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B·MINCOME

Barcelona city council welfare programme: Impact evaluation results

BMINCOME PROJECT

D 7.1.3 Final report: Impact evaluation of GMI on household outcomes

December 2019

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Ajuntament de Barcelona

EUROPEAN UNION
European Regional Development Fund

UIA URBAN INNOVATIVE ACTIONS

Acknowledgments

This report would not have been possible without the collaboration and work of several people and institutions.

Lluis Torrens, Pep Villarreal, and Laia Ortiz from Barcelona City Council's Area of Social Rights.

The institutions that provided data for the analysis; Fundació Jordi Gol, Consorci d'Educacio de Barcelona, Consorci d'Habitatge de Barcelona, Agència de l'Habitatge de Catalunya and Institut Municipal d'Educació de Barcelona.

The rest of the BMincome project's partners: The Young Foundation, Novact (International Institute for Non-violent Action), IGOP-UAB (Institute of Government and Public Policies at the Autonomous University of Barcelona) and UPC (Polytechnic University of Catalonia) and Daleph.

Thanks to Carles Ariza, Vanessa Puig, Xavier Bartoll, Davide Malmusi, Jaume Garcia, Xavier Ramos, Jurgen de Vispelare, Evelyn Forget.

We would like to thank Timo Verlat, Anna Segura, Rocio Baeza and Laura Kirchner for their research support.

Special thanks to Lluís Batlle and Albert Julià from Barcelona's city council for being incredible efficient with the collection of data. None of the work here would have been possible without their effort.

In memory of Fernando Barreiro

Executive Summary

Components of the BMincome pilot project

The welfare program is requested by and granted to individual persons according to the situation of their household. Other members of the household are joint beneficiaries. Only one person per household can request the program.

The two key components of the program are the municipal income support benefit (SMI) and a variety of socio-occupational activation policies.

The SMI is a monthly household-based means-tested benefit. The amount of the benefit depends on the household's monthly income and its basic needs, whereby the latter was calculated using a fixed formula that considers household size and composition.

The program includes four activation policies: training and employment, social entrepreneurship, room rental promotion and community participation promotion.

The project has four different modalities which concern the conditionality of the SMI benefit (conditional, unconditional) and the withdrawal rate of the benefit (full, partial)

Target population

The target population of the program is families at-risk of socioeconomic exclusion. Participation in the project was voluntary. To apply for the program, families had to fulfil some requirements:

- Official residence in one of the 10 neighbourhoods of the Besòs area of Barcelona
- Living in the city for at least two years
- At least one family member must be between 25 and 60 years old
- Family's wealth, aside from their primary residence, should not exceed 4 times the maximum annual transfer of the project. Income of the family pre start of the project had to be below the threshold of transfer
- Family's annual income in 2017 should be below the annual cost of the family's basic needs
- Active users of social services, beneficiaries of the 'Ajuts 0-16' or beneficiaries from the Làbora program.

Non take-up

Out of the applying households, 1,524 were found to be eligible to participate. Taking into consideration the entire population eligible to apply for the program, the analyses suggest that there are some differences between applicants and non-applicants. First, other things equal, the higher the

marginal gain from entering the welfare program, the higher the likelihood to apply for it. This means a part of those that did not applied are people that were not interested in the program. Second, other things equal, those that are unfamiliar with this type of program have a lower chance of applying. That is, for households of similar needs, previous experience in participating in a municipal subsidy programs, influence the take-up rate.

Randomized impact evaluation design

1,000 families were chosen from the 1,524 applicants using a stratified lottery. Table ES1 shows the number of spots in the different modalities of the program.

Table ES1 - Number of spots by modality of the program

	Partial Withdrawal (unlimited)	Full Withdrawal (limited)
Conditional with active policy	137	-
Unconditional with active policy	275	138
Unconditional without active policy	250	200

Table ES2 shows the number of places per stratum as well as the percentage of the total places available.

Table ES2 – Number of available places per stratum

	Stratum	Expected transfer	Employable	Housing policy	# HH	% HH
1	high / employable	high	yes	-	274	16.2
2	high / non-employable	high	no	-	81	5.3
3	medium / employable	medium	yes	-	382	25.1
4	medium / non-employable	medium	no	-	165	10.8
5	low / employable	low	yes	-	420	27.6
6	low / non-employable	low	no	-	166	10.9
7	room rent policy	-	-	eligible	36	2.4

Main results: implementation

Families in the treatment group received a monthly average of 463 euros. Out of the 1000 initial families assigned to the treatment group, 83.6% received at least one payment from the program (84.7% if we include related programs). Out of those that received a positive transfer at the beginning of the program, 12.5% have generated enough private resources to cover their basic needs. Overall, 60.5% received a lower transfer at the end than at the beginning.

Participation in the different policies exhibit certain variability. Training and Employment has the highest participation rate, and there is no difference between the conditional or unconditional modality. Instead, social entrepreneurship was not perceived as useful as the previous and participation rate in the conditional group is significantly higher than in the unconditional one. Finally, in the case of rental room promotion the analysis is meaningless due to the problems in the implementation.

Main results: impact evaluation

BMincome is effective in increasing wellbeing, reducing severe material deprivation, reducing food insecurity, residential exclusion and increasing quality of sleep, as well as some aspects of the financial situation of the family and the perceived economic situation. It also improves the total perceived support, although that last results seems valid only for those that did the community participation promotion policy. These results do not translate into better health outcomes.

Beneficiaries reduce labor participation and the quality of the labor participation is also negatively affected.

Finally, some positive effects are found in education and training.

Table ES3 – Estimated effect of BMincome for the Treatment group

	Estimated effect
Satisfaction with life	0.146***
Severe material deprivation	-0.08**
Going to bed hungry scale	-0.130**
Food insecurity scale	-0.213**
Falling behind arrears	-0.168*
Labour participation	-0.130***
Quality of labor participation	-0.044*
Social leisure	0.049
Risk of mental disorder	-0.019
Quality of sleep	0.066*
New diagnostics of depression or anxiety	0.006
Painkillers prescription	0.043*
Satisfaction with economic situation scale	1.075***
Borrowing from family or friends	-0.071**
Outstanding debt	-0.044*
Discretionary transfer from social services	-0.130***

* denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Robustness analysis do not show significant changes in the results.

I. Introduction

BMincome is an innovative pilot project that aims to directly invest in people while seeking to improve their immediate surroundings. The project targets poverty and inequality in Barcelona and aims at improving households' socioeconomic situation and at increasing their economic independence through a new municipal welfare program. It combines economic support with four types of active social and workplace inclusion policies: training and employment, social economy, help in renting out rooms and fostering community participation.

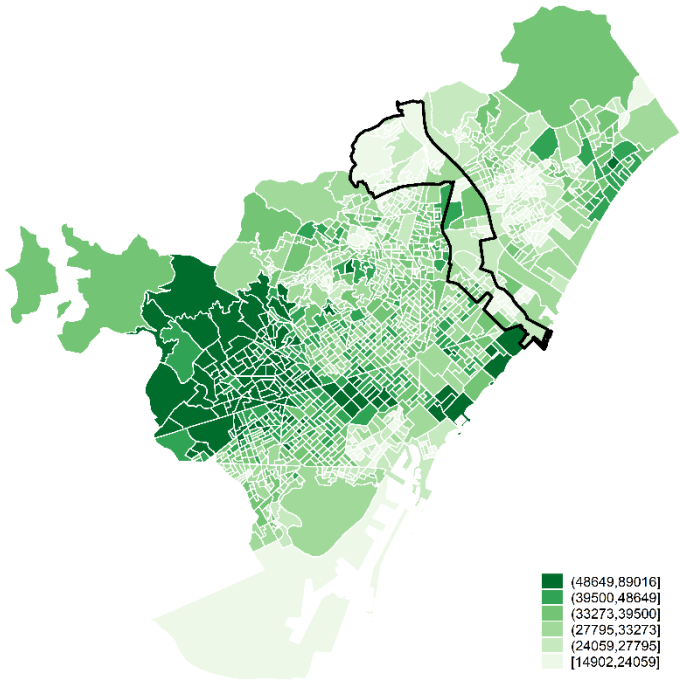
The pilot project is led by Barcelona City Council's Area of Social Rights and jointly funded by the European Union's Urban Innovative Actions program.

The name BMincome refers to another experience, namely Mincome, a well-known guaranteed-income project carried out at the end of the 1970s in Manitoba, Canada. The idea was to assess the social impact of a guaranteed, unconditional annual income.
The project's partners, which collaborate in the design and implementation of the program and are responsible for its evaluation, are The Young Foundation, Novact (International Institute for Non-violent Action), Ivàlua (Catalan Institute of Public Policy Evaluation), the IGOP-UAB (Institute of Government and Public Policies at the Autonomous University of Barcelona) and the UPC (Polytechnic University of Catalonia).
Among the project goals, i) test the contribution of a cash transfer in ensuring an increase in decision-making capacity, therefore helping them to develop their own strategies for escaping poverty and dependence on public or private resources to cover their basic needs, ii) create an innovative ecosystem of public policies to do away with the paternalistic and assistance-oriented perspective of most prevailing social policies. A key element here is the integration of various services and public policies linked to the fight against poverty and social exclusion in the area, and iii) analyse the effect of the combination of a cash transfer with various active policies.

The project targets ten of the most economically deprived neighbourhoods within Barcelona's Eix Besòs area including Ciutat Meridiana, Vallbona, Torre Baró, Roquetes, and Trinitat Nova (district of Nou Barris); Trinitat Vella, Baró de Viver, and Bon Pastor (district of Sant Andreu); and Verneda-La Pau and Besòs-Maresme (district of Sant Martí). The target area comprises around 7% of Barcelona's total population.

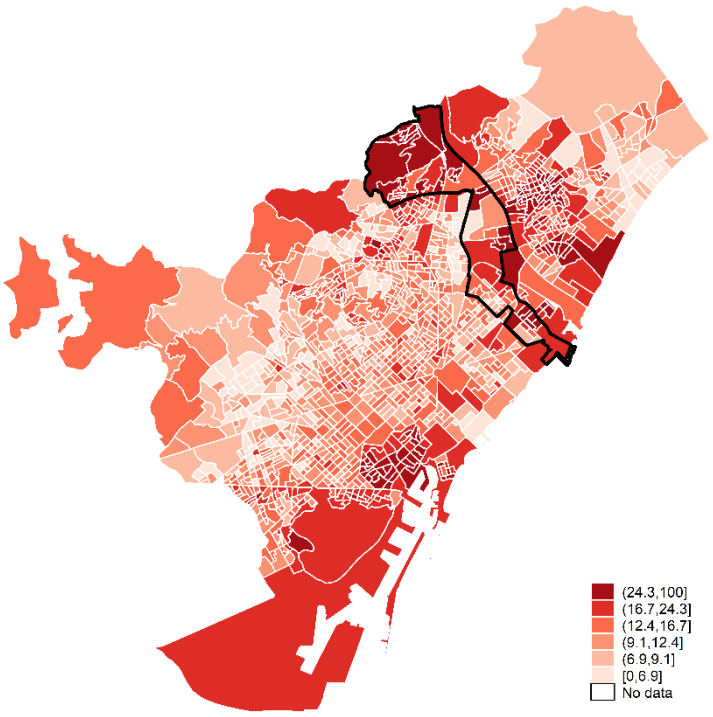
Figure 1 and Figure 2 display a map at the census level of Barcelona and the nearby cities of Badalona, Sant Adrià del Besòs and Santa Coloma de Gramanet. Figure 1 shows the annual family mean income of 2016. Figure 2 shows the proportion of families with an annual income below 5,000 euros in 2016. The area highlighted in black corresponds to the ten neighborhoods targeted by the project. We can see from both figures that the targeted area is among the poorest, not just of Barcelona but also of the metropolitan area.

FIGURE 1 – Mean family annual income as of 2016



Source: Own preparation based on INE Estadística Experimental (https://www.ine.es/experimental/experimental.htm)

Figure 2 – Proportion of families with an equivalent income below 5000 euros per year.



Source: Own preparation based on INE Estadística Experimental (https://www.ine.es/experimental/experimental.htm)

The objectives of this report are to present the results of the impact evaluation and inform Barcelona's city council on the effectiveness of the pilot project such that it can make decisions regarding it.

The report is structured as follows. In section II we describe the program and its modalities. In section III we explain what impact evaluation means and we explain the methodology used in this evaluation. In section IV we analyse the baseline situation of the BMincome participants and the particularities of the of the program implementation. In section V we present the results of the impact evaluation analysis. In section VI we present the conclusions of the analysis and some recommendations.

II. Components of the BMincome pilot project

In this section we explain the main components of the BMincome pilot project, its different configurations, the target population and its recruiting.

a. Components

The two key components of the program are the municipal income support benefit and a variety of socio-occupational activation policies.

- The municipal inclusion support benefit (Suport Municipal d'Inclusió), SMI, is a monthly household-based means-tested benefit. The amount of the benefit depends on two factors. Those are a household's monthly income and

its basic needs, whereby the latter was calculated using a fixed formula that considers household size and composition.

A household's monthly basic needs were calculated as the sum of its needs for living (excluding housing but including energy and water supply) and its needs for housing. Needs for living are calculated using a fixed value per person living in the household per month. The formula for basic needs assigned 402.6 euros for the first adult and 148 euros for every other member. Needs for housing were calculated as the minimum between the actual monthly housing costs (including rent, mortgage payments, community expenses and property tax) and a fixed formula that assigned 260 euros for the first household member, 110 for the second household member and 40 euros for every additional household member.

A household's monthly income is calculated as the sum of the incomes of all households' members in that month, including labour income, income received from returns on capital or property investment, capital gains and income from economic activities. If the sum is negative, then household's income is regarded as zero.

The monthly amount of the benefit is the difference between household's basic needs and income, and it may vary between a minimum of 0 euros (for those that have a monthly income from other sources equal or above household's monthly needs) and a maximum of 1,676 euros per month (twice the 2016 at-risk-of-poverty threshold in Catalonia). If a family getting zero euros from the program would see its income reduced such that the difference is positive again, then the transfer would be active again. The situation of the household is reviewed on a quarterly basis. Over or underpayments are settled in the following quarter in equal parts. From September 2018 onwards, 25% of the monthly transfer was paid out in a local digital currency called REC, which could be used to pay in various shops in the targeted area.

- The program included four activation policies targeted at training and employment, social entrepreneurship, promoting room rental and promoting community participation.

1. Training and employment: Accredited training intervention and municipal employment plan for unemployed participants in working age. The activities are coordinated by Barcelona Activa and take twelve months including occupational training, employment and follow-up.
2. Social entrepreneurship: Training in which participants initiate or take part in social economy and community-interest projects.

3. Room rental promotion: Housing renovation intervention for property-owning households. The policy aims at enabling households to rent out rooms on a commercial basis and thereby improve their income situation.
4. Community participation promotion: Intervention that aims at promoting participation in community activities, collective projects or projects of common interest.

The welfare program is requested by and granted to individual persons according to the situation of their household. Other members of the household are joint beneficiaries. Only one person per household can request the program.

The project had four different modalities which concern the conditionality of the SMI benefit (conditional, unconditional) and the withdrawal rate of the benefit (full, partial):
i. Conditional: Receipt of the SMI benefit is conditional on participating in the assigned activation policy.
ii. Unconditional: The SMI benefit is received regardless of participation in the assigned activation policy. However, participants that refrain from the policy are prevented from re-entering.
iii. Full withdrawal: Increases in household income from private sources reduce the amount of the monthly SMI benefit by the same amount up to a point where no SMI benefit is received. This modality is equivalent to a 100% tax on extra income up to the point where extra income equals the amount of the benefit.
iv. Partial withdrawal: Increases in household income only partially reduce the amount of the monthly SMI benefit. Specifically, extra income up to 250 euros per month reduces the benefit by 25% of that income, and extra income above 250 euros per month reduces the benefit by 35% of that income. This modality is equivalent to a 25% (35%) tax on extra income to the point where extra income equals four (ca. three) times the amount of the benefit.

b. Target population and recruiting

The target population of the program is families at-risk of socioeconomic exclusion. Participation in the project was voluntary. To apply for the program, families had to fulfil some requirements. Among them:

- Official residence in one of the 10 neighbourhoods of the Besòs area of the city
- Living in the city for at least two years
- At least one family member must be between 25 and 60 years old

- Family's wealth, aside from their primary residence, should not exceed 4 times the maximum annual transfer of the project.
- Family's annual income in 2017 should be below the annual cost of the family's basic needs.
- Due to legal reasons, only applications from families that were active users of social services could be considered. Therefore, households had to be a current beneficiary of Barcelona's municipal social services, which means having an open Social Service file, having received the 0-16 municipal benefit for low income families with children between 0 and 16 years of age or having taken part in the Làbora program in the previous 12 months[1].

In order to reach and inform as many families as possible among the target population, using administrative records the city council identified all the families living in one of the 10 possible neighborhoods that were active users of social services. That list included approximately 4,305 households[2].

Then, they sent letters to all those families[3] and organised up to 400 informative sessions to explain the project to them. Eventually, a total of 2,339 households applied to participate in the program, although after an in-depth audit, only 1,524 were found to be eligible to participate.

Of those eligible households, in a woman is the main recipient 72.7%, the average age of the main recipient is 41.1 years, 43.5% was born in Spain and 47.5% have not completed secondary education or more and 68% have kids of 16 years or less. The average rent in 2017 was 11,323 euros.

c. Assignment of applicants to the program using an RCT design

As it was stated in the application form to the UIA, Barcelona's city council had the firm intention of designing the pilot project in a way that it would be feasible to evaluate whether it has reached its goals.

Indeed, the pilot project includes an impact evaluation (effectiveness) and an economic evaluation (efficiency)[4]. Given the expected excess demand in the number of applications, from the very beginning the methodology

[1] Municipal employment program, also referred to as 'Barcelona Reserved Job Market
[2] As we will see later, the valid number of households was actually lower
[3] In some cases, they sent more than one letter to the same family as in same cases it was hard to know whether two different people were members of the same family
[4] The project included other type of analysis such as the ethnographic research done by the Young Foundation

chosen to do the impact evaluation analysis was a randomized impact evaluation (randomised control trial methodology). That is, households would be randomly assigned to the control group (or status quo) or the different treatment arms that represented the different configurations of the program.

The lottery was held on the 17th of November of 2017 and the results were communicated by sms and posted on the city council's website[5]. The first transfer of the SMI was made in December 2017, which continued until the last month of the pilot project, October 2019[6].

Table 1 and Table 2 show distribution of the available places in the program according to the initial set up of the program[7].

Table 1 – Initial distribution of the available spots by configuration of the program

Activation Policy	Withdrawal	Conditionality	Number
No activation policy	Partial withdrawal	Unconditional	250
No activation policy	Full withdrawal	Unconditional	200
Training and employment	Partial withdrawal	Unconditional	75
Training and employment	Partial withdrawal	Conditional	75
Social entrepreneurship	Partial withdrawal	Unconditional	50
Social entrepreneurship	Partial withdrawal	Conditional	50
Room rental promotion	Partial withdrawal	Unconditional	12
Room rental promotion	Partial withdrawal	Conditional	12
Community participation promotion	Partial withdrawal	Unconditional	138
Community participation promotion	Full withdrawal	Unconditional	138
Total			**1,000**

Table 2 – Number of spots by modality of the program

	Partial Withdrawal (unlimited)	Full Withdrawal (limited)
Conditional with active policy	137	-
Unconditional with active policy	275	138
Unconditional without active policy	250	200

The only category not covered in the project is full withdrawal cash transfer conditional on the activation policy. At the time of the set-up of the project, this category represented the status quo, as both the unemployment

[5] To provide more transparency, the lottery was supervised by a notary
[6] This date has been preestablished in the Bulletí Oficial de la Província de Barcelona of the 10th of August 2017
[7] Power analysis estimation of the experiment is in the appendix

insurance and the 'Renda Mínimina de Inserció' (RMI) of the Generalitat de Catalunya were conditional with full withdrawal.

III. Impact evaluation methodology[8]

In this section we explain the methodology used to analyse the effectiveness of the project: impact evaluation. First, we develop the main components of an impact evaluation and we concentrate on the randomized impact evaluation method and the statistical analysis that is derived from it. Second, we explain how the lottery was carried out and we highlight some issues with the aftermath of the lottery. Finally, we indicate what are the outcomes indicators that will be used in the analysis and the different data sources.

a. Main elements of an impact evaluation

According to Gertler et al (2011) impact evaluations "seeks to answer cause-and-effect questions" and should be structured to answer questions such as what the effect of an intervention on a certain outcome is. In that sense, impact evaluations are interested in separating those changes that are a (direct) consequence of the intervention. Therefore, the key to an impact evaluation is the focus on causality and causal attribution: we want to know the difference between what we observed with the intervention and what we would have observed without it.

While we often formulate causal questions, answering them can be quite challenging. Let's think of an intervention that trains unemployed people to improve their employability. If we want to know whether the intervention is effective in raising earnings, it is not enough to observe the income of participants six month after participation in the program in order to answer whether the intervention has any effect on earnings. There are other things that can also have affected the earnings of the participants. For instance, it could be that the program was contemporary to an economic expansion that increased wages significantly.

Formally, we want to know the effect of an intervention P over the outcome Y for a certain individual i. To do that, we should calculate the following difference:

Equation 1

$$\beta_{Pi} = (Y_{1i} \mid P_i = 1) - (Y_{1i} \mid P_i = 0)$$

According to equation 1, the causal effect of an intervention P over the outcome Y for a particular individual i is the difference between the value of the outcome when the individual receives the intervention $(Y_{1i} \mid P_i = 1)$ and

[8] This part is adapted from Todeschini and Kirchner (2018)

the value of the outcome had the person that received the intervention not received it ($Y_{1i} \mid P_i = 0$).

Imagine that the intervention is a cash transfer and that we want to see if receiving this cash transfer reduces the level of stress and anxiety. In that case β_{Pi}, the effect of the cash transfer on the stress and anxiety of person i, would be the difference between her level of stress and anxiety receiving the cash transfer and her level of stress and anxiety had she not received the cash transfer. Thus, if we want to know the (causal) effect of the cash transfer on person i stress, we would need to transfer her the money, measure her anxiety, defy the laws of physics and then travel back in time, measure her anxiety without transferring the money and calculate the difference between the two. That would be the only way to ensure that the only thing that changed between the two situations is the cash transfer and therefore any difference in the level of stress and anxiety between the two situations will be due to the intervention. Therefore, the difference between the value of her anxiety in both cases would be the effect of the cash transfer. That same logic could be applied to different interventions, different outcomes and even different treatment units.

Unfortunately, time travel is not feasible. Therefore, we need a different approach to measure the effect of an intervention. As we shall see next, this involves using people that did not receive the intervention (but not the same person in the same situation not receiving the intervention as we can't travel back in time). Second, because of that restriction, will not be able to measure the effect of the intervention at the individual level.

To estimate the impact of an intervention such as the BMincome program, we need the following ingredients:

- Intervention: without an intervention, there is really nothing to evaluate. Even though this can sound even trivial, we need to establish the existence of the intervention and sometimes this can be more difficult than what we would expect (Ashenfelter 2014). In the case of the BMincome, city council could have allocated funding and transfer it to the people enrolled in the program. However, it could be the case that those not receiving this particular funding were receiving a similar funding from a different branch of government, such as the Renda Garantida de Ciutadania (RGC) of the Generalitat de Catalunya. Shall this be the case, then our intervention is not doing anything compared to the status quo situation.

- Theory of change and causal hypothesis: Another important ingredient of the impact evaluation is the hypothesis of the intervention stated in causal terms and derived from the theory of change of the intervention. The objective of the impact evaluation thus, is to refute or validate hypothesis of similar nature. For instance, in the case of an active labor market program, that would be something such as 'if we give training to unemployed people, the probability that they will find a job will increase' and we would like to test whether the statement is false.

- Outcome indicators: The clearer the articulation of the theory of change has been done, the easier it will be to correctly state the objectives the intervention and therefore choose the appropriate indicators to measure those objectives. Indicators should usually be specific (they measure the information required as closely as possible), measurable (the information can be readily obtained), attributable (each measure is linked to the intervention's efforts), realistic (data can be obtained in a timely fashion with reasonable frequency, and at reasonable cost) and targeted (at the target population).

  Besides the indicator per se, we should have a clear idea of the data source to be used in order to obtain the information needed for the indicator, with which frequency will this data be available, who oversees collecting the data. Also, when planning the evaluation, it is usually a plus if we have the data to inform the indicators right before the intervention starts (usually called baseline assessment).

  Even though impact evaluation will focus on those indicators that capture the objectives of the intervention, it is important to understand how the intervention worked, in order to have a better understanding of the results obtained from the impact evaluation. Therefore, we should keep track of the others part of the theory of change (needs, inputs, activities, outputs) to check whether the intervention has been carried out as planned, the coverage rate and focusing of the intervention, etc. (Imas and Rist 2009)

- Counterfactual identification: The final element of an impact evaluation is the correct identification of the counterfactual situation.

As we have stated at the beginning of this section, the effect of an intervention is the difference between what happened with the intervention and what would have happened in its absence ($Y_{1i} \mid P_i = 1 - Y_{1i} \mid P_i = 0$). Since we cannot observe the same person in the two different situations at the same time, we cannot observe the latter. The greatest challenge of an impact evaluation is to find a valid way to measure that value.

What we might observe the value of the outcome for those that did not receive the intervention (to which we will refer as $Y_{0i} \mid P_i = 0$). Thus, we will use (a part) this group as a proxy for the 'absence of intervention' situation. But we should refrain from using non-participants as if they would be like participants. To start with, there might be a reason for which non-participants did not receive the intervention. For instance, in the case of the training for unemployed, it could be that those that voluntarily enrolled in the program are more motivated to find a job than those that did not enrol. Shall that be the case, then the comparison of the proportion of people working among the participants six month after the program finishes with that of those that did not participated will be capturing both the effect of the intervention as well as the differences in motivation.

Therefore, we should make sure that those individuals whose information will be used to estimate the counterfactual are indeed like those that received the intervention in two dimensions. First, in absence of the intervention both groups should be on average similar. Second, both groups should be expected to react in the same way to the intervention. Finally, they should not be exposed to different interventions. If such would be the case, then these non-participants would be like clones of our participants in the eye of the intervention and the only (relevant) difference between the two would be the intervention.

b. Estimating the effect of an intervention

In BMincome's case, as we have mentioned, the intervention consists mainly of a cash transfer combined with activation policies in some cases. Imagine that we want to estimate the mean effect of this intervention and to do that we compare the group of people that received the money with themselves before receiving the money.

That is, we compute the probability of developing a mental disease two years after receiving the money among the group of people that received the intervention (treatment group), and we use the probability of developing a mental disease just before the start of the program as the outcome for the group of non-participants (control group). In other words, if we measure the probability post intervention and it happens to be less than before the intervention, we will conclude that the program is effective in reducing the probability of developing mental diseases. Importantly, this comparison is implicitly assuming that had the cash transfer not existed, the outcomes for those receiving the transfer would not have changed a single bit.

However, this assumption about the evolution of the outcome in the absence of the program is unlikely to be correct in most situations. Since time has elapsed, many other things will have happened in between that probably affect the outcome of interest as well. For instance, imagine that the city council in the meantime has decided to improve the infrastructure and housing of the neighbourhoods where the recipients of the intervention live. If better housing leads to better mental health, then we won't be able to say which part of the change in the probability of developing mental diseases was due to the cash transfer and which to the infrastructure plan (or to other modifications like sudden changes in the family). Moreover, even in the absence of any such contemporary modification, if the outcome variable follows what it is known as a mean reverting process (or any other time depending process), then we would attributing changes to the intervention that would have happened anyway.

In the case of the BMincome intervention, we have enough reasons to conclude that the assumption would be far from the truth. First, from a macro point of view the general economic situation of the city has improved since the project started. Second, the city has started an ambitious plan to improve infrastructure in most of the areas where the recipients of the intervention live. Finally, endogenous changes to family structures have been documented in the ethnography study. Therefore, the difference between the post and pre intervention values of the outcome indicator would be a biased estimator of the effect of the intervention and therefore ill-suited to inform policy makers.

An alternative way frequently used to estimate the effect of the intervention is the comparison of the outcome between the recipients of the cash transfer and that of non-recipients. For instance, two years after the intervention starts, we compare the probability of developing mental diseases between

those receiving the cash transfer (treatment group) and a group of people that applied for the program and met all the requirements but were not granted the cash transfer because the authorities considered they had a good chance of doing well on their own (control group).

For this to be a valid comparison, those in the control group should be like those in the treatment group on everything that affects both the probability of receiving the intervention and the outcome, observable or unobservable. The presumption of the authorities is that the control group had better characteristics. Therefore, both groups were different when the program began and thus, we won't be able to know which part of the difference in the probability of developing mental diseases is due to the intervention and which to the initial differences. In the evaluation literature this bias is known as selection bias since those that do not participate in the program usually have different characteristics and we should adjust for the pre intervention differences (observable and unobservable) to eliminate the selection bias. In case we do not have enough information to adjust for those differences, then the estimator would be biased.

i. Random assignment

What if the cash transfer is allocated randomly among a group of (voluntarily) applicants? It is possible to show that, if the group of applicants is large enough, the comparison between those that were selected in the lottery and those that were excluded in the lottery would be a valid estimator of the effect of the intervention. That is, ex ante everybody had the same probability of receiving the cash transfer. And because luck is random and thus uncorrelated with any observable or unobservable characteristics of the individuals, then on average the characteristics of those receiving the intervention will be like those excluded. The only thing in which they will differ is the intervention.

Therefore, under some circumstances, random assignments guarantees that the difference between the average outcome values for the treatment and the control group is an unbiased estimator of the effect of the intervention[9].

If the true (and unknown) distribution of the variables is non pathological (that is, it has a finite mean), then the law of large numbers asserts that as the number of observations increases, the proportion of people having a given characteristic in the treatment group will be like the proportion in the control group. If in the whole pool of applicants 30% are men, according to the law of large numbers, we should expect that in the treatment group approximately 30% will be women and approximately 30% of those in the

[9] There are other requirements that will be explained later

control group will be women, such that any difference in the two groups will not be systematic.

And this should be true about any characteristic, whether observable or unobservable. Put it another way, the law of large numbers guarantees that if the population is large enough, no combination of the characteristics of the population would help us to make a better prediction of whether an individual is in the treatment or in the control group.

Because interventions are usually defined over finite populations, it is a usual procedure to check using univariate tests whether the distribution of observable characteristics pre assignment are similar between the treatment and control group, and whether the characteristics do not predict participation in a multivariate regression. In case some the null hypothesis of no difference is rejected in any of those tests, it is recommended to include the variables as adjustment variables in the regression of the treatment on the outcome variable.

Not always the probability of receiving the intervention must be the same for all the eligible individuals. Sometimes, when an experiment is designed, we want certain groups to have a higher chance of receiving the intervention. This previous procedure is called stratified randomization (or blocking randomization) and it is used when we would like a characteristic to be represented in a different proportion. For instance, imagine that we must allocate 200 spots among the 1,000 potential candidates, and out of those candidates 500 are men and 500 are women. In the case of pure randomization, women and men have the same probability of being in the treatment group (a probability of 0.2). Now, imagine that the intervention wants to prioritise women. One possibility would be to make sure that out of the 200 available spots, 150 are for women and 50 for men. In that case, we would make two lotteries. One among the 500 women where we allocate 150 positions and another among the 500 men where we allocate the remaining 50 positions.

With this set up, the probability of being assigned to the treatment group of the program is greater for women than for men. The 500 women have a of 0.30 probability of being in the treatment group while the 500 men have of 0.10 a probability. If we have reasons to believe that gender issues can affect the value of the outcome variable (as it would be the case in labor force participation, for instance), gender will be both a determinant of participation and the outcome variable. To prevent the estimator from omitted variable bias, we should adjust the analysis for gender.

ii. Estimation of the effect of the intervention using random assignment

In case we have assign individuals to the treatment group using a pure random assignment procedure (in which everybody has the same probability of being in the treatment group), we can estimate the effect of the intervention by computing the difference of means between the outcome in the treatment group and the outcome in the control group. As we can see in equation 2, the effect of the intervention is computed as the average value of the outcome in the treatment group minus the average value of the outcome in the control group.

Equation 2

$$\widehat{\beta_P} = \frac{1}{N_T}\sum_{i \in GT}^{N_T}(Y_i) - \frac{1}{N_C}\sum_{i \in GC}^{N_C}(Y_i)$$

Similarly, we could use the notation from the linear regression model as in equation 3.

Equation 3

$$Y_i = \beta_0 + \beta_1 P_i + u_i$$

If instead of a pure randomization, we randomize using some characteristics of the individual, we should adjust for those characteristics to avoid omitted variable bias. As in the previous example the sex of the individual defines the different strata, we need to adjust for the sex of the individual (Equation 4) to have a valid estimator of the effect of the intervention. In this case, the inclusion of a dummy variable equal to 1 if the individual is a woman and zero otherwise, adjust for the fact that the probability of receiving the treatment depends on the sex of the individual.

Equation 4

$$Y_i = \beta_0 + \beta_1 P_i + \beta_2 W_i + u_i$$

The previous models assume that the effect of the intervention is the same for everybody. Therefore, the effect of the treatment does not depend on the characteristics of the individual and the marginal effect is constant (β_1).

We might have reasons to suspect that this linear assumption is incorrect. In that case, we should then adapt the estimation equation to allow the effect of the treatment to be different between people of different characteristics. For instance, Equation 5 allows the effect for men to be different from that of women (although it is the same within the two groups). The estimated effect of the intervention for men is $\widehat{\beta_1}$ while for women is $\widehat{\beta_1} + \widehat{\beta_3}$. In case $\widehat{\beta_3} = 0$, then the estimated effect would be the same for women and men.

Equation 5

$$Y_i = \beta_0 + \beta_1 P_i + \beta_2 W_i + \beta_3 (W_i \times P_i) + u_i$$

Finally, the regression model could adjust for other variables as well as in. For instance, if we suspect that a certain variable is not balanced between treatment and controls, then we might want to include it in the equation to estimate. We also may want to include other variables that can improve significantly the quality of the model by reducing the variance of the error term. However, unlike the estimated coefficient for program participation, we should not give a causal interpretation to the estimated coefficients from the extra variables.

Equation 6

$$Y_i = \beta_0 + \beta_1 P_i + \beta_2 W_i + \beta_3 H_i + \beta_3 WB_i + u_i$$

iii. Statistical inference from the estimation

Once we have estimated the effect of the intervention, we should evaluate whether the observed effect is due to chance. This can be done by performing a hypothesis test where we confront two mutually exclusive statements about a population to determine which statement is best supported by the sample data, assuming the hypothesis is true (not to be confused with high probability of the truth of the hypothesis considering the sample data).

Imagine that we throw a dice ten times and we observe that the number six comes out in every thrown. Even though we can't know whether the dice is truly loaded or not with a sample of all possible throws, because the probability of observing the number six coming up ten times in a row is 0.00000001654, based on the available evidence we will probably consider that the dice is loaded. However, you may have been unlucky, drawing a sample of dices that do not represent the larger population. After all, if we throw the dice enough times the probability of observing that will be much higher; in fact, maybe the dice is fair. This is called a sampling error, something we must contend with in any test involving a sample of the population of interest.

This idea might be easy to understand in terms of electoral polling. At times of elections is quite frequent to find the result from an electoral poll. The poll is based on a representative (random) sample of the population[10], which means that a different (random) sample will produce different results. How different? That is where the sampling error enters the equation. It gives us

[10] To understand the concept of population and why we should interpret everything as a sample, please see Deming and Stephan (1941)

an idea of how much would the obtained results could change with a different sample of the same size.

There are two main contributors to sampling error: the size of the sample and the variation in the underlying population. Sample size is intuitive enough. Think about flipping a coin five times versus flipping it 500 times. The more times we flip it, the less likely you'll end up with a great proportion of heads. The same is true of statistical significance: with bigger sample sizes, were less likely to get results that reflect randomness. All else being equal, we are more comfortable about the conclusions of an experiment if we have 1,000 participants than if we have 100. Variation is a little bit trickier to understand but the idea is that all things equal, the greater the variation in the underlying population, the larger the sampling error.

Evaluating statistical significance will be usually follow a similar process. First, we state the hypothesis that refers to the initial belief about the situation before the study. This initial theory is known as the alternative hypothesis. The opposite to the alternative hypothesis is the null hypothesis, something that we are interested in disproving. In the case of the dice, the null hypothesis might be "The dice is loaded" and the alternative that the dice "is not loaded". In the case of an active labor market program for the unemployed, we might want to disprove that the program has no effect on improving labor participation. The alternative hypothesis in this case would be that "The program improved labor participation". Second, we must state the target significance level. The significance level is an expression of how rare your results are, under the assumption that the null hypothesis is true. It is usually expressed as a "p-value" and the lower the p-value, the less likely the results are due purely to chance. A p-value is the probability of observing results at least as extreme as those measured when the null hypothesis is true.

After a regression, hypothesis testing relies on the central limit theorem. Since the estimated coefficient is an average, under the null hypothesis the standardised average should be distributed as a standard normal random variable (mean 0 and variance 1). If the observed value for the difference in labor participation between treated and controls is too extreme, that is, too far away from the centre of the distribution, then we will reject the null hypothesis that the effect of the program is zero. The standard normal distribution accumulates 68% of its values one standard deviation from the mean, 95% of the values two standard deviations from the mean and 99.7% of the values three standard deviations from the mean. Usually, we require a z-score larger than 1.65 in absolute value to reject the null hypothesis (or

equivalently, a p-value of less than 0.10) but many researchers require the z-score to be 1.96 (p-value of 0.05 or less) or even a z-score of 2.36 (p-values of 0.01). The underlying idea is that even if we have used a different sample of the population (for instance, if the interview would have been done a different day or conducted under different temperature), we will still get a significant difference.

An alternative but similar procedure is to construct a confidence interval around the estimated coefficient. The idea of 95% confidence interval is that, given the observed data, if we would repeat the experiment enough times with different random samples, we would find that at least 95% of the times the estimated coefficient would be inside the confidence interval. Therefore, if the value of the null hypothesis is outside the confidence interval, we can reject the null hypothesis.

iv. Potential issues and alternative estimators

Several things should be to take into consideration regarding the randomization and program implementation. The first issue is non-compliance and crossovers. Noncompliance happens when people in the treatment group might decide not to follow the intervention or resign to it (and therefore behave as if they are part of the control group) or when people in the control group somehow manage to receive the intervention.

Another potential problem with our experiment is the observer effect, also referred to as the Hawthorne effect or the 'John Henry effect'. The 'Hawthorne effect' refer to changes in the behavior of individuals in response to their awareness of being observed in the treatment group. The John Henry effect refers to the bias introduced when members of the control group are the ones aware that they are being compared to the treatment group and behave differently than they typically would to compensate for their perceived disadvantage. Any of these effects can undermine the integrity of the analysis. In the BMincome case, this can be aggravated if social services caseworkers treat different households from the treatment or control group.

A similar problem is posed by sample attrition, that is, the loss of participants from the experiment and therefore the loss of relevant information. This can happen if, for instance, some individuals decide not to answer the survey or cannot be reached, we will not have the information that is necessary to complete the outcome indicator for these individuals and therefore they will be excluded from the analysis. Attrition is most problematic when the group of individuals that are loss, have different characteristics than those that remain in the study.

Random allocation of the intervention among a pool of applicants therefore is not enough to produce an unbiased estimator of the effect of the program. These issues are particularly worrisome when they are the consequence of some selection mechanism. For instance, if the loss of information is significantly higher among the control group, we have reasons to suspect that some hidden mechanism is behind that. If we do not adjust the regression for the determinants of that behavior, the estimator of the treatment effect will be biased.

In clinical trials, the observer effect is tackled using the double-blind procedure, in which neither the patient nor the doctor knows to which group the person has been assigned. However, in public policies such as cash transfer, it is quite improbable that the individual receiving the money will be unaware of his status. However, later research has shown that this effect is quite small and therefore it might not be that problematic for internal validity (Levit and List, 2011).

Some of the bias arising from the cases explained can be mitigated using the intention to treat estimator (ITT). If instead of measuring the effect of receiving the intervention, the analysis is based on the status of the individual from the lottery the initial treatment assignment and not on the treatment eventually received we can eliminate the non-compliance bias. While actual participation depends on the decision of the individual (and her characteristics), being in the control group or in the treatment group has been randomly decided. The interpretation of the estimated effect from this estimator is not obvious, however since ITT analysis is generally more conservative as the treatment could be diluted. For instance, if the intervention under study is effective, but there is substantial non-adherence to the treatment, since ITT analysis includes everybody as they were initially assigned, it will underestimate the magnitude of the treatment effect on the adherent (treated) patients.

If we would like to estimate the average treatment effect on those treated (ATET), we should instrument the participation decision using the random assignment as the instrument. The exclusion restriction in this case is that the only way that the lottery can affect the outcome is through participation in the program.

There are also some steps than can be taken to mitigate the attrition bias problem as well. When data are gathered using surveys, it is always a possibility to have certain problems obtaining the data. Maybe the person

cannot be found, maybe the person gives false information or maybe she even refuses to answer. If instead we use administrative records to collect the data, many of those problems may go away.

Unfortunately, many of the outcome indicators can only be constructed using survey data, and these problems will therefore be present for many of the analyses we do. Just as an example, there is no administrative record of the wellbeing of a person. So, if we want to estimate the effect of the intervention on wellbeing will need survey data, and as a consequence, conditioned by those problems. In the case of those indicators that can be constructed both with survey and administrative records, we can have a 'back of the envelope' idea of the magnitude of the bias arising from attrition.

v. Internal versus external validity

When random assignment is done correctly, we can be confident that the estimator of the effect of the intervention will be an unbiased estimator of the true parameter. We refer to this situation as internal validity of the analysis. However, we cannot infer anything regarding populations different from the one participating in the experiment.

Whether the study has external validity or not, depends on whether the population that participated in the experiment is a representative sample of the target population. If for instance, those participating in the experiment are a self-selected group of the population (those with a higher educational attainment and more informed), then we should be careful about extrapolating the results to those not participating in the experiment, particularly those with a low educational attainment.

IV. Lottery implementation

In this section we describe the procedure to allocate the available places in the program among the applicants. We also discuss some issues surrounding the aftermath of the lottery.

As previously stated, one of the main objectives of the pilot project is to inform city council which is the most efficient way of reducing socioeconomic exclusion. As such, impact and economic evaluation were considered key right from the start. According to an initial estimation, the program would face an excess demand, meaning that the 1,000 available places would be significantly lower than the expected number of applications.

1,527 valid families applied for program[11]. Given these restrictions, the city council agreed that the best way to administer the excess demand was through a stratified lottery (also known as randomised block design) [12].

i. Main parameters of the randomization set-up

Randomization unit

The unit of randomization was the household. For this project, a household is made up of all people who live in the same address and who are bound together by marriage bond or another form of relationship that is officially recognised (related within the fourth degree of consanguinity or within the second degree of affinity, including the children of each parent from reconstituted families). Household members must share (not divide) household expenses.

Type of randomization

The type of randomization chosen was a stratified randomization. There were at least three reasons to choose that procedure instead of a pure randomization. First, the project included a training and employment activation policy. Those families allocate to this policy should be in the position of doing it, otherwise funding would be lost due for bureaucratic reasons. That meant that if was necessary to make sure that if a family was chosen for that policy, at least one person should be eligible to work. That is, at least one person within the household should be above 25 years, not currently working and with the legal status to accept a job.

Another activation policy was the promotion of room rental through housing renovation. This one could only be done by owners with enough spare space within their apartment and therefore, households chosen for this one should be owners with a spare room.

Finally, if too many families with a large transfer were accepted in the treatment group, the risk of running out of funding before the end of the project was significant. To reduce that risk, it was suggested to put a larger weight on families with a smaller transfer in euros.

As such, the blocking variables for the randomization were a) eligibility for the rent room promotion policy, b) employability of at least one household member (yes / no) and c) the expected amount of the monthly SMI benefit for the household (high, medium, low).

[11] We describe this in more detail in the non-take up section

[12] Best in this context refers to fairest and at the same time compatible with an impact evaluation

One stratum corresponded to those that owned their residence and had enough m2 to rent a room. Among the rest of the families, six strata were constructed depending on whether at least one person in the family could do the training and employment policy and whether the amount that would have to be transferred in the initial payment according to the available information was less than 600 euros, between 600 euros and 1,100 euros or above 1,100 euros. Table 3 shows the number of places per stratum as well as the percentage of the total places available.

Table 3 – Number of available places per stratum

	Stratum	Expected transfer	Employable	Housing policy	# HH	% HH
1	high / employable	high	yes	-	274	16.2
2	high / non-employable	high	no	-	81	5.3
3	medium / employable	medium	yes	-	382	25.1
4	medium / non-employable	medium	no	-	165	10.8
5	low / employable	low	yes	-	420	27.6
6	low / non-employable	low	no	-	166	10.9
7	room rent policy	-	-	eligible	36	2.4

ii. Sampling design

In order to decide how many spots were allocated to each modality / stratum combination, some extra restrictions were considered. First, all the 24 room rent promotion policies had to be assigned stratum 7. Second, the 150 training and employment policies could only be allocated to families with at least one employable member (strata 1, 3 and 5). Finally, the total budget for cash transfers should not be exceeded. Table 4 shows the total number of places per stratum and modality of the program.

Table 4 – Distribution of available spots per stratum and modalities of the program

Stratum	No activation policy		Training and Employment		Social entrepreneurship		Room rental		Community participation		Total
	Partial withdrawal	Full withdrawal	Unconditional	Conditional	Unconditional	Conditional	Unconditional	Conditional	Partial withdrawal	Full withdrawal	
High / Employable	31	25	35	35	6	6	0	0	17	17	**172**
High / Non-employable	14	12	0	0	3	3	0	0	8	8	**48**
Med / Employable	48	38	30	30	10	10	0	0	26	26	**221**
Med / Non-employable	27	23	0	0	6	6	0	0	16	16	**99**
Low / Employable	92	74	10	10	18	18	0	0	50	50	**330**
Low / Non-employable	38	28	0	0	7	7	0	0	21	21	**130**
Room rental	0	0	0	0	0	0	12	12	0	0	**24**
Total	**250**	**200**	**75**	**75**	**50**	**50**	**12**	**12**	**138**	**138**	**1,000**

For instance, within the low transfer with no employable person within the household stratum, the possibility of receiving the training and employment is zero. As we mentioned, reflects the fact had this activation policy been assigned to this family, nobody would have been able to do it and therefore the allocated money for that program would have been lost. Therefore, conditional on being in the low transfer and non-employable stratum, the probability of been allocated to the training and employment activation policy was zero (either conditional or unconditional).

Finally, due to budget concerns, more places were allocated on the expected low transfer strata than in the expected high transfer strata.

iii. Lottery procedure

The chosen lottery design emulated a system that Barcelona's city council already uses to allocate seats in public nurseries, adapted to take into consideration some particularities of the project.

We first assigned each family to their corresponding stratum. As it was stated before, that depended on whether they owned their residence and have enough spare room, whether at least one person in the household was employable and the initial amount of money they would receive.

Within each stratum, we assigned using the Stata software a unique random number between 1 and the total number of families in that stratum to each family. That way, a family would have only one number and that number would not be shared with any other family within that stratum.

Within each stratum, a lottery was arranged according to the following procedure:
Step one: 9 consecutive balls with replacement were picked from a bag containing 10 balls with the numbers 0 to 9 written on them. The first figure corresponded to the hundreds of millions, the second to the tens of millions, and so on until the ninth pick that represented the unit. As such any number from 0 to 999,999,999 could be picked with the same probability.

Step two: An integer division of the lottery number by the total number of applications in that stratum was performed.

Step three: Families in each stratum were sorted using the following consecutive number of the remainder from the integer division. The first position in that stratum would go to the family holding the following

consecutive number of the remainder from the integer division from the lottery of the corresponding stratum.
The family with the next consecutive number would be in position number two and so on until the last number of the applications in the stratum was reached.
Then, the next family would be the one holding number 1, then family with number 2, and so on until all the positions from 1 to the total number of applications in that stratum were filled and families in the corresponding stratum are sorted[13].

Step four: The order of assignment of the available places in each stratum will be the following:
First, those places corresponding to the modality of partial withdrawal without an activation policy (no activation policy - and therefore unconditional - and partial withdrawal).
Second, those corresponding to the modality of full withdrawal without an activation policy (no activation policy - and therefore unconditional - and full withdrawal).
Third those corresponding to the modality partial withdrawal and unconditional on doing the employment activation policy (partial withdrawal; unconditional training and employment policy)[14].
In fourth place those corresponding to the modality partial withdrawal conditional on training and employment activation policy (partial withdrawal; conditional training and employment policy).
In fifth place those corresponding to the modality partial withdrawal and unconditional on doing the social entrepreneurship policy (partial withdrawal; unconditional social entrepreneurship policy).
In sixth place those corresponding to the modality partial withdrawal conditional on social entrepreneurship activation policy (partial withdrawal; conditional social entrepreneurship policy).
In seventh place those corresponding to the modality partial withdrawal and unconditional on doing the community participation policy (partial withdrawal; unconditional community participation policy).
In eight place those corresponding to the modality full withdrawal and unconditional on doing the community participation policy (full withdrawal; unconditional community participation policy.

[13] For instance, if the residual for the first stratum is 27, the household with file number 28 will be placed first, followed by household 29 and so on until household having number 274 that will be in position 247. After that, the following is household with number 1 who will be in position 248, the household with number 2 that will be in position 249 and so on until household with number 27 that will be in the last position.
[14] For those families assigned to the training and employment policy, it was also chosen the order to call the different members of the family to do the program.

Ninth, those corresponding to the modality partial withdrawal and unconditional on doing the renting room promotion policy (partial withdrawal; unconditional renting room promotion policy).
Tenth, those corresponding to the modality partial withdrawal conditional on renting room promotion policy (partial withdrawal; conditional renting room promotion policy).
Finally, once all the available spots were assigned, the remaining families would become the control group. However, 142 families from the control group were assigned to the reserve group. From these group it was going to be chosen the families to be granted the program in the case some of the participants were excluded from the program in order to guarantee the correct implementation of the program. None of the families in the reserve group are considered in the impact evaluation.

Given the set-up of the lottery and the number of received applications, the initial design of the experiment was 1000 families in the treatment group, 383 in the control group and 142 in the reserve group.

iv. Ex-post issues with the lottery

Duplicates

The information used to construct the lottery was rather imperfect and once the lottery was done and city council started asking the documentation to the different participating families in the treatment group, some issues arise. First, even though city council did an in-depth review of the applications, five duplicated families remained in the list. Thirty-six households were excluded ex post because they did not live in the ten target neighborhoods.

Finally, once the real income and housing expenditures was collected, 386 families allocated in the treatment group would not receive a transfer in the first month. To solve this problem in particular, it was decided to reconduct the experiment as an income insurance, such that those families that would receive zero in the first payment could continue to participate in the project. As such, if their monthly income would fall below their basic needs, they would start to receive the transfer[15]. Even though this modification, twenty-nine households were still excluded for having assets that exceeded a reasonable threshold and seventeen for exceeding a similar for income.

[15] Families with an income large enough that the probability of entering was too low were excluded. The same with families that the ex post audit indicated that their wealth was above the limits of the program.

Finally, twenty-four families decided that they did not want to participate at all.

Table 6 shows the actual involvement in the program for those in the treatment group. Once we eliminate the duplicated families, 85.8% were involved in the program (this means that they sign the agreement). The lowest participation rate is for those families with a conditional cash transfer. In the case of the conditional room rental promotion, 66.7% of the selected households were not included in the program. In the case of the other two activation policies the numbers are lower: 18,6% in the case of employment and training and 12% in social entrepreneurship.

Table 5 - Involvement in the program

Modality	Families (#)	Actual participation (%)
Treatment	996	85.8%
Cash transfer plus activation policy	550	86.7%
Cash transfer only	446	84.8%
Conditional cash transfer	137	79.6%
Unconditional cash transfer	859	86.8%
Full withdrawal cash transfer	335	87.5%
Partial withdrawal cash transfer	661	85.0%
Unconditional cash transfer with partial withdrawal	524	86.5%
Conditional cash transfer with partial withdrawal	137	79.6%
Unconditional cash transfer with full withdrawal	335	87.5%
Cash transfer with conditional activation policy	137	79.6%
Cash transfer with unconditional activation policy	413	89.1%
Cash transfer without activation policy	446	84.8%

Some of these problems were probably shared by the control group. As a matter of fact, four households were duplicates. However, since they were not part of the program it was not possible to collect further information about their income or housing expenditures.

Another issue involved the rental room promotion policy. Once the lottery assigned the families in that stratum to the treatment and control group, it

was noticed most of the families were not in a position to develop the policy as it was initially planned[16].

As was mentioned previously, some had to be excluded from the evaluation as part of the reserve group as they would be allocated the program in case some problem arises with the families initially selected. Initially, the idea was to get a proportion of the families from the control group from each stratum to be in the reserve group, where the proportion depended on the size of the control group. However, because of the issue with the rental room promotion policy, it was decided to use all the control group from these group as reserves and exclude that stratum from the evaluation.

V. Outcomes and data sources

The project aims at improving household's socioeconomic situation and increasing their economic independence. The main question to answer then, it would be whether people receiving the transfer achieved economic independence. But whether this objective is achieved, it is important to see whether the channels stated in the theory of change of the program happened.

An economic transfer combined with active policies should reduce the urge to find a job. One question to answer then is how large this disincentive is and whether people uses the guaranteed income to search for jobs or to train themselves.

Families coping with very low budgets usually have worse health, housing and food insecurities and suffer from stress and sleep deprivation. So, another type of question to answer is whether families could afford to invest more in human capital. And along that line, whether families were able to improve their financial situation.

Finally, low income families are usually excluded from social life and thus the question is whether families have increased social participation.

i. Outcomes

As such, those objectives are operationalised alongside six general themes:

- Deprivation and wellbeing: material deprivation and sever material deprivation, food insecurity, and general satisfaction with life

[16] Ten families only carried out this policy during the pilot project and only one of those rented a room under a formal rental agreement.

- Residential exclusion: fall into arrears, falling behind utilities expenditures, forced to leave current residence in the near future, having roof leaks and moisture problems
- Use of time:
    - Labor outcomes: labor participation, work search, self-employment and training
    - Other: household common tasks, participation in social leisure, participation in individual leisure.
- Health and health care use: self-reported health, self-reported serious health problems, risk of developing mental disorders, sleep deprivation, new diagnostics of anxiety and deprivation, painkillers' prescription.
- Use of social services and discretionary transfers
- Financial situation: satisfaction with economic situation, buffer for unexpected financial expenses, borrowing behaviour, outstanding debts.
- Community involvement: Total perceived support, emotional support, confidence support, electoral participation, voluntary activities, social participation.
- Minors: number of young people with bad health, number of young people continuing into post mandatory education, number of young people repeating grade, new obesity diagnostics.

ii. Data Sources

Two different type of data sources were used to collect the information for the outcome variables: survey and administrative data.

Survey

The program included three waves of a survey. The first one (baseline survey) was conducted between October and November 2017 and it was a computer assisted telephonic survey (CATI). All households included in the randomization were approached. However, even though participation in this lottery was mandatory, (only) 1,325 households completed the survey (87% response rate)[17]. Survey respondents were the main recipient[18] and the average survey duration was about 35 minutes[19]. Most of the questions were about the household situation in general and some about the main recipient with the exceptions of labor situation (people in the house eligible to work),

[17] The remaining 199 households could not be reached by phone
[18] Household applying for the program
[19] Limitations with either the Spanish or Catalan language in the case of some households had a large incidence over the average duration.

the educational outcome and health situation (people under 16 years and 12 years respectively).

The second survey (first follow-up) had a similar structure and it was done approximately one year after the first one (October 2018). It included some important modifications, however.

First, as they were not part of the evaluation, households from the reserve group were not included in the survey. However, an extra control group was interview. Some households that could not participate in the BMincome project as a consequence of residing outside the 10 target neighborhoods but otherwise eligible was interviewed as well[20].

Second, some questions were modified or eliminated, and some were added[21]. Also, most of the sociodemographic information included in the baseline was not asked again and it was asked only for the families that did not answer the baseline survey.

Finally, some surveys were conducted in person (CAPI). In the case of those families were the first interview tool to long because of language difficulties, it was decided to send a person to the house and interview them there. Also, those families that could not be contacted by phone were interviewed in social services when they showed up. The response rate in this case was a little bit lower 79.49%.

The second follow-up survey (final) was done in July 2019 and the response rate was he response rate 75.72%. It was quite similar in structure to the previous one, although some questions were added, and some were eliminated[22].

Administrative records

Besides from the information collected through the surveys, some outcomes were constructed using administrative records. Those are the cases of labor

[20] Unfortunately, this group was not included in the baseline. The analyses in this report do not include this group. We plan to do some robustness analyses using them as they increase sample size and inform of conditions outside the target neighbourhoods. However, special caution is required as they might not be similar enough and so it is important to collect administrative data to adjust for baseline differences.

[21] For instance, in the first survey the questions to assess the likelihood of mental disorders were shorter; questions on stable information such as socioemotional abilities; and questions on financial stress were added.

[22] For instance, the Duke scale was added but the question on job search or financial stress were eliminated. Also, different polling firm company was in charge of the final survey

market participation (which is also available from survey data), health care use and education.
In the case of social security data, information is obtained every ten days starting February 23th 2019 for 4,744 individuals from the treatment and control group[23]. It is relevant to notice that not all the people that was search was found among the administrative record at a particular point in time.

Health care use is obtained for the 2017 to 2018 period[24]. The dimensions obtained were diagnostics and drug prescription. The information return was anonymised and so unlike other outcomes, those constructed from this data source (new diagnostics of anxiety or depression, drug prescription and new obesity diagnostics) are exploited at the individual level.

Education outcomes (grade repetition and drop-out) are constructed from the register of students' enrolment of the Consorci Educació de Barcelona (CEB). Similar to labor data, the information is available at the individual level and later aggregated at the household using the unique id.

Finally, data on transfers from other municipal programs (Ajuts 0-16, Employment and Training Programs among others), discretionary municipal transfers and RMI/RGC is obtained from city council's database at the household level.

Table 41 to Table 45 in the appendix list the outcome variables with its definition.

VI. BMincome program implementation

In this section we explain how the BMincome project was implemented. First, we analyse the non-take up of the program. Second, we analyse the validity of the randomization. Third, we explore attrition from the survey analysis. Finally, we explore the behaviour of the cash transfer component in time as well as active participation in the different policies.

a. Non-take up of the experiment[25]

This part of the analysis tries to establish whether those that families willing to participate in the program had similar characteristics to those that even though they satisfied the requirements they chose not to apply for the program. If families participating in the experiment were different to

[23] Except for October 2019
[24] Data of health care use for 2019 will be available only by June 2020.
[25] This part is adapted from Garcia, Ramos and Cervini (2019)

those that chose not to, then we should be cautious on how we extrapolate the results from the experiment to other families.

It is very common for programs that offer public subsidies to low income families, as it is the case of BMincome, to have people who are eligible for the program but still do not participate. We call this phenomenon "non-take up".

According to Laín and Julià (2018)[26], non-take up rates can affect the ability of a program to achieve its goals, increase its long-term costs and distort budget forecasts for the concerned program and for other policies due to collateral effects. Moreover, it can generate, instead of solving, inequality problems and negatively affect how citizens perceive the program. On top of that, non-take up rates also have an incidence on the assessment of the impact of social programs, affecting both the analytical strategy to be applied and the external validity of the results (Heckman and Smith, 2004)[27].

According to Heckman and Smith (2004), the reasons behind non-take up can be analyzed as part of the process that leads to participation. They identify five relevant stages to understand non-take up of public subsidies: eligibility, awareness, application, acceptance and enrollment. We will focus our attention in the eligibility and application stages to analyze the sociodemographic and economic factors that influence non-take up in the benchmark of BMincome.

For this analysis, we use the sample with the 3,540 households to which an invitation letter to participate in BMincome[28] was sent and for which administrative data is available. Among these, we consider a household to be eligible to participate in BMincome if it fulfills the economic criterium, and a household to be an applicant if at least one of its members replied to the invitation letter.

Regarding eligibility, 2,299 households in the sample (64,94%) fulfill the income criterium and 932 (26,33%) do not. For the remaining 309 households (8,73%), we do not have income information and thus, eligibility cannot be assessed. However, for the rest of the analysis we will assume that the

[26] Laín, B. and A. Julià (2018), "Informe sobre els casos de non-take-up del projecte pilot B-MINCOME. Per què certs individus no sol·liciten el suport municipal d'inclusió?", Direcció de Planificació i Innovació. Àrea de Drets Socials. Ajuntament de Barcelona.
[27] Heckman, J.J. and J.A. Smith (2004), "The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program", Journal of Labor Economics, 22, 243-298.
[28] This initial selection included households living at BMincome neighborhoods who had at least one of the following characteristics: being social services users, receiving social subsidies from the municipality or participating in the LABORA program.

reason for not having income data for these households is that their income is very low. Consequently, households with no income are considered eligible. Under this assumption, 2,608 households (73,67%) are eligible for BMincome.

Table 6 - Eligibility and application of invited households

Replies to invitation letter	Fulfills income criterium			
	No	Yes	Missing	Total
No	473	1,018	187	1,678
Yes	459	1,281	122	1,862
Total	932	2,299	309	3,540

Concerning application, 1,862 households (52,6%) responded to the invitation letter while 1,678 (47,4%) did not. This percentages do not vary much if we only focus on eligible households, among which 1,403 (53,8%) responded to the invitation letter while 1,205 (46,2%) did not. This last figure represents the non-take up rate.

Table 7 compares the sociodemographic and economic characteristics of households that did respond to the invitation letter to those that did not.

Table 7 - Descriptive statistics (mean) of household socioeconomic variables by reply and eligibility status.

	Replies to invitation letter		Does reply to invitation letter		Does not reply to invitation letter	
	Yes	No	Fulfills income criterium	Does not Fulfill income criterium	Fulfills income criterium	Does not Fulfill income criterium
Gender of r.p. (Woman=1)	0.657	0.664	0.674	0.606	0.683	0.615
Age of r.p.	43.6	51.4	43.0	45.2	49.5	56.3
Number of adults	2.8	2.7	2.8	2.6	2.8	2.6
Number of children	1.4	0.7	1.4	1.2	0.8	0.5
Ajut 016 (Yes = 1)	0.511	0.226	0.535	0.438	0.269	0.118
Basic needs*	15.845	14.205	16.144	14.932	14.508	13.432
Household income*	10.743	10.225	7.488	20.690	6.112	20.704
Neighborhood						
Roquetes	0.136	0.170	0.134	0.142	0.177	0.152
Trinitat Nova	0.084	0.095	0.083	0.085	0.104	0.072
Torre Baró	0.067	0.035	0.070	0.057	0.041	0.019
Ciutat Meridiana	0.153	0.101	0.163	0.122	0.107	0.087
Vallbona	0.019	0.021	0.021	0.011	0.022	0.017

Trinitat Vella	0.114	0.070	0.112	0.120	0.079	0.049
Baró de Viver	0.045	0.030	0.046	0.039	0.032	0.028
Bon Pastor	0.083	0.097	0.078	0.098	0.090	0.116
Besós i Maresme	0.201	0.204	0.196	0.218	0.188	0.243
Verneda i la Pau	0.099	0.177	0.096	0.109	0.161	0.218
Number of households	1,862	1,678	1,403	459	1,205	473
Observations	3,540		1,862		1,678	

Note: * Annual numbers in thousands of euros.

Considering the whole sample (N=3,540), we observe differences among those that respond (column 1) and those that do not (column 2). Households that respond to the invitation letter have a younger person of reference, a higher number of children, are more likely to be receiving the 'Ajuts 016' and have higher income but also higher basic needs. There are also certain differences by neighborhood.

These patterns remain the same if we restrict the comparison to those classified as eligible in our data (column 3 vs column 5). Consequently, there is some evidence that households that replied to the invitation letter (takers) and those that did not (non-takers) do not belong to the same population. This suggest that the results obtained by analyzing the program participants might not apply to non-takers.

To further explore this issue, a series of logit models for the probability of replying to the invitation letter were estimated (Table 8).

Table 8 - Estimations of the probability of replying to the invitation letter

	Full sample		Only eligible households	
Gender of r.p. (Woman = 1)	-0.230**	-0.232**	-0,214*	-0,208**
Age of r.p.	-0.017**	-0.013**	-0,017**	-0,013**
Nationality (Spanish = 1)	-0.414**	-0.378**	-0,416**	-0,390**
Neighbourhood (Ref. *Roquetes*)				
Trinitat Nova	0.180	0.178	0,115	0,123
Torre Baró	0.854**	0.858**	0,778**	0,776**
Ciutat Meridiana	0.560**	0.559**	0,595**	0,589**
Vallbona	0.388	0.353	0,535	0,510
Trinitat Vella	0.439**	0.442**	0,340	0,344*
Baró de Viver	0.721**	0.713**	0,766**	0,763**
Bon Pastor	0.212	0.221	0,246	0,259
Besós i Maresme	0.424**	0.452**	0,474**	0,500**

Verneda i la Pau	-0.092	-0.046	-0,058	-0,011
Adults	0.249		0,039	
Children	0.525		0,304**	
Household members				
0 – 13 years old		0.320		0,288**
14 – 17 years old		0.361		0,324**
18 – 24 years old		0.148		0,105
25 – 60 years old		0.083		0,057
Older than 60		-0.153		-0,178*
Ajut 016 (Yes = 1)	0.729**	0.719**	0,658**	0,650**
Needs – Income	-0.115	-0.037	-0,039**	-0,041**
Constant	1.246	0.579	0,611*	0,456
Log L	-2.159.47	-2.152.12	-1.603,58	-1.598,81
Number of observations	3,540		2,608	

Note: Estimated using a logit regression. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

The analysis shows that, other things equal, the probability of replying to the invitation letter is lower if the reference person is a woman or has the Spanish nationality and decreases with age. On the contrary, a household is more likely to reply if the number of members (specially, children) is higher or is receiving the public subsidy 'Ajut 0-16' or the expected income from the program is higher. Finally, the neighbourhood of residence does also significantly affect the probability of replying to the invitation letter, with Torre Baró, Baró de Viver, Ciutat Meridiana, Trinitat Vella and Besós i Maresme having higher associated probabilities.

It seems that some of the characteristics from eligible applicants differ from eligible non-applicants, which should be taken into consideration for the external validity of the results from the impact and economic evaluation. Two dimensions are relevant. First, other things equal, the higher the marginal gain from entering the program, the higher the likelihood of applying. This means a part of those that did not applied are people that were not interested in the program. Second, other things equal, those that are unfamiliar with this type of program have a lower chance of applying. That is, for households of similar needs, previous experience in participating in a municipal subsidy programs, influence the take-up rate.

Future designs of similar programs should consider whether it is worth to include very low transfers or how to reach those that are outside the system.

b. Validity of randomization[29]

To assess the validity of the randomization process, we test for baseline differences and main outcome variables between treatment and control groups.

The results of the balance tests are shown in Table 9 and Table 10. In both tables, column 1 reports the mean and the standard deviation of the control group for a given variable. Column 2 reports differences between households assigned to one of the ten treatment groups and control households.[30] Column 3 compares households that receive activation policies to those that don't. Column 4 reports differences between households assigned to conditional treatments and those assigned to unconditional treatments, and column 5 differences between households assigned to full and partial withdrawal treatments. Standard errors are reported in parentheses. The last row shows joint significance of the coefficients in the respective column. The sample is restricted to responders for baseline outcomes. Table 9 reports the results of the balance tests for background variables, whereas Table 10 reports the results for main outcome variables.

For background characteristics we do not find any statistically significant difference except for three variables: number of household members unemployed (smaller in the conditional groups compared to unconditional groups), employability of the main recipient (higher in the conditional groups and lower in the full tax groups compared to their respective counterparts), and type of household (smaller share of single parents in treatment compared to control).

Looking at main outcome variables we find statistically significant differences between the control group and all treatment groups combined as well as for the activation treatments. Across all treatment groups the share of households in which all minors have good health is 10 percentage points lower compared to control. Activation and no activation treatments differ with regards to the share of households facing severe material deprivation (7 percentage points higher in activation treatments), the share of households with delays in paying mortgage/rent (12 percentage points higher in activation treatments), and the share of main recipients enjoying social leisure (5 percentage points lower in activation treatments).

[29] This part is adapted from Verlaat et al. (2019)
[30] We add strata fixed effects, which is why groups of households are essentially compared per strata.

From the analysis, we conclude that the few observed imbalances are unlikely to threaten the symmetry between experimental groups and consider the randomisation of households to experimental groups successful.

Table 9 – Baseline balance background characteristics

	Control	Treatment	Activation	Conditional	Full withdrawal	*N* (1)-(2)
No. of household members	3.83	0.13	-0.04	-0.1	-0.05	1,379
	(1.61)	(0.09)	(0.09)	(0.14)	(0.1)	
No. of household members <18	1.74	0.1	-0.08	-0.14	-0.11	1,379
	(1.24)	(0.07)	(0.07)	(0.1)	(0.08)	
No. of hh members unemployed	0.14	-0.05	-0.01	-0.07*	0	1,379
	(0.47)	(0.03)	(0.03)	(0.03)	(0.03)	
Main recipient employable	0.9	0.02	0.04	.08*	-0.06**	1,379
	(0.72)	(0.03)	(0.03)	(0.05)	(0.03)	
Household: single parent	0.37	-0.06**	0.01	-0.01	-0.02	1,380
	(0.48)	(0.03)	(0.03)	(0.04)	(0.04)	
Household: single person	0.07	-0.01	0.02	0.04	0.02	1,380
	(0.26)	(0.02)	(0.02)	(0.03)	(0.02)	
Household: other	0.56	0.07**	-0.03	-0.03	0	1,380
	(0.5)	(0.03)	(0.03)	(0.05)	(0.03)	
District: Nou Barris	0.49	-0.03	-0.01	0.07	-0.02	1,380
	(0.5)	(0.03)	(0.03)	(0.05)	(0.03)	
District: Sant Andreu	0.22	0.01	-0.03	-0.01	0.03	1,380
	(0.41)	(0.03)	(0.03)	(0.04)	(0.03)	
District: Sant Martí	0.29	0.01	0.04	-0.06	-0.01	1,380
	(0.45)	(0.03)	(0.03)	(0.04)	(0.03)	
Monthly household income	421.67	25.38	2.61	-12.54	-14.56	1,380
	(380.49)	(17.24)	(19.02)	(28.56)	(19.59)	

Notes: Differences between control and treatment conditions in terms of background variables; estimated with an OLS regression of the respective variable on different treatment dummies. Variables are listed on the left. For each variable, we report the coefficients of interest and their robust standard errors. The unit of observation is the household for all variables. Column 1 reports the control group mean and standard deviation for a respective variable. Column 2 reports the difference between all treatment groups combined and the control group (1:

treatment, 0: control), column 3 the difference between treatments with and without activation policy (1: activation policy, 0: no activation policy), column 4 compares conditional treatments to unconditional treatments (1: conditional treatment, 0: unconditional treatment), and column 5 full to partial withdrawal treatments (1: full, 0: partial). All estimations include strata fixed effects. We perform an F-test of joint significance by running an OLS regression of the treatment dummy on the whole set of variables. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 10 – Baseline balance main outcome variables

	Control	Treatment	Activation	Conditional	Full withdrawal	*N* (1)-(2)
Main recipient is employed	0.40	-0.02	-0.01	-0.04	-0.03	1,198
	(.49)	(.03)	(.03)	(.05)	(.04)	
Severe material deprivation	0.71	-0.04	0.07**	.01	-0.02	1,160
	(.45)	(.03)	(.03)	(.05)	(.03)	
General satisfaction	4.91	0.13	0.05	-0.27	-0.07	1,200
	(2.61)	(.18)	(.19)	(.27)	(.20)	
Delays in paying mortgage/rent	0.64	0.03	0.12*	-0.06	-0.07	1,002
	(.87)	(.06)	(.07)	(.10)	(.07)	
Buffer unexpected fin. expenses	0.08	-0.03*	0.00	-0.01	0.01	1,180
	(.27)	(.02)	(.02)	(.02)	(.02)	
Self-perceived health is good	0.51	-0.01	0.02	-0.02	0.00	1,196
	(.50)	(.03)	(.03)	(.05)	(.04)	
At risk of mental health problems	0.66	-0.04	0.01	0.01	-0.02	1,130
	(.47)	(.03)	(.04)	(.05)	(.04)	
All minors with good health	0.44	-0.10***	-0.00	-0.04	-0.00	994
	(.50)	(.04)	(.04)	(.05)	(.04)	
No. of young people studying	0.92	-0.10	0.10	-0.02	.15	431
	(.86)	(.09)	(.09)	(.13)	(.09)	
Social leisure	0.86	-0.02	-0.05*	0.04	-0.01	1,198
	(.35)	(.02)	(.03)	(.03)	(.03)	

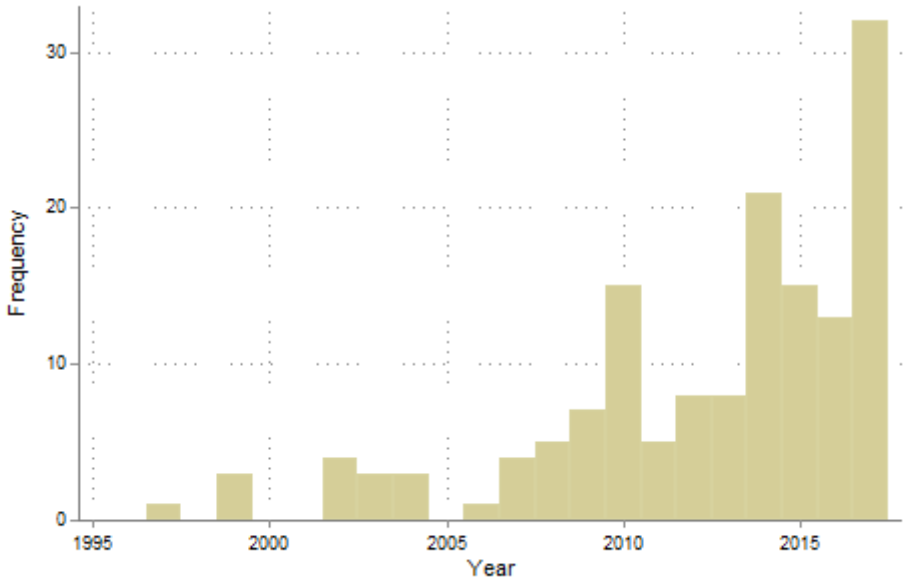
Notes: Differences between control and treatment conditions in terms of main outcome variables; estimated with an OLS regression of the respective variable on different treatment dummies. Variables are listed on the left. For each variable, we report the coefficients of interest and their robust standard errors in parentheses. The unit of observation is the household for all variables. The sample is restricted to baseline survey responders. Column (1) reports the control group mean and standard deviation for a respective variable. Column (2) reports the difference between all treatment groups combined and the control group (1: treatment, 0: control), column (3) the difference between treatments with and without activation policy (1: activation policy, 0: no activation policy), column (4) compares conditional treatments to unconditional treatments (1: conditional treatment, 0: unconditional treatment), and column (5) full to partial withdrawal treatments (1: full, 0: partial). All estimations include strata fixed effects. We perform an F-test of joint significance by running an OLS regression of the treatment dummy on the whole set of variables, except No. of people studying due to small sample size. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Besides the baseline characteristics obtained from the survey, we analyzed two other variables: perception of the RMI and perception of transfers from city council. These two variables are relevant because they somehow depict the status quo situation of participants.

Before the lottery, 117 families were receiving the RMI with an average monthly income of 745.5 euros.

Figure 3 shows the histogram of households receiving the RMI by year of application. As we can see, the concentration of the year of application to the RMI is mostly during the year when the program started and the years just before that. The most likely explanation of this is on the one hand, the expectation of the new 'Renda Garantida de Ciutadania' that was going to replace the 'Renda Minima de Insercion' and was about to start in October 2017. On the other hand, Generalitat de Catalunya increase of funding of social programs.

Figure 3 – Histogram of households granted the RMI by year of application



Source: Own preparation from City Council's administrative data on applications

Out of those 117, 96 belonged to the treatment group (741.6 euros per month) and 21 to the control group (763.5 euros per month). Using a similar procedure to the one explained before for the survey data, we find that there is no significant different between control and treatment group in the proportion of households with RMI or the quantity received.

Regarding discretionary transfers from city council as well as the 'Ajuts 0-16' and other programs, during the period from January to October 2017, 79.1% of the families in the treatment group was receiving money from city council and 78,1% in the control group. On average people in the treatment group received a total of 2081.48 euros during that period while those in the control group received 2019.40 euros.

c. Attrition

Unit nonresponse can be problematic in two ways. First, it can affect external validity. If certain subjects are more likely to respond, the sample of responders is systematically different from the study population, which complicates drawing inferences about the study population from the survey. Second, it can affect internal validity. If subjects in certain experimental groups are more likely to respond, the identification of treatment effects might be invalid, as comparing outcomes between groups might lead to biased estimates. To diagnose nonresponse in view of these two risks we take a look at the likelihood of nonresponse across groups and the characteristics of responding and nonresponding households in the three waves of the survey.

i. Baseline[31]

199 participants (13.1%) did not fill in the baseline survey as they could not be reached or localized. Households were approached for the baseline survey before randomization took place, so nonresponse should be symmetrically distributed across groups.

Nonresponse rates for individual groups vary between 0.0% and 20.0%, with nonresponse in the control (12.8%) and reserve condition (13.2%) coming close to overall nonresponse (13.1%). Given the small size of some of the groups, however, a large variation in rates per group is not surprising. Looking at treatments combined, nonresponse appears to be symmetrically distributed across all groups and like the overall nonresponse, with rates varying between 12.3% and 14.9% percent, except for conditional treatments, where 7.3% of subjects did not respond. We also test for differences in nonresponse rates statistically and find that there are no statistically significant differences across treatment groups combined, except for conditional treatments.

As a second step, we study differences between households that were responding and not responding. To compare responding and nonresponding households we regress variables for household characteristics that were available before the baseline survey on a nonresponse dummy (1: nonresponse, 0: response).

We find statistically significant differences between the two groups of households for some characteristics. Nonresponding households are on average smaller and have less household members under the age of 18. They are also less likely to be single-parent households. In terms of location,

[31] This part is partially adapted from Verlaat et al. (2019). Results available upon request.

nonresponding households are less likely to come from the district of Nou Barris and more likely to come from the district of Sant Martí. Lastly, nonresponding households seem to have lower monthly housing cost. That is, even though nonresponse seems to be equally distributed across experimental groups, nonresponding households appear to have a specific profile, in terms of household composition.

i. Follow-up

Conditional on having answered the baseline survey, the response rate of the first follow-up survey was 81.67%. In the case of the second follow-up survey, 82.24% of the families that answered the baseline and first follow-up survey answered the final survey.

One potential issue is whether attrition rate is different between treatments and controls. To answer this question, both for the first follow-up survey and for the second and last one, we regress a dummy variable equal to 1 if the family answered the survey and 0 otherwise on a dummy variable equal to 1 if the family is in the treatment group and 0 if it is in the control group, adjusting for the strata of transfer and employability, using OLS.

We repeat this procedure using as explanatory variables a dummy variable equal to 1 if the person is in the SMI group (and 0 otherwise) and a dummy variable equal to 1 if the person is in the SMI + active policy group (and 0 otherwise), adjusting for the strata of transfer and employability.

We find that the probability of answering the first follow-up survey is positive and significant. That means that attrition rate is different for treatment and control group. However, attrition rate is not different between those receiving only the SMI and those receiving the SMI plus an activation policy. In the final survey, the differential attrition rate between control and treatment persists but it should be noted that the differential rate is reduced by half[32].

Another interesting thing is that, for families of similar characteristics, the response rate is lower among those families with the highest transfer while it is higher among those with at least one employable person in the family. Even though the treatment and, in some cases, the size of the transfer is significant, the R2 is very small in the four tables meaning the proposed model does not explain the attrition rate.

[32] Results available upon request

We run the same regressions adjusting for baseline outcomes. In the case of the first follow-up survey, we find that social participation and willingness to change residence due to labor situation are significant predictors of answering the survey. In the case of the second follow-up survey, we find that job quality of the head, whether the head is looking for a job, general satisfaction with their life, food insecurity of the household, delays in the payment of housing bills, income through the rent of a room, leisure activity (social or individual) at least once a month and willingness to change residence are significant predictors of survey response. Therefore, we should consider the inclusion of this variables when we analyze using survey data the impact of the program.

d. Cash transfer

Table 11 shows the value of the average monthly transfer for the different modalities of the program, including the SMI cash transfer as well as the transfer from the 'Fons Social 0-16' and the training and employment policy[33].

Table 11 – Monthly average transfer by modality

Modality	Monthly transfer in euros
Treatment	463.31
Conditional cash transfer	526.78
Unconditional cash transfer	453.23
Full withdrawal cash transfer	417.72
Partial withdrawal cash transfer	486.58

As we can see, on average the 1000 families[34] that were allocated to the treatment group received a monthly average of 463.3 euros during the program. On top of that, these families received from Barcelona's city council an average of 73 euros on discretionary transfers.

Figure 4 shows the monthly mean transfer from the program to households in the high, medium and low initial expected transfer, with the elapsed months after the start of the program in the x-axis.
A couple of things are worth noting. First, the overall trend of the monthly transfer is negative for the high and medium transfer but positive in the low transfer group. In fact, by the end of the project, the mean transfer for the low initial transfer was similar to that for families in the medium transfer

[33] Even though this two are not transferred from the program, Barcelona City Council pays them and are deducted from the SMI transfer amount to transfer
[34] We are including the 1000 families and not only those that participated because having been excluded from participation in the BMincome was compatible with receiving the 'Ajuts 0-16'.

bracket. Second, there is a lot of variability within a group, which is probably explained by logistic problems of the program and not by changes in their economic situation.

Figure 4 – Monthly mean transfer per family per initial transfer group

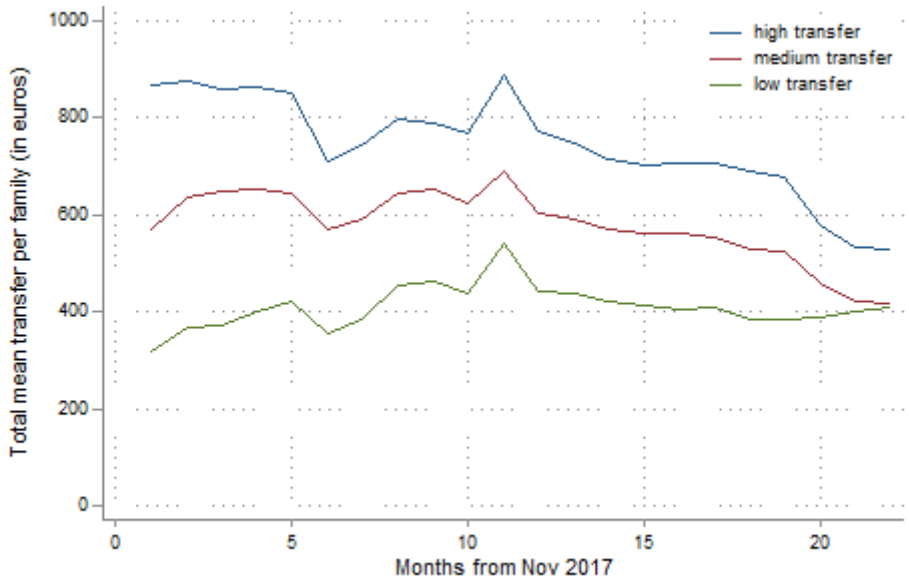
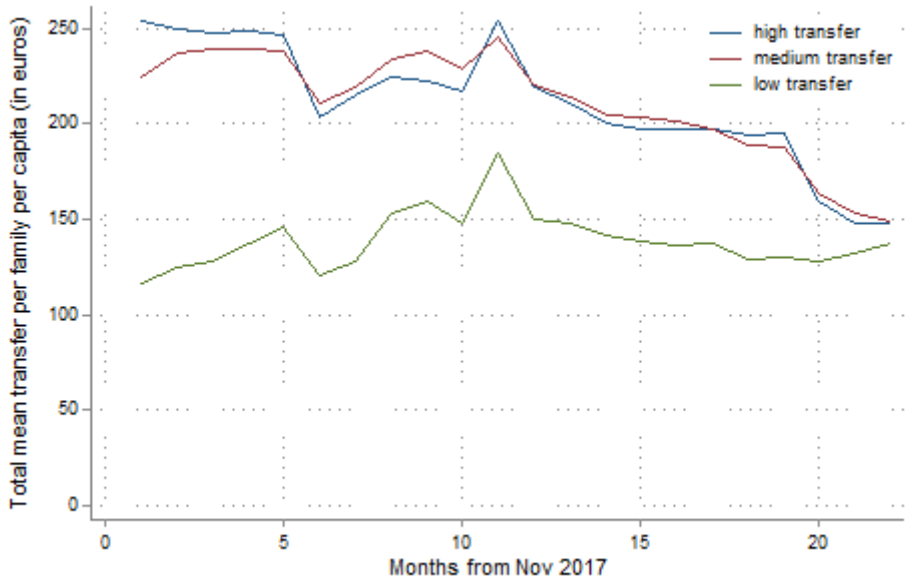


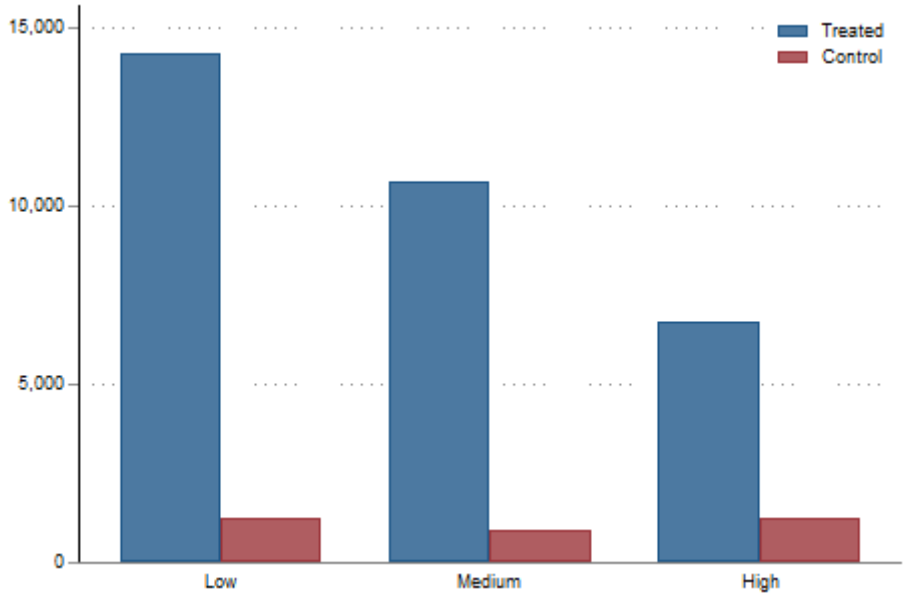
Figure 5 shows the monthly transfer per family per capita. It is interesting to note per capita, families in the high and medium transfer received a similar amount. However, this is not the case in the low transfer group. This is probably because all things equal, having more private income makes the probability of reaching the ceiling in the transfer higher.

Figure 5 – Monthly mean transfer per family per capita



Finally, Figure 6 shows the mean amount in euros from the SMI, 'Ajuts 0-16' and employment policies granted by city council to households in the treatment and in the control group. As we can see, since the BMincome complemented other existent programs, the control group still received some money from city council. However, the difference between the amount received by the treatment group and the control group is quite large.

Figure 6 – City council's total mean transfer per family in euros during the period from December 2017 to October 2019. Per category of transfer



e. Participation in activation policies

Those households assigned to the activation policies that were accepted in the program after the lottery were contacted to establish whether they fulfilled the policy's criteria and whether they were still interested in receiving the policy under the established conditions. As we can see in Table 12, in the case of the unconditional training and employment policy 96.0% of the families initially allocated were accepted into the program; of them, 86.9% were assigned to this policy and out of those 81.1% did the policy.

That final percentage is quite similar in the case conditional training and employment policy. However, in the case of social entrepreneurship there is quite a difference in participation rates between the unconditional and conditional modality. Interesting, community participation has a higher participation proportion than unconditional social entrepreneurship[35].

[35] It should be noted that very few families in the conditional modality were suspended from the program for that reason.

Table 12 – Participation in activation policies in percentage

	Unconditional			Conditional		
	In the program	Match assigned policy and lottery	Did the policy?	In the program	Match assigned policy and lottery	Did the policy?
Training and employment	96.0	86.9	81.1	81.3	72.1	81.1
Social Entrepreneurship	92.0	100.0	54.3	88.0	100.0	77.3
Room Rental Promotion	50.0	100.0	100.0	33.3	100.0	100.0
Community Participation promotion	88.4	100.0	66.0	-	-	-

f. Follow-up of the treatment group

City Council covered with transfer from SMI, 'Ajuts 0-16' or the money from the Training and Employment policy the difference between household basic needs and private income. With that in mind, we estimate the proportion of families with a positive transfer at the start of the program, that did not need a transfer by the last month, the proportion of families receiving a higher transfer in the first three months than in the last three months and the proportion of families receiving a lower transfer in the first three months than in the last three months. The first two would be similar to successful cases while the last one would those with a lower private income by the end.

Table 13 and Table 14 show how families performed in terms of transfer needs during the end of the program by stratum of transfer and by program modality respectively. Overall, out of the initial 1000 families in the treatment group, 83.6% of them received a positive transfer from the SMI and 84.7% received a positive transfer including 'Ajuts 0-16' or Training and Employment policy, and 95.4% received a positive transfer in the first three months of the program. Out of the latter, 12.5% did need a transfer in the last month of the program, and 60.5% received a smaller transfer by the end. 39.5% needed a larger transfer in the last three months of the program (Table 14). The modality with the highest proportion of 'successful' stories is the conditional cash transfer. The one with the lowest is the modality receiving only the cash transfer.

Table 13 - Proportion of families receiving a transfer in the last months of the program by program's modality

	First 3 Months > 0

	Families with positive transfer	Families with positive SMI transfer	Positive transfer during the first three months	No transfer in last month	Lower transfer in the last three months lower	Higher transfer in the last three months lower
Treatment	84.7	83.6	95.4	12.5	60.5	39.5
Cash transfer only	83.6	82.4	94.9	10.1	55.2	44.8
Cash transfer plus activation policy	85.6	84.5	95.8	14.4	64.7	35.3
Conditional cash transfer	78.8	78.1	98.1	22.6	77.4	22.6
Unconditional cash transfer	85.6	84.5	95.0	11.0	58.0	42.0
Full withdrawal cash transfer	85.5	84.0	94.8	11.3	57.3	42.7
Partial withdrawal cash transfer	84.3	83.4	95.7	13.1	62.2	37.8

Source: own elaboration using administrative data from City Council

Another interesting fact is that the highest proportion of families that needed a higher transfer in the end of the program is in in the estimated low transfer stratum (Table 15). That means that there is some sort of reversion to the mean process in the income of this families. When constructing the stratums for the lottery, the available information was their rent in the 2017, but it is probably better to define this using the average of the last three years.

Table 14 - Proportion of families receiving a transfer in the last months of the program by stratum of transfer

	Families with positive transfer	Families with positive SMI transfer	Positive transfer during the first three months	First 3 Months > 0		
				No transfer in last month	Lower transfer in the last three months lower	Higher transfer in the last three months lower
High Transfer	91.8	90.5	94.1	12.6	73.7	26.3
Medium Transfer	87.5	86.9	97.8	13.1	71.5	28.5
Low Transfer	81.5	80.4	94.5	10.8	44.4	55.6
Room rental promotion stratum	41.7	37.5	90.0	55.6	66.7	33.3

Source: own elaboration using administrative data from City Council

Table 46 to Table 48 in the appendix report the outcome values for the treatment group.

II. Impact results from the BMincome project

In this section we explain the regression analysis used to estimate the impact of the BMincome project across the different modalities of the program and we present the results from those estimations.

a. Estimated equations

i. Baseline estimation

As was explained in section III, when the assignment to a program is done randomly, the difference between the control and treatment group is a valid estimator of the effect of the program. In the case of the BMincome, the randomization was a stratified, where strata were defined according to the initial transfer they would receive and the whether there was at least one employable person in the household[36]. The regression analysis then, should adjust then include fixed effects per stratum level to avoid omitted variable bias.

The baseline equation is therefore defined as:

Equation 7

$$Y_i = \beta_0 + \beta_1 Employable_i + \beta_2 MediumTransfer_i + \beta_3 LowTransfer_i + \beta_T Treatment_i + u_i$$

Y_i is the outcome of interest. $Employable_i$ is a dummy variable equal to one if at least one person within the household is employable (and zero otherwise). $MediumTransfer_i$ is a dummy variable equal to 1 if the household was supposed to receive a monthly transfer of between 600 and 1100 euros (and zero otherwise) and $LowTransfer_i$ is a dummy variable equal to 1 if the monthly transfer was expected to be lower than 600 euros (and zero otherwise). $Treatment_i$ is a dummy variable equal to 1 if the household is in the treatment group and zero if it is in the control group.

As mentioned previously, households in the reserve group were not considered in the analysis. In this case, the coefficient of interest is $\widehat{\beta_T}$ and the corresponding null hypothesis is $H_0: \beta_T = 0$. The rest of the variables in the equation are included to prevent omitted variable bias, but their coefficient has no particular interest and we should not interpret it.

For those outcomes informed using survey data, we need to adjust for the type of survey used to interview them (CATI or CAPI) to avoid potential omitted variable bias. Some outcomes involve information on more than one member of the family, as it is the case of number of people working, number of minors with bad health, number of people that continue with post mandatory education and number of people that fail the course in mandatory education. In those cases, we have to adjust for the number of people in the household included in those categories. We should not interpret the estimated coefficient for these variables neither.

[36] As explained previously, the stratum of room rental promotion was excluded from the analysis

Taking into consideration that within the treatment group there is a lot of heterogeneity regarding what they received, we also perform other comparisons. Equation 8 shows the comparison of SMI (cash transfer only) and SMI plus activation policies versus the control group.

Equation 8

$$Y_i = \beta_0 + \beta_1 \text{Employable}_i + \beta_2 \text{MediumTransfer}_i + \beta_3 \text{LowTransfer}_i + \beta_{SMI} \text{SMI}_i + \beta_{AP} \text{ActPol}_i + u_i$$

In this case, there are two estimated of interest, one for the dummy that will be one if the household was assigned to the treatment group receiving only the cash transfer and zero otherwise ($\widehat{\beta_{SMI}}$), and another for the dummy variable that will be one if the household was assigned to the treatment group receiving the cash transfer and an activation policy and zero otherwise ($\widehat{\beta_{ActPol}}$). In this case, the null hypotheses to test are:

a) $H_0: \beta_{SMI} = 0$
   This one test the effectiveness of receiving just the cash transfer against being in the control group
b) $H_0: \beta_{AP} = 0$
   This one test the effectiveness of receiving the cash transfer plus the activation policy against being in the control group
c) $H_0: \beta_{AP} = \beta_{SMI}$
   This one test whether the effect of receiving the cash transfer is the same as the effect of receiving the cash transfer plus an activation policy

Similarly, equation 9 shows the comparison of a cash transfer conditional on the activation policy, an unconditional cash transfer and the control group.

Equation 9

$$Y_i = \beta_0 + \beta_1 \text{Employable}_i + \beta_2 \text{MediumTransfer}_i + \beta_3 \text{LowTransfer}_i + \beta_{uncond} \text{Uncond}_i + \beta_{cond} \text{Cond}_i + u_i$$

The coefficient of interest from this analysis are the one from the dummy that will be one if the household was assigned to the treatment group receiving a conditional cash transfer and zero otherwise ($\widehat{\beta_{cond}}$), and another from the dummy variable that will be one if the household was assigned to the treatment group receiving an unconditional cash transfer (this group is a mix between those receiving a cash transfer with an unconditional

activation policy and those receiving the cash transfer without activation policy) and zero otherwise ($\widehat{\beta_{uncond}}$). In this case, the null hypotheses to test are:

a) $H_0: \beta_{uncond} = 0$
   This one test the effectiveness of receiving just the cash transfer against being in the control group
b) $H_0: \beta_{cond} = 0$
   This one test the effectiveness of receiving the cash transfer plus the activation policy against being in the control group
c) $H_0: \beta_{uncond} = \beta_{cond}$
   This one test whether the effect of receiving the cash transfer is the same as the effect of receiving the cash transfer plus an activation policy

Equation 10 shows the comparison of a full withdrawal cash transfer, a partial withdrawal cash transfer and the control group.

Equation 10

$$Y_i = \beta_0 + \beta_1 \text{Employable}_i + \beta_2 \text{MediumTransfer}_i + \beta_3 \text{LowTransfer}_i + \beta_{\text{limit}} \text{Limited}_i + \beta_{\text{unlimit}} \text{Unlimited}_i + u_i$$

In this case, there are two coefficient of interest, one for the dummy that will be one if the household was assigned to the treatment group receiving the cash transfer with partial withdrawal and zero otherwise ($\widehat{\beta_{limit}}$), and another for the dummy variable that will be one if the household was assigned to the treatment group receiving the cash transfer and an activation policy and zero otherwise ($\widehat{\beta_{unlimit}}$). In this case, the null hypotheses to test are:

a) $H_0: \beta_{unlimit} = 0$
   This one test the effectiveness of receiving the cash transfer with partial withdrawal against being in the control group
b) $H_0: \beta_{limit} = 0$
   This one test the effectiveness of receiving the cash transfer plus the activation policy against being in the control group
c) $H_0: \beta_{unlimit} = \beta_{limit}$
   This one test whether the effect of receiving the cash transfer is the same as the effect of receiving the cash transfer plus an activation policy

Finally, Equation 11 shows the comparison between those receiving the unconditional and partial withdrawal cash transfer (that is a mix of those receiving an unconditional activation policy with partial withdrawal and

those receiving a partial withdrawal cash transfer with no activation policy attached), an unconditional and full withdrawal cash transfer (that is a mix of those receiving an unconditional activation policy with full withdrawal and those receiving a full withdrawal cash transfer with no activation policy attached), and a conditional and partial withdrawal cash transfer (group of households receiving a conditional active policy with partial withdrawal) versus the control group.

Equation 11

$$\begin{aligned} \mathrm{Y_i} = \beta_0 + \beta_1 \mathrm{Employable_i} + \beta_2 \mathrm{MediumTransfer_i} + \beta_3 \mathrm{LowTransfer_i} \\ + \beta_{\mathrm{uu}} \mathrm{UncondUnlim_i} + \beta_{ul} UncondLim_{\mathrm{i}} + \beta_{\mathrm{cu}} \mathrm{CondUnlim_i} + \mathrm{u_i} \end{aligned}$$

In this case, the coefficient of interest are three: the one from the dummy that will be one if the household was assigned to the treatment group receiving an unconditional cash transfer with partial withdrawal and zero otherwise (\$widehat{\beta_{uu}}$), the one from dummy variable that will take the value of one if the household was assigned to the treatment group receiving the unconditional cash transfer with full withdrawal ($\widehat{\beta_{ul}}$) and the one from the dummy variable that will take the value of one if the household was assigned to the treatment group receiving a conditional cash transfer with partial withdrawal ($\widehat{\beta_{cu}}$). In this case, the null hypotheses to test are four:

a) $H_0: \beta_{uu} = 0$
   This one test the effectiveness of receiving an unconditional and partial withdrawal cash transfer against being in the control group
b) $H_0: \beta_{cu} = 0$
   This one test the effectiveness of receiving a conditional and partial withdrawal cash transfer against being in the control group
c) $H_0: \beta_{ul} = 0$
   This one test the effectiveness of receiving an unconditional with full withdrawal cash transfer against being in the control group
d) $H_0: \beta_{uu} = \beta_{cu} = \beta_{ul}$
   This last one test whether the effect is the same for the three groups, although we could also check differences in groups of two.

ii. Augmented estimation

The inference from the baseline estimation could be improved if we adjust for the baseline outcome and if we adjust for other variables that potentially explain the outcome. That is, once we adjust for the blocking variables, we should have that $Corr(Treatment_t, Y_0) = 0$. However, it is quite likely that $Corr(Y_t, Y_0) \neq 0$. Therefore, including the baseline value in the regression (Y_0)

can reduce the standard error of the regression, and therefore reduce confidence intervals[37].

There is a second motive to include those variables. As we have seen previously, some variables were not balance. Also, some characteristics of the household explain sample attrition or differences in the baseline characteristics between groups. To avoid a potential bias in the ITT estimator, we should include those variables in the regression.
For the baseline case, the augmented regression equation is:
Equation 12

$$Y_{it} = \beta_0 + \beta_1 Employable_i + \beta_2 LowTransfer_i + \beta_3 MediumTransfer_i + \beta_T T_i + \rho Y_{i0} \gamma X_i 0 + u_{it}$$

iii. Heterogeneous effects

The previous linear models assume that the effect is homogeneous. That is, the proposed models implicitly assume that it does not matter whether the head of the household is a woman or in which transfer bracket the household was. To allow some heterogeneity in the estimated effect, Equation 8 to Equation 11 were re estimated to include if the head was a woman and if the transfer was high or medium.

In terms of Equation 8, the new equations would be
Equation 13

$$Y_i = \beta_0 + \beta_1 \text{Employable}_i + \beta_2 \text{MediumTransfer}_i + \beta_3 \text{LowTransfer}_i + \beta_T \text{Treatment}_i + \beta_W \text{Women}_i + \beta_{WT} \text{Treatment}_i \times \text{Women}_i + u_i$$

Equation 14

$$Y_i = \beta_0 + \beta_1 \text{Employable}_i + \beta_2 \text{MediumTransfer}_i + \beta_3 \text{LowTransfer}_i + \beta_T \text{Treatment}_i + \beta_{LT} \text{Treatment}_i \times \text{LowTransfer}_i + \beta_{MT} \text{Treatment}_i \times \text{MedimTransfer}_i + u_i$$

In the case of Equation 12, the estimated effect for a household where the main recipient was a woman is $\beta_T + \beta_{WT}$ whereas for the other households the effect is β_T. Therefore, if $\widehat{\beta_{WT}} \neq 0$ it would mean that the effect is different for the two type of households. Similar, in the case of Equation 13, if $\widehat{\beta_{MT}} \neq 0$ or $\widehat{\beta_{LT}} \neq 0$ it means that the effect is different for households in these two brackets of initial transfer relative to high transfer.

iv. Treatment effect on the treated (ATT)

Finally, Equation 8 to 11 use the outcome of the lottery as the treatment variable. However, as we have seen from the implementation section,

[37] Technically, we are reducing the likelihood of type 2 error

compliance was not perfect as for different reasons some households from the treatment group ended up not receiving anything.

Also, the amount of money transferred to the different households was different. To take those things into consideration, we propose two set if additional equations. In the first one, we instrument the actual participation in the program with the result in the lottery. In the second one, we instrument the actual amount of money transferred in the program with the result in the lottery.

In both cases, the exclusion restriction is that participation in the program only affects the outcome variable through the lottery.

b. Results

In this part we present the results from their baseline equation with their corresponding tables, as well as the main results for robustness and heterogeneity effect analysis. The order of the reported outcomes has no particular meaning.

i. Deprivation and wellbeing

Deprivation[38]

BMincome reduces the probability of suffering severe deprivation by 8 percentage points. The effect is larger in absolute value for the group with just the cash transfer and it is lower for the group with the unconditional activation policy (Table 15). The program, however, does not seems to have a statistically significant effect for deprivation (the estimated effect is negative for most of the groups, but the coefficient is smaller; Table 49 in the appendix).

Table 15 – Effect on severe deprivation

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.080**					
	0.04					
Cash transfer only		-0.115***				
		0.04				
Cash transfer plus activation policy		-0.051				
		0.04				
Conditioned cash transfer			-0.103*			
			0.06			

[38] A more in-depth analysis of this section can be found in Ramos et al. (2019)

Unconditioned cash transfer			-0.076**			
			0.04			
Limited cash transfer				-0.091**		
				0.04		
Unlimited cash transfer				-0.074**		
				0.04		
Unconditional and unlimited cash transfer					-0.067*	
					0.04	
Unconditional and limited cash transfer					-0.090**	
					0.04	
Conditional and unlimited cash transfer					-0.102*	
					0.06	
Conditional cash transfer plus activation policy						-0.102*
						0.06
Unconditional cash transfer plus activation policy						-0.035
						0.04
Unconditional cash transfer without activation policy						-0.114***
						0.04
R-squared	0.007	0.009	0.006	0.006	0.006	0.01
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

BMincome is effective in reducing the scale of going to bed hungry in about 0.13 points (Table 21). In this case, the effect is larger for those in the conditioned activation policy although the difference between groups is not statistically significative.

Table 16 – Effect on the scale of going to bed hungry

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.130**					
	0.06					

Cash transfer only		-0.164***				
		0.06				
Cash transfer plus activation policy		-0.102*				
		0.06				
Conditioned cash transfer			-0.196***			
			0.07			
Unconditioned cash transfer			-0.120**			
			0.06			
Limited cash transfer				-0.139**		
				0.07		
Unlimited cash transfer				-0.126**		
				0.06		
Unconditional and unlimited cash transfer					-0.110*	
					0.06	
Unconditional and limited cash transfer					-0.138**	
					0.07	
Conditional and unlimited cash transfer					-0.195***	
					0.07	
Conditional cash transfer plus activation policy						-0.194***
						0.07
Unconditional cash transfer plus activation policy						-0.075
						0.07
Unconditional cash transfer without activation policy						-0.163**
						0.06
R-squared	0.004	0.005	0.004	0.003	0.004	0.006
N	1024	1024	1024	1024	1024	1024

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

BMincome also reduces food insecurity scale by 0.16 points (Table 50 in the appendix).

Wellbeing

BMincome has a positive effect on the probability of being satisfied with their life[39] as well on general life satisfaction (Table 17 and Table 51 of the appendix respectively). The program increases the probability of being satisfied with their life by 14.6 percentage points and life satisfaction 1.153 points and it increases.

The effect seems to be smaller[40] in the group with the activation policy and among those, larger in the group with the unconditional policy. This contrasts with the results from the intermediate report. At the time of the first follow-up survey, it was the group of people with an activation policy those that enjoyed the highest increase due to the program, particularly, those with a conditional activation policy.

Table 17 – Effect on the probability of being satisfied with their life

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.146***					
	0.03					
Cash transfer only		0.134***				
		0.04				
Cash transfer plus activation policy		0.155***				
		0.03				
Conditioned cash transfer			0.089*			
			0.05			
Unconditioned cash transfer			0.154***			
			0.03			
Limited cash transfer				0.160***		
				0.04		
Unlimited cash transfer				0.139***		
				0.03		
Unconditional and unlimited cash transfer					0.150***	
					0.03	
Unconditional and limited cash transfer					0.161***	
					0.04	
Conditional and unlimited cash transfer					0.089*	
					0.05	
Conditional cash transfer plus activation policy						0.089*
						0.05
Unconditional cash transfer plus activation policy						0.175***
						0.04

[39] Satisfied with their life is defined as reporting a level of satisfaction of 7 or higher
[40] That is, the difference is not statistically significant between groups

Unconditional cash transfer without activation policy						0.135***
						0.04
R-squared	0.029	0.028	0.029	0.028	0.028	0.03
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

ii. Residential exclusion

In general, BMincome reduces the probability falling into arrears (Table 18). Even though the sign is negative, and the estimated effect is quite considerable, the effect is not consistently significative across all the different groups, particularly not on those with a conditional cash transfer.

Table 18 – Probability of falling behind in mortgage repayments or rent

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.168*					
	0.09					
Cash transfer only		-0.203*				
		0.1				
Cash transfer plus activation policy		-0.14				
		0.1				
Conditioned cash transfer			-0.044			
			0.16			
Unconditioned cash transfer			-0.188*			
			0.1			
Limited cash transfer				-0.167		
				0.11		
Unlimited cash transfer				-0.169*		
				0.1		
Unconditional and unlimited cash transfer					-0.199*	
					0.1	
Unconditional and limited cash transfer					-0.17	
					0.11	
Conditional and unlimited cash transfer					-0.044	

					0.16	
Conditional cash transfer plus activation policy						-0.043
						0.16
Unconditional cash transfer plus activation policy						-0.169
						0.11
Unconditional cash transfer without activation policy						-0.205**
						0.1
R-squared	0.002	0.001	0.002	0.001	0.001	0.001
N	990	990	990	990	990	990

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

In the case of utilities expenditures (Table 58 in the appendix), it does not seem to be any distinguishable effect. Relative to the outcome of being forced to leave the current residence for financial reasons, we don't find any effect of BMincome on the probability of the event. (Table 59 in the appendix).

BMincome reduces the probability of having roof leaks or moisture problems in the housing in 7.6 percentage points (Table 19). This sign of the effect and statistical significance is consistent across all categories of treatment, although the effect is higher on those households with a conditional cash transfer.

Table 19 – Probability of having roof leaks or moisture problems

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.076**					
	0.04					
Cash transfer only		-0.082*				
		0.04				
Cash transfer plus activation policy		-0.071*				
		0.04				
Conditioned cash transfer			-0.100*			
			0.06			

Unconditioned cash transfer			-0.073*			
			0.04			
Limited cash transfer				-0.05		
				0.05		
Unlimited cash transfer				-0.089**		
				0.04		
Unconditional and unlimited cash transfer					-0.086**	
					0.04	
Unconditional and limited cash transfer					-0.05	
					0.05	
Conditional and unlimited cash transfer					-0.101*	
					0.06	
Conditional cash transfer plus activation policy						-0.100*
						0.06
Unconditional cash transfer plus activation policy						-0.063
						0.04
Unconditional cash transfer without activation policy						-0.082*
						0.04
R-squared	0.002	0.001	0.001	0.002	0.001	0
N	1017	1017	1017	1017	1017	1017

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

iii. Use of time

Labor Outcomes[41]

BMincome has a negative effect on labor participation across the different groups of comparison (Table 16). That is, receiving the BMincome reduces the probability of working by 13 percentage points. The effect is larger in absolute value for those doing an activation policy (statistically significant at 10%), meaning that for those doing some extra activity, the disincentive was

[41] Only 39 families answered the question on job search. It is not clear whether this is the true outcome from the survey or bad coding from the polling company. We decided not to include job search as an outcome in the effectiveness analysis.

larger. Unfortunately, this analysis excludes the households receiving the training and employment policy as many of them were employed by the policy at the time of the interview or collecting the unemployment insurance.

Table 20 – Effect on the probability of labor participation using the survey

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.130***					
	0.04					
Cash transfer only		-0.099**				
		0.04				
Cash transfer plus activation policy		-0.168***				
		0.04				
Conditioned cash transfer			-0.141			
			0.09			
Unconditioned cash transfer			-0.129***			
			0.04			
Limited cash transfer				-0.156***		
				0.04		
Unlimited cash transfer				-0.113***		
				0.04		
Unconditional and unlimited cash transfer					-0.110***	
					0.04	
Unconditional and limited cash transfer					-0.156***	
					0.04	
Conditional and unlimited cash transfer					-0.141	
					0.09	
Conditional cash transfer plus activation policy						-0.141
						0.09
Unconditional cash transfer plus activation policy						-0.171***
						0.04
Unconditional cash transfer without activation policy						-0.099**
						0.04
R-squared	0.008	0.011	0.007	0.009	0.008	0.01
N	901	901	901	901	901	901

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. Reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment

combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. Households in the Training and Employment policy were excluded from the analysis * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

This result is also present when we take into consideration all the members of the family that could work (Table 52 in the appendix). BMincome has also a negative effect on the quality of the job. That is, BMincome reduces in 4,4 percentage points the probability of having a full-time job with indefinite contract (Table 53 in the appendix). The effect of BMincome on training is statistically non-significant. Finally, BMincome has also a non-significant effect on the probability of doing entrepreneurship. However, unlike the previous results we see a difference in sign (although not statistically significant) between those that did the social entrepreneurship policy and the rest. In the former the effect is positive and negative in the latter.

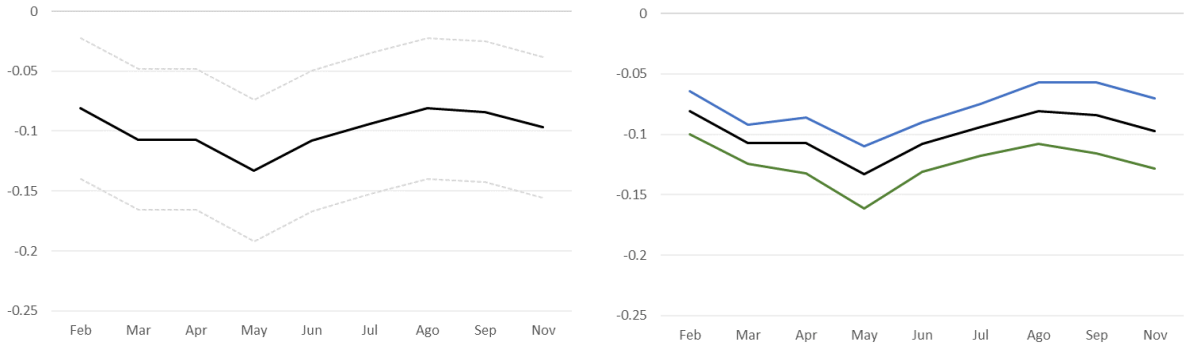
As we commented previously, households in the training and employment policy were not included in this section. In that regard, we strongly recommend continuing collecting the information from social security during 2020 to evaluate the impact on labor outcomes including this group. One interesting thing to note however, is that due to this policy 7 households were able to regularize their migration status and therefore acquired the possibility to find a job in the formal market. So, to mitigate poverty, it might be advisable to concentrate similar policies among those that are unable to work in the formal market.

If instead of the survey we use social security data, the results are quite similar. As we can see in Figure 7, the reduction in the probability of labor participation is stable around 10 percentage points.

Since the survey's interviews were done in July 2019, comparing the estimated effect of labor participation from the survey and of that month from social security could shed some light into the magnitude of sample attrition bias. Interestingly, the difference is not statistically significant, which is evidence against the hypothesis of a large sample attrition bias.

Figure 7 – Estimated effect on the probability of labor participation in basic points for the period from February 2019 to November 2019 using data from social security. On the left, the coefficient from the estimated coefficient treatment regression (control being the default category) with the confidence interval in dashed points. On the right, the estimated coefficient from the treatment

regression (black line), and the estimated coefficient from the cash only (blue line) and cash with policy activation (green line) regression.



Leisure and household tasks

The program has a positive effect on social leisure (Table 21). However, the effect is not consistent across the different modalities of the program and it is only statistically significant in the group doing a conditioned activation policy.

Table 21 – Effect on the probability of engaging in social leisure

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.049					
	0.04					
Cash transfer only		0.049				
		0.04				
Cash transfer plus activation policy		0.048				
		0.04				
Conditioned cash transfer			0.128**			
			0.06			
Unconditioned cash transfer			0.037			
			0.04			
Limited cash transfer				0.028		
				0.04		
Unlimited cash transfer				0.059		
				0.04		
Unconditional and unlimited cash transfer					0.043	
					0.04	
Unconditional and limited cash transfer					0.026	
					0.04	
Conditional and unlimited cash transfer					0.128**	
					0.06	
Conditional cash transfer plus activation policy						0.127**

						0.06
Unconditional cash transfer plus activation policy						0.025
						0.04
Unconditional cash transfer without activation policy						0.047
						0.04
R-squared	0.001	0	0.003	0.001	0.002	0.002
N	1019	1019	1019	1019	1019	1019

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

In the case of individual leisure, BMincome does not have any significant effect (Table 22).

Table 22 – Effect on the probability of enjoying individual leisure.

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.001					
	0.01					
Cash transfer only		0				
		0.01				
Cash transfer plus activation policy		0.001				
		0.01				
Conditioned cash transfer			0.017			
			0.02			
Unconditioned cash transfer			-0.002			
			0.01			
Limited cash transfer				0.008		
				0.01		
Unlimited cash transfer				-0.003		
				0.01		
Unconditional and unlimited cash transfer					-0.008	
					0.01	
Unconditional and limited cash transfer					0.007	
					0.01	
Conditional and unlimited cash transfer					0.017	

					0.02	
Conditional cash transfer plus activation policy						0.017
						0.02
Unconditional cash transfer plus activation policy						-0.004
						0.01
Unconditional cash transfer without activation policy						0
						0.01
R-squared	0	-0.001	0.001	0.001	0.003	0
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Finally, the program has a positive yet small effect on the ability of families to devote more time to do household common tasks (Table 23).

Table 23 – Effect on the probability of doing household common tasks

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.023					
	0.01					
Cash transfer only		0.016				
		0.02				
Cash transfer plus activation policy		0.029*				
		0.02				
Conditioned cash transfer			0.038**			
			0.02			
Unconditioned cash transfer			0.021			
			0.01			
Limited cash transfer				0.003		
				0.02		
Unlimited cash transfer				0.033**		
				0.01		
Unconditional and unlimited cash transfer					0.032**	
					0.01	

Unconditional and limited cash transfer					0.002	
					0.02	
Conditional and unlimited cash transfer					0.038**	
					0.02	
Conditional cash transfer plus activation policy						0.038**
						0.02
Unconditional cash transfer plus activation policy						0.027*
						0.02
Unconditional cash transfer without activation policy						0.015
						0.02
R-squared	-0.001	0	-0.001	0.003	0.003	-0.001
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

iv. Health

Self-Perceived Health and serious health problems

In line with what we find with the intermediate survey, the program has no effect on the health of the main recipients (Table 24). This result is disappointing as we would except that the financial security provided by the program would lead to improvement in the self-perceived health, particularly when there is plenty of room for improvement along this dimension (46% of the main recipients in the control group report a good, very good or excellent health). There is also no effect of the program on the probability of having a serious health problem (Table 56 in the Appendix).

Table 24 – Effect on the probability of reporting health good, very good or excellent

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.001					
	0.04					
Cash transfer only		0.031				
		0.04				
Cash transfer plus activation policy		-0.026				

		0.04				
Conditioned cash transfer			-0.001			
			0.06			
Unconditioned cash transfer			-0.001			
			0.04			
Limited cash transfer				0.014		
				0.04		
Unlimited cash transfer				-0.008		
				0.04		
Unconditional and unlimited cash transfer					-0.009	
					0.04	
Unconditional and limited cash transfer					0.014	
					0.04	
Conditional and unlimited cash transfer					-0.001	
					0.06	
Conditional cash transfer plus activation policy						-0.002
						0.06
Unconditional cash transfer plus activation policy						-0.034
						0.04
Unconditional cash transfer without activation policy						0.03
						0.04
R-squared	0.037	0.038	0.036	0.036	0.035	0.037
N	1023	1023	1023	1023	1023	1023

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Risk of mental disorder

Table 25 shows the effect of the BMincome program on the probability of developing a risk of mental disease. Like the self-perceived health outcome, there is no significant effect, even though in general the effect tends in the expected direction. However, this is at odds with the results from the intermediate report.

Using the intermediate survey, we find that the program significantly reduces the probability of developing mental diseases. Even more, the few

modalities with the 'wrong' sign are those that have the largest reduction in the intermediate report[42]. Given that approximately 64% of the control group is at risk of developing a mental disease, we would have expected that the program would have some effect in this category. So, this is another category in which the theory of change should be revised considering the results.

Table 25 – Effect on the probability of developing a mental disorder

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.019					
	0.04					
Cash transfer only		-0.039				
		0.04				
Cash transfer plus activation policy		-0.003				
		0.04				
Conditioned cash transfer			0.009			
			0.06			
Unconditioned cash transfer			-0.023			
			0.04			
Limited cash transfer				0.006		
				0.05		
Unlimited cash transfer				-0.031		
				0.04		
Unconditional and unlimited cash transfer					-0.041	
					0.04	
Unconditional and limited cash transfer					0.005	
					0.05	
Conditional and unlimited cash transfer					0.009	
					0.06	
Conditional cash transfer plus activation policy						0.01
						0.06
Unconditional cash transfer plus activation policy						-0.006
						0.04
Unconditional cash transfer without activation policy						-0.039
						0.04
R-squared	0.002	0.002	0.001	0.002	0.002	0.001
N	872	872	872	872	872	872

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1

[42] This regression has fewer observation that most of the presented analysis as no everybody answered all the questions from the survey that are used to construct the indicator.

reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Sleep Deprivation

In terms of sleep deprivation, BMincome has a positive effect on the numbers of hours slept (Table 57 in the appendix) and in the quality of sleep (Table 26), although the effect is statistically non-significant for the numbers of hours. The effect of the program seems to be uniform across the different modalities: receiving the intervention increases the probability of improving the quality of hours slept increases in about 6.6 percentage points.

Table 26 – Effect on the quality of sleep

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Tractament	0.066*					
	0.03					
Cash transfer only		0.064				
		0.04				
Cash transfer plus activation policy		0.069*				
		0.04				
Conditioned cash transfer			0.061			
			0.06			
Unconditioned cash transfer			0.067*			
			0.04			
Limited cash transfer				0.053		
				0.04		
Unlimited cash transfer				0.073**		
				0.04		
Unconditional and unlimited cash transfer					0.076**	
					0.04	
Unconditional and limited cash transfer					0.053	
					0.04	
Conditional and unlimited cash transfer					0.061	
					0.06	
Conditional cash transfer plus activation policy						0.061
						0.06
Unconditional cash transfer plus activation policy						0.071*

						0.04
Unconditional cash transfer without activation policy						0.064
						0.04
R-squared	0.027	0.026	0.026	0.026	0.025	0.025
N	1017	1017	1017	1017	1017	1017

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 27 and Figure 8 report the results using administrative data from use of health care services during 2018. Table 27 reports the effect of BMincome on the probability of new diagnostics of anxiety or depression. In the case of these two mental disorders, we do not find any statistically significant effect.

Table 27 – Effect on the probability of new diagnostics of anxiety or depression

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.006					
	0.01					
Cash transfer only		-0.002				
		0.01				
Cash transfer plus activation policy		0.012				
		0.01				
Conditioned cash transfer			0.013			
			0.01			
Unconditioned cash transfer			0.004			
			0.01			
Limited cash transfer				-0.003		
				0.01		
Unlimited cash transfer				0.01		
				0.01		
Unconditional and unlimited cash transfer					0.009	
					0.01	
Unconditional and limited cash transfer					-0.003	
					0.01	
Conditional and unlimited cash transfer					0.013	

						0.01
Conditional cash transfer plus activation policy						0.013
						0.01
Unconditional cash transfer plus activation policy						0.011
						0.01
Unconditional cash transfer without activation policy						-0.002
						0.01
R-squared	0	0	0	0	0	0
N	2654	2654	2654	2654	2654	2654

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the individual. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and are restricted to people of 16 or older. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

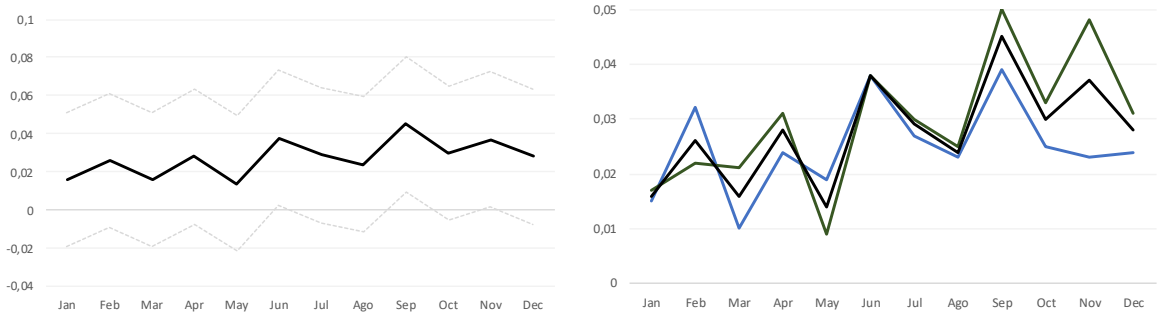
Figure 8 reports the monthly effect on prescription of painkillers, which includes Analgesics and Nonsteroidal anti-inflammatory drugs (NSAIDs). As we can see in Figure 8, BMincome increases the probability of prescription by about 2 percentage points. Also, the effect for the treatment group is similar for the cash transfer only group and for the cash transfer and activation policy group. Finally, if instead of monthly data we use the entire year, the probability of being prescribed a painkiller is about 4.3 percentage point higher for the treatment group.

That is, if anything, the estimated effect has the opposite sign to what would have been expected. It is unclear why this is the case. A further analysis to complement this one would analyze whether BMincome has any effect on the purchase of prescribed painkillers[43].

Figure 8 – Effect on monthly painkiller prescription during 2019 for people of 16 years or more. On the left, the estimated coefficient from the treatment regression (control being the default category) with the confidence interval in dashed points. On the right, the estimated coefficient

[43] That analysis is not reported here as we are waiting for the data on health care use corresponding to 2019 to complete the analysis

from the treatment regression (black line), and the estimated coefficient from the cash only (blue line) and cash with policy activation (green line) regression



v. Use of Social Services

BMincome reduces the need to use social services (Table 28). The estimated coefficient is statistically significance in the cash transfer without activation policy modality. This makes sense, as many of the other groups were having meetings with social workers just by design of the program, and therefore the answer in the survey could be misleading.

Table 28 – Effect on the probability of using social services

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.045					
	0.04					
Cash transfer only		-0.084**				
		0.04				
Cash transfer plus activation policy		-0.012				
		0.04				
Conditioned cash transfer			0.014			
			0.06			
Unconditioned cash transfer			-0.054			
			0.04			
Limited cash transfer				-0.021		
				0.04		
Unlimited cash transfer				-0.056		
				0.04		
Unconditional and unlimited cash transfer					-0.072*	
					0.04	
Unconditional and limited cash transfer					-0.023	
					0.04	
Conditional and unlimited cash transfer					0.013	
					0.06	
Conditional cash transfer plus activation policy						0.015

						0.06
Unconditional cash transfer plus activation policy						-0.02
						0.04
Unconditional cash transfer without activation policy						-0.085**
						0.04
R-squared	-0.002	0.001	-0.002	-0.002	-0.001	0
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Besides that, according to the answers from the surveyed households, the program reduces the probability of receiving a non-contribute pension by 4 percentage points, housing subsidies by 6 percentage points and discretionary transfers from municipal social services by 13 percentage points (table XX to XX in the appendix respectively). It also raises the probability of collecting the RGC between 2 to 4.7 percentage points (table 65 in the appendix). That is, case workers from municipal social services reduce discretionary transfers to people on the treatment group, which would make sense since they know they are on a guaranteed income scheme, as well as other discretionary transfers such as housing subsidies. Also, since most of the people in the treatment and control group were eligible for the RGC, case workers encouraged the application to the RGC to those in the treatment group. Therefore, it is no surprise to find that the program increases the probability of obtaining it; if anything, we would expect a much larger effect.

vi. Financial situation

BMincome has a positive effect on the satisfaction of families with their economic situation (Table 29). However, the effect is almost 25% smaller than in the follow-up survey. Unfortunately, the scale does not have a validated threshold, so it is quite hard to interpret what the extra point means in terms of perception of the economic situation.

Table 29 – Effect on satisfaction with economic situation (scale)

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se

Treatment	1.075***					
	0.19					
Cash transfer only		1.147***				
		0.21				
Cash transfer plus activation policy		1.017***				
		0.21				
Conditioned cash transfer			0.875***			
			0.29			
Unconditioned cash transfer			1.106***			
			0.19			
Limited cash transfer				1.099***		
				0.23		
Unlimited cash transfer				1.064***		
				0.2		
Unconditional and unlimited cash transfer					1.108***	
					0.21	
Unconditional and limited cash transfer					1.103***	
					0.23	
Conditional and unlimited cash transfer					0.875***	
					0.29	
Conditional cash transfer plus activation policy						0.873***
						0.29
Unconditional cash transfer plus activation policy						1.059***
						0.22
Unconditional cash transfer without activation policy						1.150***
						0.21
R-squared	0.043	0.043	0.043	0.042	0.042	0.042
N	1016	1016	1016	1016	1016	1016

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

BMincome has no effect on the probability of households having a buffer for unexpected expenses using their own resources (Table 66 in the appendix) and it reduces in 3 percentage points the probability of renting a room to earn money (Table XX in the appendix). That is, on the one hand, the

payment of the BMincome is not enough to set apart a fraction of the income and save enough money for most of the families. On the other, families use the financial security from the program to avoid renting a room to strangers. These findings are interesting because the program tried to promote room rental, which seems to something that beneficiaries try to avoid if possible. And second, that the estimated monthly transfer is not too large (although it could be smaller than what needed).

BMincome reduces in 7.1 percentage points the probability of borrowing money from family or friends (Table 30), one of the most frequent channels used among this population. It does not influence borrowing from financial institutions or borrowing from the administration.

Table 30 – Effect on the probability of borrowing money from family or friends

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.071**					
	0.03					
Cash transfer only		-0.070*				
		0.04				
Cash transfer plus activation policy		-0.072*				
		0.04				
Conditioned cash transfer			-0.06			
			0.06			
Unconditioned cash transfer			-0.073**			
			0.03			
Limited cash transfer				-0.069*		
				0.04		
Unlimited cash transfer				-0.072**		
				0.04		
Unconditional and unlimited cash transfer					-0.075**	
					0.04	
Unconditional and limited cash transfer					-0.070*	
					0.04	
Conditional and unlimited cash transfer					-0.06	
					0.06	
Conditional cash transfer plus activation policy						-0.06
						0.06
Unconditional cash transfer plus activation policy						-0.076*
						0.04

Unconditional cash transfer without activation policy						-0.070*
						0.04
R-squared	0.004	0.003	0.003	0.003	0.003	0.003
N	1025	1025	1025	1025	1025	1025

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

BMincome also reduces the probability of having an outstanding debt in 4.4 percentage points (Table 31), an effect that is consistent across the different modalities of the program (although not always statistically significant). It also increases the probability of not contracting any debt and the probability of reducing or eliminating the outstanding debt, although in both cases the effect is not statistically significant.

Table 31 – Effect on the probability of having and outstanding debt

	M1	M2	M3	M4	M5	M6
	b/se	b/se	b/se	b/se	b/se	b/se
Treatment	-0.044*					
	0.02					
Cash transfer only		-0.049*				
		0.03				
Cash transfer plus activation policy		-0.04				
		0.03				
Conditioned cash transfer			-0.06			
			0.04			
Unconditioned cash transfer			-0.041*			
			0.02			
Limited cash transfer				-0.046		
				0.03		
Unlimited cash transfer				-0.043*		
				0.02		
Unconditional and unlimited cash transfer					-0.038	
					0.03	
Unconditional and limited cash transfer					-0.046	
					0.03	
Conditional and unlimited cash transfer					-0.06	
					0.04	

Conditional cash transfer plus activation policy						-0.06
						0.04
Unconditional cash transfer plus activation policy						-0.034
						0.03
Unconditional cash transfer without activation policy						-0.048*
						0.03
R-squared	-0.001	-0.002	-0.002	-0.002	-0.003	-0.003
N	838	838	838	838	838	838

vii. Community Involvement

Regarding the community dimension, the effect of BMincome is mostly not significant. For instance, the effect of BMincome on the Duke social support and stress scale shows no statistically significant difference between control and treatment in the different modalities (Appendix, table 60). However, we do find a positive effect on the probability of perceiving a higher social support (Duke>32) for those doing a unconditional activation policy (Table 32), which is consistent with the theory of change of the community support promotion policy.

Table 32 – Effect on the total perceived support

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.037					
	0.04					
Cash transfer only		0.002				
		0.04				
Cash transfer plus activation policy		0.065*				
		0.04				
Conditioned cash transfer			0.039			
			0.06			
Unconditioned cash transfer			0.036			
			0.04			
Limited cash transfer				0.042		
				0.04		
Unlimited cash transfer				0.034		
				0.04		
Unconditional and unlimited cash transfer					0.033	
					0.04	
Unconditional and limited cash transfer					0.041	
					0.04	
Conditional and unlimited cash transfer					0.039	

					0.06	
Conditional cash transfer plus activation policy						0.04
						0.06
Unconditional cash transfer plus activation policy						0.073*
						0.04
Unconditional cash transfer without activation policy						0.003
						0.04
R-squared	0.04	0.042	0.039	0.039	0.038	0.042
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Regarding the other two outcomes that can be constructed from this scale, that is emotional support and confidential support (Table 61 and Table 62 in the Appendix respectively), we don't find any statistically significant effect.

BMincome also has a positive yet not statically significant effect on electoral participation in the recent municipal election (Table 33). It should be taken into consideration that some of the households among the treatment and control can't vote in municipal elections, which could not be considered during the interview[44].

Table 33 – Effect on electoral participation

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.04					
	0.03					
Cash transfer only		0.053				
		0.04				
Cash transfer plus activation policy		0.03				
		0.04				
Conditioned cash transfer			0.064			
			0.06			

[44] If the measurement error is random, then the estimator is downward biased

Unconditioned cash transfer			0.036			
			0.04			
Limited cash transfer				0.01		
				0.04		
Unlimited cash transfer				0.054		
				0.04		
Unconditional and unlimited cash transfer					0.052	
					0.04	
Unconditional and limited cash transfer					0.01	
					0.04	
Conditional and unlimited cash transfer					0.064	
					0.06	
Conditional cash transfer plus activation policy						0.063
						0.06
Unconditional cash transfer plus activation policy						0.02
						0.04
Unconditional cash transfer without activation policy						0.052
						0.04
R-squared	0.011	0.01	0.01	0.011	0.01	0.01
N	1019	1019	1019	1019	1019	1019
* p<0.10	**	***				
	p<0.05	p<0.01				

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

However, it does seem to have a positive effect on social participation and a negative one on voluntary activities (Table 34 and Table 35 respectively). People receiving the BMincome in the conditioned cash transfer have 11 percentage point more of probability of engaging in social participation.

Table 34 - Probability of engaging in social participation

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se

Treatment	0.023					
	0.04					
Cash transfer only		-0.012				
		0.04				
Cash transfer plus activation policy		0.053				
		0.04				
Conditioned cash transfer			0.109*			
			0.06			
Unconditioned cash transfer			0.01			
			0.04			
Limited cash transfer				0.011		
				0.04		
Unlimited cash transfer				0.03		
				0.04		
Unconditional and unlimited cash transfer					0.011	
					0.04	
Unconditional and limited cash transfer					0.009	
					0.04	
Conditional and unlimited cash transfer					0.109*	
					0.06	
Conditional cash transfer plus activation policy						0.110*
						0.06
Unconditional cash transfer plus activation policy						0.036
						0.04
Unconditional cash transfer without activation policy						-0.013
						0.04
Adj R-squared	0.017	0.019	0.019	0.016	0.018	0.02
N	1026	1026	1026	1026	1026	1026
* p<0.10	**	***				
	p<0.05	p<0.01				

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

However, receiving a cash transfer without activation policy has a negative effect on voluntary activities. In this case, the reduction in the probability of doing voluntary activities is of 8.2 percentage points.

Table 35 – Probability of doing voluntary activities

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.016					
	0.03					
Cash transfer only		-0.082**				
		0.03				
Cash transfer plus activation policy		0.038				
		0.03				
Conditioned cash transfer			-0.005			
			0.05			
Unconditioned cash transfer			-0.018			
			0.03			
Limited cash transfer				-0.011		
				0.04		
Unlimited cash transfer				-0.018		
				0.03		
Unconditional and unlimited cash transfer					-0.021	
					0.03	
Unconditional and limited cash transfer					-0.011	
					0.04	
Conditional and unlimited cash transfer					-0.005	
					0.05	
Conditional cash transfer plus activation policy						-0.003
						0.05
Unconditional cash transfer plus activation policy						0.051
						0.04
Unconditional cash transfer without activation policy						-0.081**
						0.03
R-squared	0.016	0.031	0.015	0.015	0.014	0.032
N	1023	1023	1023	1023	1023	1023

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for

the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

viii. Minors

Education

Regarding educational outcomes, there is some evidence that BMincome reduces the probability of grade repetition (Table 36). The effect is not statistically significant, except for the conditional and unlimited cash transfer group. It should be noted that grade repetition is quite uncommon in primary education. Thus, only households with children in secondary education are subject to this which means that the effect of the program can be mitigated due to lack of variation in the outcome.

Table 36 – Effect on the number of people repeating course in 17/18 and 18/19

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.021					
	0.03					
Cash transfer only		0.001				
		0.04				
Cash transfer plus activation policy		-0.039				
		0.03				
Conditioned cash transfer			-0.073*			
			0.04			
Unconditioned cash transfer			-0.013			
			0.03			
Limited cash transfer				0.035		
				0.04		
Unlimited cash transfer				-0.05		
				0.03		
Unconditional and unlimited cash transfer					-0.044	
					0.03	
Unconditional and limited cash transfer					0.036	
					0.04	
Conditional and unlimited cash transfer					-0.074*	
					0.04	
Conditional cash transfer plus activation policy						-0.074*
						0.04
Unconditional cash transfer plus activation policy						-0.028
						0.03

Unconditional cash transfer without activation policy						0.002
						0.04
R-squared	-0.002	-0.001	-0.001	0.004	0.004	-0.001
N	1111	1111	1111	1111	1111	1111

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects, a dummy for the type of survey used and the number of people under 16 in the household. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

On the other hand, the evidence is a little bit stronger that there is a positive effect in the reduction of drop-out rate (Table 37). Again, statistical significance is elusive (only in the modality of only cash transfer the effect is statistically significant), but overall all the coefficients are positive and around 2 to 4 percentage point of increase in the probability of continuing with post mandatory education.

Table 37 – Effect on the probability of continuing to post mandatory education in the academic year of 2017/2018, 2018/2019 and 2019/2020

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.027					
	0.02					
Cash transfer only		0.046*				
		0.03				
Cash transfer plus activation policy		0.013				
		0.02				
Conditioned cash transfer			0.049			
			0.04			
Unconditioned cash transfer			0.024			
			0.02			
Limited cash transfer				0.018		
				0.03		
Unlimited cash transfer				0.032		
				0.02		
Unconditional and unlimited cash transfer					0.028	
					0.02	
Unconditional and limited cash transfer					0.017	

					0.03	
Conditional and unlimited cash transfer					0.049	
					0.04	
Conditional cash transfer plus activation policy						0.049
						0.04
Unconditional cash transfer plus activation policy						0.002
						0.02
Unconditional cash transfer without activation policy						0.046*
						0.03
R-squared	0.014	0.015	0.013	0.013	0.012	0.015
N	1111	1111	1111	1111	1111	1111

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects, a dummy for the type of survey used and the number of people under 16 in the household. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Health

Table 38 reports the effect on the number of people with 16 years or less reporting a bad or regular health situation. According to the results, for families of identical characteristics, BMincome reduces the number of children with bad health. The effect is not statistically significant however, except for the modality of unconditional and unlimited cash transfer.

Table 38 – Effect on the number of people under 16 reporting bad health

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.128					
	0.08					
Cash transfer only		-0.123				
		0.09				
Cash transfer plus activation policy		-0.133				
		0.09				
Conditioned cash transfer			-0.188			
			0.14			
Unconditioned cash transfer			-0.119			
			0.08			

Limited cash transfer				0.033		
				0.1		
Unlimited cash transfer				-0.209**		
				0.09		
Unconditional and unlimited cash transfer					-0.214**	
					0.09	
Unconditional and limited cash transfer					0.033	
					0.1	
Conditional and unlimited cash transfer					-0.19	
					0.14	
Conditional cash transfer plus activation policy						-0.188
						0.14
Unconditional cash transfer plus activation policy						-0.116
						0.09
Unconditional cash transfer without activation policy						-0.122
						0.09
R-squared	0.241	0.24	0.24	0.247	0.247	0.239
N	831	831	831	831	831	831

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects, a dummy for the type of survey used and the number of people under 16 in the household. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 39 reports the effect of BMIncome on child obesity. Again, there is no statistically significant effect, except for children in households with the limited cash transfer, where the probability increases by 2.4 percentage points.

Table 39 – Effect on the probability of new obesity diagnostics on people under 15 years

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.013					
	0.01					
Cash transfer only		0.017				
		0.01				

Cash transfer plus activation policy		0.01				
		0.01				
Conditioned cash transfer			-0.003			
			0.02			
Unconditioned cash transfer			0.016			
			0.01			
Limited cash transfer				0.024*		
				0.01		
Unlimited cash transfer				0.008		
				0.01		
Unconditional and unlimited cash transfer					0.01	
					0.01	
Unconditional and limited cash transfer					0.024*	
					0.01	
Conditional and unlimited cash transfer					-0.003	
					0.02	
Conditional cash transfer plus activation policy						-0.003
						0.02
Unconditional cash transfer plus activation policy						0.014
						0.01
Unconditional cash transfer without activation policy						0.017
						0.01
R-squared	0.001	0	0.001	0.001	0.001	0
N	1425	1425	1425	1425	1425	1425

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the individual. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and are restricted to people of 15 years or younger. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

c. Robustness analyses[45]

With very few exceptions, adjusting the regression analyses for baseline characteristics of the households does not modify the previous analyses. Something similar happens when we instrument participation with the result of the lottery or instrument the total amount of euros received by city

[45] Results available upon request

council with the result from the lottery. The estimated effect using the ATT estimator is usually a little bit higher in absolute value and marginally the ATT coefficient is significant in some cases when the one from the ITT it is not. Overall however, the main conclusions from the baseline analysis remain unmodified. Particularly, there is no reversal in the sign of the estimated coefficients.

d. Heterogeneity Effects[46]

Finally, we check if the effect is similar for households where a woman is the main recipient and for households that belonged to the highest expected transfer stratum. In general, most of the results are in line with the baseline estimated equations. However, there are some differences worth mentioning.

In the case of households with a woman as main recipient, Bmincome reduces the probability of labor participation more than on households where a man is the main recipient. The same happens with electoral participation and buffer for unexpected financial expenses. On the other hand, BMincome has a larger effect reducing debt from local shops in households where a woman is the main recipient.

In the case of households with a high expected transfer, BMincome reduces significantly more the probability of labor participation and engaging in entrepreneurship activities. On the other hand, the effect is higher in terms of debt reduction and debt avoiding as well as electoral participation.

e. Interpretation

According to the results and in line with the theory of change, the program is effective in improving the well-being. This is consistent with other important results such as the improvement in the quality of sleep hours, the reduction in severe material deprivation, the reduction in the stress from food deprivation and the improvement in the perception of their economic situation.

The program has other direct results. It improves the household financial situation with reduction in outstanding debt or the need to borrow from friends or family. However, recipients do not seem to be able to save enough to pay from their own resources large unexpected expenses.

[46] Results available upon request

The program reduces residential exclusion. Households decrease by 17 percentage points the probability of falling into arrears and reduce the probability of having rook leaks or moisture problems. However, the program does not affect the probability of being forced out of their current residence.

The effect on community involvement is ambiguous. On the one hand, the program improves total perceived support among those that did the community participation promotion policy. It also increases the probability of engaging in social activities but only among those in the conditional cash transfer modality. On the other hand, the probability of engaging in voluntary work is reduced for those households receiving the cash transfer without activation policy modality. Finally, there is no effect on electoral participation.

However, these improvements are not necessarily translated into better health. We do not find an improvement in self-perceived health, nor a reduction in probability of developing mental disorders. In line with those findings, the probability of new diagnostics from anxiety or depression is not modified by the program. In fact, according to the results the program increases the prescription of painkillers. These results are at odds with the theory of change, as we would expect an improvement in health outcomes. Further exploration of these is recommended, particularly exploiting the information from health care use once they are available for 2019.

What should happen with beneficiaries' use of time is not that clear from an ex-ante perspective. On the one hand, families have more time to look for a better job and less urgency in taking the first one that is presented. On the other hand, economic theory predicts that families will have fewer incentives to search for a job or take one up and might prefer to increase leisure time or devote their time to common household activities. On the other hand, the evidence suggest that the program is ineffective in generating better job opportunities. Labor participation is reduced as well as the probability of finding a good quality job while entrepreneurship is not fostered by the program actions. At the same time, the probability of enjoying social and individual leisure is increased as well as the probability of devoting more time to household common tasks. It should be noted, that the results on labor outcomes do not include the households on the training and employment policy and therefore it will be interesting to see if there is a change once those households can be included.

In terms of individuals below 16 years, we find weak evidence of a reduction in grade repetition, no improvement in new obesity diagnostics and no improvement in the possibility of pursuing extracurricular activities. We find weak evidence of a reduction in the drop-out rate. It should be noted that the theory of change is more diffuse on these outcomes, so these findings are not surprising.

In most of the cases, there is not statistical difference between the different groups analyzed. For instance, the estimated differences between cash transfer with activation policy and without it are similar in most of the outcomes, with very few exceptions. We should be careful in how we interpret this, as the experiment is underpowered to test for small differences. That is, it could be that there is a difference, but the effect is too small to be detected with the current design.

With respect to the midterm analysis, many of the estimated coefficients are higher. In particular, general life satisfaction, residential insecurity, severe material deprivation, food insecurity and training. However, there are other outcomes for which the estimated effect is smaller, or it the coefficient is no longer statistically significant. For instance, the probability of developing mental disorder, the estimated effect is no longer significant. The coefficient on quality of sleep is smaller as it is the coefficient for self-reported health, which now it is negative (even though not significant).

The reason why some of the effects are dissipating in the medium term is not clear, however. A possible explanation is that in the last survey households were anticipating the termination of the program. Again, differences between the first follow-up and final follow-up survey are usually not statistically significant, so we should be cautious on these or other possible interpretations.

Finally, the adjusted R2 from the different OLS analysis are quite low. That, in simple terms, is a sign that the estimated models are not good enough explaining the variability of the outcomes. Even though this fact does not invalidate the analysis, it states that social exclusion is a very complex phenomenon and it is hard to explain it only by lack of a steady income.

VII. Conclusions and recommendations

The analyses in the present report show that the BMincome pilot project has the capacity to improve household's situation, but it has challenged some predictions from the theory of change.

First, a large proportion of the families that was collecting money from the program at the start was able to reduce the need of cash transfer by the end of the program. About 12% of the former did not need any further municipal transfer. Even though we do not have this information from the control group, this reduction is quite a success story, particularly with the inexistence of a central government program of guaranteed income and the implementation issues in the first months of the regional guaranteed income program (RGC).

Second, conditionality does not seem to make a large difference in terms of participation in the policy. It does not seem to have any differential effect on the outcomes either. So, future editions of the program should choose the less expensive modality. Partial withdrawal did not have any statistically significant effect either.

Third, community participation promotion is effective in improving total perceived support. Given the high correlation between that variable and the risk of heart diseases, future edition of similar programs should probably include more of this intervention.
Fourth, wellbeing, deprivation, residential exclusion and financial situation seem to be the dimensions were the program has a larger impact. Unfortunately, there is no effect on health which was a prediction of the theory of change.

Pending on the analysis including the households doing the training and employment policy, a cash transfer whether conditional or unconditional, with partial withdrawal or full withdrawal reduces labor participation and it also reduces the quality of labor. Also, social entrepreneurship training does not seem to have any effect on entrepreneurship attitudes. With that in mind, future editions of the program should reconsider the implementation of employment or entrepreneurship training and target only those that can actually take advantage of them. For instance, other things equal, households without a legal residence will be probably benefit the most from training and employment policies as they will be granted a legal residence and the possibility to look for a job in the formal sector.

One aspect of this report that should not go unnoticed is the information system that was created to inform the different aspect of the program and the evaluation. Thanks to the pilot project, city council has now a more robust and agile access to information, which should continue improving in order to improve the population target of its different programs as well as of they reach them.

In that sense, the non-take up analysis shows that part of the target population did not apply due to lack of information about municipal interventions. This finding is similar to the one found in Blasco and Todeschini (2019) about the program 'Fons d'Infancia 0-16'. Barcelona's city council should review how the most vulnerable are reached in order to have a larger impact.

Finally, it is important to continue with the impact and economic evaluation of BMincome project. On the one hand, some outcomes were not informed for 2019 such as use of health care services. Also, labor outcomes analyses did not include participants of the training and employment policy. On the other hand, it is important to have a robust feedback regarding how families perform once the program has finished. In that sense, we recommend a third follow-up survey one year after the termination of the program.

VIII. Bibliography

Ashenfelter, O. (2014) The Early History of Program Evaluation and the U.S. Department of Labor, IZA Discussion Papers, No. 8118, Institute for the Study of Labor.

Broadhead, W. E., Gehlbach, S. H., DeGruy, F. V., & Kaplan, B. H. (1988). The DukeUNC Functional Social Support Questionnaire: Measurement of social support in family medicine patients. Medical Care, 26(7), 709-23.

Casella G, Berger RL. Statistical inference. Pacific Grove, CA: Duxbury; 2002.

Clark, A., Flechè S., Layard, R., Powdthavee N. and Ward, G. (2018). The origins of happiness: the science of well-being over the life course. Princeton university press.

Deming W. and Stephan F. (1941). On the Interpretation of Censuses as Samples. Journal of the American Statistical Association, Vol. 36, No. 213 (Mar., 1941), pp. 45- 49.

Garcia, Ramos, Cervini (2019). BMincome non take-up: an econometric approach. Unpublished work (presented to the UIA as part of the BMincome project)

Gerber, A. and Green, D. (2012) Field experiments. Design, analysis and interpretation. Norton and Company.

Gertler, P.J., Martinez, S., Premand, P., Rawlings, L.B. and Vermeersch, C.M., 2016. Impact evaluation in practice. The World Bank.

Glennerster, R. and Tkavarasha , K. (2013). Running randomized evaluations: a practical guide. Princeton university press.

Goldberg DP, Gater R, Sartorius N, et al. The validity of two versions of the GHQ in the WHO study of mental illness in general health care. Psychol Med. 1997;27:191–7.

Heckman, J.J. and J.A. Smith (2004), “The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program”, Journal of Labor Economics, 22, 243-298.

INE. Atlas de distribución de renta de hogares

Imas and Rist (2009). The road to results: Designing and conducting effective development evaluations. The World Bank Group.

Imbens, G.W. and Rubin, D.B., 2015. Causal inference in statistics, social, and biomedical sciences. Cambridge University Press

Laín, B. and A. Julià (2018), “Informe sobre els casos de non-take-up del projecte pilot B-MINCOME. Per què certs individus no sol·liciten el suport municipal d’inclusió?”, Direcció de Planificació i Innovació. Àrea de Drets Socials. Ajuntament de Barcelona.

Levitt, Steven D.; List, John A. (2011). Was There Really a Hawthorne Effect at the Hawthorne Plant? An Analysis of the Original Illumination Experiments. American Economic Journal: Applied Economics. 3 (1): 224-238.

Lobo A, Munoz P. Versiones en lengua española validadas. In: Goldberg D, Williams P, editors. Cuestionario de Salud General GHQ (General Health Questionnaire). Guía para el usuario de las distintas versiones. Barcelona, Spain:Masson; 2010.

Perez López C. and Moral Arce, I. (2015). Técnicas de Evaluación de Impacto. Grupo editorial Gaceta

Todeschini and Kirchner (2018). Metodologia avaluació d’impacte del projecte BMincome. Unpublished work (presented to the UIA as part of the BMincome project)

Todeschini and Casado (2013). Guia pràctica 10 – Avaluar l'impacte de les polítiques actives d'ocupació. Col.lecció Ivàlua de guies practiques sobre avaluació de polítiques publiques.

Verlat, Todeschini and Kirchner (2019). BMincome baseline report. Unpublished work (presented to the UIA as part of the BMincome project)

IX. Appendix: Power analysis

Table 40 shows the basic power analysis for different configurations of the program. This analysis aims to establish the minimum detectable effect (MDE) for a given sample size, power and significance of the test. In the case of the BMincome project, we had 1383 households and we choose a power of 0.8[47] and a significance level of 0.05 in a two tails test[48]. To make the estimation, we use the hypothetical outcome of the unemployment rate, which was 19.5% in the city at the beginning of the project.

According to the estimation, the analysis of the effect of the program on unemployment when we compare all families that received the program versus those in the control group, the MDE is 0.071. That is, given this configuration, the analysis would not be able to detect effects smaller than 7.1 percentage points. The Cohen D in this case is 0.455, which means that the MDE corresponds to a medium to large effect.

Table 40 – Power analysis

	Treatment Group	Control Group	MDE	MDE/Outcome	Cohen D
Program					
1. Cash transfer (SMI) vs. No Cash transfer (Control)	1000	383	0.071	0.367	0.455
Activation policy					
2. Cash transfer with activation policy vs. no Cash transfer	550	383	0.079	0.406	0.505
3. Cash transfer with activation policy vs. Cash transfer without activation policy	550	450	0.075	0.386	0.48
Conditionality					
5. Conditional Cash transfer vs No Cash transfer	275	383	0.094	0.483	0.6
6. Conditional cash transfer vs Unconditional cash transfer with activation policy	275	275	0.103	0.527	0.654
Partial withdrawal					
7. SMI partial withdrawal vs No SMI	400	383	0.085	0.437	0.543
8. SMI partial withdrawal (no activation policy) vs No SMI	388	383	0.086	0.44	0.547
9. SMI partial withdrawal (no activation policy) vs SMI full withdrawal (no activation policy)	388	200	0.106	0.543	0.675
Training and employment (PFO)					
10. SMI with PFO vs No SMI	150	383	0.115	0.591	0.734
11. SMI conditional on PFO vs No SMI	75	383	0.152	0.778	0.967
12. SMI unconditional on PFO vs SMI partial withdrawal (no activation policy)	75	388	0.152	0.777	0.966
13. SMI with unconditional PFO vs SMI with conditional PFO	75	75	0.208	1.066	1.324

[47] The power of a test is the probability of rejecting the null hypothesis when it is false; in other words, it is the probability of avoiding a type II error.
[48] The significance level is the probability of rejecting the null hypothesis when it is true, given the data; in other words, it is the probability of a type I error.

As a side note, it should be noted that in this basic estimation we have not included the fact that that it is a stratified randomization, that we can adjust for the baseline outcome as well as for other possible family characteristics. These variables are likely correlated with the outcome but are uncorrelated with the result from the lottery. As such, if we adjust for them in the regression, the standard error of the regression will be lower, improving the quality of the inference.

Even though, it should be clear that the experiment does not has enough power to detect small to medium differences among categories of the treatment group. Unless the magnitude of the estimated effect is large enough, we will not be able to stay which of the modalities is more effective.

X. Appendix: Outcome variables

Table 41 – Outcome variables from the deprivation and wellbeing dimension

Variable	Construction
General Life Satisfaction	Answer to the question "how much satisfied the person is with their life from 0 to 10"
Very satisfied with life	Variable equal to 1 if the person answers more than 7 points to the question: "how much satisfied the person is with their life from 0 to 10"
Material Deprivation	Variable equal to 1 if the household answered NO in at least three of the following situation: (1) No delays in the payment of expenses related to the household (mortgage or rent, gas receipts, community ...) in the last 12 months, (2) Keeping the household warm enough, (3) Assuming unforeseen expenses, (4) Eating meat, chicken or fish at least every two days, (5) going on vacation at least a week a year, (6) having a car, (7)having a telephone (8) having a tv (9) having a washing machine
Severe material deprivation	Variable equal to 1 if the household answered NO in at least four of the following situation: (1) No delays in the payment of expenses related to the household (mortgage or rent, gas receipts, community ...) in the last 12 months, (2) Keeping the household warm enough, (3) Assuming unforeseen expenses, (4) Eating meat, chicken or fish at least every two days, (5) going on vacation at least a week a year, (6) having a car, (7)having a telephone (8) having a tv (9) having a washing machine
Going to bed hungry	Variable equal to 0 if they answer that any member went to sleep hungry during the last 4 weeks. It is equal to 1 if they answer yes to the last question and that happened once or twice during the last 4 weeks. It is equal to 2 if it happened between 3 and 10 times and, last, equal to 3 if the situation happened more than 10 times during the last month.
Food insecurity	Variable constructed from two variables: being worried for not having anything to eat and any member went to sleep hungry during the last 4 weeks. Then, this variable is equal to 0 if they answer NO no both questions, 1 if they answer 1 or 2 times in the first question and NO to the second; 3 if they answer more than 3 times in the first question and NO in the second.

Table 42 – Outcome variables from the use of time dimension

Variable	Construction
Labor	
Labor participation	Variable equal to 1 if the person identified as head is in one of the following situations: working full time (category 1); working part-time (category 2); working on their own business full time (category 3); working on their own business part time (category 4)
Quality of labor participation	Variable equal to 1 if they are working not in temporal basis and full time at the moment of the interview
Job search	Variable that reports 1 if the head answer yes to the question if they looked for a job during the last 4 weeks (even if the job is for a short period of time)
Intention of starting a business	Variable that reports 1 if the head answer yes to the question: Do you plan to start a new business or similar activity during the next 3 months?

Number of 25-65 years old working	Sum of the number of household members working
Number of 18-65 years old on training	Sum of the number of members between 18 and 65 years old that are doing or did (during the last 6 months) a training course (post-compulsory education)
Other	
Household common tasks	Dummy variable equal to 1 if they perform at least once a week, monthly or daily household chores.
Social leisure activity at least once a month	Dummy variable equal to 1 if they go to a bar, to the movies, concerts or discos once a week, a month or daily.
Individual leisure activity at least once a month	Dummy variable equal to 1 if they perform religious or spiritual activities, sports, music, painting or some other art, watch TV, movies or play video games sometime a week, a month or daily.

Table 43 – Outcome variables from the financial dimension

Variable	Construction
Satisfaction with economic situation	Answer to the question "how much satisfied the person is with their economic situation from 0 to 10"
Buffer for unexpected expenses	Dummy equal to 1 if the household answer that it has the capacity to face an unexpected expense of € 750 with its own resources.
Income through the rent of a room	Dummy equal to 1 if the household has tried or got any income through the rental of a room or a space of their house since January 1, 2019.
Cope with housing expenses with difficulty	Dummy variable equal to 1 if the family answer that they can pay their expenses with a little difficulty, difficulty or a lot of difficulty. Else is 0.
loan from a bank or financial company	Dummy equal to 1 if the household said they asked for a loan from a bank or financial company since 2018.
loan from friends or family	Dummy equal to 1 if the household said they asked for a loanfrom their family/friends since 2018.
pending payment with the administration and / or some commerce in the neighbourhood	Dummy equal to 1 if the household has had a pending payment with the Administration (Education, taxes, SS ...) and / or with a commerce in the neighbourhood since 2018.
Debt situation	Variable constructed in the following way: If it hadn't any debt is missing. If they had any debt then this variable is equal to -1 if the debt has increased from 2018 until not, 0 if it is the same, 1 if it has been reduced or 2 if it has been paid at the moment of the interview.
Pending debt	Variable equal to 1 if the household has at least two debts that is not paid at the moment of the interview. If the household didn't have any debt in 2018 then it is missing.
No debt	Variable equal to 1 if the household said they did not have any debt since 2018
Payed debt	Dummy variable equal to 1 if the household had debt but they have paid or reduced it since 2018. It is missing if they didn't have any debt during 2018
None or less debt	Dummy variable equal to 1 if the household managed to pay their debt, has reduced it or had no debt at all since 2018.

Table 44 – Outcome variables from the health dimension

Variable	Construction

Self-perceived health	Variable equal to 1 if the answer to the question "how do you think is your health in general?" excellent, very good or good
Serious health problems	Variable equal to 1 if they said they had a serious problem health during the last year
Risk of mental illness	Variable equal to 1 if the sum of the components of the GHQ12 is equal or greater than 3
Hours of sleep	Number of hours of sleep during last week.
Quality of sleep	Dummy variable equal to 1 if they slept more than 6 hours during the last month and they consider the quality of sleep good or very good.
New diagnostic of anxiety or depression	Dummy variable equal to 1 if the person hasn't an open diagnostic of anxiety and no open prescription of N06B, N05C or N05B on november 1st, 2017 but they have new prescriptions between nov 1st, 2017 and dec 31st, 2018
Painkiller prescription	Dummy variable equal to 1 if there is any prescription of AINE or N02 on november 1st, 2017 onwards

Table 45 – Outcome variables from the community involvement dimension

Variable	Construction
Volunteering	Dummy variable equal to 1 if they work voluntarily once a month, a week or daily.
Social leisure activity at least once a month	Dummy variable equal to 1 if they go to a bar, to the movies, concerts or discos once a week, a month or daily.
Individual leisure activity at least once a month	Dummy variable equal to 1 if they perform religious or spiritual activities, sports, music, painting or some other art, watch TV, movies or play video games sometime a week, a month or daily.
Social participation	Dummy variable equal to 1 if they actively belong to any group, organization or initiative of civil society during the last 12 months.
Electoral participation	Dummy variable equal to 1 if voted in the municipal elections of Barcelona (May 2019)
Normal social support	Dummy variable equal to 1 if the Duke index is greater than 32.

XI. Implementation

a. Attrition

b. Follow-up of the treatment group

Table 46 – Outcome variables of the Treatment group for the deprivation and wellbeing dimension

Outcome	Baseline	Intermediate follow up	Final follow up
Treatment			
General Satisfaction	5.03	6.31	6.26
Very satisfied	0.17	0.32	0.32
Material Deprivation	0.94		0.67
Severe material deprivation	0.67	0.64	0.47
Housing with leakage / humidity problems	0.45	0.47	0.43
Delays in the payment of housing bills	0.50	0.48	0.53
Food insecurity of the household	0.09	0.13	
Food situation of the household	0.10	0.19	0.71
Delay in the payment of rent or mortgage	0.65	0.52	0.83
satisfaction about his economic situation		5.17	5.02
Housing insecurity		0.13	0.07
Social Services in the last 12 months			0.63
Property regime			1.94
Delay in the payment of housing-related receipts			1.47
Scale of the food insecurity of the household			0.26
Conditional Cash transfer			
General Satisfaction	4.88	6.47	6.06
Very satisfied	0.18	0.36	0.27
Material Deprivation	0.94		0.64
Severe material deprivation	0.68	0.64	0.43
Housing with leakage / humidity problems	0.41	0.44	0.39
Delays in the payment of housing bills	0.47	0.43	0.45
Food insecurity of the household	0.05	0.10	
Food situation of the household	0.05	0.15	0.69
Delay in the payment of rent or mortgage	0.63	0.59	0.96
satisfaction about his economic situation		5.03	4.92
Housing insecurity		0.17	0.06
Social Services in the last 12 months			0.67
Property regime			1.86
Delay in the payment of housing-related receipts			1.39
Scale of the food insecurity of the household			0.19
Unconditional cash transfer			

General Satisfaction	5.05	6.28	6.29
Very satisfied	0.17	0.31	0.32
Material Deprivation	0.93		0.68
Severe material deprivation	0.67	0.64	0.48
Housing with leakage / humidity problems	0.46	0.48	0.44
Delays in the payment of housing bills	0.50	0.49	0.54
Food insecurity of the household	0.09	0.14	
Food situation of the household	0.11	0.20	0.71
Delay in the payment of rent or mortgage	0.66	0.51	0.81
Satisfaction about his economic situation		5.20	5.03
Housing insecurity		0.13	0.08
Social Services in the last 12 months			0.62
Delay in the payment of housing-related receipts			1.49
Scale of the food insecurity of the household			0.27
Full Withdrawal			
General Satisfaction	4.96	6.00	6.11
Very satisfied	0.16	0.27	0.33
Material Deprivation	0.93		0.67
Severe material deprivation	0.66	0.64	0.45
Housing with leakage / humidity problems	0.49	0.52	0.46
Delays in the payment of housing bills	0.48	0.49	0.52
Food insecurity of the household	0.10	0.14	
Food situation of the household	0.11	0.20	0.67
Delay in the payment of rent or mortgage	0.60	0.57	0.85
Satisfied about his economic situation		5.09	5.01
Housing insecurity		0.18	0.09
Social Services in the last 12 months			0.66
Delay in the payment of housing-related receipts			1.46
Scale of the food insecurity of the household			0.25
Partial Withdrawal			
General Satisfaction	5.06	6.46	6.34
Very satisfied	0.18	0.34	0.31
Material Deprivation	0.94		0.68
Severe material deprivation	0.68	0.64	0.48
Housing with leakage / humidity problems	0.43	0.45	0.42
Delays in the payment of housing bills	0.51	0.48	0.53
Food insecurity of the household	0.08	0.12	
Food situation of the household	0.10	0.19	0.73
Delay in the payment of rent or mortgage	0.68	0.50	0.82
satisfaction about his economic situation		5.21	5.02
Housing insecurity		0.11	0.07
Social Services in the last 12 months			0.61
Delay in the payment of housing-related receipts			1.48

Scale of the food insecurity of the household	0.26

Table 47 – Outcome values for the Treatment Group in the use of time dimension

Outcome	Baseline	Intermediate follow-up	Final Follow-up
Treatment			
All members of the family are working	0.196	0.206	0.229
At least one member of the family works	0.540	0.529	0.526
Head is looking for a job	0.497	0.361	0.258
Head with intention of starting a business	0.159	0.098	0.056
Labor situation of the head	0.368	0.375	0.374
Number of 18-65 years old members doing a training course	0.254	0.280	0.576
Quality of the job	0.090	0.079	0.078
Conditional Cash transfer			
All members of the family are working	0.157	0.241	0.204
At least one member of the family works	0.441	0.643	0.553
Head is looking for a job	0.528	0.294	0.000
Head with intention of starting a business	0.142	0.134	0.051
Labor situation of the head	0.315	0.491	0.379
Number of 18-65 years old members doing a training course	0.244	0.348	0.689
Quality of the job	0.079	0.054	0.078
Unconditional cash transfer			
All members of the family are working	0.202	0.201	0.233
At least one member of the family works	0.557	0.513	0.522
Head is looking for a job	0.491	0.371	0.267
Head with intention of starting a business	0.162	0.093	0.057
Labor situation of the head	0.377	0.357	0.373
Number of 18-65 years old members doing a training course	0.256	0.270	0.559
Quality of the job	0.092	0.083	0.078
Full withdrawal cash transfer			
All members of the family are working	0.174	0.158	0.189
At least one member of the family works	0.552	0.455	0.511
Head is looking for a job	0.443	0.366	0.273
Head with intention of starting a business	0.153	0.079	0.063
Labor situation of the head	0.358	0.291	0.331
Number of 18-65 years old members doing a training course	0.278	0.288	0.568
Quality of the job	0.090	0.091	0.084
Partial withdrawal cash transfer			
All members of the family are working	0.207	0.231	0.249
At least one member of the family works	0.534	0.567	0.533
Head is looking for a job	0.523	0.359	0.250
Head with intention of starting a business	0.162	0.108	0.053

Labor situation of the head	0.373	0.417	0.395
Number of 18-65 years old members doing a training course	0.243	0.277	0.579
Quality of the job	0.090	0.074	0.075

Table 48 – Outcome variables for the Treatment group for the health dimension

Outcome	Baseline	Intermediate follow up	Final follow up
Treatment			
Self-perceived health	0.49	0.43	0.36
Risk of mental illness	0.63	0.74	0.62
Quality of sleep		0.39	0.29
Serious health problems			0.24
Hours of sleep			5.76
Conditional cash transfer			
Self-perceived health	0.48	0.42	0.36
Risk of mental illness	0.63	0.72	0.63
Quality of sleep		0.41	0.29
Serious health problems			0.18
Hours of sleep			5.76
Unconditional cash transfer			
Self-perceived health	0.49	0.43	0.36
Risk of mental illness	0.63	0.74	0.62
Quality of sleep		0.39	0.29
Serious health problems			0.25
Hours of sleep			5.76
Full withdrawal cash transfer			
Self-perceived health	0.49	0.44	0.36
Risk of mental illness	0.62	0.76	0.65
Quality of sleep		0.35	0.27
Serious health problems			0.26
Hours of sleep			5.77
Partial withdrawal cash transfer			
Self-perceived health	0.49	0.43	0.36
Risk of mental illness	0.64	0.73	0.60
Quality of sleep		0.41	0.30
Serious health problems			0.23
Hours of sleep			5.76

XII. Appendix: Results not reported in the main text

a. Baseline regressions

i. Deprivation and wellbeing

Table 49 – Effect on material deprivation

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.021					
	0.03					
Cash transfer only		-0.025				
		0.03				
Cash transfer plus activation policy		-0.019				
		0.03				
Conditioned cash transfer			0.012			
			0.04			
Unconditioned cash transfer			-0.026			
			0.03			
Limited cash transfer				-0.018		
				0.03		
Unlimited cash transfer				-0.023		
				0.03		
Unconditional and unlimited cash transfer					-0.031	
					0.03	
Unconditional and limited cash transfer					-0.019	
					0.03	
Conditional and unlimited cash transfer					0.012	
					0.04	
Conditional cash transfer plus activation policy						0.012
						0.04
Unconditional cash transfer plus activation policy						-0.028
						0.03
Unconditional cash transfer without activation policy						-0.026
						0.03
R-squared	0.005	0.004	0.005	0.004	0.004	0.004
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. Reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full

withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. Households in the Training and Employment policy were excluded from the analysis * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 50 – Effect on food insecurity scale

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.213**					
	0.09					
Cash transfer only		-0.299***				
		0.1				
Cash transfer plus activation policy		-0.143				
		0.1				
Conditioned cash transfer			-0.146			
			0.14			
Unconditioned cash transfer			-0.224**			
			0.09			
Limited cash transfer				-0.263**		
				0.11		
Unlimited cash transfer				-0.189**		
				0.09		
Unconditional and unlimited cash transfer					-0.199**	
					0.1	
Unconditional and limited cash transfer					-0.264**	
					0.11	
Conditional and unlimited cash transfer					-0.145	
					0.14	
Conditional cash transfer plus activation policy						-0.144
						0.14
Unconditional cash transfer plus activation policy						-0.143
						0.1
Unconditional cash transfer without activation policy						-0.299***
						0.1
R-squared	0.009	0.012	0.009	0.009	0.008	0.011
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. Reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment

combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 51 – Effect on general life satisfaction

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment Group	1.153***					
	0.19					
Cash transfer only		1.211***				
		0.21				
Cash transfer plus activation policy		1.106***				
		0.21				
Conditioned cash transfer			0.934***			
			0.29			
Unconditioned cash transfer			1.187***			
			0.19			
Limited cash transfer				1.027***		
				0.23		
Unlimited cash transfer				1.216***		
				0.19		
Unconditional and unlimited cash transfer					1.282***	
					0.2	
Unconditional and limited cash transfer					1.032***	
					0.23	
Conditional and unlimited cash transfer					0.935***	
					0.29	
Conditional cash transfer plus activation policy						0.933***
						0.29
Unconditional cash transfer plus activation policy						1.157***
						0.22
Unconditional cash transfer without activation policy						1.214***
						0.21
R-squared adjusted	0.042	0.041	0.042	0.042	0.042	0.041
N	1014	1014	1014	1014	1014	1014

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for

the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

ii. Labour Outcomes

Table 52 – Effect on the number of people working in the household

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.173***					
	0.05					
Cash transfer only		-0.141**				
		0.06				
Cash transfer plus activation policy		-0.213***				
		0.06				
Conditioned cash transfer			-0.173			
			0.11			
Unconditioned cash transfer			-0.173***			
			0.05			
Limited cash transfer				-0.200***		
				0.06		
Unlimited cash transfer				-0.155***		
				0.06		
Unconditional and unlimited cash transfer					-0.154***	
					0.06	
Unconditional and limited cash transfer					-0.200***	
					0.06	
Conditional and unlimited cash transfer					-0.173	
					0.11	
Conditional cash transfer plus activation policy						-0.173
						0.11
Unconditional cash transfer plus activation policy						-0.218***
						0.06
Unconditional cash transfer without activation policy						-0.141**
						0.06
R-squared	0.132	0.133	0.131	0.132	0.131	0.132
N	904	904	904	904	904	904

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. Reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer

and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used and the number of members in the family that could work. Households in the Training and Employment policy were excluded from the analysis * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 53 – Effect on the probability of having an indefinite and full-time job

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.044*					
	0.02					
Cash transfer only		-0.042*				
		0.03				
Cash transfer plus activation policy		-0.047*				
		0.03				
Conditioned cash transfer			-0.062			
			0.05			
Unconditioned cash transfer			-0.043*			
			0.02			
Limited cash transfer				-0.037		
				0.03		
Unlimited cash transfer				- 0.049**		
				0.02		
Unconditional and unlimited cash transfer					-0.048*	
					0.03	
Unconditional and limited cash transfer					-0.037	
					0.03	
Conditional and unlimited cash transfer					-0.062	
					0.05	
Conditional cash transfer plus activation policy						-0.062
						0.05
Unconditional cash transfer plus activation policy						-0.045*
						0.03
Unconditional cash transfer without activation policy						-0.042*
						0.03
R-squared	0.009	0.008	0.008	0.008	0.007	0.007
N	895	895	895	895	895	895

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. Reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer

and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used and the number of members in the family that could work. Households in the Training and Employment policy were excluded from the analysis * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 54 – Effect on the probability of engaging in entrepreneurship

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.002					
	0.02					
Cash transfer only		-0.004				
		0.02				
Cash transfer plus activation policy		0				
		0.02				
Conditioned cash transfer			0.039			
			0.06			
Unconditioned cash transfer			-0.004			
			0.02			
Limited cash transfer				0.002		
				0.02		
Unlimited cash transfer				-0.005		
				0.02		
Unconditional and unlimited cash transfer					-0.009	
					0.02	
Unconditional and limited cash transfer					0.002	
					0.02	
Conditional and unlimited cash transfer					0.039	
					0.06	
Conditional cash transfer plus activation policy						0.039
						0.06
Unconditional cash transfer plus activation policy						-0.005
						0.02
Unconditional cash transfer without activation policy						-0.004
						0.02
R-squared	0	-0.002	-0.001	-0.001	-0.001	-0.002
N	904	904	904	904	904	904

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. Reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer

and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used and the number of members in the family that could work. Households in the Training and Employment policy were excluded from the analysis * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 55 – Effect on the number of persons in the household doing training

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.038					
	0.06					
Cash transfer only		-0.017				
		0.06				
Cash transfer plus activation policy		0.104				
		0.07				
Conditioned cash transfer			0.157			
			0.15			
Unconditioned cash transfer			0.031			
			0.06			
Limited cash transfer				0.037		
				0.07		
Unlimited cash transfer				0.038		
				0.06		
Unconditional and unlimited cash transfer					0.026	
					0.06	
Unconditional and limited cash transfer					0.037	
					0.07	
Conditional and unlimited cash transfer					0.157	
					0.15	
Conditional cash transfer plus activation policy						0.157
						0.15
Unconditional cash transfer plus activation policy						0.097
						0.07
Unconditional cash transfer without activation policy						-0.017
						0.06
R-squared	0.05	0.053	0.05	0.049	0.049	0.052
N	904	904	904	904	904	904

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. Reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for

the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used and the number of members in the family that could work. Households in the Training and Employment policy were excluded from the analysis * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

iii. Health

Table 56 – Probability of having a very serious health problem

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.01					
	0.03					
Cash transfer only		0.033				
		0.04				
Cash transfer plus activation policy		-0.01				
		0.04				
Conditioned cash transfer			-0.038			
			0.05			
Unconditioned cash transfer			0.017			
			0.03			
Limited cash transfer				0.042		
				0.04		
Unlimited cash transfer				-0.006		
				0.04		
Unconditional and unlimited cash transfer					0.001	
					0.04	
Unconditional and limited cash transfer					0.043	
					0.04	
Conditional and unlimited cash transfer					-0.038	
					0.05	
Conditional cash transfer plus activation policy						-0.038
						0.05
Unconditional cash transfer plus activation policy						-0.001
						0.04
Unconditional cash transfer without activation policy						0.034
						0.04
R-squared	0	0.001	0	0.001	0.001	0
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for

the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 57 - Effect on the numbers of hours slept

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.077					
	0.12					
Cash transfer only		0.141				
		0.13				
Cash transfer plus activation policy		0.024				
		0.13				
Conditioned cash transfer			-0.007			
			0.19			
Unconditioned cash transfer			0.09			
			0.12			
Limited cash transfer				0.105		
				0.15		
Unlimited cash transfer				0.064		
				0.12		
Unconditional and unlimited cash transfer					0.08	
					0.13	
Unconditional and limited cash transfer					0.106	
					0.15	
Conditional and unlimited cash transfer					-0.007	
					0.19	
Conditional cash transfer plus activation policy						-0.009
						0.19
Unconditional cash transfer plus activation policy						0.034
						0.13
Unconditional cash transfer without activation policy						0.142
						0.13
R-squared	0.011	0.011	0.01	0.01	0.009	0.01
N	1013	1013	1013	1013	1013	1013

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with

partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

iv. Financial

Table 58 – Probability of fall behind in utilities expenditures

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.033					
	0.04					
Cash transfer only		-0.038				
		0.04				
Cash transfer plus activation policy		-0.03				
		0.04				
Conditioned cash transfer			-0.101*			
			0.06			
Unconditioned cash transfer			-0.023			
			0.04			
Limited cash transfer				-0.041		
				0.04		
Unlimited cash transfer				-0.029		
				0.04		
Unconditional and unlimited cash transfer					-0.013	
					0.04	
Unconditional and limited cash transfer					-0.04	
					0.04	
Conditional and unlimited cash transfer					-0.101*	
					0.06	
Conditional cash transfer plus activation policy						-0.101*
						0.06
Unconditional cash transfer plus activation policy						-0.009
						0.04
Unconditional cash transfer without activation policy						-0.036
						0.04
R-squared	-0.002	-0.003	-0.001	-0.003	-0.001	-0.001
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an

activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 59 – Probability of being forced to leave current residence

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.042					
	0.09					
Cash transfer only		-0.063				
		0.1				
Cash transfer plus activation policy		-0.024				
		0.1				
Conditioned cash transfer			0.058			
			0.16			
Unconditioned cash transfer			-0.053			
			0.09			
Limited cash transfer				0.102		
				0.11		
Unlimited cash transfer				-0.104		
				0.09		
Unconditional and unlimited cash transfer					-0.13	
					0.1	
Unconditional and limited cash transfer					0.099	
					0.11	
Conditional and unlimited cash transfer					0.057	
					0.16	
Conditional cash transfer plus activation policy						0.058
						0.16
Unconditional cash transfer plus activation policy						-0.042
						0.1
Unconditional cash transfer without activation policy						-0.065
						0.1
R-squared	0.02	0.016	0.018	0.043	0.045	0.012
N	173	173	173	173	173	173

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group

that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

v. Community

Table 60 – Effect on the Duke Scale of Social Support and Stress

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.534					
	0.79					
Cash transfer only		0.006				
		0.91				
Cash transfer plus activation policy		0.968				
		0.85				
Conditioned cash transfer			0.327			
			1.26			
Unconditioned cash transfer			0.565			
			0.81			
Limited cash transfer				1.004		
				0.98		
Unlimited cash transfer				0.302		
				0.83		
Unconditional and unlimited cash transfer					0.297	
					0.87	
Unconditional and limited cash transfer					1.003	
					0.98	
Conditional and unlimited cash transfer					0.323	
					1.26	
Conditional cash transfer plus activation policy						0.341
						1.26
Unconditional cash transfer plus activation policy						1.154
						0.9
Unconditional cash transfer without activation policy						0.018
						0.92
R-squared	0.056	0.057	0.055	0.056	0.055	0.056
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an

activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 61 – Effect on confidential support

	M1	M2	M3	M4	M5	M6
Treatment	0.009					
	0.04					
Cash transfer only		-0.018				
		0.04				
Cash transfer plus activation policy		0.03				
		0.04				
Conditioned cash transfer			-0.023			
			0.06			
Unconditioned cash transfer			0.013			
			0.04			
Limited cash transfer				0.023		
				0.04		
Unlimited cash transfer				0.001		
				0.04		
Unconditional and unlimited cash transfer					0.007	
					0.04	
Unconditional and limited cash transfer					0.023	
					0.04	
Conditional and unlimited cash transfer					-0.023	
					0.06	
Conditional cash transfer plus activation policy						-0.022
						0.06
Unconditional cash transfer plus activation policy						0.046
						0.04
Unconditional cash transfer without activation policy						-0.017
						0.04
R-squared	0.042	0.043	0.041	0.041	0.04	0.043
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group

that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 62 – Effect on emotional support

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.019					
	0.04					
Cash transfer only		0.009				
		0.04				
Cash transfer plus activation policy		0.027				
		0.04				
Conditioned cash transfer			0.005			
			0.06			
Unconditioned cash transfer			0.021			
			0.04			
Limited cash transfer				0.052		
				0.04		
Unlimited cash transfer				0.002		
				0.04		
Unconditional and unlimited cash transfer					0.002	
					0.04	
Unconditional and limited cash transfer					0.052	
					0.04	
Conditional and unlimited cash transfer					0.004	
					0.06	
Conditional cash transfer plus activation policy						0.005
						0.06
Unconditional cash transfer plus activation policy						0.033
						0.04
Unconditional cash transfer without activation policy						0.009
						0.04
R-squared	0.008	0.007	0.007	0.008	0.007	0.006
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group

that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

vi. Social Services and municipal transfers

Table 63 - Effect on the probability of receiving housing subsidy

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.061**					
	0.03					
Cash transfer only		-0.044				
		0.03				
Cash transfer plus activation policy		-0.075**				
		0.03				
Conditioned cash transfer			-0.074			
			0.05			
Unconditioned cash transfer			-0.059*			
			0.03			
Limited cash transfer				-0.090***		
				0.03		
Unlimited cash transfer				-0.047		
				0.03		
Unconditional and unlimited cash transfer					-0.041	
					0.03	
Unconditional and limited cash transfer					-0.090***	
					0.03	
Conditional and unlimited cash transfer					-0.074	
					0.05	
Conditional cash transfer plus activation policy						-0.074
						0.05
Unconditional cash transfer plus activation policy						-0.075**
						0.03
Unconditional cash transfer without activation policy						-0.044
						0.03
R-squared	0.006	0.007	0.006	0.008	0.007	0.006
N	1023	1023	1023	1023	1023	1023

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an

activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 64 – Effect on the probability of receiving discretionary transfer from municipal social services

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.130***					
	0.03					
Cash transfer only		-0.135***				
		0.04				
Cash transfer plus activation policy		-0.126***				
		0.04				
Conditioned cash transfer			-0.144***			
			0.05			
Unconditioned cash transfer			-0.128***			
			0.03			
Limited cash transfer				-0.112***		
				0.04		
Unlimited cash transfer				-0.139***		
				0.03		
Unconditional and unlimited cash transfer					-0.137***	
					0.04	
Unconditional and limited cash transfer					-0.112***	
					0.04	
Conditional and unlimited cash transfer					-0.144***	
					0.05	
Conditional cash transfer plus activation policy						-0.144***
						0.05
Unconditional cash transfer plus activation policy						-0.120***
						0.04
Unconditional cash transfer without activation policy						-0.134***
						0.04
R-squared	0.023	0.022	0.022	0.023	0.022	0.022
N	1026	1026	1026	1026	1026	1026

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an

activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 65 – Effect on the probability of receiving the RGC

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	0.028					
	0.02					
Cash transfer only		0.047**				
		0.02				
Cash transfer plus activation policy		0.013				
		0.02				
Conditioned cash transfer			0.036			
			0.03			
Unconditioned cash transfer			0.027			
			0.02			
Limited cash transfer				0.048*		
				0.03		
Unlimited cash transfer				0.018		
				0.02		
Unconditional and unlimited cash transfer					0.014	
					0.02	
Unconditional and limited cash transfer					0.048*	
					0.03	
Conditional and unlimited cash transfer					0.036	
					0.03	
Conditional cash transfer plus activation policy						0.035
						0.03
Unconditional cash transfer plus activation policy						0.006
						0.02
Unconditional cash transfer without activation policy						0.046**
						0.02
R-squared	0.024	0.025	0.023	0.024	0.024	0.025
N	1021	1021	1021	1021	1021	1021

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.

Table 66 – Effect on the probability of having a financial buffer for unexpected expenditures

	M1 b/se	M2 b/se	M3 b/se	M4 b/se	M5 b/se	M6 b/se
Treatment	-0.008					
	0.02					
Cash transfer only		-0.013				
		0.02				
Cash transfer plus activation policy		-0.003				
		0.02				
Conditioned cash transfer			-0.018			
			0.03			
Unconditioned cash transfer			-0.006			
			0.02			
Limited cash transfer				-0.002		
				0.02		
Unlimited cash transfer				-0.01		
				0.02		
Unconditional and unlimited cash transfer					-0.008	
					0.02	
Unconditional and limited cash transfer					-0.002	
					0.02	
Conditional and unlimited cash transfer					-0.018	
					0.03	
Conditional cash transfer plus activation policy						-0.018
						0.03
Unconditional cash transfer plus activation policy						0.001
						0.02
Unconditional cash transfer without activation policy						-0.013
						0.02
R-squared	0.006	0.006	0.006	0.006	0.005	0.005
N	1017	1017	1017	1017	1017	1017

Notes: Estimated with an OLS regression of the outcome on different treatment dummies, where the control group is always the default category. In that sense, reported coefficients should be interpreted respect to the control group. We report the coefficients of interest and their robust standard errors. The unit of observation is the household. M1 reports the effect when we use a dummy variable equal to 1 if the household is in the treatment group (all treatment combined); M2 reports the group that received the cash transfer only and the group that received the cash transfer combined with an activation policy; M3 reports the effect for the group that received a conditional cash transfer and the group that received an unconditional cash transfer. M4 report the effect for the group that received a Full withdrawal transfer (limited) and the group that received a Partial Withdrawal transfer; M5 reports the effect for the group that received an unconditional cash transfer with partial withdrawal, the group that received an unconditional cash transfer with partial withdrawal and the group that received a conditional cash transfer with partial withdrawal; M6 reports the effect for the group that received a cash transfer conditional on doing an activation policy, the group that received the cash transfer unconditional of the activation policy and the group that received a cash transfer without an activation policy. All estimations include strata fixed effects and a dummy for the type of survey used. * denotes significance at 10 percent, ** at 5 percent, and *** at 1 percent level.