

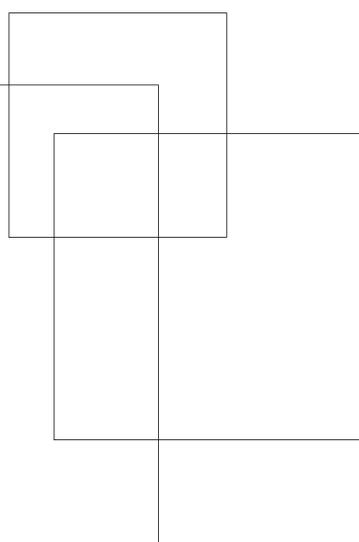


International  
Labour  
Office

RESEARCH DEPARTMENT ||||| WORKING PAPER NO. 11 |||||

# Effectiveness of active labour market tools in Conditional Cash Transfers programmes: Evidence for Argentina

ELVA LÓPEZ MOURELO  
AND VERÓNICA ESCUDERO



MARCH 2016



Research Department Working Paper No. 11

**Effectiveness of active labour market tools  
in conditional cash transfers programmes:  
Evidence for Argentina**

*Elva López Mourelo and Verónica Escudero\**

March 2016

International Labour Office

\* International Labour Organization, Research Department, [lopezmourelo@ilo.org](mailto:lopezmourelo@ilo.org)

*ILO Cataloguing in Publication Data*

López Mourelo, Elva; Escudero, Verónica

Effectiveness of active labour market tools in conditional cash transfers programmes: evidence for Argentina / Elva López Mourelo, Verónica Escudero; International Labour Office, Research Department. - Geneva: ILO, 2016

1 v. : statistics (Research Department Working paper ; No. 11)

International Labour Office Research Dept.

cash benefit / labour market policy / impact evaluation / job placement / Argentina / Latin America

02.14.2

## Abstract

This paper examines the impact of a programme implemented in Argentina to provide support in skills upgrading, vocational training, job-seeking and job placement to those eligible beneficiaries of the large conditional cash transfer programme *Plan Jefes*. Using data from the Permanent Household Survey, this article assesses the short-term effects of the programme on a number of labour market indicators. Through non-experimental methods, this paper finds that the intervention, at least in the short-run, is associated with a decrease in the probability of having an informal job and with higher hourly wages. The findings also suggest that the programme is associated with a lower probability of working an excessive number of hours and being underemployed.

**Keywords:** active labour market policies, job quality, impact evaluation, Argentina, Latin America, conditional cash transfer programmes

**JEL codes:** J21, J68, I38, H53

## Acknowledgments

The authors would like to thank Fidel Bennett for excellent research assistance. We would also like to thank Steven Tobin for valuable comments, our colleagues at the ILO Statistics Department for their support in obtaining our dataset and the programming team of the Labour Analysis and Information System for Latin America and the Caribbean (SIALC/Panama) for their advice in processing the database and for providing definitions for a number of variables. Thanks are also due to representatives of the Argentinian Ministry of Labour for their constructive ideas and suggestions. Finally, we thank Philippe Askenazy (Paris School of Economics), Luis Casanova (ILO Country Office for Argentina), Miguel Ángel Malo (University of Salamanca), Michele Pellizzari (University of Geneva) and participants at the workshop on impact evaluation of active labour market policies in Latin America held at the ILO in April 2015 for their helpful comments. Any opinion expressed or conclusions drawn represent the views of the authors and do not necessarily represent ILO views or ILO policy. The views expressed herein should be attributed to the authors and not to the ILO, its management or its constituents.

## Contents

<b>Abstract</b> .....	<b>iii</b>
<b>Acknowledgments</b> .....	<b>iv</b>
<b>1. Introduction</b> .....	<b>1</b>
<b>2. Background</b> .....	<b>3</b>
<b>3. Data and descriptive statistics</b> .....	<b>5</b>
<b>4. Empirical strategy</b> .....	<b>11</b>
<b>5. Estimates of the impact of the programme</b> .....	<b>16</b>
5.1 Impact on labour market status .....	16
5.2 Impact on job quality .....	17
<b>6. Conclusions</b> .....	<b>19</b>
<b>References</b> .....	<b>20</b>
<b>Appendix A: Area of common support</b> .....	<b>22</b>
<b>Appendix B: Detailed results</b> .....	<b>23</b>

## Tables

Table 1. Number of offices created or strengthened since 2003 by region.....	4
Table 2. Distribution of SCE participants by gender, age and educational attainment: Comparison between the EPH sample and administrative data .....	8
Table 3. Descriptive statistics .....	9
Table 4. Estimation results of probit model on the probability of being participant .....	15
Table 5. Impact of the programme on labour market status using a DD estimator.....	17
Table 6. Impact of the programme on job quality using a DD estimator.....	18

## Figures

Figure 1. Structure of the transition stages from Plan Jefes.....	7
Figure 2. Distribution of participants and non-participants by employment status at the baseline.....	10



## 1. Introduction

By late 2004, the economic recovery from the crisis that affected Argentina at the end of 2001 had become manifest. Indeed, in 2004, GDP grew at an annual rate of 8.9 per cent, more than 413,000 people found a job and the poverty rate was 18.6 percentage points lower than in 2002. The country faced a new reality, which required different policy responses more adapted to the changing circumstances. The Unemployed Heads of Household Programme (*Plan Jefes y Jefas de Hogar Desocupados* or *Plan Jefes*), a conditional cash transfer programme launched in May 2002 as the main measure to provide income support during the 2001–02 crisis, was reformed to give way to new programmes designed to respond better to the new realities of the country. In this context, the Training and Employment Insurance (*Seguro de Capacitación y Empleo*, SCE) was implemented in April 2006 to provide support in skills upgrading, vocational training, job seeking and job placement to those eligible *Plan Jefes*' participants.

The SCE is an example of a growing trend observed in Latin America and the Caribbean, where labour market activation components<sup>1</sup> are increasingly included in the conditional cash transfers programmes (CCTs) operating in the region. In general, employment-related services have been progressively provided either directly by the CCT programmes themselves or indirectly by facilitating the access to other programmes that include a labour market activation component, as it is in the case of the SCE (Cecchini and Madariaga, 2011; ECLAC/ILO, 2014). These interventions are based on the premise that, despite the crucial role of CCT programmes in providing income support during periods of economic instability, monetary transfers alone are not enough to reduce poverty in a sustainable manner. Proponents of this approach sustain that activation measures can complement these efforts by supplying individuals with the tools necessary to find more autonomous and sustainable income generation opportunities. In addition, CCT programmes, as well as other non-contributory initiatives, provide an outstanding channel for the articulation of these labour market measures (OAS/ECLAC/ILO, 2010; ILO, 2016). However, a key question that remains unanswered is how successful these activation measures are in increasing the probability of participants of finding a good quality job.

Indeed, despite this growing trend towards a greater use of activation mechanisms, the empirical evidence on the effectiveness of active labour market interventions as tools to increase the employability of CCTs beneficiaries is scarce. Some exceptions include Galasso et al. (2004) who analysed whether providing a wage subsidy and specialized training to beneficiaries of the Argentinean workfare programme “*Trabajar*”<sup>2</sup> was effective; and Almeida and Galasso (2010) who evaluated the effects of a self-employment programme offered to Argentina’s *Plan Jefes* beneficiaries. Our paper aims to contribute to closing this gap in the literature. We focus on the effects of the SCE in increasing employability and work quality of former *Plan Jefes*' participants, therefore assessing the effectiveness of the SCE as an exit strategy to more universal CCTs. The SCE is particularly interesting in this regard since it is a comprehensive programme that includes a panoply of different activation instruments such

---

<sup>1</sup> Labour market activation component refers to all interventions that the State undertakes with the aim to increase the employability of participants. Employability describes the individual’s potential likelihood to find/ be placed in a job.

<sup>2</sup> *Trabajar* was a small-scale workfare programme, active between 1996 and 2002, and replaced by the *Plan Jefes* when the crisis started. *Trabajar* was aimed at unemployed workers below the poverty line. The objective of the programme was to sustain the most vulnerable through income support but also work opportunities that contributed to projects that were of value to poor communities. The programme provided recipients 200 pesos per month, access to health care and coverage of risks in exchange of a tightly enforced work requirement of 30 to 40 hours per week (Ronconi, 2002).

as: (i) support to the completion of primary and secondary education; ii) vocational training and apprenticeships; iii) job-search assistance; iv) employment subsidies; and v) promotion of self-employment and microbusiness. Importantly, to the best of our knowledge, this is the first attempt to evaluate whether the provision of a comprehensive package of active labour market measures would contribute to a successful and sustained labour market integration of CCT beneficiaries. This is thus the first contribution of this paper to the literature. In addition, although a body of research exists that has analysed the effects of other Argentinian programmes such as *Plan Jefes* (Galasso and Ravallion, 2004), *Microemprendimientos Productivos* (Almeida and Galasso, 2010), and *Asignación Universal por Hijo* (Gasparini and Gruces, 2010), to our knowledge, this is the first attempt to analyse the impact of the SCE at the country level. Finally, while the literature has often focused on the effect of ALMPs on employment creation, this paper focuses on the job quality effects of the programme. Importantly, the indicators used in this paper to measure job quality are based on agreed ILO definitions and not on self-defined economic concepts.

From the theoretical perspective, the effectiveness of active labour market interventions as tools to increase the employability of CCTs beneficiaries relies on two main conditions: i) the willingness of CCTs beneficiaries to participate in these employment-related programmes; and ii) the capacity of the active labour market measures to effectively improve the employment prospects of participants. Empirically, however, very little is known about the drivers to take-up (i.e. first condition) or the characteristics that would make some CCTs beneficiaries more prone to participate in an active labour market programme (as well as how those characteristics might also affect outcomes).<sup>3</sup> Meanwhile, the empirical evidence on the effectiveness of these active labour market interventions in emerging and developing economies (i.e. second condition), and more specifically in Latin America, has been contentious, particularly for some activations measures.

On the one side of the spectrum, there seems to be a consensus in the literature on the role of vocational training and other skill development measures in fostering more successful labour market trajectories and higher wages. For example, evaluations of training programmes in Colombia and Peru have identified a positive effect on formal employment and income earned (Attanasio et al., 2011; Díaz and Jaramillo, 2006; Galdo and Chong, 2012). Likewise, measures to promote the completion of studies have had positive indirect effects, by raising the effectiveness of other activation instruments, as they enable beneficiaries to make the most of available opportunities (Weller, 2009). Finally, employment subsidies and self-employment and micro-enterprise creation programmes have also shown mainly positive effects in terms of increasing the probability of employment, however, given the shortage of impact evaluation studies on these types of measures, conclusions are not generalizable. Conversely, studies have been more critical on the role of job-search assistance in achieving their goal, especially in Latin America where a high share of the hiring is done using informal mechanisms, such as recommendations and personal contacts (ECLAC/ILO, 2014).<sup>4</sup> Although again, very little is known in the region regarding the effectiveness of labour intermediation services. Therefore, whether the provision of a comprehensive package of active labour market measures would contribute to a successful and sustained labour market integration of CCT beneficiaries remains an unanswered question that this paper aims to tackle.

---

<sup>3</sup> However, as detailed below, we undertake significant efforts to identify the observable factors determining programme participation, at the same time that we take into account the presence of potential unobservable drivers of participation.

<sup>4</sup> See Chapter 3 of ILO (2016) for a detailed review of the empirical economic literature on impact evaluation of active labour market programmes, paying particular attention to the studies conducted in Latin America and the Caribbean.

The evaluation has been carried out by means of a difference-in-difference approach using data from the Permanent Household Survey, which allows comparing outcomes between beneficiaries and non-participants at two different moments in time (i.e. baseline and follow-up). Moreover, this approach has been combined with a PSM (propensity score matching) to reduce the existing bias due to the presence of observable differences between participants and non-participants.

In a nutshell, this paper finds that the intervention, at least in the short-run, positively affects job quality of participants by decreasing the probability of having an informal job, and raising hourly wages. The estimates also suggest that the programme is associated with a lower probability of working an excessive number of hours and being underemployed. Finally, the paper also finds that programme participation is associated with an increase in the probability of being inactive.

The paper is organised as follows. Section 2 describes the main characteristics of the programme and the economic context in which it was implemented. Section 3 presents the data and how the sample was selected and summarizes a descriptive analysis of the data. Section 4 introduces the empirical strategy used in the evaluation. Section 5 describes the main findings regarding the impact of the programme on the labour market performance of participants. Finally, Section 6 concludes.

## 2. Background

In 2001–02, Argentina suffered one of the most severe economic crises in its history. In addition to the detrimental macroeconomic effects, the crisis had severe consequences on social conditions. Indeed, the unemployment rate increased by more than 6 percentage points in two years to reach 21.5 per cent in May 2002 and the employment rate decreased by more than 3 percentage points during the same period. Moreover, the share of people living below the poverty line increased from 37 per cent just prior to the crisis to 57 per cent in May 2002 (Escudero, 2011; World Bank, 2003). This was accompanied by widespread political instability and social unrest.<sup>5</sup>

In this context, the Unemployed Heads of Household Plan (*Plan Jefes y Jefas de Hogar Desocupados*) or *Plan Jefes* was launched in May 2002 as the main measure to provide income support during the 2001–02 crisis. The Plan provided a monthly allowance of 150 pesos to unemployed heads of households with children under the age of 18 or disabled dependants. To participate, eligible individuals had to register and request participation at their local municipality or any local office of the Ministry of Labour. At its inception the plan was only conditional on basic health care and school attendance of children. Yet, soon after, a work requirement was included to ensure that the benefits reached those individuals that were in most need (Galasso and Ravallion, 2004). In exchange, participants had to work 20 hours per week in sectors benefitting society, such as basic community work. It is estimated that the *Plan Jefes* provided income to about 2 million beneficiaries at its peak in May 2003 (Neffa and Brown, 2011). Moreover, the empirical evidence highlights its effectiveness in protecting beneficiaries' income and reducing their probability of falling into extreme poverty (Galasso and Ravallion, 2004).

Subsequently, in 2004, the economic recovery started to take root, consolidated by an annual GDP growth rate of 8.9 per cent, which resulted in an increase in households' income. As a consequence, by 2010 the number of *Plan Jefes*' beneficiaries was considerably reduced owing mainly to an increase in the employment rate among participants, but also due to the transfer to other programmes (Madoery, 2011). Indeed, since 2006, the *Plan Jefes* was reformed to give way to new programmes that responded better to the economic recovery of the country and were better targeted to meet the needs of the diverse *Plan Jefes*' participants. The reform involved the implementation of two main programmes: *Plan*

---

<sup>5</sup> See Escudero (2011) for a detailed analysis of the drivers and consequences of the 2001-02 Argentinian crisis.

*Familias* and the SCE. On the one hand, *Plan Familias* focused on families whose heads faced serious employability difficulties (i.e. female unemployed heads of household with two or more children under the age of 18 and not having completed secondary education) and was administered by the Ministry of Social Development. *Plan Familias* conferred a benefit indefinitely, which was proportional to the number of children at home and conditional on basic health care and school attendance of these children. The SCE, on the other hand, was aimed at *Plan Jefes*' participants who had better opportunities to enter the labour market (i.e. male or female heads of household with one child under the age of 18 and having completed secondary education).

The SCE was created in October 2004 but implemented only at the beginning of 2006 (Decree 336/2006). It is a non-contributory programme that aims to support unemployed individuals through activation measures such as skills upgrading, vocational training, and job-search assistance. The programme was put in place as part of the reform framework to the *Plan Jefes* and was originally conceived as a programme to encourage activation among the beneficiaries of this Plan. However, later in 2009, it was opened to beneficiaries of other labour and social programmes (Neffa and Brown, 2011). While participation in the SCE was voluntary, eligible *Plan Jefes* beneficiaries who opted to participate had to forgo their allowance and register with the public employment service (PES) office. PES offices are then responsible for analysing the labour market history of each candidate and assessing whether they meet the eligibility requirements. Once the application is approved, a "contract of adhesion" (*Convenio de Adhesión*) including all rights and obligations is signed.

In order to strengthen the institutional capacities of the SCE, the Ministry of Labour put into service a network of PES offices at the municipal level. PES offices are in charge of providing job-search assistance and vocational counselling and improving the coverage and quality of training services. An IT system was also created in 2006 to facilitate job-search support (Neffa and Brown, 2011). However, this institutional capacity was not deployed to the same extent (both in terms of the number of offices and in time) in all areas of the country (see Table 1).

**Table 1. Number of offices created or strengthened since 2003 by region**

Region	Number of offices
Buenos Aires	1
Patagonica	22
Northwest region	36
Northeast region	49
Cuyo	65
Pampeana	168
<b>Total</b>	<b>341</b>

Sources: Madoery (2011).

Participants in the SCE receive a monthly stipend of 225 pesos<sup>6</sup> (75 pesos more than the allowance provided by *Plan Jefes*) during the first 18 months and 200 pesos during the last 6 months (all these transfers are taken into account for old-age pension) for a maximum period of two years. Allowances

<sup>6</sup> This amount accounted for 29.6 per cent of Argentinean minimum wage in April 2006.

may be interrupted if the participant fails to comply with the commitments undertaken under the contract of adhesion. In addition to the income provision, the programme aims to support individuals through the following instruments: (i) support for the completion of primary and secondary education; (ii) vocational training and apprenticeships; (iii) labour intermediation services; (iv) indirect job creation measures (e.g. employment subsidies); and (v) promotion of self-employment and micro-enterprise creation. In exchange, participants commit to attending regularly the PES office to develop a career plan, participating in training, apprenticeship or vocational orientation activities and accepting job offers that correspond to their profile and experience. Unlike *Plan Jefes*, beneficiaries of the SCE that get a job may continue to receive the benefit for a specific period of time (up to twelve months in the case of a job in the public sector and up to six months in the private sector). Thus, the potential disincentive to labour market participation is reduced, since the beneficiaries can accept a job offer without losing the benefit (Cruces and Gasparini, 2008).

The amount disbursed by the Ministry of Labour increased fast – from 14.8 million pesos in 2006 when the programme was created, to 237.8 million pesos (close to 2 per cent of GDP) in 2009. Moreover, in terms of coverage, the SCE increased from 20,803 beneficiaries in 2006 to 226,744 beneficiaries in 2012, the latest year with available information.<sup>7</sup> However, despite extensive dissemination and information about the benefits of the SCE, as well as the existence of important economic incentives to participate<sup>8</sup>, three years after the programme was implemented approximately 10 per cent of the total number of *Plan Jefes* beneficiaries in 2006 had migrated to the SCE.<sup>9</sup>

### 3. Data and descriptive statistics

The analysis draws on the Permanent Household Survey (*Encuesta Permanente de Hogares*, EPH), conducted quarterly by the Argentinian National Institute of Statistics (INDEC) since the third quarter of 2003. The EPH covers 31 large urban areas and contains a sample of approximately 24,000 dwellings, which account for around 96,000 dwellings per year.

EPH is a household survey targeting questions to households and household members. It provides information on personal characteristics of each individual in the sample – such as gender, age, marital status and place of residence – as well as information about the composition of the individual's household and housing conditions. Moreover, EPH contains information on the individual's education, such as literacy, highest grade successfully completed and school attendance. Finally, EPH provides information on the individual's labour characteristics, such as employment status, occupation, industry, hours worked and monthly earnings in the case of employed individuals, or cause and duration of unemployment, among others, in the case of unemployed individuals.

Regarding its methodology, EPH follows a 2-2-2 system. This implies that a household is interviewed two quarters in a row, then it is moved away from the sample for another two quarters, and, finally, it comes back for being interviewed for two additional quarters. According to this method, a subset of the

---

<sup>7</sup> Ministry of Labour, Employment and Social Security: <http://www.trabajo.gov.ar/secretaria/>

<sup>8</sup> The SCE monthly allowance was 50 per cent higher than that under *Plan Jefes* and there were other economic incentives related to complete successfully some of the activation components. More specifically, participants in the SCE who successfully complete remedial education and vocational training would receive additionally 600 ARS and 900 ARS, respectively.

<sup>9</sup> Between 2006 and 2010 (i.e. period of analysis), an annual average of 74,000 people participated in the SCE, which corresponds to 11 per cent of the average annual participation in *Plan Jefes* over the same period and 7.5 per cent of the average number of unemployed each year.

sample is linked as a panel and, therefore, a household and/or individual can be followed during one year and a half.<sup>10</sup>

Regarding the sample selection, it is important to note that EPH does not contain specific information on SCE participants. However, the fraction of SCE participants that was previously part of the *Plan Jefes* programme can be identified by following EPH respondents over time. Indeed, the panel structure of the survey combined to the fact that beneficiaries of *Plan Jefes* were transferred gradually to two different programmes (SCE and *Plan Familias*, as described in section 2) according to their characteristics, has been used to approximate the identification of SCE's participants. In more detail, individuals that have identified themselves in EPH as beneficiaries of *Plan Jefes* in period 1, but that affirm not to be benefitting from it in period 2 could be classified in three groups: a) individuals that no longer meet *Plan Jefes* requirements (i.e. they are formally employed or no longer have children under the age of 18)<sup>11</sup>; b) individuals that were transferred to *Plan Familias*; and c) individuals that were transferred to the SCE. Thus, a former *Plan Jefes* participant who continues to meet *Plan Jefes* eligibility criteria, receives a cash transfer from the State, and whose characteristics do not correspond to those required by *Plan Familias* (i.e. being a female unemployed head of household with two or more children under the age of 18 or disabled dependants, and not having completed secondary education; or a male head of household in the same situation in the case of a single-parent family) would be considered in this paper as a SCE participant (Figure 1).<sup>12</sup>

The analysis focuses on individuals under the age of 65 who were identified as SCE participants, according to the above-described criteria, in the week of reference between the second quarter of 2006 (first quarter of the SCE implementation) and the third quarter of 2010 (last quarter for which there is available information on participation in *Plan Jefes*, which is an essential step to identify the SCE's beneficiaries). In addition, only those individuals who were re-interviewed have been selected. Overall, the sample consists of 582 programme participants.<sup>13</sup>

It is important to note that our sample only represents the share of SCE participants that were transferred from *Plan Jefes*. As such, it is not representative of all programme beneficiaries, especially since 2009 when participation was opened to participants in other labour and social programmes (see Section 2). According to Bertranou and Mazorra (2009), as of July 2009, 127,266 *Plan Jefes* beneficiaries were

---

<sup>10</sup> See INDEC (2003) for a more detailed description of EPH methodology.

<sup>11</sup> To be a *Plan Jefes* beneficiary, individuals had to be unemployed head of household with children under the age of 18 or disabled dependants. Nevertheless, the employment status that could be reliably checked by programme administrators was whether the individual was participating in the formal labour market (Galasso and Ravaillon, 2004). Thus, for the purpose of this study, an individual doesn't meet *Plan Jefes* requirements if he/she is employed in the formal sector.

<sup>12</sup> It is important to note that in addition to the SCE there was one other programme that included activation components, the *Empleo Comunitario* programme, to which *Plan Jefes* participants with employment potential could have moved and whose effect will be included in our estimates. However, given that the SCE is the main programme in terms of coverage, it is safe to expect that the effects measured are mostly related to this programme. Moreover, activation initiatives provided in the framework of *Empleo Comunitario* programme were very similar to those included in SCE and, therefore, the objective of evaluating the effectiveness of active labour market measures as an exit strategy from CCT programmes remains, regardless of the employment programme *Plan Jefes* beneficiaries moved to.

<sup>13</sup> Each of these individuals was interviewed in at least three quarters. As such, the first two consecutive quarters were used to identify participants in the SCE, provided individuals were *Plan Jefes*' beneficiaries in the first period and no longer in the second one. Then, the following quarter for which there is available information on the individual was used to estimate the impact of the programme. Thus, the effects are measured up to one year later depending on the availability of information per participant (i.e. for some individuals, follow-up information is only available one, two or three quarters later). This is why effects are said to be measured in the short-term.

transferred to the SCE. As observed in our sample from EPH, the grossed-up estimation of the SCE participants totals 107,302 participants between the second quarter of 2006 and the second quarter of 2009. Therefore, our sample accounts for 84.3 per cent of the administrative data on transfers from *Plan Jefes* to the SCE. Differences might be explained by the fact that the SCE is a programme of national coverage and EPH only covers 31 urban areas.

Figure 1. Structure of the transition stages from *Plan Jefes*

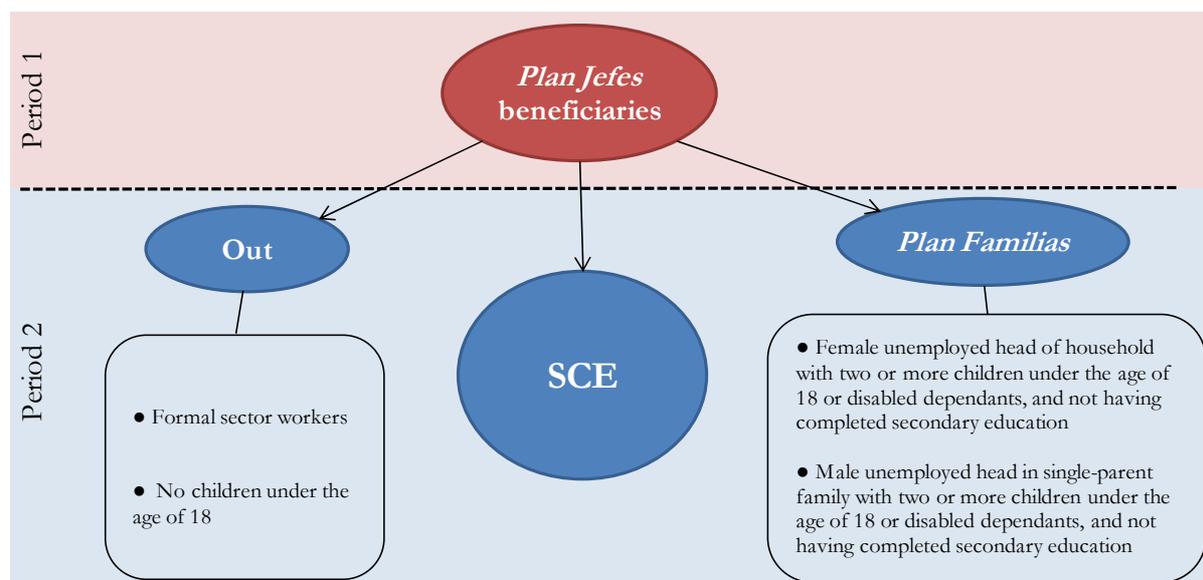


Table 2 shows the distribution of the SCE participants in our sample by gender, age and educational attainment and compares this breakdown with administrative data provided by Madoery (2011). In general, there are not significant discrepancies between the EPH sample and the administrative data with regard to the main characteristics of the SCE participants. Indeed, women account for 70 per cent of the SCE participants in both the EPH sample and the administrative data. Differences are slightly more significant in terms of the distribution by age. In particular, while 69 per cent of the SCE participants in the EPH sample are under the age of 46, this percentage is 66 per cent in the case of administrative data. Likewise, there is a small difference regarding the distribution of participants by educational attainment. While 71 per cent of the sample of the SCE participants have either uncompleted secondary or lower educational attainment, this percentage equals 75 per cent according to administrative data (Table 2). This suggests that the EPH sample we are using for the analysis approximates well the main features of the registered SCE participants.

**Table 2. Distribution of SCE participants by gender, age and educational attainment: Comparison between the EPH sample and administrative data**

	EPH sample <sup>a</sup>	Administrative data <sup>b</sup>
<i>Gender</i>		
Men	30%	30%
Women	70%	70%
<i>Age</i>		
Aged 26-35	33%	33%
Aged younger than 46 years	69%	66%
Aged 46 and older	31%	34%
<i>Educational attainment</i>		
Secondary non completed or lower	71%	75%
Secondary completed or higher	29%	25%

Sources: <sup>a</sup> Authors' calculations based on EPH; <sup>b</sup> Madoery (2011).

The objective of this paper is to evaluate the effectiveness of the active labour market measures provided by the SCE programme, above and beyond the cash assistance of *Plan Jefes*. In order to isolate the effect of these active labour market tools, it is crucial to identify a comparison group which has comparable features to the SCE participants but that has not benefitted from the activation measures provided by the programme. As detailed in Section 2, the transfer from *Plan Jefes* to the SCE was gradual and therefore, between the second quarter of 2006 and the third quarter of 2010, there were participants in *Plan Jefes* that met the requirements to be beneficiaries of the SCE but had not yet been transferred to the SCE. Therefore, the comparison group for this evaluation consist of *Plan Jefes* participants under the age of 65 who had not yet been transferred to the SCE programme during the period both programmes were operating at the same time (i.e. between the second quarter of 2006 and the third quarter of 2010), and were re-interviewed up to one year later. Thus, our sample consists of 1,120 non-participants.

It is important to note that since we are evaluating the transition from one programme to the other, effectively, the difference between participants and the control group lies in the difference in the benefits provided by both programmes – i.e. the active labour market measures which participants in the SCE were entitled to.

Table 3 depicts the means and standard deviations of selected variables for programme participants and non-participants at the baseline. Data show that participants are more likely to be men than the sample of non-participants – 30 per cent of participants compared to 19 per cent among non-participants. However, participants and non-participants are very similar in terms of age, as both on average are around 38 years old. Differences are slightly more significant regarding the marital status and the role of the individual in the household. Married or cohabiting people account for 64 and 60 per cent of participants and non-participants, respectively. Likewise, 42 per cent of participants are heads of household, while this percentage is 46 per cent for non-participants.

Table 3. Descriptive statistics

	Participants		Non-participants	
	Mean	Std. Dev	Mean	Std. Dev
<b>Personal characteristics</b>				
<b>Gender</b>				
Male	0.30	0.46	0.19	0.39
<b>Age</b>	38.6	11.0	38.4	9.5
<b>Marital status</b>				
Married or cohabiting	0.64	0.48	0.60	0.49
Separated, divorced or widowed	0.14	0.35	0.18	0.38
Single	0.22	0.41	0.23	0.42
<b>Role in the household</b>				
Head	0.42	0.49	0.46	0.50
Spouse of head	0.33	0.47	0.35	0.48
Son/daughter of head	0.19	0.39	0.15	0.36
Other	0.06	0.23	0.03	0.17
<b>Literacy</b>	0.97	0.16	0.98	0.14
<b>School attendance</b>	0.08	0.27	0.07	0.25
<b>Educational attainment</b>				
None	0.12	0.33	0.16	0.36
Primary	0.57	0.50	0.61	0.49
Secondary	0.29	0.45	0.22	0.41
Tertiary	0.02	0.14	0.01	0.11
<b>Region</b>				
Buenos Aires	0.15	0.36	0.12	0.32
Northwest region	0.29	0.45	0.39	0.49
Northeast region	0.16	0.37	0.15	0.36
Cuyo	0.06	0.23	0.06	0.23
Pampeana	0.25	0.43	0.23	0.42
Patagonica	0.09	0.28	0.05	0.23
<b>Immigrant status</b>	0.04	0.19	0.02	0.13
<b>Household characteristics</b>				
Household size	5.0	2.40	5.3	2.32
Number of children in the household	2.2	1.72	2.6	1.75
Household income	1481.9	1217.4	1174.8	956.5
Household income per capita	321.9	236.8	237.5	185.6
Other household members in employment	0.75	0.44	0.72	0.45
Other household members in unemployment	0.14	0.35	0.14	0.34
<b>Number of observations</b>	<b>582</b>		<b>1,120</b>	

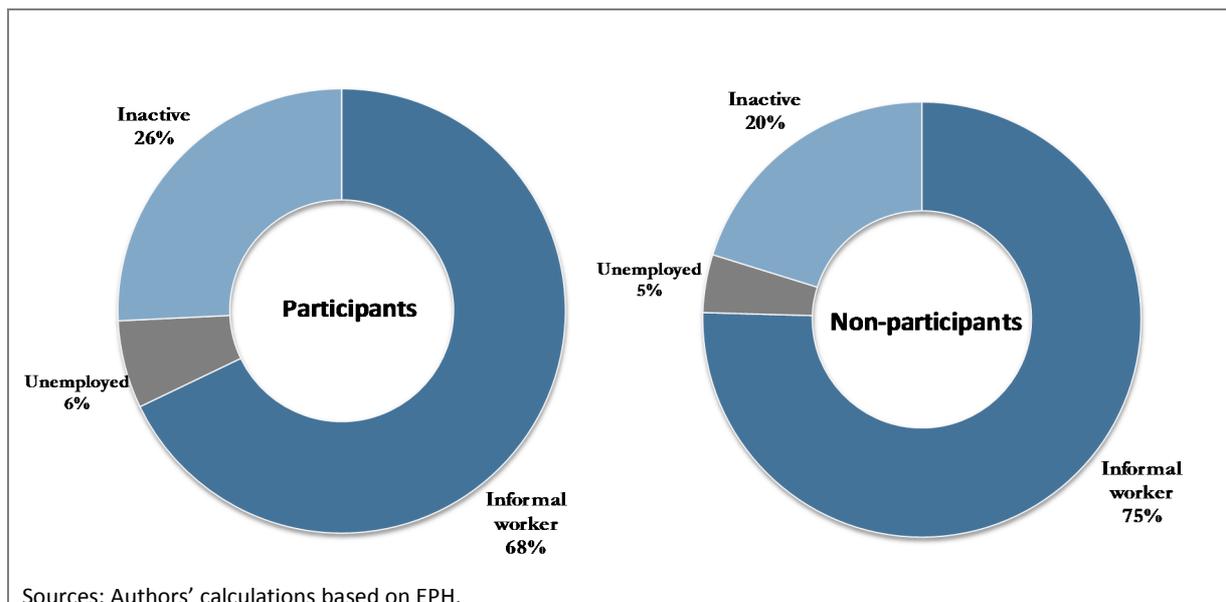
Sources: Authors' calculations based on EPH.

On average, participants tend to be more educated than non-participants. In fact, while 12 per cent of participants have not completed primary education, this is true for 16 per cent of non-participants. Moreover, the percentage of participants who have only completed primary education is lower than that observed in the group of non-participants – 57 per cent among participants compared to 61 per cent among non-participants. However, participants are more likely to have completed secondary education (29 per cent versus 22 per cent for non-participants). Differences with respect to the incidence of tertiary education are insignificant (around 2 per cent of the sample in both groups), so are they regarding the percentage of individuals attending school (around 8 per cent also in both cases). In addition, participants and non-participants tend to have similar characteristics in terms of the region where the individual lives and their immigrant status.

Regarding household characteristics, participants tend to come from smaller households – 5 members per participating household compared to 5.3 for a non-participant household. Likewise, participants' households have, on average, a lower number of children – 2.2 children per participating household versus approximately 2.6 children per non-participant household. Moreover, the average household income per capita is slightly higher among participants than the average income per capita for a non-participant household. Finally, while there are no significant differences between participants and non-participants regarding the presence of family members in unemployment (14 per cent in both cases), participants' households are more likely to have a member in employment – 75 per cent of participants have at least one employed household member compared to 72 per cent among non-participants.

Regarding labour characteristics, the overwhelming majority of non-participants were informal workers during the baseline. Indeed, while 75 per cent of non-participants were informal workers, 20 per cent were inactive and 5 per cent were unemployed. Although informal workers also accounted for the highest percentage of participants (68 per cent), they are less likely to be in informal employment than their non-participant counterparts. By contrast, participants are more likely to be inactive (26 per cent), and unemployed (6 per cent) (Figure 2). According to these results, there seems to be observable characteristics affecting participation in the programme.

**Figure 2. Distribution of participants and non-participants by employment status at the baseline**



## 4. Empirical strategy

The objective of this paper is to estimate the average effect of the SCE on different employment outcomes.<sup>14</sup> In particular, the aim is to compare the labour market performance of participants to the counterfactual, that is, outcomes of these same individuals in the absence of the programme. However, given that the perfect counterfactual can never be observed, it will need to be estimated.

Information on participation used in this analysis has been gathered from non-experimental data (i.e. participants have not been randomly selected). This means that there could be important differences between participants and non-participants that may be driving participation (selection bias) and that ultimately could be correlated with labour market performance. Therefore, the average impact of the programme cannot simply be calculated as the average difference between the two groups. In addressing this selection bias, it is important to consider that it may come from two different sources, i.e. observable and non-observable factors. Should the available data and knowledge about the programme capture the main determinants of participation, the effect of the programme could be estimated by conditioning on those covariates. However, even if this observable heterogeneity was accounted for, there could still be (and usually are) a number of factors not observed by the evaluator that could be driving both participation in the programme and labour market outcomes. For instance, participation in the programme could be due to a higher motivation to find a job, which in turn could increase the chances of success in the labour market. Thus, the correlation between participation in the programme and labour market performance would be confounded with this “motivation” effect.

In order to get the pure effect of the programme on the treated, a difference-in-difference (DD) model is estimated to control for time-invariant individual characteristics that might be correlated with both participation and labour market outcomes. The panel structure of our dataset allows us to have baseline information on participants and non-participants before programme participation and also follow-up information on the same individuals after programme participation. Given this longitudinal feature, the DD estimator compares changes in the outcome of participants before and after the programme to the changes in the outcomes of non-participants. The average treatment effect on the treated following the DD method would be then expressed as:

$$DD = E(Y_1^T - Y_0^T | P(X), T = 1) - E(Y_1^C - Y_0^C | P(X), T = 0) \quad (1)$$

where  $Y_0^T$  and  $Y_1^T$  are the outcome of interest for a treated unit during baseline and the follow-up period, respectively; and  $Y_0^C$  and  $Y_1^C$  are the same outcome for a non-participant during the same two periods of time.

In a DD framework, the change in outcomes among participants accounts for the variation due to intertemporal characteristics; meanwhile the change in outcomes among non-participants accounts for time variation that is not due to the effect of the programme (as it is common to both participants and non-participants). Therefore, the counterfactual can be expressed as a sum of a time effect (common to both participants and non-participants) and a group effect (constant over time).

---

<sup>14</sup> A common concern about policies targeted at a subgroup of job seekers is the potential effect that the policy might have on non-recipients (known as general equilibrium effect). However, the magnitude of this spillover depends on the relative size of the treated. In this regard, programme evaluated in this paper was implemented at a small scale, as discussed above.

The impact of the programme ( $\alpha$ ) can be calculated following a reduced-form equation for a pooled sample of participants, non-participants and time periods:

$$y_{it} = \alpha T_i t + \beta x_{it} + \rho T_i + \gamma t + \varepsilon_{it} \quad (2)$$

where  $y_{it}$  is the outcome of interest for an individual  $i$  in period  $t$ ;  $x_{it}$  is a vector of explanatory variables that vary across individuals  $i$  and time;  $T_i$  is a dummy variable taking the value of one for an individual who participates in the SCE;  $t$  is a dummy variable taking the value of one for the follow-up period; and  $\varepsilon_{it}$  is the error term. The coefficient  $\alpha$  of the interaction term between  $T_i$  and  $t$  corresponds to the DD estimator, which provides the average DD effect of the programme. The model is estimated by Ordinary Least Squares (OLS).

From the above, it can be deduced that the DD estimator lies in the assumption that selection bias is time invariant and therefore that the difference in average outcomes between participants and non-participants can be eliminated by double differencing. Therefore, the identification assumption of this method is that in the absence of treatment the outcomes of participants and non-participants would have changed in the same manner over time (the so-called “common trend assumption”). Although this assumption is weaker than conditional exogeneity, its validity should not be taken lightly. A number of studies have found that there can be large bias associated to DD estimators in situations where changes over time are a function of initial conditions, which could influence both participation and outcomes (Jalan and Ravallion, 1998; Pitt and Khandker, 1998). An unbalanced distribution of participants and non-participants according to observable characteristics that could have differential trends might make the common trend assumption very stringent. In order to account for observable heterogeneity in trends, a set of pre-determined covariates have been included in Equation 2.

The objective of this paper is to evaluate the impact of the SCE on two types of outcomes: firstly, on labour market status and, secondly, on the job quality of participants who have found a job. Therefore, two different estimations have been carried out to measure the impact of programme participation in these two different types of outcomes. Firstly, in order to estimate the impact of the SCE on labour market status of participants, three dependent variables have been selected: i) a variable that takes the value of one if the individual is in informal employment; ii) another that takes the value of one if the individual is in unemployment; and iii) a third variable that takes the value of one if the individual is in inactivity.

Secondly, to evaluate the effect of the programme on job quality, the following indicators have been selected as dependent variables: i) the logarithm of real hourly wages; ii) a variable that takes the value of one if the individual is in a low-paid job<sup>15</sup>; iii) the actual number of hours worked in the week of reference; iv) a variable that takes the value of one if the individual worked an excessive number of hours in the week of reference<sup>16</sup>; and v) a variable that takes the value of one if the individual is on time-related underemployment.<sup>17</sup>

<sup>15</sup> Individuals in low-paid jobs are those whose hourly wages are below two-thirds of the median hourly wages of the sector where they operate.

<sup>16</sup> Excessive working time refers to more than 48 actual hours worked per week.

<sup>17</sup> Individuals on time-related underemployment are those whom during the week of reference were willing to work additional hours, were available to do so, but had worked less than 30 hours.

Moreover, the following time variant covariates have been included in all estimations:

- *Personal characteristics*: age grouped in six levels (18-24, 25-34, 35-39, 40-49, 50-59 and 60-65), three dummy variables on marital status (cohabitating or married; separated, divorced or widowed; and single), five binary variables depicting the role of the individual in the household (head, spouse, son or daughter, other family relationship and non-family member) school attendance, immigrant status and three dummies for the level of educational attainment (primary, secondary and tertiary education).
- *Household characteristics*: Type of family structure (single-parent versus nuclear family); number of children, share of members aged 0-5 years, a dummy for the presence of employed individuals in the household, and a dummy for the presence of unemployed individuals in the household.
- Finally, fixed effects have been included in the model to measure time-invariant effects; and quarterly and yearly dummies have been added to control for time effects common to all individuals.

Another source of bias may arise from the presence of an unbalance distribution of observables between participants and non-participants affecting labour market outcomes. As Table 3 showed, there is some heterogeneity between participants and non-participants. To control for this observable heterogeneity, a matching method was used to identify a sample of non-participants the closest possible to the SCE participants based on observed features. Since finding a comparison group where participants and non-participants are matched on every single characteristic is cumbersome (especially when there is a large number of available variables to perform the matching), a common way of matching individuals is by using propensity score matching (PSM).

According to Rosembaum and Rubin (1983), PSM builds a counterfactual where participants and non-participants are matched on the basis of the probability of participating in the programme ( $T=1$ ) conditional on observed covariates ( $X$ ), i.e. the propensity score:

$$P(X_i) = Prob(T_i = 1|X_i) \quad (3)$$

Provided observed characteristics are the sole factor determining programme participation and that there is a substantial region of common support, matching on the propensity score is as effective as matching on every single characteristic (Rosembaum and Rubin, 1983).

To calculate the propensity score, a probit model was estimated to assess the probability of participation as a function of all the observed variables that are likely to affect participation. The estimation of the model includes the following explanatory variables organized by categories:

- Personal characteristics of individuals include information on sex, age (divided in six groups: 18-24, 25-34, 35-39, 40-49, 50-59, and 60-65), school attendance, immigrant status and three dummies for the level of educational attainment (primary, secondary and tertiary education).
- Variables linked to individuals' family background are introduced to control for the fact that family responsibilities can affect the decision to participate in the programme. This category includes marital status, role in the household, type of family structure (single-parent versus nuclear family), number of children in the household, the composition of the household, and three dummy variables depicting the size of the household (one household member, from two to five household members, and more than five household members).

- A set of covariates capturing specific characteristics of the dwelling is also included: number of rooms, three dummies relative to the type of house (villa, apartment, and other); and the form of house ownership (renting versus personal ownership).
- Variables related to employment status of the individual, as well as of other members in the household include: three dummies on individuals' employment status (informal worker, inactive and unemployed); a dummy on the presence of employed individuals in the household; and a dummy on the presence of unemployed individuals in the household.
- Finally, regional and year dummies are introduced to control for geographic and time specific drivers influencing participation in the programme.

The results of the probit model estimation on the probability of participation are presented in Table 4. The first column shows coefficients for the different categories and the second the standard errors. A positive coefficient indicates that the corresponding category increases the probability of participation, while a negative coefficient indicates the opposite. Estimates that reach a significant probability level are denoted by asterisks.

A number of interesting results arise from the analysis. Particularly, the analysis shows that high-skilled men aged 18-24 have a higher probability of participating. By contrast, individuals living in households with a higher share of members below the age of 18 are less likely to participate. Moreover, individuals who were in inactivity during the baseline period have higher probabilities to participate. Furthermore, regarding regional effects, the Northwest region is the geographical area with the lowest probability of participation (see Table 4).

After the probit model is estimated, propensity scores are calculated as the predicted values of participation. Appendix A shows the histogram for the treatment and the control group, where a large region of common support is observed proving that the overlap condition is fulfilled. In addition, balancing tests were carried out to check if the distributions of treated and control groups are similar. The balancing property was satisfied revealing that the means of each characteristic do not differ significantly between treated and comparison observations.

Once the propensity scores have been estimated, there are numerous matching techniques to match participants to non-participants on the basis of the propensity scores. This paper uses Nearest Neighbour Matching<sup>18</sup>, which matches each treatment observation to the comparison unit with the closest propensity scores (Khandker et al., 2010).<sup>19</sup>

---

<sup>18</sup> In particular, Nearest Neighbour Matching without replacement is used and one nearest neighbour is selected to do matching.

<sup>19</sup> As the selection of a specific matching method may affect the estimated programme effects, different matching techniques have been used to test the robustness of our estimations. Using different matching methods delivers similar results.

**Table 4. Estimation results of probit model on the probability of being participant**

	Coefficient	Standard errors
<b>Gender</b> (ref. Women)		
Men	0.423***	0.100
<b>Age</b> (ref. 25-34)		
18-24	0.356**	0.150
35-39	0.090	0.108
40-49	-0.149	0.105
50-59	-0.028	0.129
60-65	0.348	0.264
<b>Marital status</b> (ref. Separated, divorced or widowed)		
Single	0.089	0.125
Married or cohabiting	0.209	0.133
<b>Role in the household</b> (ref. Non-family member)		
Head	5.245***	0.820
Spouse of head	5.214***	0.815
Son or daughter	5.396***	0.788
Other family relationship	5.622***	0.807
<b>School attendance</b> (ref. No)		
Yes	0.099	0.132
<b>Immigrant status</b> (ref. No)		
Yes	0.326	0.214
<b>Educational attainment</b> (ref. Secondary)		
None	-0.456***	0.123
Primary	-0.222***	0.083
Tertiary	0.284	0.273
<b>Type of family</b> (ref. Nuclear family)		
Single-parent family	-0.001	0.123
<b>Number of children in the household</b>	0.049	0.041
<b>Household composition</b>		
Share of members aged 0-5	-1.177**	0.589
Share of members aged 6-17	-1.178**	0.551
Share of members aged 18-64	-0.115	0.474
<b>Household size</b> (ref. More than five household members)		
One household member	-0.032	0.353
Two-five household members	0.097	0.105
<b>Number of rooms in the house</b>	0.004	0.022
<b>Type of house</b> (ref. Room or others)		
Villa	-0.551	0.354
Apartment	-0.604	0.369
<b>House ownership</b> (ref. Renting house or others)		
Personal ownership	-0.009	0.085
<b>Employment status</b> (ref. Informal worker)		
Inactive	0.212**	0.084
Unemployed	0.113	0.152
<b>Other employed in the household</b> (ref. No)		
Yes	-0.030	0.096

	Coefficient	Standard errors
<b>Other unemployed in the household (ref. No)</b>		
Yes	-0.037	0.103
<b>Region (ref. Gran Buenos Aires)</b>		
Northwest region	-0.432***	0.111
Northeast region	-0.137	0.126
Cuyo region	-0.040	0.164
Pampeana region	-0.082	0.113
Patagonica region	0.192	0.161
<b>Year (ref. 2008)</b>		
2006	-2.392***	0.521
2007	-2.022***	0.521
2009	-1.731***	0.524
2010	-1.519***	0.526
<b>Number of observations</b>		1,702
<b>Pseudo R2</b>		0.123
<b>Log likelihood</b>		-958.61

Significance levels: \*significant at 10 per cent; \*\*significant at 5 per cent; \*\*\*significant at 1 per cent.  
Source: Authors' calculations based on EPH.

Finally, our second set of estimates is obtained carrying out a difference-in-difference approach on matched observations. Several studies sustain that combining matching with difference-in-difference estimators produce a fully efficient estimator that eliminates selection bias due to both observable and time-invariant omitted effects that might affect participation (Galasso and Ravallion, 2004; Khandker et al., 2010).

## 5. Estimates of the impact of the programme

This section presents the estimation results on the impact of programme participation on labour market performance in the short term. First, the section focuses on individuals' status in the labour market (i.e. informal worker, unemployed or inactive). Second, for participants who have found a job, the section also summarises the impact of the programme on job quality, namely the average hourly real wages, the probability of having a low-paid job, the number of hours worked, the probability of working an excessive number of hours and the probability of being in time-related underemployment.

The estimated parameter is the average treatment effect on the treated (ATT), which should be interpreted as the change in a given outcome due to programme participation. For each labour market indicator analysed, we report the estimated effect of the programme using the difference-in-difference estimator on the full sample and on the sample once it has been restricted to matched observations.

### 5.1 Impact on labour market status

Table 5 displays the estimation results for the ATT of the programme on individuals' labour market status, showing consistent findings across the different methodologies.

The average impact estimates for the full sample show that, in the short run, the programme decreases the probability of having an informal employment by 2 per cent at the 1 per cent level of significance.

This negative estimated impact of the programme on informality is higher when the analysis is limited to matched observations (-6 per cent), but its statistical significance drops to the 5 per cent level.

**Table 5. Impact of the programme on labour market status using a DD estimator**

	Full sample	PSM matching
<b>Informal worker</b>		
ATT	-0.021 (0.003)***	-0.059 (0.013)**
Observations	3,404	1,872
<b>Unemployed</b>		
ATT	0.002 (0.001)	0.012 (0.000)
Observations	3,404	1,872
<b>Inactive</b>		
ATT	0.028 (0.009)*	0.075 (0.019)**
Observations	3,404	1,872

Notes: Table reports the least square estimates of Equation 2. Standard errors (in parentheses) are clustered at the household level. Significance levels: \*significant at 10 per cent; \*\*significant at 5 per cent; \*\*\*significant at 1 per cent. The full estimation including results on all variables are presented in Table A1 of the Appendix.

Source: Authors' calculations based on EPH.

Moreover, using the full sample, programme participation is associated with a 3 per cent increase in the probability of being inactive. This result is even higher when the sample is restricted to matched observations, where participation in the programme is associated with a 7.5 per cent increase in the probability of being in inactivity.

Finally, the effect of the programme on unemployment is small and non-statistically significant. These estimates are similar across methods, in both magnitude and statistical significance.

## 5.2 Impact on job quality

Table 6 presents the estimates of the average impact of the programme on several indicators of job quality.

First, the programme has a sizeable and significant impact on wages in the short term. More specifically, programme participation raises real hourly wages by 3.7 per cent. This result remains practically unchanged when the sample is limited to matched observations – in this case, participation in the programme is associated with a 3.1 per cent increase in real hourly wages. Estimates are statistically significant in both cases.

**Table 6. Impact of the programme on job quality using a DD estimator**

	Full sample	PSM matching
<b>Logarithm of real hourly wages</b>		
ATT	0.037*** (0.005)	0.031** (0.009)
Observations	2,127	1,139
<b>Low-paid job</b>		
ATT	-0.021 (0.013)	-0.03 (0.033)
Observations	2,151	1,153
<b>Hours worked</b>		
ATT	0.640* (0.226)	-1.553*** (0.079)
Observations	2,299	1,245
<b>Excessive working time</b>		
ATT	-0.015** (0.004)	-0.049** (0.009)
Observations	2,300	1,246
<b>Underemployment</b>		
ATT	-0.033*** (0.001)	-0.020*** (0.001)
Observations	2,300	1,246

Notes: Hourly wages have been calculated as total earnings per hour worked in the main occupation during the month of reference. In addition, hourly wages have been deflated using the CPI published by INDEC (base 2008=100) ([http://www.carpetas.com.ar/indec/indec\\_consumidor.pdf](http://www.carpetas.com.ar/indec/indec_consumidor.pdf)).

Table reports the least square estimates of Equation 2. Standard errors (in parentheses) are clustered at the household level. Significance levels: \*significant at 10 per cent; \*\*significant at 5 per cent; \*\*\*significant at 1 per cent.

The full estimation including results on all variables are presented in Table A2 of the Appendix.

Source: Authors' calculations based on EPH.

Second, the impact of the programme on the number of hours worked is more ambiguous. Results for the full sample indicate that participants in the programme seem to work on average 0.6 hours per week more than non-participants, and the estimates are significant at 10 per cent level. However, the impact of the programme on the number of hours worked is negative and statistically significant at 1 per cent when the estimations are restricted to the matched sample.

Third, participation in the programme is linked to a 2 per cent decrease in the probability of working an excessive number of hours. The impact is even higher when the sample is limited to matched observations – in this case, participation in the programme is associated with a 5 per cent decrease in the probability of excessive working time. Estimates are significant in both cases at the 5 per cent level.

Fourth, the programme has a statistically significant reducing impact on the probability of being in time-related underemployment. In particular, programme participation reduces the probability of being in underemployment by 3.3 per cent. Moreover, restricting the estimation to matched observations does not change significantly the results. With this method, participants are 2 per cent less likely to be in underemployment.

Finally, regardless of the method used, there is not statistically significant evidence on the impact of the programme on the probability of having a low-paid job in the short term.

## 6. Conclusions

This paper examines the short-term effects of the programme *Seguro de Capacitación y Empleo* (SCE). The SCE is a non-contributory transfer programme aimed to support unemployed individuals through activation measures such as vocational training, remedial education, job-search assistance and employment subsidies. As such, the SCE is an example of a growing trend observed in Latin America and the Caribbean, where labour activation components have been increasingly included into conditional cash transfers programmes (CCTs) operating in the region. Despite this growing trend, not enough is known regarding the effectiveness of these components, especially on job quality. In this context, the evaluation of the SCE is an important contribution to the debate on the effectiveness of labour activation components embedded in CCT programmes since it sheds light – for the first time – on the impact of a programme that includes all these different labour market interventions. It therefore provides empirical evidence on the effectiveness of activation policies as a way out of more universal CCTs. Moreover the paper pays attention to the effects in terms of, both, employment creation and job quality, which is another novelty of the analysis.

Using data from the Permanent Household Survey (EPH) and exploiting the panel structure of the survey, this paper uses a difference-in-difference (DD) model to estimate the average impact effect of the SCE. Moreover, the paper is able to relax the underlying DD assumption that selection bias is time invariant and therefore that the observed dissimilarity in outcomes between participants and non-participants can be eliminated by double differencing. Indeed, exploiting the richness of EPH in terms of availability of sufficiently detailed information on participants and non-participants, a PSM method is carried out at the baseline period to remove pre-programme observable heterogeneity. Thus, a second set of estimates is obtained by calculating a DD estimator on a sample of matched observations to correct for possible selection bias on observable characteristics. Importantly, main findings are consistent across the two different approaches used (i.e. DD on the full sample and DD on a sample of matched individuals).

The analysis finds that the SCE, at least in the short-run, matters in terms of improving the job quality of the observed participants. Estimates suggest that the SCE is associated with a decrease in the probability of having an informal job in the short-term and with an increase in hourly wages. The findings also suggest that the programme is associated with a lower probability of working an excessive number of hours and being in underemployment. Given that observed participants in this study are those transiting from *Plan Jefes*, these positive effects on employment and job quality suggest that reducing dependency on more universal CCTs through programmes such as the SCE that are rich in activation components is feasible and beneficial for participants in terms of their labour market trajectories.

Despite these positive effects, the analysis also finds that the programme is associated with an increase in the probability of being inactive. This might be related to the fact that as participants move from the informal to the formal labour market, they might fall sometimes in inactivity. This finding brings about two relevant questions from the policy perspective: first, whether transitions from inactivity to formal employment are easier and faster than transitions from informal to formal employment; and second, whether follow-up policies aimed at activating inactive individuals are less costly and easier to implement than policies aimed to formalizing informal jobs. Provided this is the case, the negative spill-over effect of the SCE would be easily justifiable.

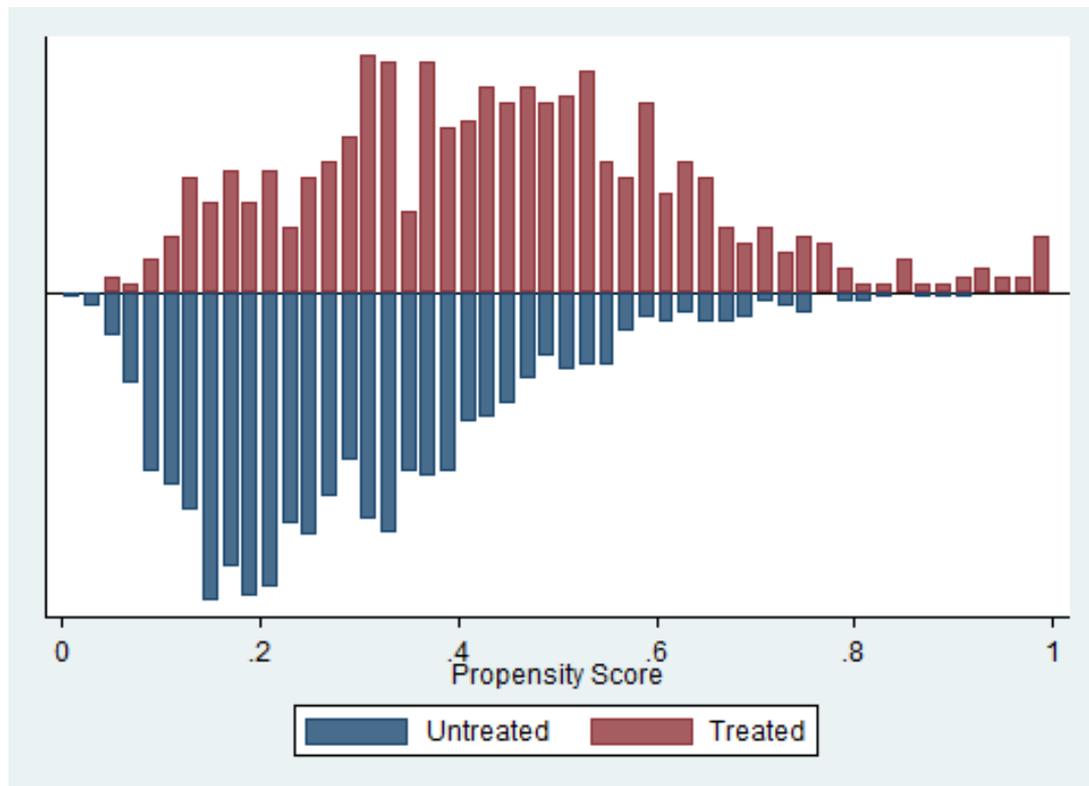
## References

- Almeida, R.K.; Galasso, E. 2010. “Jump-starting self-employment? Evidence for welfare participants in Argentina”, in *World Development*, Vol. 38, No. 5, pp. 742-755.
- Attanasio, O.; Kugler, A.; Meghir, C. 2011. “Subsidizing vocational training for disadvantaged youth in Colombia: Evidence from a Randomized Trial”, in *American Economic Journal: Applied Economics*, Vol. 3, No. 3, pp. 188-220.
- Bertranou, F.; Mazorra, X. 2009. *Argentina experience in programmes for income protection and employability improvement*. ILO notes on the Crisis (ILO Country Office for Argentina, Buenos Aires).
- Cecchini, S.; Madariaga, A. 2011. *Conditional cash transfer programmes: The recent experience of Latin America and the Caribbean*. Cuadernos de la CEPAL No. 95 (ECLAC, Santiago de Chile).
- Cruces, G.; Gasparini, L. 2008. *Programas sociales en Argentina: Alternativas para la ampliación de la cobertura*. Documento de trabajo CEDLAS No. 77. (Universidad Nacional de La Plata, La Plata).
- Díaz, J.J.; Jaramillo, M. 2006. *An evaluation of the Peruvian “Youth Labor Training Program” – PROJOVEN*, Office of Evaluation and Oversight Working Paper 10/06 (Inter-American Development Bank, Washington, DC).
- Economic Commission for Latin America and the Caribbean; International Labour Organization (ECLAC/ ILO). 2014. *The employment situation in Latin America and the Caribbean: Conditional transfer programmes and the labour market*, No. 10, May 2014 (ECLAC, Santiago de Chile).
- Escudero, V. 2011. *Argentina – Case study of past crises*, EC-IILS Joint Discussion Paper Series, No. 3 (International Labour Office, Geneva).
- Galasso, E.; Ravallion, M. 2004. “Social protection in a crisis: Argentina’s Plan Jefes y Jefas”, in *The World Bank Economic Review*, Vol. 18, No. 3, pp. 367-399.
- Galasso, E.; Ravallion, M.; Salvia, A. 2004. “Assisting the transition from welfare to work: A randomized experiment”, in *Industrial and Labor Relations Review*, Vol. 58, No. 1, pp. 128-142.
- Galdo, J.; Chong, A. 2012. “Does the quality of public-sponsored training programmes matter? Evidence from bidding processes data”, in *Labour Economics*, Vol. 19, No. 6, pp. 970-986.
- Gasparini, L.; Cruces, G. 2010. “Las asignaciones universales por hijo en Argentina: Impacto, discusión y alternativas”, in *Económica*, Vol. 41, pp. 105-146.
- International Labour Organization (ILO). 2016. *What works: Active labour market policies in Latin America and the Caribbean* (ILO, Geneva).
- Instituto Nacional de Estadística y Censos (INDEC). 2003. *La nueva Encuesta Permanente de Hogares de Argentina. 2003* (INDEC, Buenos Aires).
- Jalan, J.; Ravallion, M. 1998. “Are there dynamic gains from a poor-area development program?”, in *Journal of Public Economics*, Vol. 67, No. 1, pp. 65-86.
- Khandker, S.R.; Koolwal, G.B.; Samad, H.A. 2010. *Handbook on Impact Evaluation: Quantitative methods and practices* (The World Bank, Washington DC.).
- Madoery, O. 2011. *Más y mejor trabajo para todos. Del Programa Jefes de Hogar al Programa Jóvenes. Políticas activas de empleo, Argentina 2003-2010*. Programa CEA-OIT (ILO Country Office for Argentina, Buenos Aires).

- Neffa, J. (dir.); Brown, B. 2011. *Empleo, desempleo y políticas de empleo. Políticas públicas de empleo III (2002/2010)*, No. 7, Tercer trimestre (CEIL-PIETTE, Buenos Aires).
- Organization of American States; Economic Commission for Latin America and the Caribbean; International Labour Organization (OAS/ECLAC/ILO). 2010. *Social protection and employment generation: Analysis of experiences from co-responsibility transfer programs*. Inter-Agency Document, November 2010 (OAS, Washington DC.).
- Pitt, M.; Khandker, S. 1998. “The impact of group-based credit programs on poor households in Bangladesh: Does the gender of participants matter?”, in *Journal of Political Economy*, No. 106, pp. 958–998.
- Ronconi, L. 2002. *El Programa Trabajar*, Serie Documentos de Trabajo No. 63 (Centro de Estudios para el Desarrollo Institucional, Buenos Aires).
- Rosenbaum, P.R; Rubin, D.B. 1983. “The central role of the propensity score in observational studies for causal effects”, in *Biometrika*, Vol. 70, No. 1, pp. 41-55.
- Weller, J. 2009. *El fomento de la inserción laboral de grupos vulnerables. Consideraciones a partir de cinco estudios de caso nacionales*, Projects Documents No. 306 (ECLAC, Santiago de Chile).
- World Bank. 2003. *Argentina Crisis and Poverty 2003: A Poverty Assessment*. Report No. 26127-AR (The World Bank, Washington DC.).

## Appendix A: Area of common support

Figure A.1: Distribution of propensity scores by treatment status



Note: Histogram of propensity score distribution for non-participants (untreated) and participants (treated); 114 participants (19.5%) are off the common support.

Source: Authors' calculations based on the EPH

## Appendix B: Detailed results

Table A1 Impact of the programme on labour market status						
	Informal worker		Unemployed		Inactive	
	Full sample	PSM matched sample	Full sample	PSM matched sample	Full sample	PSM matched sample
DD estimator	-0.021*** (0.003)	-0.059** (0.013)	0.002 (0.001)	0.012 (0.000)	0.028* (0.009)	0.075** (0.019)
<b>Age (ref.25-34)</b>						
18-24	-0.067 (0.038)	-0.087 (0.052)	0.056*** (0.003)	0.088*** (0.008)	0.083 (0.038)	0.039 (0.055)
35-39	0.025 (0.061)	0.082 (0.070)	-0.048* (0.020)	-0.023 (0.037)	0.012 (0.040)	-0.060* (0.025)
40-49	-0.024 (0.069)	0.052 (0.081)	-0.061* (0.021)	-0.056 (0.034)	0.094 (0.041)	-0.001 (0.029)
50-59	-0.187* (0.073)	-0.172 (0.087)	-0.051 (0.024)	-0.028 (0.036)	0.190** (0.039)	0.141** (0.028)
60-65	-0.225 (0.107)	-0.513* (0.177)	0.037 (0.027)	0.229** (0.063)	0.098 (0.061)	0.159* (0.063)
<b>Marital status (ref. Married or cohabiting)</b>						
Separated, divorced or widowed	0.118*** (0.003)	0.007 (0.024)	0.020*** (0.001)	-0.002 (0.006)	-0.105*** (0.002)	0.029 (0.016)
Single	0.102*** (0.004)	-0.013** (0.004)	0.019*** (0.001)	0.005 (0.004)	-0.080*** (0.007)	0.055** (0.010)
<b>Role in the household (ref. Non-family member)</b>						
Head	0.641*** (0.013)	0.375*** (0.015)	-0.025** (0.005)	0.027* (0.009)	-0.736*** (0.021)	-0.560*** (0.015)
Spouse of head	0.528*** (0.081)	0.213*** (0.025)	-0.005 (0.010)	0.094*** (0.006)	-0.668*** (0.040)	-0.463*** (0.016)
Son or daughter	0.487*** (0.021)	0.227*** (0.014)	-0.021* (0.009)	0.107*** (0.005)	-0.544*** (0.012)	-0.409*** (0.011)
Other family relationship	0.361*** (0.035)		-0.028 (0.012)		-0.387*** (0.029)	
<b>School attendance (ref. No)</b>						
Yes	-0.064*** (0.003)	-0.089*** (0.001)	0.029*** (0.000)	0.028*** (0.001)	0.056*** (0.004)	0.056*** (0.004)
<b>Educational attainment (ref. Secondary)</b>						
None	-0.006 (0.011)	-0.034 (0.016)	-0.057*** (0.001)	-0.073*** (0.001)	0.090*** (0.003)	0.173*** (0.002)
Primary	-0.042** (0.012)	-0.024 (0.017)	-0.001* (0.000)	0.008*** (0.001)	0.074*** (0.001)	0.077*** (0.002)
Tertiary	0.015 (0.017)	0.020 (0.013)	-0.005*** (0.001)	0.046*** (0.003)	0.082** (0.020)	0.060* (0.022)

<b>Table A1 Impact of the programme on labour market status</b>							
<b>Immigrant status (ref. No)</b>							
	Yes	0.152*** (0.009)	-0.162*** (0.010)	-0.148*** (0.001)	0.019*** (0.002)	0.133*** (0.005)	0.063*** (0.010)
<b>Type of family (ref. Nuclear family)</b>							
	Single-parent family	-0.012 (0.015)	0.069** (0.017)	0.027*** (0.000)	0.086*** (0.003)	-0.034** (0.010)	-0.138*** (0.005)
<b>Number of children in the household</b>							
		0.000 (0.002)	-0.020* (0.007)	-0.005 (0.003)	-0.009 (0.006)	0.013*** (0.000)	0.043*** (0.003)
<b>Household composition</b>							
	Share of members aged 0-5	0.026 (0.042)	0.066 (0.123)	0.064** (0.015)	0.133*** (0.019)	-0.046*** (0.004)	-0.148*** (0.018)
<b>Other employed in the household (ref. No)</b>							
	Yes	0.106*** (0.005)	0.055*** (0.008)	0.005** (0.001)	0.076*** (0.001)	-0.086*** (0.004)	-0.115*** (0.005)
<b>Other unemployed in the household (ref. No)</b>							
	Yes	-0.002 (0.006)	-0.054*** (0.003)	0.002** (0.001)	0.031*** (0.001)	-0.008 (0.006)	0.008** (0.002)
<b>Quarter (ref. Fourth quarter)</b>							
	First	0.053 (0.056)	-0.137** (0.036)	0.045 (0.029)	0.122* (0.043)	-0.084 (0.049)	0.033 (0.065)
	Second	0.011 (0.044)	-0.129** (0.036)	0.051** (0.015)	0.101** (0.022)	-0.049 (0.035)	0.058 (0.044)
	Third	-0.011 (0.024)	-0.101** (0.023)	-0.002 (0.006)	0.037* (0.012)	0.032 (0.022)	0.090** (0.027)
<b>Year (ref. 2011)</b>							
	2006	0.537 (0.333)	-0.609 (0.261)	0.313 (0.201)	0.830* (0.289)	-0.513 (0.314)	0.194 (0.442)
	2007	0.345 (0.258)	-0.600* (0.208)	0.259 (0.157)	0.672* (0.233)	-0.315 (0.253)	0.271 (0.352)
	2008	0.242 (0.200)	-0.442* (0.170)	0.215 (0.115)	0.539* (0.179)	-0.215 (0.194)	0.183 (0.275)
	2009	0.169 (0.126)	-0.285* (0.121)	0.136 (0.076)	0.366* (0.124)	-0.144 (0.129)	0.100 (0.188)
	2010	0.046 (0.060)	-0.191 (0.084)	0.097 (0.045)	0.253* (0.085)	-0.041 (0.063)	0.052 (0.108)
<b>Constant</b>							
		-0.295 (0.286)	1.079** (0.199)	-0.194 (0.167)	-0.798* (0.253)	1.228** (0.255)	0.390 (0.366)
<b>Number of observations</b>		3,404	1,872	3,404	1,872	3,404	1,872
<b>R-squared</b>		0.086	0.103	0.013	0.035	0.064	0.092

Notes: Table reports the least square estimates of Equation 2. Standard errors (in parentheses) are clustered at the household level. Significance levels: \*significant at 10 per cent; \*\*significant at 5 per cent; \*\*\*significant at 1 per cent.  
Source: Authors' calculations based on the EPH.

**Table A2. Impact of the programme on job quality**

	Real hourly wages		Low-paid worker		Hours worked		Excessive working time		Underemployment	
	Full sample	PSM matched sample	Full sample	PSM matched sample	Full sample	PSM matched sample	Full sample	PSM matched sample	Full sample	PSM matched sample
DD estimator	0.037*** (0.005)	0.031** (0.009)	-0.021 (0.013)	-0.030 (0.033)	0.640* (0.226)	-1.553*** (0.079)	-0.015** (0.004)	-0.049** (0.009)	-0.033*** (0.001)	-0.020*** (0.001)
<b>Age (ref.25-34)</b>										
18-24	-0.203* (0.071)	-0.201 (0.094)	-0.187 (0.080)	-0.219* (0.087)	0.016 (0.403)	-0.226 (0.713)	-0.054*** (0.008)	-0.073*** (0.011)	-0.019** (0.004)	-0.031*** (0.004)
35-39	0.124*** (0.020)	0.114** (0.025)	-0.006 (0.009)	0.039** (0.009)	-0.059 (0.167)	-0.704* (0.280)	0.014 (0.007)	-0.043*** (0.005)	0.021*** (0.001)	0.031*** (0.000)
40-49	0.111** (0.031)	0.239*** (0.019)	0.059*** (0.009)	0.120*** (0.003)	8.059*** (0.092)	8.362*** (0.165)	0.090*** (0.009)	0.055** (0.013)	-0.001 (0.001)	-0.026* (0.010)
50-59	-0.136* (0.043)	-0.018*** (0.002)	0.280*** (0.012)	0.327*** (0.004)	6.917*** (0.149)	11.608*** (0.266)	0.178*** (0.014)	0.194*** (0.026)	0.027*** (0.001)	-0.089*** (0.012)
60-65	0.923*** (0.038)	1.164*** (0.015)	-0.096*** (0.005)	-0.117** (0.031)	2.223*** (0.361)	5.237*** (0.129)	0.174*** (0.013)	0.124*** (0.011)	0.072*** (0.000)	-0.088*** (0.011)
<b>Marital status (ref. Married or cohabiting)</b>										
Separated, divorced or widowed	-0.141** (0.033)	0.033 (0.015)	0.033*** (0.004)	-0.075*** (0.002)	3.340*** (0.062)	-0.125 (0.321)	0.054*** (0.007)	0.041** (0.008)	-0.005** (0.001)	0.029*** (0.001)
Single	0.072 (0.041)	0.158*** (0.013)	0.018 (0.034)	-0.099*** (0.011)	-2.542** (0.626)	-5.898*** (0.188)	0.016 (0.019)	-0.055*** (0.009)	-0.057*** (0.003)	-0.042*** (0.001)
<b>Role in the household (ref. Non-family member)</b>										
Head	0.359** (0.103)	0.610** (0.153)	-0.301*** (0.012)	-0.028 (0.018)	14.165*** (2.320)	8.165** (1.825)	0.395*** (0.031)	0.103*** (0.000)	-0.061*** (0.004)	-0.268*** (0.006)
Spouse of head	0.026 (0.115)	0.578** (0.151)	-0.283* (0.117)	-0.053** (0.011)	17.108*** (0.684)	6.043** (1.841)	0.361*** (0.032)	-0.030** (0.009)	-0.145*** (0.006)	-0.425*** (0.007)
Son or daughter	0.537*** (0.040)	0.627*** (0.085)	-0.328*** (0.025)	0.073*** (0.010)	10.432*** (0.890)	0.442 (1.276)	0.266*** (0.020)	-0.172*** (0.005)	-0.043*** (0.002)	-0.217*** (0.002)

Other family relationship	0.202 (0.292)		-0.329** (0.078)		12.944*** (1.486)		0.465*** (0.055)		0.067** (0.021)	
<b>School attendance</b> (ref. No)										
Yes	-0.066 (0.070)	0.033 (0.103)	0.078*** (0.008)	0.014* (0.006)	1.826** (0.400)	-0.467 (0.767)	-0.004 (0.031)	0.003 (0.045)	-0.040*** (0.000)	-0.093*** (0.008)
<b>Educational attainment</b> (ref. Tertiary)										
None	-0.009 (0.071)	-0.174 (0.086)	-0.205** (0.035)	-0.060 (0.054)	2.027*** (0.077)	4.237** (1.327)	0.100*** (0.015)	0.177** (0.039)	0.004*** (0.000)	0.100*** (0.000)
Primary	-0.083* (0.033)	-0.133 (0.074)	-0.019 (0.026)	0.057 (0.059)	-1.019* (0.401)	2.122 (1.026)	0.027 (0.022)	0.132** (0.041)	0.027*** (0.000)	0.041*** (0.000)
Tertiary	-0.168 (0.271)	0.017 (0.392)	0.204*** (0.035)	0.163* (0.052)	6.173 (4.337)	-1.727 (6.246)	-0.141** (0.031)	-0.207** (0.057)	0.009 (0.007)	0.013* (0.005)
<b>Immigrant status</b> (ref. No)										
Yes	0.893*** (0.019)	1.219*** (0.055)	-0.756*** (0.026)	-0.742*** (0.011)	-4.300*** (0.062)	-2.685** (0.555)	-0.204*** (0.004)	-0.281*** (0.004)	0.260*** (0.001)	0.301*** (0.004)
<b>Type of family</b> (ref. Nuclear family)										
Single-parent family	-0.073* (0.027)	0.300*** (0.023)	0.022*** (0.003)	0.001** (0.000)	-1.866** (0.484)	-8.003*** (0.502)	-0.031*** (0.003)	-0.158*** (0.011)	-0.003 (0.003)	-0.076*** (0.001)
<b>Number of children in the household</b>	0.023** (0.005)	0.013*** (0.001)	0.014 (0.007)	-0.003 (0.015)	-0.346** (0.075)	-1.017*** (0.147)	-0.013** (0.003)	-0.028*** (0.002)	0.025*** (0.001)	0.007*** (0.000)
<b>Household composition</b>										
Share of members aged 0-5	0.180 (0.131)	0.286 (0.130)	-0.271 (0.176)	-0.378 (0.358)	7.471*** (0.982)	4.960 (2.427)	0.181*** (0.012)	0.015 (0.059)	-0.109*** (0.010)	0.023** (0.007)
<b>Other employed in the household</b> (ref. No)										
Yes	0.026 (0.017)	0.150** (0.043)	0.015** (0.004)	-0.013** (0.004)	-0.812* (0.313)	-1.234 (0.875)	0.018** (0.004)	0.024* (0.010)	0.014*** (0.001)	0.004** (0.001)
<b>Other unemployed in the household</b> (ref. No)										
Yes	0.003 (0.021)	0.028 (0.032)	0.106*** (0.010)	0.096*** (0.003)	-0.911* (0.344)	-1.370 (0.595)	-0.034*** (0.001)	-0.060*** (0.004)	0.013*** (0.000)	0.013*** (0.001)

<b>Quarter (ref. Fourth quarter)</b>											
	First	-0.154 (0.099)	-0.015 (0.151)	0.144*** (0.013)	-0.018 (0.036)	-8.760*** (0.846)	-5.683* (2.183)	-0.166*** (0.023)	-0.128** (0.039)	-0.037*** (0.004)	-0.015** (0.005)
	Second	0.010 (0.086)	0.092 (0.116)	0.029* (0.009)	-0.090* (0.032)	-4.260*** (0.535)	-1.925 (1.691)	-0.038** (0.011)	0.020 (0.025)	-0.028*** (0.003)	0.016*** (0.002)
	Third	0.014** (0.003)	0.056 (0.025)	-0.033** (0.010)	-0.102** (0.024)	-3.092*** (0.155)	-0.072 (0.116)	-0.035*** (0.002)	0.027** (0.005)	-0.009*** (0.001)	-0.015*** (0.000)
<b>Year (ref. 2011)</b>											
	2006	-1.673** (0.393)	-0.816 (0.828)	1.293*** (0.062)	0.176 (0.118)	-50.849*** (5.310)	-23.704 (13.534)	-0.746** (0.201)	-0.364 (0.303)	-0.268*** (0.026)	-0.171*** (0.012)
	2007	-1.432** (0.282)	-0.638 (0.629)	1.021*** (0.042)	0.113 (0.075)	-41.273*** (3.921)	-19.579 (10.259)	-0.596** (0.157)	-0.284 (0.238)	-0.229*** (0.020)	-0.147*** (0.016)
	2008	-1.226*** (0.191)	-0.556 (0.469)	0.736*** (0.022)	0.036 (0.022)	-28.237*** (3.075)	-11.605 (7.807)	-0.370* (0.131)	-0.102 (0.194)	-0.166*** (0.015)	-0.071** (0.021)
	2009	-0.981*** (0.130)	-0.452 (0.314)	0.456*** (0.016)	-0.055** (0.010)	-19.312*** (1.817)	-9.079 (4.668)	-0.240* (0.092)	-0.060 (0.135)	-0.097*** (0.008)	-0.013 (0.025)
	2010	-0.559*** (0.090)	-0.082 (0.145)	0.120** (0.033)	-0.233*** (0.009)	-10.805*** (0.630)	-7.217*** (1.030)	-0.069 (0.053)	0.008 (0.076)	-0.027*** (0.002)	0.064 (0.030)
	<b>Constant</b>	2.016** (0.392)	0.645 (0.774)	-0.183** (0.039)	0.569*** (0.050)	54.436*** (5.483)	42.208** (12.336)	0.383 (0.178)	0.449 (0.217)	0.306*** (0.025)	0.466*** (0.005)
	<b>Number of observations</b>	2,127	1,139	2,151	1,153	2,299	1,245	2,300	1,246	2,300	1,246
	<b>R-squared</b>	0.169	0.196	0.056	0.061	0.064	0.084	0.031	0.069	0.028	0.054

Notes: Table reports the least square estimates of Equation 2. Standard errors (in parentheses) are clustered at the household level. Significance levels: \*significant at 10 per cent; \*\*significant at 5 per cent; \*\*\*significant at 1 per cent.

Source: Authors' calculations based on the EPH.