

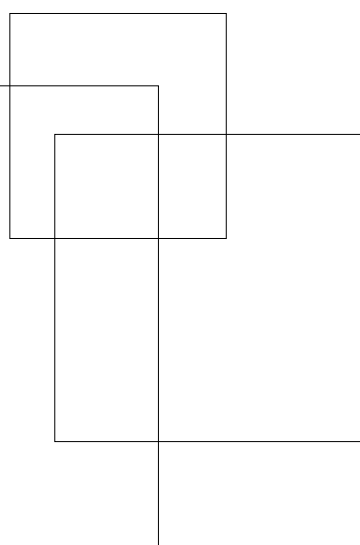


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# Joint provision of income and employment support: Evidence from a crisis response in Uruguay

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## **Joint provision of income and employment support: Evidence from a crisis response in Uruguay**

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## Abstract

There is an increasing recognition in the policy debate of the importance of providing support to unemployed individuals through a combination of income support and active labour market policies. However, very little evidence exists on the effectiveness of this policy approach (and possible trade-offs) beyond developed economies. We provide one of the first evaluations of these schemes in the context of an emerging economy by looking at a public works programme implemented in Uruguay between 2005 and 2007 as part of a comprehensive cash transfer intervention that reached around 10 per cent of households in the country during a major recession. Exploiting specific eligibility criteria for participation in the cash transfer programme, we use rich administrative data of panel nature to study the effects of (i) participating in the public works programme (active component), (ii) receiving the cash transfer (income-support component) and, (iii) of benefiting of both the active and income-support programmes. We find that participation in the active programme has positive (albeit only marginally significant) effects on the employment probability, but non-significant effects on the quality of the job found. The positive employment effect does not generate displacement effects from participants to non-participants within the same household. However, the effect fades away when participants receive the cash transfer. Finally, the programme did not have any effect on measures of civic engagement and social integration.

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## 1. Introduction

This paper analyses the impact of the activation and income-support interventions of the comprehensive social assistance programme *Plan de Asistencia Nacional a la Emergencia Social* (PANES), which reached around 10 per cent of households in Uruguay between 2005 and 2007, following a major economic recession. As other integrated social protection interventions implemented in Latin American countries, PANES had the dual objective of providing monetary support to vulnerable households to assist them with immediate needs and to promote households' reinsertion into the society in order to prevent economic and social exclusion (Government of Uruguay, 2006). We exploit the particular setup of the programme to assess the effects of the income support *Ingreso Ciudadano* (IC), which covered the entire pool of PANES participants, providing a monthly monetary transfer of UYU 1,360 (USD 102, PPP) per household regardless of its size or composition; and the public works programme *Trabajo por Uruguay* (Work for Uruguay, TxU) targeted to cash-transfer recipients, that required participants to work for five months in community projects managed by civil society organizations for a salary corresponding to twice the amount of the cash transfer. TxU provided temporary employment opportunities with the dual objective of increasing immediate household income and improving participants' likelihood of obtaining an unsubsidized job after participation.

By analyzing the particular case of Uruguay, the paper digs deeper into the knowledge of an increasing trend observed in developing and emerging economies towards combining income support measures with active labour market policies (ALMPs) as a means to address a wide range of labour market and social challenges. Disentangling the effects of income support measures and ALMPs within this combined approach is particularly important as the literature remains inconclusive regarding the possible complementarities between active and passive interventions. This combined approach is based on the premise that, despite the crucial role of income support programmes in providing income security to vulnerable people and guaranteeing their right to social protection, monetary support alone is not enough to improve individuals' employment or social situations and reduce poverty in a sustainable manner.<sup>1</sup> A comprehensive strategy should thus provide individuals with tools to address the underlying causes of precarious living conditions and poverty, by focusing on the dual goal of improving the job quality for those who are in employment, while creating new decent work opportunities for those who are not, but who are able to work. PANES is part of this generation of social protection programmes, which integrate income support with activation measures. As such, the specific context of Uruguay provides a unique opportunity to assess the effects of income support measures and public works programmes separately, as well as to evaluate the joint provision of the two interventions.

Yet, despite this increasing trend, the knowledge on the complementarity between ALMPs and income support programmes in emerging and developing economies remains limited and has not yet reached a consensus (López Mourelo and Escudero, 2017; Martínez et al., 2018). In particular, studies assessing the effectiveness of public works programmes in the framework of more comprehensive social

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<sup>1</sup> There has been some debate around the potential theoretical labour supply effects of cash transfer programmes. On the one hand, cash transfers beneficiaries may reduce their labour supply to remain eligible for the programme or due to a pure income effect that increases the demand for leisure. On the other hand, the need to compensate for the reduction in household income due to the decrease in child labour and/or the increase in school expenditures might lead to a positive labour supply effect. However, recent empirical evidence has recently shown that cash transfers do not have an aggregate effect on households' labour supply (see, for instance, (Alzúa et al., 2013)).

protection interventions show mixed results. A study of a public works programme in Bangladesh, for example, found positive results in terms of raising self-employment among beneficiaries of social protection programmes (Hashemi and Rosemberg, 2006). Likewise, similar public works and technical assistance programmes in Argentina have been found to increase the probability of income support beneficiaries to become self-employed, but at the cost of a reduced probability of participating in formal employment (Almeida and Galasso, 2010; Galasso et al., 2004). Interestingly, these studies find that detrimental effects on formal employment are mostly due to the shortage of good quality job opportunities. This seems to suggest that in areas where there is a shortage of waged employment opportunities, self-employment arises as a potential graduation strategy even though it has the risk of locking people in lower quality jobs.

The success of this integrated approach relies to a great extent on the capacity of public works programmes to improve the labour market trajectories of participants in a sustainable manner. Large-scale workfare programmes can be effective tools, particularly in providing protection to the most vulnerable following a crisis (Almeida and Galasso, 2010). These programmes can have an antipoverty effect arising from the direct transfers (Subbarao et al., 2012) and a consumption smoothing effect, particularly when they are implemented as safety nets to protect people against periods of economic slack when labour demand is low (O’Keefe, 2005). However, often enrolment in the programmes is also expected to raise participants’ employment prospects (e.g. the probability of finding a job and job quality) in the medium-term. For this reason, participation in public works activities is often complemented with training interventions or job-search assistance. Empirically, while various studies of public works programmes have illustrated their beneficial effects as income support measures during periods of economic slack (O’Keefe, 2005), there is surprisingly limited evidence with regards to the impacts on employability after participation. This is particularly the case in Latin America, where only six impact evaluations have been carried out on public works programmes, four of them focusing on the effects of beneficiaries during participation (Escudero et al., 2017).<sup>2</sup> Existing evidence suggests that the human capital accumulation component of these interventions is generally extremely limited and does not result in an improvement in the characteristics of the job found (Escudero, forthcoming; Zimmermann, 2012).

Against this backdrop, this article contributes to the literature in several respects. By estimating the post-participation effects of TxU, this paper aims to increase existing knowledge regarding the sustainability of public works’ effects. Moreover, while the scarce labour market evidence has focused only on the income and labour market participation effects of public works programmes, this paper provides impacts on other social and labour aspects such as employment quality and social inclusion. By analysing these additional outcome variables, we are able to assess in a more comprehensive way how the programme affected individuals’ labour market and social prospects. In addition, we examine in our paper the possible presence of disincentive or displacement effects from participation in the active component within households (e.g. reduction of labour supply from other members), which is a usual criticism to public works programmes. Finally, the paper aims to shed light into a central policy question today, which is whether there is a complementarity between activation measures, particularly public

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<sup>2</sup> These studies include: (Hernani-Limarino et al., 2011; Jalan and Ravallion, 2003; Macroconsult S.A., 2012; Ronconi et al., 2006). Meanwhile, the two other studies (Alik-Lagrange et al., 2017; Escudero, 2016) estimate the effects of public works programmes after participation. These papers evaluate the effects of public works independently from income support measures, which is the innovation that our paper brings about to the existing literature.

works programmes and income support programmes in emerging and developing economies.

For the purposes of our research question, our data and empirical strategy have three main advantages. First, the empirical strategy takes advantage of a rich set of administrative records available for a specific sample of participants and non-participants of the social assistance programme PANES at three points in time. This allows us to identify separately the effects of receiving the income support and participating in the active component, as well as the combined effect of benefitting from both components. In this way, we are able to assess the complementarity between public works programmes and income support measures. Second, the analysis benefits greatly from the fact that PANES was assigned based on a continuous index cut-off,<sup>3</sup> and that the comprehensive database we are using was designed with the specific aim of assessing the effectiveness of the programme by means of a regression discontinuity (i.e. participants and non-participants were randomly selected around the 2 per cent eligibility threshold of PANES). Although our empirical strategy is not based on the availability of the RD threshold, our study exploits this data collection process to define a particularly comparable control group.

To assess the causal effects of TxU, we combine difference-in-difference with matching methods, while taking advantage of the panel structure of the data. This allows us to abstract from potentially endogenous self-selection into both PANES and TxU, as long as the underlying characteristics are constant over time. We provide evidence for this identifying assumption based on various robustness and placebo tests. We find that the active component increases the probability of participants being employed (albeit the result is only marginally significant). However, benefitting from the income support has a small negative effect on employment (which is significant only in certain specifications) and as a result the combination of the active intervention and the income support has a small positive but non-significant effect on employment. Similar results hold for the probability of being unemployed and inactive. For those in employment, the programme appears not to have a statistically-significant impact in their working conditions (whether it is on earnings or on their probability of being working poor or working excessive hours). Similarly, no significant effects are found on measures of civic engagement and social inclusion. Finally, within the household, we do not find any evidence of displacement effects from participation in the active component. All in all, our analysis suggests that TxU successfully fulfilled its essential task of reintegrating participants into the labour market, but the expected effects on job quality, civic engagement and social integration did not fully materialise.

The remainder of this paper is organized as follows. Section 2 describes the main characteristics of the comprehensive social assistance programme PANES and its public works component TxU, putting special emphasis on its targeting strategy. Section 3 presents the data and descriptive statistics. Section 4 discusses the empirical specification. Results are presented in Section 5, while Section 6 concludes.

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<sup>3</sup> In order to reach households in a situation of critical material deprivation, an index was calculated and used to determine final programme eligibility, as only households above a certain threshold of this indicator were eligible to participate (see Section 2 for more details).

## 2. The programmes

### 2.1 The social assistance intervention – PANES

In May 2005, the Uruguayan government launched a comprehensive social assistance programme called *Plan de Asistencia Nacional a la Emergencia Social* (National Assistance Plan of Social Emergency, PANES).<sup>4</sup> This emergency plan was implemented to respond to a sharp deterioration of economic and social conditions in the country since 1999, which had been further accelerated by the financial and economic crisis that started in 2002. The unemployment rate increased from 11.3 per cent in 1999 to 17 per cent in 2002, the poverty rate more than doubled over the same period (from 15.3 to 38.9 per cent) and income inequality increased.<sup>5</sup> The institution in charge of the implementation of the programme was the Ministry of Social Development (MIDES), which was created in March 2005 for the purpose of coordinating different social interventions. PANES was conceived since the beginning as an emergency measure of temporary nature and it was designed and announced to the public as a two-year programme. Accordingly, in January 2008 it was substituted by the *Plan de Equidad* (Equity plan), a more comprehensive social policy with a broader target population.<sup>6</sup>

PANES was targeted at the household level. In order to become beneficiary, households needed to apply to the MIDES or to a local branch of the national social security institute (*Banco de Previsión Social*). Two criteria defined eligibility in the programme, which were aimed to jointly capture monetary and material poverty. First, household's monthly income per capita (excluding family allowances, food vouchers and disability and old-age benefits) was not to exceed UYU 1,300 (USD 97.5, PPP). Second, applicant households had to be in a situation of critical material deprivation, as captured by a composite indicator. The application process followed a two-step strategy to verify the eligibility criteria. In the first step, households willing to participate were required to fill in a basic form with personal and income information on all household members (*Formulario de inscripción*, Registration Form) – which was available at the different branches of the national social security institute or the MIDES. The information on self-reported income presented in this form was cross-checked with social security data and the highest among the two was considered. In the second step, households below the income threshold were administered a more detailed survey (*Formulario de visita*, Visit Form) with the aim of conducting a multi-dimensional assessment of the poverty status of the household. The information gathered from this survey was used to calculate an index of material deprivation – the so-called *Índice de Carencias Críticas*, ICC<sup>7</sup> – which was used to determine final programme eligibility. Only

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<sup>4</sup> Law N° 17.869 of 20 May 2005 declared a state of social emergency and laid down the government's response, describing the conditions of access to the services included in the plan.

<sup>5</sup> See Bucheli and Furtado (2005) for a more detailed description of the impact of the 2002 crisis on economic and social conditions in Uruguay.

<sup>6</sup> PANES households were transferred to this new system of allowances automatically, provided they had dependents under the age of 18.

<sup>7</sup> The ICC was designed by MIDES together with the University of the Republic as a weighted combination of the non-monetary characteristics of households covered in the survey. The variables used for this index included information about household age structure and headship, the presence of public employees and pensioners in the household, the average years of education of individuals over the age of 18, residential overcrowding, ownership of durable goods, the availability of sanitation services and whether the household owned, rented or occupied the residence where it lived. The ICC used the coefficients of a previously estimated probit model determining the likelihood of being among the poorest 20 per cent of individuals below the poverty line. Neither the enumerators nor the household members were informed on how the ICC was

households above a certain threshold of the ICC index were eligible to participate. Neither were households informed about this ICC threshold, nor were they able to infer it. The ICC threshold varied across regions in order to account for geographical heterogeneity in living costs.<sup>8</sup>

PANES target population was composed of individuals in the lowest income quintile below the poverty line. Over the duration of the programme, 188,671 households applied to the programme, and 102,000 eventually participated. This corresponded to 10 per cent of all households and 14 per cent of the population (Amarante et al., 2011). The programme was publicly funded and its cost amounted to 5.6 per cent of government expenditure and 1.2 per cent of GDP in 2006. PANES lasted until December 2007 and beneficiaries remained in the programme until the end, unless at some point the household exceeded the income threshold of UYU 1,300 per capita or the programme administrators found out that the registration into the programme had been based on false information. Applications were accepted for the entire duration of the programme and rejected households could eventually reapply if their circumstances had changed (Amarante et al., 2011).

As other integrated social protection interventions implemented in Latin American countries, PANES had two main objectives. First, it provided monetary support to vulnerable households to assist them with immediate needs. Second, the broader objective of the programme was to promote households' reinsertion into the society in order to prevent economic and social exclusion (Government of Uruguay, 2006). To meet these objectives, PANES consisted of eight different interventions which made use of different tools such as cash transfers, food vouchers, education and work activities.<sup>9</sup> The central component of this system of interventions was the cash transfer *Ingreso Ciudadano* (Citizen Income, IC), which covered the entire pool of PANES participants.<sup>10</sup> The IC consisted of a monthly monetary transfer of UYU 1,360 (USD 102, PPP) per household,<sup>11</sup> regardless of its size or composition. The amount corresponded to little more than half the minimum wage and it was paid to beneficiaries over the entire duration of the programme. Initially, the IC transfer was intended to be conditional on school attendance of children between the age of 6 and 14 as well as regular health check-ups for children and pregnant women. However, the requirements were neither monitored nor enforced, and the IC operated *de facto* as an unconditional cash transfer (Amarante et al., 2009).

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calculated, therefore manipulation for the purpose of inclusion was unlikely. See Amarante et al. (2005) for more details on the construction of the ICC.

<sup>8</sup> In selected geographical areas where poverty was particularly severe, representatives of PANES visited households themselves to encourage applications into the programme. In these cases, the initial basic form and the subsequent more detailed survey, which have been described above, were administered at the same time (Borraz and González, 2008).

<sup>9</sup> The eight interventions included *Ingreso Ciudadano* (Citizen Income), *Construyendo Rutas de Salida* (Exit Routes), *Trabajo por Uruguay* (Work for Uruguay), *Asistencia Alimentaria* (Food Assistance), *Intervención de Hábitat* (Housing Intervention), *Intervenciones específicas en términos de educación* (Specific Interventions in Education), *Intervenciones en Salud Pública* (Public Health Interventions) and *Plan de Apoyo a los "Sin Techo"* (Support Plan for the Homeless).

<sup>10</sup> Only homeless PANES beneficiaries, who were covered by the intervention *Plan de Apoyo a los "Sin Techo"* (Support Plan for the Homeless), did not receive the IC. As a result, 97.6 per cent of PANES participants received the IC.

<sup>11</sup> The monthly payment corresponded to half of the monthly minimum wage and was adjusted every three months to the consumer price index (Amarante et al., 2009).

While all PANES participants were covered by the cash transfer IC, the other seven components targeted specific groups and followed different selection procedures.<sup>12</sup> **Error! Reference source not found.** in the Appendix illustrates the coverage of the different PANES components. The rationale of such a comprehensive approach was to involve all households' members in the eradication of poverty and social exclusion, under the assumptions that multiple constraints should be tackled simultaneously and that interventions across different domains can have positive spill-over effects. The present study focuses on the interrelation between PANES and the public work component Trabajo por Uruguay (Work for Uruguay, TxU) that provided work in community projects managed by civil society organizations for a maximum period of five months.

## 2.2 The public work component – *Trabajo por Uruguay*

*Trabajo por Uruguay* (TxU) was launched in September 2005<sup>13</sup> as a voluntary programme aimed at promoting labour market participation as a means to improve living conditions and foster social inclusion. The programme used labour market participation as an instrument for social inclusion. In particular, the programme's objective was to increase participants' employability (i.e. improve labour competencies for both dependent and self-employment), and at the same time promote awareness of civil rights (including women's rights), foster participation in social networks (e.g. social organizations and local networks) and favour the access to public services (e.g. health, education) (Government of Uruguay, 2007). In practice, the idea was to provide a temporary employment opportunity with the aim of increasing immediate household income; while at the same time promoting labour market and social integration in the longer run. As many other public work programmes, TxU also aimed to benefit the society at large by financing projects aimed at building or entertaining public goods and infrastructures.

The programme was centred on community projects, which were administered, implemented and managed by Civil Society Organizations (*Organizaciones de la Sociedad Civil*, OSCs). In general, these projects involved work in hospitals, schools and construction sites. The selection of the projects was made by public bodies, which would also specify the tasks to be carried out in each project and disseminate this information to the OSCs.<sup>14</sup> Based on these guidelines, the OSCs would elaborate a proposal on the implementation of the specific project, including a description on how a training component could be integrated within the proposed activity. This proposal would then be submitted to a tripartite committee for the selection of the OSCs to which the project was going to be assigned. After the decision of this committee, an agreement between the MIDES and the selected OSCs would be

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<sup>12</sup> For instance, *Tarjeta Alimentaria* (Food Card) consisted of an in-kind transfer delivered through a debit card, which allowed to buy health, cleaning products or food. Eligible households were those with children below the age of 18 (including pregnant women), which were automatically registered in the intervention. Another component *Construyendo Rutas de Salida* (Building Exit Routes, CRS) consisted of training and community reintegration activities aimed at providing PANES beneficiaries with personal development and citizen integration. There were no eligibility criteria to participate in CRS, but participants were called by the MIDES based on the proximity between the household residence and the project that was taking place as part of RTS.

<sup>13</sup> See Decree N° 274/005 of September 12, 2005 on *Programa de Empleo Transitorio "Trabajo por Uruguay"*.

<sup>14</sup> Tasks were designed according to the following criteria: i) tasks improve or recover infrastructure and/or equipment of public spaces that are deemed of interest to the community; ii) they are simple tasks that do not replace or interfere with the regular activities of staff in the corresponding public body; iii) can be performed during the duration of the programme; iv) the number of workers required for the activities ranges from 10 to 60; v) it will be possible to count on the support of specialised officers from the SUNCA, a trade-union affiliated with construction and related sectors; vi) the technical leadership and the co-ordination with the selected OSC will be the responsibility of the public body.

signed. Once this process was completed, PANES beneficiaries interested in participating in the programme could apply to the OSC directly.

Participation in TxU was open to all PANES beneficiaries who were at least 18 years old, unemployed<sup>15</sup> at the time of enrolment and were not receiving any other social benefit (with the exception of *Asignación Familiar* and disability benefits). In exchange for an allowance equivalent to twice the IC amount (USD 204, PPP) participants were required to work from Mondays to Fridays, six hours per day during (a maximum of) five months. This activity generally involved elementary tasks for the community (e.g. cleaning public spaces, repairing small infrastructures) and was complemented with 20 hours per month of mandatory training (Reuben et al., 2008). After these five months, participants were provided with follow-up support and job-search assistance for an additional month.<sup>16</sup> Participation in the programme was voluntary and, given that the number of applicants largely outpaced the places available, the selection of final participants was made by drawing lots that respected the gender proportionality of applications. This resulted in an overrepresentation of women (78.6 per cent of total participants) with respect to PANES beneficiaries (57.3 per cent of which were women) (Government of Uruguay, 2006); a phenomenon that is not unusual in ALMPs in the region (Escudero, 2016; López Mourelo and Escudero, 2017).<sup>17</sup> Only one member per household could participate, with the possibility of a replacement by another member of the household in the event that the originally selected participant was unable to join. Moreover, beneficiaries could participate only once in the programme. TxU lasted from September 2005 to December 2007 and involved several calls over these two years, which means that participants joined (and left) the programme at different points in time. The programme reached a total of 15,684 households, approximately 17 per cent of all PANES beneficiaries – representing the most subscribed voluntary intervention of PANES. In terms of its geographical distribution, 62.7 per cent of participants resided in Montevideo, while the rest were distributed equally across other departments.<sup>18</sup> In terms of public spending, TxU cost approximately UYU 400 million (USD 17.5 million) in 2006.

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<sup>15</sup> The employment status that could be reliably checked by programme administrators was whether the individual was participating in the formal labour market. This explains why more than 50 per cent of TxU participants were in employment (see Table 1).

<sup>16</sup> For the first two calls (i.e. until February 2006), activities lasted four months and there was no follow-up.

<sup>17</sup> In the case of the Peruvian workfare programme *Construyendo Perú*, for example, it is explained that the overrepresentation of women among participants (78 per cent) responds to the fact that the programme was used by households to top-up family income – i.e. principal earners (usually men) kept their usual jobs, while women entered the programme (Escudero, forthcoming).

<sup>18</sup> This was done by construction, as the first and third call were implemented fundamentally in Montevideo, the second in the rest of departments and the fourth in inland departments (Government of Uruguay, 2006).



### 3. Data and identification strategy

#### 3.1 Definition of treatment and control groups

This paper exploits the particular setup of the programme presented above, in order to assess the effectiveness of receiving the income support IC (available to all PANES participants), participating in the active intervention TxU (available to PANES participants meeting the eligibility criteria and applying) and benefiting from both the active and income-support programmes. As such, we aim to assess separately the effects of the income support and the active component, as well as the effect of the joint provision of the two interventions. Overall, the specific context of Uruguay provides a unique opportunity to assess the complementarity (or lack thereof) between income support measures and public works programmes.

Firstly, in order to analyse the effect of the income support, we compare PANES participants who received the cash transfer IC but did not participate in TxU (group 2 of the descriptive statistics below) with individuals who did not participate in PANES (thus neither in TxU) because they did not meet the ICC eligibility criteria (group 1). As we explain in more detail below, these individuals have very similar observable and unobservable characteristics compared to PANES participants as they are sampled just below the ICC participation threshold.

Secondly, in order to identify the effect of the active intervention, we compare PANES participants who participated in TxU and therefore received as well the income support IC (group 3) with PANES participants who did not participate in TxU (group 2). While not enrolling in TxU can be motivated by either unobservable (e.g. lack of motivation) or observable factors (e.g. not meeting the eligibility requirements), we can reasonably control for these sources of bias by exploiting our rich individual-level panel-data, as explained below. In contrast to the second control group, treated individuals did not only receive the cash transfer IC but benefited additionally from TxU.

Finally, and in order to analyse the effect of the joint provision of the income support and the active component, we compare PANES participants who participated as well in TxU (group 3) with individuals who did not participate in PANES because they did not meet the ICC eligibility criteria (group 1).

To assess the causal effects of the different combinations of active and income support policies, we use a difference-in-difference approach (DID) combined with matching techniques, taking advantage of the fact that our database allows us to compare outcomes between participants and non-participants at two different points in time (i.e. baseline and follow up). In the following, we explain our empirical approach in detail by describing the data and descriptive statistics, before presenting our empirical specification in Section 4.

#### 3.2 Data sources

Since the beginning of the design and implementation phases of PANES, an impact evaluation of the programme was envisaged. Experts at MIDES supervised the collection of the necessary data in collaboration with both national and international academics. As described above, eligibility into PANES was based on the fulfilment of two different requirements used to identify households that were at the same time in conditions of monetary poverty and material deprivation. These two criteria were

verified with two different surveys: the Registration Form (*Formulario de inscripción*) was used to verify the income requirement and the Visit Form (*Formulario de visita*) for the index of material deprivation ICC. The Registration Form asked information on all members of the household (i.e. name, nationality, date of birth, gender, relationship within the household and marital status), main contact details (e.g. address, phone number), preferred date and time for the visit of MIDES officials and the household income. Households that met the income requirement were then asked to complete the Visit Form. This questionnaire gathered a wealth of information on main socio-economic characteristics of each member of the household; including educational attainments, health outcomes, labour market characteristics as well as information on receipt of different forms of social transfers. At the household level, the survey recorded information on housing conditions, ownership of durable goods and ownership of the house. Additionally, these records were used to estimate the value of the ICC for each household. The Registration and the Visit Forms provided information on around 131,000 households (about 490,000 individuals), two thirds of which participated later in PANES because they were above the ICC threshold.

PANES administrative records from these two questionnaires can be matched with two follow-up surveys that have been designed with the specific aim to assess the effectiveness of the programme by means of a regression discontinuity (Amarante et al., 2011, 2016; Manacorda et al., 2011). In particular, these follow-up surveys collected data on around 3,300 households (12,100 individuals) that were randomly selected among households with an ICC score within a 2 per cent interval around the eligibility threshold. The sample was split in a 2:1 ratio between eligible and ineligible individuals around the threshold. Additionally, 500 households were sampled further away above the threshold – i.e. with higher ICC levels, therefore being eligible to the programme. The first survey was conducted while the programme was still in place (with data collection starting in October of 2006), while the second was administered a few months after the end of the programme (between February and March, 2008). Thus, the data allow for an evaluation of the post-participation effects of the programme. Attrition rates were particularly low: 92 per cent of the sample interviewed in the first round was successfully re-interviewed in the second wave.

In terms of content, both follow-up surveys follow the same structure and are highly comparable. At the individual level, they provide detailed information on current and previous educational attainments, health status, labour market situation (e.g. employment status, job characteristics, previous employment history), participation in social groups, and the degree of civic awareness (e.g. knowledge of social rights, awareness of labour laws such as minimum wages and maternity leave, governmental policies). Additionally, individuals were asked different questions on their participation in PANES and its components as well as their degree of satisfaction with the service provided as part of PANES and their opinion on the overall purpose of the intervention.

By matching the administrative records at baseline with the two follow-up surveys (i.e. 2006 and 2008), we are able to construct a database that tracks a subset of participants and non-participants (i.e. those randomly selected around the 2 per cent eligibility threshold) before, during and after their (eventual) participation in the programmes (i.e. 2005, 2006 and 2008, respectively).<sup>19</sup> Treatment is defined based on available questions in the two follow-up surveys related to (current or retrospective) participation in

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<sup>19</sup> Although our empirical strategy is not based on the availability of a RD threshold, our study exploits this feature of our dataset to define comparable control groups (see Section 4 for a description of the empirical strategy).

PANES and TxU. Unfortunately, these questions were asked only to the survey respondents within the household (often the household head). We thus restrict our analysis to this subgroup, but further below we show that the TxU participants included in our sample compare well with the universe of TxU participants.

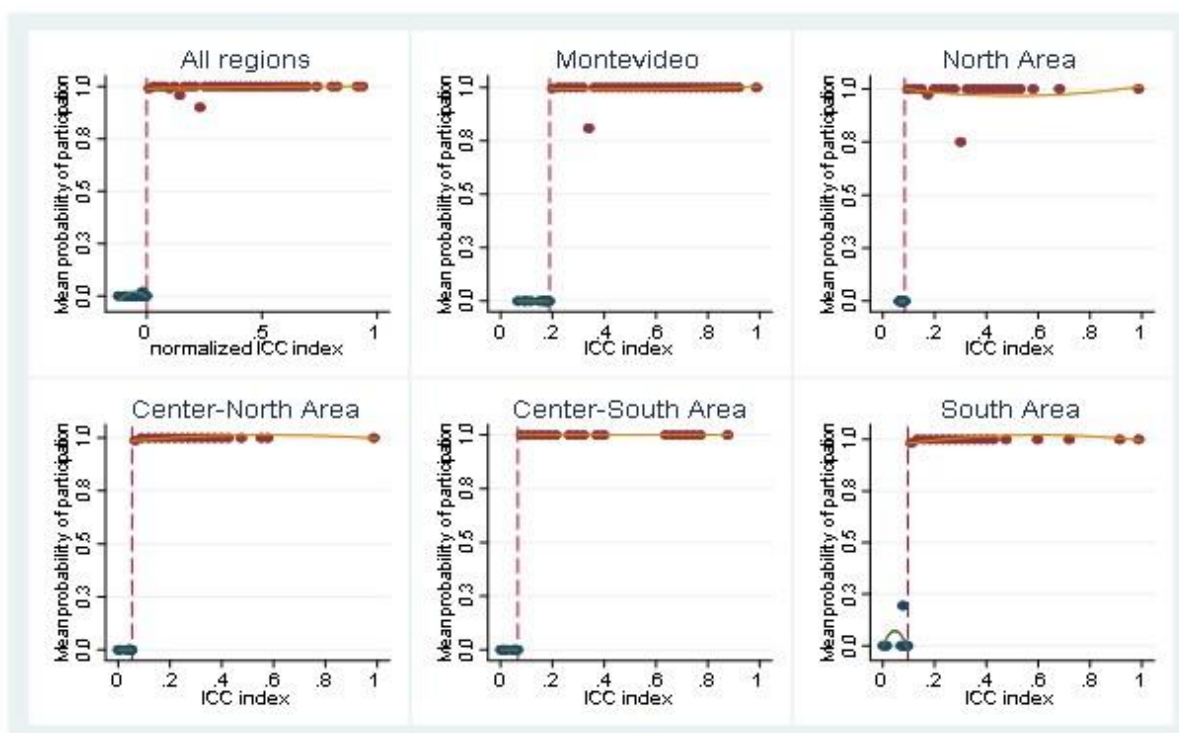
### 3.3 Descriptive statistics

In order to assess the effect of the (joint or separate) provision of the income and active support provided within PANES, two selection processes are relevant: first, whether individuals participated in PANES; second, for those who participated in PANES, whether they decided to apply for TxU. In line with the first process, we begin by assessing if the cut-off rule determining selection into PANES was properly enforced. As already reported in previous studies (Amarante et al., 2011, 2016; Manacorda et al., 2011), programme implementation was remarkably clean with respect to the ICC threshold. This can be seen in Figure 1, which reports the share of households who benefited from the programme at any point in time as a function of their ICC.<sup>20</sup> This score (and its threshold) varied across regions in order to account for geographical heterogeneity in living costs and is normalized around zero when looking to all regions together, with higher values indicating higher poverty levels. The number of bins is higher on the right of the threshold due to the different sample size as mentioned above. Figure 1 illustrates a sharp discontinuity in the probability to participate in the programme when crossing the eligibility cut-off, both at the regional and national levels, which suggests the programme was correctly implemented in all geographical areas. Importantly, participants were not aware of the cut-off and the data we use for our main analysis only include persons close to the cut-off. In this context, selection into PANES can be argued to be as good as randomly assigned.

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<sup>20</sup> The figure reports the discontinuity for all individuals in the sample (i.e. both those within the 2 per cent boundary around the cut-off point and the 500 households sampled away from the eligibility requirement).

Figure 1. Discontinuity in PANES individuals' participation, conditional to the ICC



Note: The figure plots the mean probability of participation in PANES as a function of the ICC. The conditional mean is drawn on the base of equal-sized bins. The fit used was suggested by the graphical analysis carried out using the lowest fit.

We next present descriptive statistics for the three different groups discussed above that are relevant for our analysis: (i) individuals who did not participate in PANES because their household did not meet the ICC eligibility criteria (group 1), (ii) individuals who participated in PANES and therefore receive the cash transfer IC, but who did not participate in TxU (received only the income support component – group 2), and (iii) individuals who participated in PANES and also in TxU (benefitted from both the income support and the active component – group 3).

For the three groups, Table 1 reports selected individual and household characteristics at baseline (i.e. from the combination of the Registration Form and the Visit Form administered in 2005) and after programme completion (i.e. during the first months of 2008). Starting with demographic characteristics, the table illustrates that PANES participants (benefitting or not from TxU) are more likely to be women and are younger in average.<sup>21</sup> No substantial differences exist with respect to marital status, although PANES participants are more likely than non-participants to be single, possibly as a result of their younger age. Moreover, PANES participants (benefitting or not from TxU) are more likely to have dependent children and less likely to have an elderly person in their households (as this was one of the variables contributing to the ICC). They are also less likely than non-participants to be covered by private health-care insurance. Turning to educational attainment, we see that PANES participants are more likely to have completed primary education, but beyond that level we see similar distributions across the three groups (with the bulk of individuals reporting having completed primary education) and a substantial increase in the share of individuals having completed secondary education during the

<sup>21</sup> We highlight in the text differences of means, which are statistically significant.

course of the analysis (again probably due to the young age profile of some participants).

Looking at labour market variables, we see that individuals who participated in TxU are substantially less likely to be inactive at baseline than individuals who participated only in PANES and to non-participants (inactivity rate equal to 17 per cent for group 3, compared to 23 per cent of group 1 and 25 per cent of group 2). Likewise, PANES participants (benefitting or not from TxU) are more likely to be unemployed. This can be explained by the fact that the unemployment status was one of the conditions for being eligible to participate in TxU. At the same time, non-PANES participants (i.e. group 1) were more likely to be employed before the start of the programme, which is not surprising as this was one of the variables included in the computation of the ICC. Moreover, some interesting insights arise when looking at the evolution of labour market outcomes throughout the period. We observe that the rate of employment increased between 2005 and 2008 in the three groups (possibly as a result of improvements in economic conditions), but the magnitude of the increase was stronger for individuals who participated in both the active and income support interventions (the employment rate for group 3 increased by 9 percentage points) compared to the other two groups (whose increase in employment rate was equal to 5 percentage points).

Finally, we look at individuals' socio-economic status before participation in the programme. Since these variables were not recorded in the last panel survey, we cannot observe changes in 2008. By design, we find that individuals in the three groups are in the proximity of the ICC threshold (normalised around zero) – with those who participated in PANES just above the cut-off and those who did not participate just below it. We observe no statistically significant differences between TxU participants and non-participants (within PANES). On the contrary, we find that the household average per capita income is higher among PANES non-participants. Among PANES participants, those who also participated in TxU had a lower per capita income than those who did not participate – potentially as a result of the differences in demographic and labour market characteristics presented above.

**Table 1. Descriptive statistics**

	Group 1: outside PANES		Group 2: PANES (IC but not TxU)		Group 3: PANES (IC and TxU)	
	2005	2008	2005	2008	2005	2008
<b>Panel A: Individual Characteristics</b>						
Man	0.27	0.27	0.18	0.18	0.21	0.21
Age	40.30	42.90	38.21	40.99	36.01	38.71
Married or cohabiting	0.36	0.43	0.42	0.48	0.35	0.44
Single	0.35	0.27	0.31	0.23	0.39	0.32
Divorced or separated	0.25	0.25	0.23	0.23	0.21	0.20
Widowed	0.04	0.05	0.05	0.06	0.05	0.04
At least 1 child (0-5 yrs) in hh	0.32	0.20	0.38	0.25	0.40	0.27
At least 1 child (6-17 yrs) in hh	0.51	0.52	0.60	0.63	0.60	0.66
At least 1 elderly person in hh.	0.06	0.09	0.04	0.06	0.01	0.03
Health care from hospital or a polyclinic of Ministry of Public Health	0.93	0.85	0.96	0.89	0.97	0.90
<b>Panel B: Educational Attainment</b>						
Less than primary education	0.24	0.26	0.20	0.19	0.20	0.19
Completed primary education	0.63	0.53	0.66	0.58	0.68	0.63
Completed secondary education	0.09	0.18	0.10	0.20	0.08	0.14

Completed technical training	0.04	0.04	0.04	0.04	0.03	0.04
<b>Panel C: Labour Market Characteristics</b>						
Inactive	0.23	0.25	0.25	0.29	0.17	0.17
Employed	0.57	0.62	0.53	0.58	0.54	0.65
Unemployed	0.20	0.13	0.22	0.13	0.29	0.18
<b>Panel D: Socio-Economic Status</b>						
ICC normalized	-0.01	.	0.01	.	0.01	.
HH income per capita	541.44	.	432.66	.	388.43	.
Household lives in rural areas	0.04	n.a.	0.02	n.a.	0.02	n.a.
N	764		1043		269	

Notes: All variables displayed are dummy variables, with the exception of age, ICC, and household income. The variable “health care from hospital or polyclinic of the Ministry of Public Health” refers to a regular health insurance scheme (as opposed to private insurance or insurance schemes covering the police and the military). Group 1 refers to individuals just below the ICC threshold who did not participate in PANES; Group 2 to individuals just above the ICC threshold, who participated in PANES thereby receiving the cash transfer IC, but did not participate in TxU; Group 3 to individuals just above the ICC threshold, who participated in both PANES (thus benefitting from IC) and TxU

The discussion presented above has shown similarities as well as key differences across the three groups at the centre of our analysis. This is important as it allows us to factor in these observations during the empirical specification below. A final concern relates to the non-random nature of our available sample, which is composed uniquely of survey respondents. Nonetheless, when comparing descriptive statistics between individuals who participated in the active and income-support components (group 3) with administrative data collected at the time of registration in the programme for all TxU participants (Government of Uruguay, 2006), we find encouraging results (see Table A-1 in the Appendix for details).<sup>22</sup> In particular, TxU administrative data report that the average age of programme participants is 36 years (exactly as in our database). Educational attainment (e.g. 64 per cent of all TxU participants report to have obtained only primary education compared to 68 per cent in our sample) and the share of married individuals are also similar. There are also some differences between the two groups: 71 per cent of all participants are female against 79 percent in our sample.<sup>23</sup> On balance, however, the two groups compare well. Importantly, differences across PANES participants (between groups 2 and 3) are also comparable to the results obtained through the TxU administrative data.

## 4. Empirical specification

### 4.1 Difference-in-difference analysis

As mentioned above, the panel nature of the data allows examining changes in the outcomes of interest for both participants and non-participants before and after their (eventual) participation in the programme. We thus estimate the following difference-in-difference model to identify the causal effects of receiving the income support and the active intervention:

<sup>22</sup> The available administrative data for TxU reports descriptive statistics only for the first three calls of the programme.

<sup>23</sup> Differences in the share of women can be explained by the fact that female participation in TxU increased over time (from 65 to 77 per cent between the first and third call). The higher share of women in our sample can therefore be explained by the fact that we cover all calls (while administrative data refer only the first three).

$$Y_{i,t} = \alpha + \beta X_{i,t} + \gamma_i + \delta T_t + \theta(IC_i * T_t) + \xi(TxU_i * T_t) + \varphi(IC_i * TxU_i * T_t) + \varepsilon_{i,t}$$

where  $t$  refers to years 2005 (before participation) and 2008 (after participation).  $Y_{i,t}$  is the outcome of interest for individual  $i$  in year  $t$ ,  $X_{i,t}$  is a vector of time-variant individual or household characteristics,  $\gamma_i$  are individual-level fixed effects,  $IC_i$  is a dummy for benefitting of the income support IC (taking the value of one if the household receives it),  $TxU_i$  is a dummy for participation in the active intervention (taking the value of one if the individual participates in TxU) and  $T_t$  takes the value of one in the period after participation and is equal to zero otherwise.<sup>24</sup>

The DID framework enables us to remove time trends that are common to both the treatment and control groups (due to the inclusion of  $T_t$ ). Furthermore, we account for all individual-level differences between treatment and control groups that are constant across time (due to the inclusion of  $\gamma_i$ ). The main parameters of interest are thus represented by the interaction terms  $\theta$ ,  $\xi$  and  $\varphi$ , which capture the causal average effect of participation in the passive, active or both interventions, respectively. The key identifying assumption is that, in the absence of the programme, there would not be any systematic differences between treatment and control groups, which change over time. The identifying assumption thus requires that the outcomes of participants and non-participants would have evolved in parallel in the absence of treatment (i.e. common trend assumption).

To provide supporting evidence for the common trend assumption, we would normally analyse the trends in the outcomes of interest for control and treatment groups before the implementation of the policy. If these trends are parallel, we can reasonably expect that they would have remained so in the absence of the intervention. Unfortunately, given that in our context we observe only one data point before programme implementation (in 2005) for the full sample, we cannot examine common trends for all the different groups presented above. However, we can exploit a specific programme characteristic in order to examine the validity of the common trend assumption for a sub-group of TxU participants, for which we have two data points before their enrolment into the programme. Indeed, TxU involved different calls over the two years of its implementation where each individual could participate for a maximum of five months. This means that participants joined (and left) the programme at different points in time.<sup>25</sup> We exploit this institutional characteristic along with the fact that the first follow-up survey was administered when the programme was running (in 2006), and thus provide evidence of parallel trends before participation for the sub-group of TxU participants that joined the programme at a later stage (i.e. after the 2006 follow-up survey was carried out). It is important to mention that not being able to test the common trend assumption for the income-support beneficiaries is not necessarily a problem, because the validity of the estimation strategy for this group relies on the sampling strategy around the ICC threshold.

<sup>24</sup> Although standard in the literature, we are unable to include the dummies for participation in IC and TxU independently (i.e. without them being interacted with the time dummy) due to perfect collinearity with the individual fixed effects.

<sup>25</sup> Importantly, the timing of participation is unlikely to be totally exogenous with respect to the outcome of interest – making this subsample a non-random group within participants. However, the fact that the programme was over-subscribed and that final admission was based on a random draw (with unselected participants able to re-apply later on) provides confidence that this is not a problem in our case.

For the sub-group of TxU participants, we estimate the DID model in equation (1) using late programme participants (those who participated in TxU only after the 2006 survey was conducted) as our treatment group and measuring programme effects in 2006 (before treatment took place for these individuals). The resulting DID estimator is effectively a test of whether the control group satisfactorily represents the path of the treatment group in the absence of the programme (i.e. the common trend assumption), as we should not expect any programme effect before individuals enrolled in the programme. The results of this placebo test are presented in Table 2 for employment, unemployment and inactivity variables and in Table A-2 of the Appendix for work quality variables.<sup>26</sup> The placebo test is done comparing individuals who participated in TxU (and therefore also PANES, group 3) with two control groups: (i) those who did not participate in PANES (group 1 above) and (ii) those who participated in PANES but not TxU (group 2).

Although effects presented in Panel A of Table 2 are not significant across the board, point estimates show that TxU participants experience a slight reduction in employment and unemployment prior to joining the programme (and an increase in the likelihood to be inactive). This can be interpreted as providing weak evidence of a violation of the common trend assumption. Individuals who registered in TxU may have experienced a deterioration in their labour market status before enrolment, which can be the reason why they enrolled in the public work scheme (i.e. individuals lost their job and applied to the programme) or can be the result of the anticipation of the programme itself (i.e. individuals exited the labour market temporarily as they knew they were going to access soon employment through the programme).<sup>27</sup> These types of trajectories before enrolment in ALMPs correspond to the well-known phenomenon of Ashenfelter's dip (Ashenfelter, 1978).

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<sup>26</sup> Here in the main text we focus our discussion on outcomes capturing labor market status, but for completeness, we display in the Appendix the same placebo test for outcome variables capturing work quality (see Table A-2).

<sup>27</sup> A similar trend is observed by hours worked and hourly earnings that appear to decline prior to participation in TxU, which would correspond to the evidence for Ashenfelter's dip discussed above (see Table A-2 in the Appendix). Meanwhile, the fact that working poverty and the likelihood of working excessive hours appear to decline as well prior to TxU participation, casts doubts on the potential evidence for a deterioration of working conditions before programme participation. Note also that none of these effects are precisely estimated.



**Table 2. Placebo test on the common trend assumption**

	Control 1: no PANES			Control 2: PANES, no TxU		
	(1) Employed	(2) Unemployed	(3) Inactive	(4) Employed	(5) Unemployed	(6) Inactive
	<b>Panel A: Difference-in-difference</b>					
DID	-0.052 (0.061)	-0.012 (0.058)	0.064 (0.048)	-0.037 (0.060)	-0.028 (0.057)	0.065 (0.048)
Constant	1.406*** (0.357)	-0.630** (0.319)	0.224 (0.226)	1.362*** (0.266)	-0.542** (0.242)	0.181 (0.263)
Observations	1,765	1,765	1,765	2,322	2,322	2,322
R-squared	0.062	0.078	0.053	0.080	0.084	0.060
	<b>Panel B: DID on the common support sample and using propensity score matching</b>					
DiD	-0.045 (0.072)	0.018 (0.073)	0.027 (0.050)	-0.019 (0.072)	-0.012 (0.072)	0.030 (0.049)
Constant	1.741*** (0.379)	-0.846** (0.382)	0.105 (0.189)	1.573*** (0.267)	-0.513** (0.239)	-0.060 (0.227)
Observations	1,722	1,722	1,722	2,273	2,273	2,273
R-squared	0.085	0.118	0.065	0.087	0.108	0.073
Individual FE	YES	YES	YES	YES	YES	YES
Personal characteristics	YES	YES	YES	YES	YES	YES

Note: Table 2 illustrates the results of the placebo test of the common trend assumption. The model follows equation (1), with two differences (i)  $t$  corresponds to years 2005 and 2006, and (ii) the treatment group is restricted to TxU participants who joined this programme late (i.e. after 2006), so we can observe a pre-programme trend for this group. Columns (1)-(3) correspond to the effects relative to the first control group (PANES non-participants), and columns (4)-(6) to those relative to the second control group (PANES participants who did not participate in TxU). Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

## 4.2 Matching

We complement the DID approach with matching techniques to increase the comparability between treatment and control groups as suggested by the literature (Gadenne, 2017; López Mourelo and Escudero, 2017; Novella et al., 2017) including with regards to characteristics that might drive individuals to enrol in a public works programme.<sup>28</sup> This is particularly important in our case since there appear to be differences in various pre-treatment characteristics between individuals who participated in the active component and those who did not (as shown in the descriptive statistics above), which could be correlated with the dynamics of the outcome variables (Heckman et al., 1999). To address this concern, we implement the following three steps: (i) we estimate the propensity score of participation in TxU using a probit model. By understanding the determinants of participation in TxU among eligible individuals (i.e. those who participated in PANES), we can also identify individuals in groups 1 and 2 who have a high probability to participate in TxU, given their observable characteristics, but who are not benefitting from it. (ii) Then, we restrict the sample to observations in the common support of the covariate distribution to compare the findings of the estimations using the full and the common support

<sup>28</sup> Again, we conduct the exercise only for in the assessment of the active component TxU, as the similarity between recipients and not-recipients of the income support is guaranteed around the threshold that determines participation in PANES.

sample. (iii) Finally, we increase balance between our treated group 3 and groups 1 and 2 by reweighting individuals in these latter groups using their estimated propensity to be part of TxU when carrying out the DID on the common support sample (for methodological details see Caliendo and Kopeinig, 2008).

In order to estimate the probability to participate in TxU (first step of our matching procedure), we include a set of variables  $Z_i$  that might affect programme participation and eventually the outcome of interest, but that are measured before the start of the programme (in 2005).<sup>29</sup> This includes (i) variables related to the eligibility criteria to participate in TxU, and (ii) individual and household characteristics that might drive individuals to enrol in a public works programme. Importantly, the richness of the administrative data allows us to test selection based on a wide set of characteristics, including: individual characteristics (gender, age, marital status, household structure, and health status), educational attainment, labour market information (status in employment and occupation), variables capturing socio-economic status (the ICC index of material deprivation and residence in a rural area), and regional fixed effects. To assess the out-of-sample probabilities, we use a sample solely composed by PANES participants (i.e. whether they participated in TxU or not) in order to understand the determinants of self-selection into the programme among the pool of eligible participants.<sup>30</sup> But then we assign weights to the full sample (including PANES non-participants) in the analysis (see below).

Table A-3 in the Appendix illustrates the results of the analysis. Two main conclusions can be drawn. First, individual characteristics play a role in determining participation in TxU. TxU participants tend to be more often male, single and younger than non-participants. In addition, living with at least one elderly person in the same household (who could, for example, be in need of care) and permanently receiving medical treatment significantly decreases the likelihood of participation. Second, while no major patterns emerge with regard to educational attainment or socio-economic status, labour market characteristics are relevant. TxU participants are more likely to have been unemployed, or working in certain occupations (e.g. labourers in mining, construction, manufacturing, and transport), while they are less likely to have been working as operators in the construction sector and in the garment industry.

We employ this approach to restrict the analysis to observations in the common support and to introduce weights for each observation based on their probability of participation.<sup>31</sup> This allows us to re-estimate the common trends assumption. As a result, the evidence for the Ashenfelter's dip becomes considerably weaker (see Table 3, Panels B). This is in our view evidence that the common trends assumption is largely satisfied once matching methods are incorporated to the DID analysis. Therefore, in the following, we present the results of the estimations based on DID results and those of our preferred specification that combines DID with matching techniques.

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<sup>29</sup> Importantly, any anticipation effect of the programme can be ruled out for 2005 as limited knowledge was available on PANES and its components before its actual implementation.

<sup>30</sup> We believe that the alternative of restricting the analysis to only PANES participants who also meet TxU eligibility criteria is not optimal since: (i) we do not observe these criteria at the time of application (but only at the time of interview), and (ii) evidence suggests that these criteria have not been adequately enforced.

<sup>31</sup> As an intermediary step, we also performed the analysis on the common support but without weighting the observations with the propensity score. These results are in line with those presented in the tables and are available upon request.

## 5. Results

This section presents the estimated results of participating in TxU, receiving the cash transfer IC and benefitting from both the active and income support, on labour market status, work quality and civic and social engagement. As explained above, to achieve this we compare: (i) individuals who participated in both PANES and TxU with those who participated only in PANES (i.e. in this case treatment corresponds to participation in the active component); (ii) individuals who participated in PANES with those who did not (i.e. treatment corresponds to receiving the income support); and (iii) individuals who participated in PANES and TxU with those who did not participate in PANES (i.e. treatment corresponds to participating in the active component as well as receiving the income support). In this way, we are able to assess the effectiveness of the active and passive interventions both, when provided separately and jointly.

The effects are estimated a few months after the termination of PANES and TxU (2 to 3 months), since the last follow-up survey was administered in February and March of 2008 and the programmes ran until December of 2007 (Amarante et al., 2009). This means that for the passive component we are examining short-run effects (i.e. PANES households received the transfer until the expiration of the programme). For the active component, however, as explained above individuals participated only once at different points in time between 2005 and 2007 and for a maximum duration of five months. We are thus identifying an average treatment effect that can span from the very short-term (for those who remained in TxU until the end of PANES) to the medium-term (up to two years after participation) for individuals who enrolled earlier in the programme. Importantly, when exploring possible differences in treatment effects among individuals participating at different points in time, we do not find any evidence of differential effects.<sup>32</sup>

In terms of outcomes of interest, we assess the effectiveness of the programme with respect to labour market status, work quality and civic and social engagement. This is against its stated objectives of fostering labour market participation, improving the quality of jobs, increasing participation in formal and informal social networks, and improving awareness of civil rights. First with respect to individuals' labour market status, we examine programme effects on employment, unemployment and inactivity, as it is expected that participation in a public works programme should increase the probability of being in employment and decrease the probability of being inactive – while the effect on unemployment can be either positive (due to higher labour force participation) or negative (if all the newly active individuals find a job, see (Zimmermann, 2012)).

Second, in terms of work quality, we investigate the impact on working hours, hourly earnings, working poverty, and excessive working time.<sup>33</sup> When putting in place TxU, the government expected that enrolment in this programme would also improve the quality of jobs found in the medium term.

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<sup>32</sup> While we do not know when exactly individuals participated in TxU, we know whether they participated up until the first follow-up survey in 2006. This allows us to distinguish between early participants (those who in 2006 had participated or were participating in TxU) and late participants (those who participated after 2006, as explained in the placebo test in Table 2). We used this information to run a modified version of equation (1) using triple differences to distinguish between early and late participants. On balance, there are no major differences in effects between these two groups, which is why we focus in our analysis on the specification outlined in equation (1). Detailed results for the triple differences specification are available from the authors on request.

<sup>33</sup> Please refer to Table A-4 in the Appendix for the definitions of these outcome variables.

However, the existing evidence is not necessarily supportive of this claim and has suggested that similar interventions do not necessarily provide participants with better chances of improving their working conditions (Escudero, forthcoming), possibly because the human capital accumulation component of this type of interventions is generally very limited.

Finally, we investigate the impact of the programme on civic engagement and social inclusion. In particular, we analyse two indicators: (i) a measure of participation in civil organizations (equal to one if the individual participates in at least one of the organizations listed); and (ii) a measure of participation in selected social activities (equal to one if the individual participates in at least one of the activities listed).<sup>34</sup> According to the stated objectives, the programme should have increased participants' civic and social engagement, either as a direct result of the programme or, alternatively, as spill-over effect from labour market participation.

A detailed definition of the outcome variables is provided in Table A-4 in the Appendix. We now present the main results of the analysis (sub-section 5.1) as well as results of a test we conduct to assess the possible presence of displacement effects (sub-section 5.2).

## 5.1 Main results

As explained above, we analyse the three different treatment effects – (i) participating in the active intervention TxU, (ii) receiving the income support IC; and (iii) benefitting from the combination of the active and passive support – with respect to labour market status, work quality and civic and social engagement. Tables 3 and 4 illustrate our results. For each outcome of interest and each control group, we present simple DID results (Panel A), and DID results using observations on the common support, where individuals have been reweighted using the propensity scores of participation in TxU as explained in Section 4.2 above (Panel B). We focus our discussion mainly on the results of this second panel, which corresponds to our preferred empirical strategy. All estimations include individual-level fixed effects to control for time-invariant differences across individuals. The baseline results do not include additional covariates, as the matching procedure already adjusts for differences in observable characteristics. However, in the robustness section we test if results are sensitive to the inclusion of a large set of covariates.

Table 3 illustrates the results in terms of labour market status. Looking at our preferred specification in Panel B (i.e. on common support with matching), we find that participation in the active component TxU has a strong (but only marginally significant) effect on the probability of being employed. Meanwhile, the passive component IC has a small negative effect on employment (which is nevertheless not significant) and as a result the combination of active and passive support is left with a positive but non-significant effect on the probability of being employed. Similarly, while the active component has a decreasing effect on the probability of being inactive, receiving the income support has the opposite effect. However, neither coefficient is statistically significant in this case. Finally, benefitting from both, the active and passive components, has a marginally negative non-significant effect on the probability of being unemployed. These results are generally confirmed in the simple DID specification (Panel A), where, coefficients are smaller in magnitude and less precisely estimated – possibly because no account is made for differences in observable characteristics.

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<sup>34</sup> See Table A-4 in the Appendix for a list of the organizations and activities.

Overall, these findings support the view that ALMPs have beneficial labour supply effects, while the effect of passive policies is not conclusive in our case. Indeed, participation in the active intervention has an economically substantial positive effect on employment (8.5 percentage points), which remains positive (although not significant) in the simple DID model. Meanwhile, the negative effect of the income support on employment is smaller in magnitude (-1.8 percentage points in the preferred specification) and it is not statistically significant or robust to changes in specification (e.g. it changes sign in the specification with no matching).<sup>35</sup>

In terms of work quality, as illustrated in Table 4, any of the programmes appears to have an effect as all results are non-statistically significant. However, point estimates are of the expected sign and of realistic magnitudes. In particular, coefficients for both the active component and the income support are positive when assessing hourly wages (by 2.2 and 1.3 pesos, respectively). This is consistent with the idea that active policies increase individuals' employability while the receipt of an income support reduces the risk of accepting low-paid jobs – both effects contributing to higher wages upon re-employment. As a result, both the active and (to a lesser extent) the income support components have the potential of reducing the probability of being working poor – but again, this potential does not materialize in the case of the PANES programmes as coefficients are not statistically significant. This is also the case in terms of working hours, where effects are again not statistically significant. As in the case of labour market status, results on work quality variables, are generally consistent across specifications (Panels A and B of Table 4).

Finally, we assess the effects of the programme on two additional variables of civic and social engagement: participation in civil organizations (through a dummy equal to one if the individual participated in at least one of the organizations listed in Table A-4 of the Appendix) and participation in social activities (through a dummy equal to one if the individual participated in at least one of the activities listed in the same table). Results of these estimations are presented in Table A-5 of the Appendix. Overall, in this case results are not only non-statistically significant but also coefficients are very small in magnitude – suggesting that the programme did not succeed in fostering civic participation. In particular, we find that the active component has a small non-significant effect on the probability of participating in organizations while the income support has a small negative effect (likewise non-significant) – resulting into a combined effect close to zero (Table A-5 of the Appendix, Panel B). Coefficients are slightly more positive for the effect of participation in activities (e.g. visits to a lawyer, participation in demonstrations, visits to public offices), which however are never statistically significant.

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<sup>35</sup> Amarante et al. (2011) assessed the effects of the overall programme PANES on labour market outcomes finding negative effects on formal employment and earnings, mainly among men.

**Table 3. Treatment effects on employment, unemployment and inactivity**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive
<b>Panel A: Difference-in-difference results</b>									
Active component (TxU)	0.047 (0.043)	-0.009 (0.038)	-0.038 (0.035)						
Income support (IC)				0.009 (0.028)	-0.022 (0.024)	0.013 (0.024)			
Active component and income support							0.055 (0.044)	-0.031 (0.039)	-0.024 (0.036)
Constant	0.528*** (0.008)	0.236*** (0.007)	0.235*** (0.007)	0.544*** (0.007)	0.214*** (0.006)	0.242*** (0.006)	0.563*** (0.009)	0.222*** (0.008)	0.215*** (0.008)
Observations	2,628	2,628	2,628	3,615	3,615	3,615	2,067	2,067	2,067
R-squared	0.015	0.034	0.004	0.009	0.029	0.003	0.014	0.025	0.001
<b>Panel B: Difference-in-difference on common support with weights</b>									
Active component (TxU)	0.085* (0.049)	-0.035 (0.044)	-0.050 (0.035)						
Income support (IC)				-0.018 (0.034)	-0.025 (0.030)	0.043 (0.027)			
Active component and income support							0.067 (0.051)	-0.060 (0.045)	-0.007 (0.036)
Constant	0.539*** (0.010)	0.283*** (0.009)	0.179*** (0.007)	0.563*** (0.008)	0.243*** (0.007)	0.194*** (0.007)	0.571*** (0.011)	0.263*** (0.010)	0.167*** (0.008)
Observations	2,578	2,578	2,578	3,535	3,535	3,535	2,021	2,021	2,021
R-squared	0.018	0.059	0.018	0.009	0.045	0.014	0.022	0.048	0.004
Individual FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Department FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Additional covariates	NO	NO	NO	NO	NO	NO	NO	NO	NO

Note: Table 3 presents results on employment, unemployment and inactivity. The model follows equation (1), where  $t$  refers to years 2005 (before treatment) and 2008 (after treatment). Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

Table 4. Treatment effects on job quality variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Working hours	Hourly earnings	Working poor	Excessive working time	Working hours	Hourly earnings	Working poor	Excessive working time	Working hours	Hourly earnings	Working poor	Excessive working time
<b>Panel A: Difference-in-difference results</b>												
Active component (TxU)	-0.019 (2.554)	3.295 (3.836)	-0.042 (0.059)	-0.046 (0.044)								
Income support (IC)					-2.512 (1.847)	1.262 (2.564)	-0.049 (0.044)	-0.058 (0.036)				
Active component and income support									-2.531 (2.702)	4.557 (3.609)	-0.091 (0.061)	-0.104** (0.047)
Constant	20.368*** (0.554)	22.178*** (0.934)	0.887*** (0.013)	0.059*** (0.010)	20.560*** (0.486)	22.170*** (0.713)	0.846*** (0.011)	0.047*** (0.009)	20.912*** (0.669)	20.564*** (0.798)	0.821*** (0.015)	0.056*** (0.013)
Observations	1,382	1,298	1,480	1,382	1,921	1,811	2,069	1,921	1,141	1,075	1,231	1,141
R-squared	0.158	0.020	0.380	0.042	0.180	0.013	0.335	0.071	0.191	0.030	0.336	0.081
<b>Panel B: Difference-in-difference on common support with weights</b>												
Active component (TxU)	0.432 (2.741)	2.196 (3.704)	-0.056 (0.066)	-0.063 (0.052)								
Income support (IC)					-2.403 (2.181)	1.302 (2.886)	-0.017 (0.052)	-0.026 (0.045)				
Active component and income support									-1.970 (2.929)	3.498 (3.311)	-0.073 (0.067)	-0.089 (0.056)
Constant	20.334*** (0.642)	22.157*** (0.988)	0.883*** (0.016)	0.056*** (0.013)	20.624*** (0.582)	22.029*** (0.760)	0.847*** (0.013)	0.042*** (0.012)	20.991*** (0.762)	20.202*** (0.808)	0.840*** (0.016)	0.060*** (0.015)
Observations	1,358	1,274	1,453	1,358	1,882	1,772	2,027	1,882	1,116	1,050	1,204	1,116
R-squared	0.170	0.016	0.358	0.058	0.187	0.009	0.316	0.077	0.197	0.021	0.342	0.070
Individual FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Department FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Additional covariates	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Note: Table 4 presents results on outcome variables capturing work quality. The model follows equation (1), where t refers to years 2005 (before treatment) and 2008 (after treatment). Individuals outside employment have been dropped from these regressions. Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

Before continuing with the analysis, we believe it is important to test the robustness of our findings to some departures from the preferred specification (i.e. DID with and without matching). We focus our attention on the robustness of the results on labour market status variables (i.e. employment, unemployment and inactivity), where the only statistically significant effects were found.<sup>36</sup> First, we introduce a rich set of covariates to the baseline specification to better account for possible differences in observable characteristics. In particular, we add controls for individual characteristics (e.g. age, educational attainments, and health status), household characteristics (e.g. marital status, presence of young or old members in the household) and labour market covariates (e.g. sector and occupation). Results are presented for both specifications, the baseline specification (DID) and our preferred one (DID with matching) in Table B-1 of the Appendix. In this latter model, the results confirm the positive (and marginally significant) effect of the active component on the probability of being employed. Additionally, when adding these additional covariates, we also find evidence of a positive and statistically-significant effect of receiving the income support on the probability of being inactive.

As a second robustness test, we re-estimate the effects only for a cross-section of observations in 2008 (i.e. without DID, with and without matching) to provide a benchmark for the analysis. The results of this exercise do not contradict the findings discussed above, but several effects are now statistically significant (see details in Table B-2 of the Appendix). In particular, the active intervention continues to have a statistically significant increasing effect on the probability of being employed (by around 8 percentage points, as before) but now it also has a decreasing effect on the probability of being unemployed and inactive (the effect is particularly strong and significant in the latter case). At the same time, the income support has now a statistically significant negative effect on the probability of being employed (of 6.5 percentage points) and of being inactive – while the effect on unemployment is around zero. As a result, benefitting from a combination of the active intervention and the income support has a statistically significant decreasing effect on inactivity and increasing effect on unemployment – while the effect on employment is small and non-significant. These results provide a more complete picture of the potential effects of providing the different programmes separately and together. However, they offer suggestive evidence only given the possible bias arising from existing unobservable time-invariant differences across individuals, which are not considered in this specification, and are instead accounted for in the DID analysis discussed above.

Finally, PANES included several interventions, most of which were of voluntary nature and individuals could enrol simultaneously in more than one provided they met the eligibility criteria. To isolate the effect of the active intervention TxU and control for the possible risk of contamination if the individual participated in more than one intervention, we run the above estimation with covariates, adding dummy indicators for participation in any of the other interventions implemented as part of PANES. This exercise can be done only within a cross-sectional framework (i.e. using observations for 2008 only) as these variables are constant over time (and would be perfectly collinear with the individual fixed effect). The results of this exercise are available in Table B-3 of the Appendix, which generally confirms the findings discussed above. In particular, the active component has a positive effect on employment and a negative effect on inactivity (both statistically significant at conventional levels). However, the effects of the income support are different in this new specification, illustrating a positive effect on employment and a negative effect on unemployment – which have however only marginal statistical significance.

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<sup>36</sup> We have also performed the robustness tests for the other outcomes of interest. The results are in line with those discussed above and they are available from the authors upon request.



## 5.2 Displacement effects

So far, the results of our analysis have provided suggestive evidence that participation in TxU had positive effects on beneficiaries' employment but effects on work quality (and civic and social participation) did not materialize. While this (modest) positive impact is good news, it is important to examine the mechanisms through which these effects materialise before ascertaining the overall general equilibrium gains. If participation in the public work component by one member of a household creates displacement effects (i.e. whereby the other members of the household reduce their labour supply), the overall benefits of the programme could be reduced and even wiped out.

We address this concern in this section, where we examine whether participation in TxU generates displacement effects on other members of the household. The possible presence of displacement effects is a well-known feature of ALMPs (Crépon et al., 2013), but has never been examined in the context of emerging and developing economies. However, the issue is rarely analysed due to data constraints (i.e. lack of adequate information on programme non-participants). In our paper, we can analyse the employment trajectories of individuals who reported not having directly participated in TxU, but who live in households where someone else participated in the programme. Therefore, we now define this group as our treatment group and compare it to group 1 (individuals who did not participate in PANES, and therefore in TxU) and group 2 above (individuals who participated in PANES but not in TxU).<sup>37</sup> The results are presented in Table 5. There is no evidence of the presence of displacement effects, both when assessing the effect of the activation component TxU and the joint effect of the active and income-support components. Moreover, although non-statistically significant, unemployment and inactivity coefficients are not zero, which could be an indication of possible positive spill-over effects in terms of labour supply from participants to non-participants within the same household. In particular, taken together, the positive coefficient for unemployment and the negative coefficient for inactivity could suggest that participation in TxU of one household member may have encouraged other household members to look for jobs. Positive spill-over effects could occur as a result of better formal and informal networks to find a job, but we acknowledge that further research would be needed to ascertain this hypothesis.

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<sup>37</sup> Note that for this analysis we employ the difference-in-difference estimation while no longer reweighting individuals (through the predicted out-of-sample probability of TxU participation) combined with matching. The weights were constructed based on the selection into TxU, whereas in this section we focus on individuals who did not participate in this programme. Note also that results do not change in meaningful ways when we use weighting (details are available from the authors on request).

Table 5. Displacement effects on employment, unemployment and inactivity

	Control 1: no PANES			Control 2: PANES, no TxU		
	(1)	(2)	(3)	(4)	(5)	(6)
	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive
<b>Panel A: Difference-in-difference</b>						
DID	0.003 (0.044)	0.031 (0.042)	-0.033 (0.043)	0.006 (0.043)	0.046 (0.041)	-0.052 (0.042)
Constant	1.358 (1.012)	0.359 (0.945)	-0.717 (0.986)	0.791 (0.492)	0.145 (0.441)	0.065 (0.457)
Observations	1,900	1,900	1,900	2,461	2,461	2,461
R-squared	0.098	0.042	0.060	0.099	0.055	0.058
Individual FE	YES	YES	YES	YES	YES	YES
Personal characteristics	YES	YES	YES	YES	YES	YES

Note: Table 5 presents an analysis of displacement effects. The model follows equation (1), where  $t$  refers to years 2005 (before treatment) and 2008 (after treatment). This time, the treatment group comprises individuals who did not participate in TxU but lived in a household where another member participated in TxU (i.e., the treatment group corresponds to group 3 in Table 1 above). Columns (1)-(3) correspond to the effects relative to the first control group (PANES non-participants), and columns (4)-(6) to those relative to the second control group (PANES participants who did not participate in TxU). Estimates do not combine the difference-in-difference analysis with matching, since weights used above are based on the decision to participate in TxU (whereas here the individuals included in the treatment group do not participate in TxU). Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

## 6. Conclusions

This paper analyses the effects of the activation and income-support interventions of the comprehensive social assistance intervention *PANES*, launched in Uruguay in May 2005 as an emergency plan to respond to a sharp deterioration of economic and social conditions in the country since 1999. As other integrated social protection interventions implemented in Latin American countries, *PANES* had the dual objective of providing monetary support to vulnerable households to assist them with immediate needs and to promote households' reinsertion into the society in order to prevent economic and social exclusion (Government of Uruguay, 2006). As such, *PANES* is part of a generation of social protection programmes that integrate income support with activation measures. The objective of such joint approach is to provide a minimum income to the poorest households, all while improving their employability and social inclusion. In this way, these programmes aim to ensure income security but also address the underlying causes of individuals' vulnerability.

In this paper, we exploit the particular setup of the programme to assess the effects of the income support *Ingreso Ciudadano* (IC), which covered the entire pool of *PANES* participants, and the active component *Trabajo por Uruguay* (TxU), a public works programme implemented to increase the employability and social inclusion of beneficiaries. Overall, the specific context of Uruguay provides a unique opportunity to assess the effects of income support measures and public works programmes separately, as well as to evaluate the joint provision of the two interventions.

Despite the fact that these types of interventions are becoming more common, very little is known to date regarding the effects of the joint provision of activation measures and income support programmes in emerging and developing economies. By analyzing the particular case of Uruguay, this paper, first and foremost, contributes to the empirical literature by disentangling the effects of income support

measures and ALMPs within this combined approach. The paper provides thus an indication of whether this integrated approach to social protection has the potential of helping vulnerable populations in a sustainable manner. Moreover, the paper estimates the post-participation effects of TxU. This is an important contribution, as the existing literature has largely focused on the effects during participation (anti-poverty effects) or the short-term income effects. In addition, while the scarce labour market evidence has focused only on the income and employment effects of these interventions, this paper provides impacts on other social and labour aspects such as labour market participation, employment quality and social inclusion. Therefore, we are able to assess in a more comprehensive way how the programme affected individuals' labour market and social prospects.

To assess the causal effects of the programmes, we combine difference-in-difference with matching methods, while taking advantage of the panel structure of the data. This allows us to abstract from potentially endogenous self-selection into both PANES and TxU. We are able to identify, three different groups for the analysis: the first composed of individuals who did not participate in PANES (thus neither in the public works programme TxU) because they did not meet the eligibility criteria, the second one composed of individuals who participated in PANES but who did not enrol in TxU, and the third one composed of individuals who participated in both PANES and TxU. By comparing these different groups, we gauge the difference in effects for participants who benefit from both, the active measure (TxU) and the income support component of PANES (IC); while also measuring the additional benefit of participating in TxU for individuals who were already benefitting from the cash transfer IC, and the effect of receiving solely the income support IC.

We find that participation in the active component TxU has a strong (but only marginally significant) effect on the probability of being employed, while the passive component IC has a small negative effect on employment (which is nevertheless not significant). As a result, the combination of active and passive support is left with a positive but non-significant effect on the probability of being employed. Similarly, while the active component has a decreasing effect on the probability of being inactive, receiving the income support has the opposite effect. However, neither coefficient is statistically significant in this case. Finally, benefitting from both the active and passive components has a marginally negative non-significant effect on the probability of being unemployed. The direction and size of coefficients are consistent across different specifications, but statistical significance increases in the cross-section specification. In this case, receiving the income support has a statistically significant negative effect on the probability of being employed and of being inactive – while the effect on unemployment is around zero. Although the more robust specification is necessary in the case of the assessment of TxU to account for any possible bias arising from existing unobservable time-invariant differences across individuals, the cross-section analysis can be sufficient in the case of the analysis of the income support IC. Indeed, as we explained above in more detail, PANES participants and non-participants have very similar observable and unobservable characteristics around the ICC participation threshold, where the analysis of this programme takes place.

In terms of work quality, none of the programmes appears to have an effect as all results are non-statistically significant. Likewise, no significant effect is found on measures of civic engagement and social inclusion. Finally, some piece of good news, our analysis does not find any evidence for the presence of displacement effects (i.e. where the participation of one household member in the public work programme would discourage labour market participation of other household members).

All in all, our analysis suggests that TxU successfully fulfilled its essential task of reintegrating participants into the labour market, but the expected improvement of working conditions and the spill-over effects on civic engagement and social integration did not fully materialise. Importantly, although the statistical significance of effects is modest, effects are relevant from the economic point of view if we consider that the skills component of public works programmes, such as TxU, are usually limited (e.g. public projects used for the implementation of the programme included the cleaning of public spaces or the construction of small infrastructures). The effects of the income support are less conclusive as they are not robust to a change in specification, but we believe they remain relevant given the more robust assignment of the programme. In fact, taken together, the effects of TxU assessed through the most stringent specification (DID combined with matching) with the effects of the cash transfer IC, assessed through cross-section analysis, support the view that ALMPs have beneficial labour supply effects, while the effect of passive policies might have disincentive effects. Importantly, the magnitude of the two employment effects is substantially different (8.5 percentage points for the active component compared to -1.6 percentage points for the income support), which could be taken as an indication for the general suitability of comprehensive approaches integrating income support with activation measures, although this assessment cannot be confirmed in our analysis.

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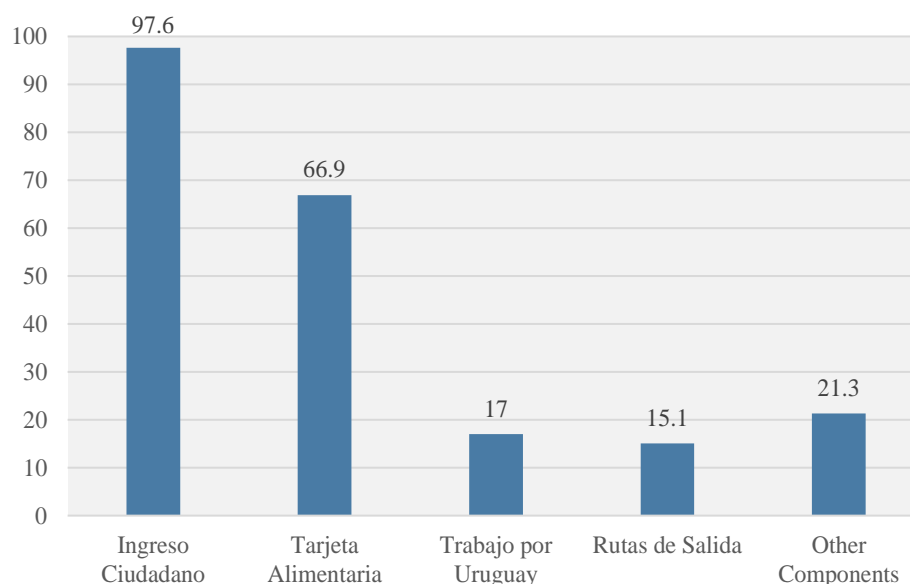
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## Appendices

### Appendix A: Supplementary information and estimations

**Figure A1. Coverage rates of PANES components (percentage of total PANES beneficiaries)**



Source: (Amarante et al., 2009)

**Table A1. Descriptive Statistics for TxU Participants: Comparing administrative data with survey data on the sample comprising our treatment group**

	Universe of Participants (1)	Sample Comprising Treatment Group (2)
Percent Female	71	79
Average Age	36	36
Percent Married or Cohabiting	31	35
Percent Single	52	39
Percent Divorced or Separated	15	21
Percent Widowed	2	5
Percent with Primary Education	66	68
Percent Employed	48	54

Note: Summary statistics in column (1) are based on administrative data collected at the time of registration in the programme and for all TxU participants, though only for the first three calls of the programme. The percentages are calculated neglecting persons with missing information (Government of Uruguay, 2006). Column (2) is based on our own analysis (see Table 1 in the main text). We excluded characteristics which could not be compared due to differences in the classifications used.



**Table A2. Placebo test on the common trend assumption, work quality variables (employed individuals only)**

	Control 1: no PANES				Control 2: PANES, no TxU			
	(1) Hours	(2) Earnings	(3) Working Poor	(4) Excess Time	(5) Hours	(6) Earnings	(7) Working Poor	(8) Excess Time
<b>Panel A: Difference-in-difference</b>								
DID	-3.212 (3.971)	-6.133 (5.358)	-0.107 (0.077)	-0.047 (0.058)	-0.941 (3.670)	-1.620 (6.906)	-0.042 (0.069)	-0.030 (0.054)
Constant	74.23*** (19.04)	-427.92*** (103.94)	2.448*** (0.619)	0.439 (0.667)	-75.29* (41.708)	93.54** (47.555)	0.318 (0.547)	-1.224* (0.695)
Observations	945	860	1,042	945	1,186	1,084	1,286	1,186
R-squared	0.172	0.350	0.084	0.133	0.136	0.036	0.117	0.115
<b>Panel B: DID on the common support sample and using propensity score matching</b>								
DID	-2.774 (4.537)	-1.547 (6.846)	-0.107 (0.088)	-0.060 (0.072)	-1.132 (4.003)	3.205 (7.001)	-0.073 (0.081)	-0.032 (0.062)
Constant	55.46 (37.18)	-314.47** (128.20)	1.971 (1.220)	0.306 (0.917)	-73.93 (47.71)	59.07* (33.98)	0.282 (0.365)	-1.94*** (0.579)
Observations	926	842	1,021	926	1,162	1,062	1,260	1,162
R-squared	0.196	0.191	0.074	0.148	0.147	0.041	0.124	0.148
Individual FE	YES	YES	YES	YES	YES	YES	YES	YES
Personal characteristics	YES	YES	YES	YES	YES	YES	YES	YES

Note: Table A-2 illustrates the results of the placebo test of the common trend assumption for work quality variables. The model follows equation (1) with two differences: (i)  $t$  corresponds to years 2005 and 2006, and (ii) the treatment group is restricted to TxU participants who joined this programme late (i.e. after 2006), so we can observe a pre-programme trend for this group. Columns (1)-(4) correspond to the effects relative to the first group (PANES non-participants), and columns (5)-(8) to those relative to the second group (PANES participants who did not participate in TxU). Non-employed individuals have been dropped from the regressions. Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

Table A3. Results of probit model assessing the determinants of TxU participation

	(1)	(2)	(3)	(4)	(5)
Man	0.187*	0.195*	0.131	0.132	0.127
	(0.110)	(0.110)	(0.145)	(0.146)	(0.150)
Age	-0.009**	-0.010**	-0.008*	-0.008*	-0.006
	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
<i>Martital status (ref. married or cohabiting)</i>					
Single	0.219**	0.210**	0.195**	0.196**	0.262**
	(0.096)	(0.096)	(0.099)	(0.099)	(0.104)
Divorced or separated	0.108	0.107	0.102	0.099	0.154
	(0.111)	(0.111)	(0.113)	(0.113)	(0.115)
Widowed	0.228	0.213	0.201	0.199	0.287
	(0.198)	(0.198)	(0.204)	(0.203)	(0.206)
<i>Number of children in the household (ref. no children in the household)</i>					
At least 1 child (0-5 years) in the household	-0.063	-0.048	-0.032	-0.027	-0.037
	(0.095)	(0.096)	(0.097)	(0.096)	(0.103)
At least 1 child (6-17 years) in the household	0.042	0.058	0.069	0.071	0.024
	(0.086)	(0.087)	(0.088)	(0.088)	(0.093)
At least 1 elderly person in the household	-0.875***	-0.879***	-0.880**	-0.903***	-0.939***
	(0.335)	(0.336)	(0.342)	(0.340)	(0.340)
Receives permanent medical treatment	-0.182*	-0.178*	-0.188*	-0.185*	-0.223**
	(0.104)	(0.104)	(0.106)	(0.106)	(0.110)
Health care from hospital or polyclinic of the Ministry of Public Health	0.305	0.324	0.406*	0.414*	0.526**
	(0.217)	(0.217)	(0.225)	(0.226)	(0.226)
<i>Educational attainment (ref. less than primary education)</i>					
Completed primary education		-0.076	-0.040	-0.045	-0.029
		(0.112)	(0.113)	(0.113)	(0.115)
Completed secondary education		-0.221	-0.159	-0.168	-0.128
		(0.167)	(0.169)	(0.170)	(0.180)
Completed technical training		-0.224	-0.235	-0.246	-0.244
		(0.242)	(0.248)	(0.248)	(0.254)
Employed (last week)			0.138	0.137	0.077
			(0.120)	(0.120)	(0.126)
Unemployed (last week)			0.267**	0.270**	0.174
			(0.125)	(0.125)	(0.130)
Agricultural labourers and workers			0.230	0.228	0.272
			(0.176)	(0.176)	(0.183)
Sales workers			-0.284	-0.286	-0.266
			(0.202)	(0.202)	(0.207)
Operators in the construction sector			-0.959***	-0.950***	-1.022***
			(0.354)	(0.355)	(0.373)
Craft and other related trade workers in the garment industry			-0.494*	-0.482*	-0.535*
			(0.273)	(0.273)	(0.296)
Craft and other trade workers in the food processing industry			0.064	0.061	0.129
			(0.241)	(0.241)	(0.257)
Labourers in mining, constr., manuf. and transport			0.427**	0.425**	0.396*
			(0.205)	(0.206)	(0.211)

Personal services workers	-0.206 (0.300)	-0.203 (0.300)	-0.064 (0.308)		
Street vendors	0.085 (0.174)	0.086 (0.174)	0.089 (0.183)		
Refuse workers and cleaners	0.232 (0.231)	0.225 (0.232)	0.220 (0.242)		
Other or missing occupation	0.016 (0.133)	0.009 (0.132)	-0.018 (0.136)		
ICC		-7.671 (6.827)	-7.213 (6.967)		
Household lives in rural area		-0.113 (0.264)	-0.087 (0.287)		
Constant	-0.885*** (0.290)	-0.797** (0.311)	-1.096*** (0.346)	-1.012*** (0.352)	-0.819** (0.369)
Observations	1,312	1,312	1,312	1,312	1,312
Department FE	NO	NO	NO	NO	YES

Notes: Table A-3 illustrates the results from a probit model, where the outcome variable is a dummy variable equal to one if an individual participated in TxU and zero otherwise. The sample includes individuals who participated in PANES and who either did or did not participate in TxU; i.e. we compare the treatment group with our second control group. Each column refers to a separate probit regression. All explanatory variables are pre-determined characteristics at baseline (in 2005). They are defined as dummy variables, with the exception of age and ICC. Reference categories for the dummy variables are: woman, married or cohabiting, no children in the household, not completed primary education, inactive in the labour market, and domestic workers. "Health care from hospital or polyclinic of the Ministry of Public Health" refers to a regular health insurance scheme (as opposed to private insurance or insurance schemes covering the police and the military). Based on Column (5), we predict the out-of-sample probabilities of programme participation which we use when combining the DID analysis with matching. Note that we dropped household income per capita from the regressions, since this variable is missing for some individuals and is moreover not statistically significant. Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

**Table A4. Description of outcome variables**

<b>Variable</b>	<b>Definition</b>
<i>Labor market status</i>	
Employed	Dummy variable equal to one whenever an individual was employed in the week prior to data collection, and equal to zero otherwise. Employment was defined as working at least one hour during that week (excluding domestic activities).
Unemployed	Dummy variable equal to one whenever an individual was unemployed in the week prior to data collection, and equal to zero otherwise. Unemployed individuals are defined as not being employed but being searching for employment (note that the variable does not take into account whether the individuals could take up a job within a short period of time).
Inactive	Dummy variable equal to one whenever an individual was neither employed nor unemployed in the week prior to data collection, and equal to zero otherwise.
<i>Work quality</i>	
Working hours	Number of hours usually worked in a week.
Hourly earnings	Total monthly income from dependent work and self-employment, divided by the number of hours usually worked per month.
Working poor	Dummy variable equal to one if the individual is employed and lives in a household whose income per capita is below the extreme poverty line (“línea de indigencia”), and equal to zero otherwise.
Excessive working hours	Dummy variable equal to one if the individual is employed and works more than 48 hours per week, and equal to zero otherwise.
<i>Civic Engagement</i>	
Participation in organizations	Dummy variable equal to one whenever an individual participated in at least one of the organizations elicited by the survey, and equal to zero otherwise. The organizations included in the survey include: (i) School associations; (ii) Neighbourhood associations; (iii) Sport clubs; (iv) Music groups; (v) Religious organizations; (vi) Women associations; (vii) Cooperatives; (viii) Trade unions; (ix) Political parties.
Participation in activities	Dummy variable equal to one whenever an individual participated in at least one of the activities elicited by the survey, and equal to zero otherwise. The activities included in the survey are the following: (i) Visit a public office to make a claim or seek assistance; (ii) Visit a mediation centre or a lawyer to solve private conflicts with neighbours or relatives; (iii) Visit a lawyer for criminal matters; (iv) Seek assistance with the trade unions; (v) Seek assistance with an NGO; (vi) Participate in demonstrations; (vii) Sign a petition; (viii) Participate in a strike; (ix) Participate in meetings organised by public or private organizations to provide assistance; (x) Call a radio or TV channel to express a claim.

**Table A-5: Treatment effects on civic and social engagement outcomes**

	(1)	(2)	(3)	(4)	(5)	(6)
	Participation in organizations	Participation in activities	Participation in organizations	Participation in activities	Participation in organizations	Participation in activities
<b>Panel A: Difference-in-difference results</b>						
Active component (TxU)	-0.010 (0.031)	0.008 (0.035)				
Income support (IC)			0.006 (0.022)	0.027 (0.024)		
Active component and income support					-0.003 (0.032)	0.035 (0.036)
Constant	-0.001 (0.006)	-0.002 (0.007)	-0.001 (0.005)	-0.001 (0.006)	0.000 (0.007)	-0.001 (0.008)
Observations	2,628	2,628	3,615	3,615	2,067	2,067
R-squared	0.285	0.465	0.285	0.453	0.280	0.446
<b>Panel B: Difference-in-difference on common support with weights</b>						
Active component (TxU)	0.013 (0.034)	0.019 (0.039)				
Income support (IC)			-0.021 (0.025)	0.005 (0.028)		
Active component and income support					-0.007 (0.036)	0.024 (0.040)
Constant	-0.000 (0.007)	-0.000 (0.008)	0.000 (0.006)	0.000 (0.007)	0.000 (0.008)	0.000 (0.009)
Observations	2,578	2,578	3,535	3,535	2,021	2,021
R-squared	0.258	0.432	0.265	0.424	0.273	0.429
Individual FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Department FE	YES	YES	YES	YES	YES	YES
Additional covariates	NO	NO	NO	NO	NO	NO

Note: Table A-5 presents results on outcome variables capturing civic engagement and social inclusion. The model follows equation (1), where  $t$  refers to years 2005 (before treatment) and 2008 (after treatment). The treatment group comprises TxU participants. Columns (1)-(3) correspond to the effects relative to the first control group (PANES non-participants), and columns (4)-(6) to those relative to the second control group (PANES participants who did not participate in TxU). Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

## Appendix B: Robustness tests and additional estimations

Table B1. Treatment effects on employment, unemployment and inactivity – including additional covariates

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive
<b>Panel A: Difference-in-difference results</b>									
Active component (TxU)	0.048 (0.043)	-0.013 (0.038)	-0.034 (0.035)						
Income support (IC)				0.004 (0.028)	-0.018 (0.024)	0.014 (0.024)			
Active component and income support							0.061 (0.044)	-0.030 (0.039)	-0.031 (0.036)
Constant	0.748 (0.465)	0.104 (0.395)	0.148 (0.406)	0.896* (0.484)	0.075 (0.420)	0.029 (0.452)	1.057 (0.830)	0.259 (0.706)	-0.315 (0.730)
Observations	2,628	2,628	2,628	3,615	3,615	3,615	2,067	2,067	2,067
R-squared	0.036	0.045	0.015	0.039	0.043	0.018	0.051	0.051	0.024
<b>Panel B: Difference-in-difference on common support with weights</b>									
Active component (TxU)	0.087* (0.048)	-0.038 (0.043)	-0.050 (0.034)						
Income support (IC)				-0.024 (0.033)	-0.021 (0.030)	0.045* (0.027)			
Active component and income support							0.063 (0.050)	-0.050 (0.045)	-0.013 (0.036)
Constant	0.824 (0.706)	-0.151 (0.638)	0.326 (0.501)	1.228* (0.695)	0.043 (0.619)	-0.270 (0.536)	1.083 (0.972)	0.529 (0.840)	-0.611 (0.687)
Observations	2,578	2,578	2,578	3,535	3,535	3,535	2,021	2,021	2,021
R-squared	0.047	0.076	0.036	0.044	0.059	0.039	0.052	0.075	0.031
Individual FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Department FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Additional covariates	YES	YES	YES	YES	YES	YES	YES	YES	YES

Note: Table B1 presents results on employment, unemployment and inactivity. The model follows equation (1), where t refers to years 2005 (before treatment) and 2008 (after treatment). Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

**Table B2. Treatment effects on employment, unemployment and inactivity – cross-section in 2008**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive
<b>Panel A: Difference-in-difference results</b>									
Active component (TxU)	0.096*** (0.031)	0.052** (0.026)	-0.120*** (0.027)						
Income support (IC)				-0.038 (0.023)	0.001 (0.016)	0.037* (0.021)			
Active component and income support							0.031 (0.034)	0.052** (0.026)	-0.083*** (0.028)
Constant	0.553*** (0.010)	0.237*** (0.012)	0.232*** (0.012)	0.548*** (0.012)	0.214*** (0.010)	0.238*** (0.010)	0.564*** (0.015)	0.223*** (0.013)	0.213*** (0.013)
Observations	2,628	2,628	2,628	3,615	3,615	3,615	2,067	2,067	2,067
R-squared	0.003	0.017	0.008	0.003	0.013	0.003	0.004	0.013	0.004
<b>Panel B: Difference-in-difference on common support with weights</b>									
Active component (TxU)	0.083** (0.037)	0.049 (0.030)	-0.132*** (0.028)						
Income support (IC)				-0.065** (0.028)	0.006 (0.020)	0.058** (0.024)			
Active component and income support							0.018 (0.038)	0.055* (0.030)	-0.074** (0.029)
Constant	0.586*** (0.019)	0.136*** (0.013)	0.278*** (0.017)	0.650*** (0.020)	0.130*** (0.014)	0.220*** (0.017)	0.650*** (0.020)	0.130*** (0.014)	0.220*** (0.017)
Observations	1,266	1,266	1,266	1,729	1,729	1,729	989	989	989
R-squared	0.006	0.004	0.020	0.004	0.000	0.004	0.000	0.005	0.007
Individual FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Department FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Additional covariates	NO	NO	NO	NO	NO	NO	NO	NO	NO

Note: Table B2 presents results on employment, unemployment and inactivity. The model departs from equation (1) by simply using a cross-section of data for 2008 (i.e. without difference-in-difference). Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.

**Table B3. Treatment effects on employment, unemployment and inactivity – cross-section in 2008 with controls for participation in other programmes**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive	Employed	Unemployed	Inactive
<b>Panel A: Difference-in-difference results</b>									
Active component (TxU)	0.069** (0.034)	0.059** (0.027)	-0.128*** (0.028)						
Income support (IC)				0.122 (0.083)	-0.135* (0.072)	0.013 (0.074)			
Active component and income support							0.201** (0.091)	-0.108 (0.077)	-0.094 (0.079)
Constant	0.586*** (0.028)	0.108*** (0.018)	0.306*** (0.026)	0.458*** (0.081)	0.252*** (0.071)	0.290*** (0.073)	0.462*** (0.084)	0.227*** (0.073)	0.311*** (0.076)
Observations	1,202	1,202	1,202	987	987	987	293	293	293
R-squared	0.016	0.012	0.025	0.010	0.009	0.010	0.053	0.048	0.064
<b>Panel B: Difference-in-difference on common support with weights</b>									
Active component (TxU)	0.088** (0.038)	0.047 (0.031)	-0.135*** (0.030)						
Income support (IC)				0.146 (0.101)	-0.156* (0.088)	0.010 (0.083)			
Active component and income support							0.274** (0.107)	-0.137 (0.093)	-0.136 (0.085)
Constant	0.626*** (0.032)	0.109*** (0.023)	0.265*** (0.027)	0.459*** (0.099)	0.280*** (0.088)	0.261*** (0.081)	0.476*** (0.101)	0.269*** (0.091)	0.255*** (0.082)
Observations	1,158	1,158	1,158	948	948	948	284	284	284
R-squared	0.023	0.020	0.029	0.011	0.010	0.009	0.063	0.059	0.040
Individual FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Department FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Additional covariates	NO	NO	NO	NO	NO	NO	NO	NO	NO

Note: Table B3 presents results on employment, unemployment and inactivity. The model departs from equation (1) by simply using a cross-section of data for 2008 (i.e. without difference-in-difference) and adding controls for participation in other PANES sub-programmes. Robust standard errors are in parentheses; \*\*\*, \*\*, and \* denote significance levels at the 1, 5, and 10 per cent levels, respectively.