $(0.02)$     | -0.05*<br>(0.03)   | 0.02 $(0.04)$           | 0.02<br>(0.03)           | 0.06 $(0.04)$                    | -0.03<br>(0.03)          |
| Mean CG                                  | 0.08              | 0.89               | 0.33                    | 0.72                     | 0.57                             | 0.79                     |
| $p$ -value $(\beta_{CCT} - \beta_{UCT})$ | 0.08              | 0.32               | 0.03                    | 0.34                     | 0.00                             | 0.45                     |
| Observations                             | 1,045             | 1,049              | 1,048                   | 1,049                    | 1,045                            | 1,045                    |

Notes: This table shows the effect of the intervention on family economic conditions and wellbeing with inverse probability weighting. Each observation is weighted with weights obtained through the model in column (2) of Table A.2. Dependent variables: collection of some savings in the last year (column 1), arrears with payment of utility bills in the last year (column 2), having internet at home (column 3), having internet on the phone (column 4), need for financial help from people outside the household in the last year (column 5), being worried about the future (column 6). All outcome variables are expressed as indicator variables. CCT stands for the conditional cash transfer group, UCT stands for the unconditional cash transfer group, and CG stands for the control group. Dependent variables are collected through an endline survey administered one year after assignment to the experimental groups. All models are estimated through OLS. The CG is the reference category for the estimates. All models include control variables for family income, number of household members under age 18, and indicator variables for mother's Italian citizenship and completed secondary education. All models also include randomization group fixed effects. Standard errors are robust to heteroskedasticity and reported in parentheses. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

To further test possible selective attrition, we replicate the baseline results of Tables 2 and 3 of the text through inverse probability weighting. For our initial sample, we predict the individual probability to be part of the final sample based on the model in column (2) of Table A.2. Then, we weight each observation in the sample by the inverse of the predicted probability to be observed in the final sample. Tables A.3 and A.4 report the analysis and highlight that any significant difference is observed when baseline

estimates are compared with estimates obtained through inverse probability weighting.

Alternative Standard Errors. We test in this section the robustness of the results to the use of alternative standard errors. In the paper, we use heteroskedastic standard errors. We take into account here the rolling basis nature of the application process to the cash transfer program we analyze. The rolling basis application process might indeed induce error correlation between families applying at the same time of the year and, therefore, part of the same randomization group. To test this possibility, we reestimate the baseline analysis of household members' labor supply in Table 2 of the paper by using standard errors clustered at the randomization group level. There are 16 randomization groups in our sample. The analysis is reported in Table A.5 and shows that results are unaffected by the use of clustered at the randomization group level standard errors.

Table A.5: Baseline Estimates with Clustered Standard Errors

| ,            |                   |                  | Mother            |                 |                            |                   |                     | Father               |                 |                       |
|--------------|-------------------|------------------|-------------------|-----------------|----------------------------|-------------------|---------------------|----------------------|-----------------|-----------------------|
|              | Work one hour (1) | Days<br>work (2) | Hours<br>work (3) | Hourly wage (4) | Regular<br>contract<br>(5) | Work one hour (6) | Days<br>work<br>(7) | Hours<br>work<br>(8) | Hourly wage (9) | Regular contract (10) |
| CCT          | -0.02 (0.04)      | -0.05 (0.19)     | 0.03 (0.93)       | -0.45 (1.42)    | -0.03 $(0.04)$             | 0.08**            | 0.47** $(0.18)$     | 4.55*** (1.43)       | -1.05 (1.38)    | 0.05 $(0.04)$         |
| UCT          | -0.02 (0.02)      | -0.08 (0.14)     | 0.19              | -0.04 (2.25)    | 0.00 (0.03)                | 0.02 $(0.05)$     | 0.03 $(0.23)$       | 0.36 (1.16)          | 0.53 $(1.50)$   | 0.02 $(0.04)$         |
| Observations | 1,071             | 1,071            | 1,070             | 219             | 1,070                      | 874               | 874                 | 856                  | 268             | 850                   |

Notes: This table shows the robustness of the intervention effect on parental labor market outcomes to the use of alternative standard errors. The table replicates the analysis in Table 2 in the main text. Standard errors are clustered at the randomization group level and reported in parentheses. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Social Desirability and Positive Response Bias. Families selected to receive the cash transfer or mentoring courses may be inclined to misreport socially desirable behaviors. This threat might be particularly relevant for individuals assigned to the CCT group who attended courses that mentored them about good practices to succeed in the labor market or to conciliate work and family duties.

We run two sets of tests for positive response bias. First, we test a set of outcomes not covered by mentoring courses. These outcomes help with the understanding of whether individuals treated with the cash transfer tend to overreport virtuous behaviors compared to the CG. Second, we exploit a set of questions in our endline survey on highly desirable behaviors that were related and particularly highlighted by the material covered by courses. The CCT might be particularly inclined to overreport these behaviors as a result of courses' attendance. For both sets of tests, in presence of positive response bias, we might expect to find positive treatment effects of the intervention for all (or some) outcomes with socially desirable connotation. On the contrary, the absence of treatment effect would suggest that treated families in the CCT and the UCT do not tend to overreport behavior if the behavior can be considered as socially desirable. Table A.6 shows the analysis.

Columns (1)-(3) of Table A.6 investigate the treatment effect of the intervention on behaviors not directly covered by mentoring courses. We analyze participation at municipal events in the last year (column 1), child's friends visits at home in the pre-interview month (column 2), and child visits at friend's home in the pre-interview month (column 3). All outcomes are expressed as indicator variables. We estimate linear probability models with standard errors robust to heteroskedasticity. All the outcomes investigated in columns (1)-(3) may be defined as highly socially desirable: they relate to family involvement in the surrounding social environment and some of these activities, e.g. meeting friends, are potential ways for mothers to conciliate work and family duties. However, these topics were not directly covered by mentoring courses. None of the investigated outcomes is significantly affected by the intervention. The CCT and the UCT perform similarly and their performance align with the one of the CG. The absence of treatment effect suggests that survey respondents are unlikely to be biased in their responses by the degree of social desirability of behaviors not directly covered by mentoring courses.

Table A.6: Testing Positive Response Bias

|  | Topics no            | t covered                     | Topics not covered by courses | To                | Topics covered by courses | ed by com                | ses.              |
|--|----------------------|-------------------------------|-------------------------------|-------------------|---------------------------|--------------------------|-------------------|
|  | Municipal events (1) | Child's . friends at home (2) | Child at friend's home (3)    | Read to child (4) | Activities open-air. (5)  | Visits<br>museums<br>(6) | Shopping list (7) |
| CCT                                      | 0.03 (0.03)          | -0.03                         | $0.05 \\ (0.04)$              | 0.02 (0.03)       | 0.01 $(0.02)$             | 0.03                     | -0.01 (0.04)      |
| UCT                                      | 0.01 (0.03)          | -0.02 (0.04)                  | 0.04 $(0.04)$                 | 0.01 (0.03)       | 0.03 $(0.02)$             | 0.05 (0.03)              | 0.00 (0.04)       |
| Mean CG                                  | 0.24                 | 0.54                          | 09.0                          | 0.71              | 0.91                      | 0.28                     | 0.50              |
| $p$ -value $(\beta_{CCT} - \beta_{UCT})$ | 0.49                 | 0.79                          | 0.73                          | 0.64              | 0.38                      | 0.63                     | 0.69              |
| Observations                             | 1,060                | 925                           | 847                           | 1,066             | 1,066                     | 1,065                    | 1,069             |

1)-(3) show the analysis of outcomes related with topics not covered by courses. Columns (4)-(7) show the analysis UCT stands for the unconditional cash transfer group, and CG stands for the control group. Dependent variables Notes: This table shows the effect of the intervention on outcomes characterized by social desirability. Columns of outcomes related with topics covered by courses. Dependent variables: participation at municipal events in the last year (column 1), child's friends visits at home in the pre-interview month (column 2), child visits at friend's home in the pre-interview month (column 3), reading to the child in the pre-interview week (column 4), open-air activities in the pre-interview month (column 5), visits to museums in the last year (column 6), use of a shopping list (column are collected through an endline survey administered one year after assignment to the experimental groups. The CG is the reference category for the estimates. All models include control variables for family income, number of household members under age 18, and indicator variables for mother's Italian citizenship and completed secondary education. All models also include randomization group fixed effects. Standard errors are robust to heteroskedasticity 7). All outcome variables are expressed as indicator variables. CCT stands for the conditional cash transfer group, and reported in parentheses. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively. Columns (4)-(7) of Table A.6 focus the analysis on desirable outcomes related with topics directly covered by mentoring courses attended by CCT families. The dependent variables are reading to the child in the pre-interview week (column 4), open-air activities in the pre-interview month (column 5), visits to museums in the last year (column 6), and use of a shopping list (column 7). These behaviors might be classified as socially desirable and, at the same time, they were highlighted during mentoring courses as important tools to improve the parent-child relation, especially for working parents, or family economic and financial conditions. None of the outcomes is affected by the intervention. In particular, the CCT group, that was exposed to mentoring courses emphasizing the importance of these behaviors, does not report any increase with respect to the CG. This analysis reassures that the CCT seems unlikely to over-report socially desirable behavior just because these behaviors were covered by the mentoring courses they had to attend.