SOC–Avalua

ACTIVE EMPLOYMENT POLICIES EVALUATION IN CATALONIA

Employment and Training programme Long-term unemployed line

2016

Pilot and feasibility study on the sustainability and effectiveness of results for ESF participants using CIEs

(VT/201745)

Credits

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1.1. Pilot CIE 3: Spain - Catalonia

Features of the policy

The Autonomous Community of Catalonia is the second largest Spanish region in terms of population. It has over seven million inhabitants, which account for 16% of the total Spanish population.[1] The region contributes 19% of national GDP[2]. Moreover, with a yearly nominal per-capita GDP of roughly €29,000 in 2016, it is the fourth richest Spanish region (after Madrid, País Vasco and Navarra).

Similarly to the rest of Spain, Catalonia was severely hit by the economic recession between 2008 and 2013. During these years the Catalan economy grew on average by only 1.1% a year, against an average growth rate of 3.3% before the crisis.[3] The economy started to recover from 2013 onwards. According to the most recent macroeconomic indicators, the regional gross value added (GVA) in Catalonia increased by 3.5% from 2015 to 2016, which is above the average GVA annual growth in the EU (1.8%).[4]

Despite these signs of recovery, the situation in the Catalan labour market remains critical. The unemployment rate was 13.4% in 2017, above the average unemployment rate in the EU (7.6%).[5] Long term unemployment accounts for a large share of total unemployment. Of all unemployed people in Catalonia, 53.6% were long-term unemployed in 2016, while the EU and Spanish figures for that year were 46.6% and 48.4% respectively. The share of long-term over total unemployment declined to 46.7% in 2017, converging towards the national and EU averages (44.5% and 45.0% respectively).[6]

The most disadvantaged groups in the labour market appear to be younger workers and workers over the age of 45. The unemployment rate for the 15 to 19 age group was 46.3% in 2017, more than double the EU average.[7] Unemployment has also increased amongst those over the age of 45, reaching 21.2% in 2013.[8]

The ESF regional Operational Programme (OP) 'Comunidad Autónoma de Cataluña'aims to 'increase employment opportunities, especially for long-term unemployed, people with low skills and those over 45 years of age'.[9] The current OP, running from 2014 to 2020, builds on a previous OP under the same name which ran in the previous funding period. However, the current scheme has new priorities.

Several policies targeting unemployed individuals have been implemented in Catalonia within this OP. The specific policy considered in this pilot is the Employment and Training ('Trabajo y Formación') programme. This policy was introduced in Catalonia in 2013,[10] and falls under ESF thematic objective 8 (Promoting Employment and Supporting Labour Mobility). At its outset, the policy targeted unemployed individuals who received the

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[1] Eurostat, 2018, Population on 1 January by age, sex and NUTS 2 region [demo_r_d2jan], accessed on 16/11/2018.

[2] Eurostat, 2018 Gross domestic product (GDP) at current market prices by NUTS 2 regions [nama_10r_2gdp], accessed on 16/11/2018.

[3] SOC , 2015, Programa operativo del fondo social europeo (FSE) 2014-2020 de Cataluña, available at: http://serveiocupacio.gencat.cat/web/.content/01_soc/servei-public-docupacio-de-catalunya-soc/el-fons-social-europeu-a-catalunya/Periode-2014-2020/Programa-Operatiu-FSE-Catalunya-2014-2020/FSE_Cataluxa_PO_cast.pdf.

[4] Eurostat, 2018, Real growth rate of regional gross value added (GVA) at basic prices by NUTS 2 regions - percentage change on previous year [nama_10r_2gvagr], accessed on 16/11/2018.

[5] Eurostat, 2018, Unemployment rates by sex, age and NUTS 2 regions (%) [lfst_r_lfu3rt], accessed on 16/11/2018.

[6] Eurostat, 2018, Long-term unemployment (12 months and more by NUTS 2 regions) [lfst_r_lfu2ltu], accessed on 16/11/2018.

[7] Eurostat, 2018, Youth unemployment rate by sex and NUTS 2 regions [yth_empl_110], accessed on 16/11/2018.

[8] Servei Públic d'Ocupació de Catalunya, 2015, op. cit.

[9] http://ec.europa.eu/esf/main.jsp?catId=67&langId=en&newsId=2408

[10] Departamento de trabajo, asuntos sociales y familias, 2016, Orden TSF/296/2016.

guaranteed minimum income ('Trabajo y Formación, RMI'). Since 2015, another strand of the policy has been introduced, which targets those aged 45 and older who are unemployed and have received unemployment benefits for their maximum permitted duration. This second strand of the policy is referred to as 'Trabajo y Formación, PANP' (PANP henceforth). This pilot evaluates the wave of the PANP programme that started at the end of 2016. The following section describes the targets of the intervention.

Targets

Individuals are only eligible for unemployment benefit if they have made social security contributions for at least 360 days over the past six years. Provided they meet this minimum threshold they are entitled to receive unemployment benefit for 120 days. As mentioned above, PANP targets unemployed individuals who have exhausted their entitlement to unemployment benefits and are preferably aged 45 years or more. Within this group, priority is given to individuals who are aged 55 or more and have insufficient social security contributions to receive a pension at the age of 65. PANP is also targeted at those who have been unemployed for at least one year and who are not in receipt of other social security benefits.

PANP participants enter an employment contract of either 6 or 12 months. The regulation states that individuals over the age of 55 should be given priority for 12-month contracts, with six-month contracts generally offered to those aged between 45 and 54. Younger individuals may be invited to participate in this programme if there are no eligible individuals aged 45 or more.[11]

The beneficiary entities of the PANP programme are local authorities, i.e. councils ('Ajuntamientos') and district councils ('Consejos Comarcales') responsible for the implementation of active labour market policies. The number of employment contracts financed through the PANP programme in each area depends on the number of unemployed individuals in in June 2016. The table below provides a breakdown of the number of unemployed individuals registered in June 2016, and the number of 12- and 6-month contracts allocated to each province. Being the province with the largest population, Barcelona has also the largest number of unemployed people, and hence most PANP interventions were assigned to this province. Across all provinces 6-month contracts were expected to comprise more than 80% of all contracts financed through PANP. In practice, as the later sections show, the number of individuals starting on PANP exceeded the numbers expected at the outset.

Table 1 - Number of unemployed individuals and allocation of PANP contracts, by province

Province	Nr. unemployed individuals as of June 2016	Nr. 12 months contracts	Nr. 6 months contracts	Total
Barcelona	337,900	237	1,252	1,489
Girona	39,495	28	180	208
Lleida	21,358	12	92	104
Tarragona	51,190	34	231	265
Total	449,943	311	1,755	2,066

Source: Resolución TSF/2496/2016, pp. 7-13.

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[11] Ibidem, Art. 7.

Type of actions

Participants in PANP are obliged to attend training courses while working. The regulation specifies that formal professional training is preferred to informal training. However, individuals can take part in informal training activities if their previous education level is below that required to participate in formal training. The training courses are designed to improve general competence and improve the likelihood of obtaining employment. Examples of the sort of training which participants might undertake include courses to improve numerical skills. According to the regulation, the number of hours of formal professional training for PANP participants should range from between a minimum of 80 hours and a maximum of 200 hours. No minimum or maximum limit is set for informal training.[12]

Previous experience in CIE

The Catalan PES (Servei Públic d'Ocupació de Catalunya, SOC) have carried out a number of evaluations of policies implemented under the OP 'Comunidad Autónoma de Cataluña'. As noted in the 2014-2016 specific evaluation plan for the OP[13], most evaluations have focused on active labour market policies (ALMPs) for young unemployed people. So far these have been mainly process and monitoring evaluations. Here our focus is on counterfactual impact evaluations (CIE) which instead consider how the outcomes attained by participants compare to those that they would have been expected to attain if they had not participated in the programme.

To the best of our knowledge, the only CIE carried out on an ESF-funded project in Catalonia has been the evaluation of the 'Trabajo y Formación' programme for the recipients of a guaranteed minimum income (RMI).[14] This study used difference-in-differences methods to analyse the impact of the programme on two main outcomes, both measured after six months from completion:

1) the probability of being employed;

2) the probability of obtaining a full-time or part-time contract.

The study found that the programme improved the probability of having a job six months after completion by 8.33 percentage points. The impact was similar for men and women. Moreover, the programme had a large positive impact on the probability of obtaining a full-time contract (20 percentage points). The estimated impact on the probability of obtaining a part-time contract was close to zero. The study concluded that the programme improved not only the chances of obtaining employment, but also that participants obtained high-quality employment, given that they moved into full-time, rather than part-time, work.

1.1.1. Data and CIE methods

The timing of the intervention

There is a very limited timeline for implementation of this wave of the PANP programme. Beneficiary entities must have at least some participants who have started an intervention

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[12] Departamento de trabajo, asuntos sociales y familias, 2016, *op. cit.*

[13] SOC, 2016, ESF Operational Programme for Catalunya 2014-2020: specific evaluation plan, available at: http://serveiocupacio.gencat.cat/web/.content/01_soc/servei-public-docupacio-de-catalunya-soc/pla_destudis_i_avaluacions/Plan_FSE_CATALUNYA_ENGLISH.pdf.

[14] SOC, 2017, Evaluación de impacto del Programa Trabajo y Formación (convocatoria 2015) en el marco del PO FSE 2014-2020 de la Generalitat de Catalunya, available at: http://serveiocupacio.gencat.cat/web/.content/01_soc/servei-public-docupacio-de-catalunya-soc/pla_destudis_i_avaluacions/Evaluacion_TIF_CAST_rev.pdf.

by the end of December 2016 and all other interventions must have been started by January 2017. In addition, all six-month employment contracts must have ended by July 2017. All contracts of 12-month duration must be complete by January 2018.[15]

The monitoring data reflects the legal requirements for the start dates of the programme and demonstrates that they have been applied in practice.[16] Most participants started on an intervention between December 2016 and January 2017. However, the date of completing the programme was only recorded for around one-fifth of participants (21.8%) in the period to the end of January 2018. The date of completing PANP is only collected retrospectively between 12 to 18 months after the individual has completed the PANP programme. However, it is possible to infer the date of completing participation from the end date of the employment contract which commenced on the date the individual started on PANP.

Timeline for obtaining data

The table below summarises the main steps in the process of obtaining access to the data required for the study. There was an initial meeting with the managing authority for the programme (SOC) on 8 August 2018. The meeting was used to discuss the key features of the policy, data availability and the process of obtaining the data. It was explained at this meeting that whilst it was possible to obtain information on the labour market history of participants and non-participants in PANP, and outcomes 12 and 18 months after participation in the programme, this was time-consuming to collate as the information had to be matched on from administrative data sources.

It was therefore necessary for the data extraction to be conducted in two phases. In the first phase, anonymised data on participants and non-participants drawn from the SOC administrative data would be supplied. These data would be used to select those individuals who were likely to be the most suitable comparison group. The second phase of data extraction would match information on labour market history and outcomes for the selected sample of participants and non-participants to the existing dataset.

A formal request for cooperation was sent to SOC two days after the meeting (10 August 2018) and we received notification that the request had been approved by the Director of the Catalan Public Employment Service on 21 September 2018. The data documentation was received on 28 September 2018 and the first data extract was received on 27 October 2018.

The first data extract consisted of nine datasets. The number of records on each individual dataset ranged from 2,239 to 10,010. The datasets were labelled in Catalan, so all variables and values were relabelled in English, using the supplied documentation. Each dataset contained a pseudo-anonymised unique identifier, stored as a string variable, so these were converted to numeric format (for ease of sorting). Having relabelled the datasets in English, queries on the content and coverage of the variables supplied were sent to the managing authority on 7 November. This was to clarify the contents of variables where the translation from Catalan to English was unclear. A response to these queries was received on 9 November.

The data were manipulated to derive variables which could be used to identify a well-matched comparison group. For example, information on the region of residence was aggregated to NUTS 3 level (province) and information on the highest level of education

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[15] SOC, 2016, Resolución TSF/2496/2016, Art. 6.1-6.2.
[16] The analysis is restricted to individuals resident in Catalonia and with a valid unique identifier. The dataset included 12 PANP participants who were recorded as living outside of Catalonia and a further 6 participants without a unique identifier and so these 18 cases were dropped from further analysis.

was combined into broader groupings. Having completed the data manipulation, the nine datasets were combined into a single dataset, containing all the supplied information on the individuals included in the sample.

Having carried out an initial descriptive analysis of the combined dataset, we identified that, contrary to the data supply process outlined in initial discussions with the managing authority, the extract did not include any information on non-participants. We contacted the managing authority on 13 November to ask for data on non-participants, and were told that we would need to specify the size of the sample and the variables of interest before this could be supplied. This was sent on 15 November 2018. Information on the employment history of the treatment and comparison groups was supplied on 14 December.

The main outcome measure used in the analysis is whether the individual was employed in successive months following the start on PANP. This can only be observed for all participants for a period of up to 16 months

Table 2 - Main steps in the process of obtaining data in Spain

Initial meeting	Formal request of data	Data release
08/08/2018	10/08/2018	14/12/2018

Monitoring data

The monitoring data on PANP participants covered 2,339 individuals who entered the programme between December 2016 and December 2017. However, 98% had started on PANP in either December 2016 or January 2017. The data supplied contains information on:

- the socio-demographic characteristics of participants, including: age, gender, nationality, municipality of residence, family caring responsibilities and whether they had a disability;
- the dates that they started and finished participating in the PANP programme;
- the name and municipality of the beneficiary entity;
- the types of training activities carried out as part of the programme, such as whether the participant received formal or informal training, the type of training and the number of hours that they participated in training;
- the benefits received prior to starting on the programme: the type of benefits received and the start and end dates of any benefit spells;
- the main features of employment contracts during and after participation in PANP, including the start and end dates, the type of contract, the sector and occupation and the municipality of the workplace.

In addition, the data extract received includes information on the results of an initial employability assessment made by SOC before individuals started on the programme. The aim of the assessment is to identify the specific needs of the individual so that they can be referred to the most appropriate type of programme.

Participation in PANP

In accordance with the regulation, most participants began the PANP programme towards the end of 2016 and beginning of 2017 (next table). The largest proportion of starts on the programme occurred in January 2017 (85.4%). Since then only 45 individuals (2.0%) have started on the programme.

Table 3 - Start of participation in PANP

PANP programme start date	Frequency	Percent
December 2016	280	12.6%
January 2017	1,896	85.4%
February 2017	24	1.1%
March 2017	5	0.2%
April 2017	6	0.3%
May 2017	5	0.2%
June 2017	3	0.1%
August 2017	1	0.1%
December 2017	1	0.1%
Total	2,221	

Source: our calculations using data from the Catalonia region

As mentioned previously the date that PANP participation finished was not recorded for the vast majority of individuals who started on the PANP programme. However, we were informed (by SOC) that if there was an employment spell with an identical start date to the PANP start date, the date that participation in PANP ended could be inferred from the end date of the employment spell. In some cases where the data of completing PANP was not recorded, there was also no employment spell which started on the same date as participation in PANP. This meant that the date of completing PANP could not be imputed for some PANP participants.

Table 4 shows the distribution of completed end dates, both for the original sample for whom the end date was recorded and for the original sample plus those with imputed end dates. As of the second quarter of 2018, 484 participants (21.8% of those who started) had a recorded end date. Four-in-five of those who were known to have completed the programme finished in July 2017, with 5.2% completing the programme in the previous month (June). 8.7% completed the programme in December 2017 or January 2018. When including those with imputed end dates, the sample rises to 1,913 participants. When those with imputed end dates are included, three-in-four participants in PANP have an end date of July 2017, slightly lower than the proportion for those for whom end dates were recorded. This is as a result of more participants finishing in contiguous months. Almost 10 per cent of the sample which included those with imputed end dates completed the PANP programme in January 2018. Only one participant appeared to complete the programme after January 2018 once end dates were imputed. As this case appeared to be an outlier, it was excluded from further analysis on the length of participation in PANP. In a further two cases, the imputed end date was exactly the same as the recorded start date and so these two cases were also dropped when looking at the duration of PANP participation.

Table 4 - Completion of PANP

PANP programme end date	Frequency Recorded	Percent Recorded	Frequency Recorded +imputed	Percent Recorded +imputed
January 2017	2	0.4%	4	0.2
February 2017	6	1.2%	6	0.3
March 2017	1	0.2%	1	0.1
April 2017	5	1.0%	5	0.3
May 2017	7	1.5%	7	0.4
June 2017	25	5.2%	157	8.2
July 2017	396	81.8%	1,458	76.2
December 2017	23	4.8%	93	4.9
January 2018	19	3.9%	181	9.5
December 2018			1	0.1
Total	484		1,913	

Source: our calculations using data from the Catalonia region

Given the range of dates when the treatment group completed participation in PANP it is necessary to focus on employment outcomes from 12 to 16 months after completing PANP, rather than 18 months after completion, as the majority of PANP participants would not achieve 18-month outcomes until January 2019.

The clustering of start and end dates around December 2016/January 2017 and July 2017 respectively means that most individuals for whom an end date was recorded spent around 180 days on the programme. Of the 484 individuals with recorded end dates, the mean duration was 189 days. This was lower than the expected duration for the sample which included imputed end dates, where the mean was 204 days. In both samples there was a minimum duration of one day (1 individual)[17] and a maximum of a calendar year. The left-hand side of the next table shows that the vast majority (85.7%) of individuals participated in the programme for between 150 and 249 days, with a small proportion participating for a shorter duration and just under 1-in-10 taking 250 days or more to complete the programme. When including those with imputed end dates, far fewer individuals participated in the programme for less than 150 days. Exactly 1,600 participants took part in the programme for between 150-249 days, of which 1,580 participated for 6 months (179-181 days). A greater proportion of those with imputed end dates participated in the programme for between 250 days and a year (14.3%) than those with recorded end dates.

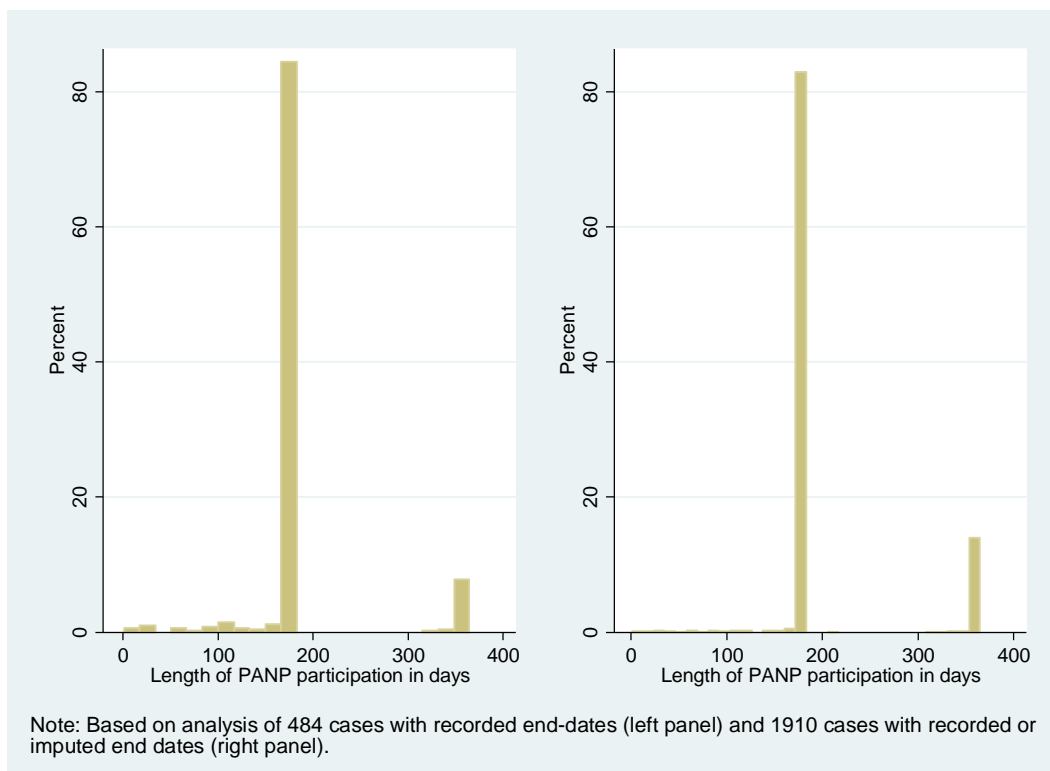**Table 5 - Total duration of programme for PANP participants**

Duration of PANP programme (days)	Frequency Recorded	Percent Recorded	Frequency Recorded+ imputed	Percent Recorded+ imputed
1-49	8	1.7%	10	0.5%
50-99	8	1.7%	11	0.6%
100-149	12	2.5%	16	0.8%
150-249	415	85.7%	1,600	83.8%
250+	41	8.5%	273	14.3%
Total	484		1,910	

Source: our calculations using data from the Catalonia region

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[17] As mentioned previously, two cases where the imputed end date was the same as the recorded start date were excluded from this analysis.

The next figure consists of two histograms showing the length of time spent on the programme for the two samples of individuals - the 492 with recorded end dates (in the left panel) and the 1,910 with recorded or imputed end dates (right panel). Both panels in the figure illustrate the fact that durations for the majority of participants corresponded with the expected durations of employment contracts of six and 12 months, six months being far more common for both groups. However, as with Table 5 above there is a noticeably larger proportion who participated for longer durations when end dates are imputed. In line with expectations, older participants were more likely to stay in the programme for more than 250 days. More than half (55%) of those who participated in PANP for more than 250 days were aged between 55 and 60.

Figure 1 - Distribution of length of participation in the programme in days

Note: Based on analysis of 484 cases with recorded end-dates (left panel) and 1910 cases with recorded or imputed end dates (right panel).

Source: our calculations using data from the Catalonia region

Characteristics of participants

Of the 2,221 individuals with a valid unique identifier who participated in PANP and were clearly resident in Catalonia, 43.1% were female. The vast majority (90.8%) were Spanish and just 2.2% were known to have a disability. In total, 52.9% of participants had family caring responsibilities.

As expected, given the targets of the intervention, the vast majority of participants in the PANP programme were at the upper end of the working age distribution (next table). Just over one-third (35.1%) of participants were aged between 50 and 55 and just under one-third (32.3%) were aged between 45 and 50. Only 3.7% were aged between 20 and 40.
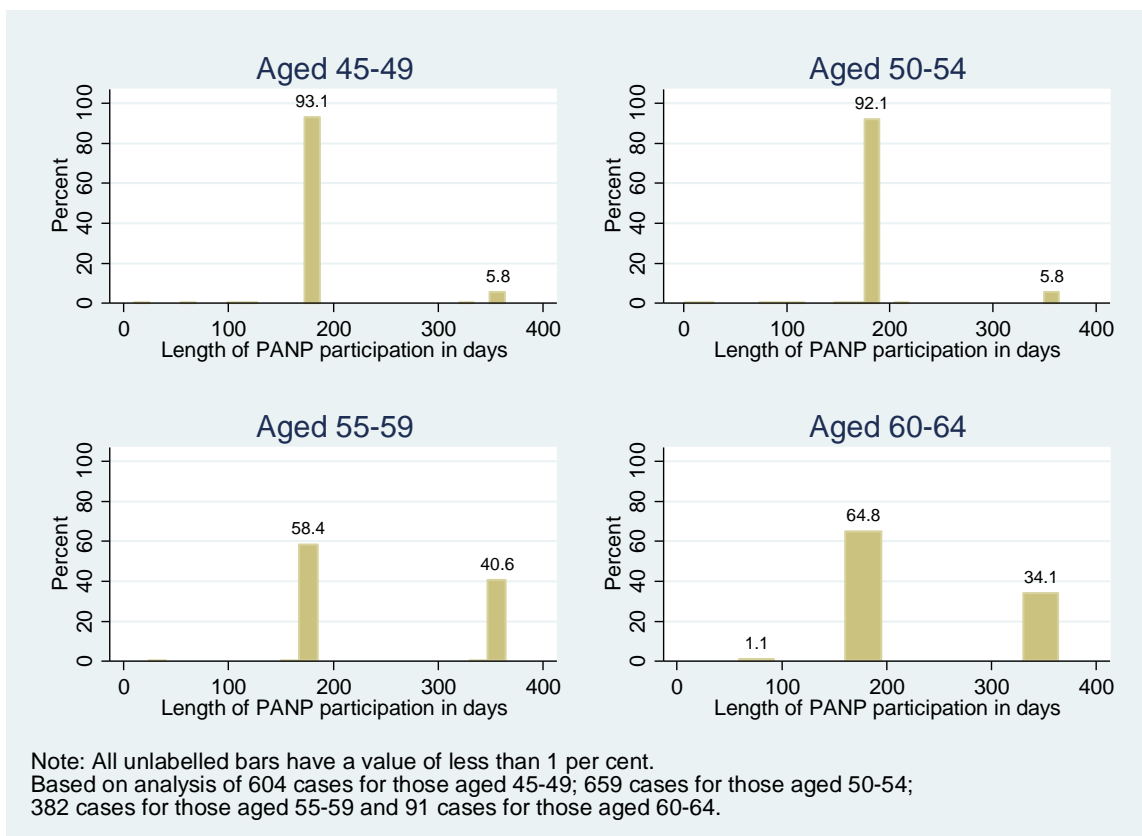
Table 6 - Age distribution of PANP participants

Age group	Frequency	Percent
20-25	4	0.2%
25-30	11	0.5%
30-35	32	1.4%
35-40	36	1.6%
40-45	92	4.1%
45-50	717	32.3%
50-55	780	35.1%
55-60	436	19.6%
60-65	113	5.1%
Total	2,221	

Source: our calculations using data from the Catalonia region

Figure 2 shows how the number of days spent participating in PANP varied for each of the main target age groups. The figure focuses on individuals who started on PANP prior to February 2017 and who had either a recorded or imputed end date. It is also restricted to those aged between 45 and 65. The figure shows that the vast majority (over 90 per cent) of those in the two younger age bands spent around 180 days (6 months) on PANP. Whilst around three-fifths of those aged 55 or more also participated in PANP for a period of six months, they were much more likely to be on PANP for 12 months than the younger age group.

Figure 2 - Length of participation in PANP by age

Note: All unlabelled bars have a value of less than 1 per cent.
Based on analysis of 604 cases for those aged 45-49; 659 cases for those aged 50-54;
382 cases for those aged 55-59 and 91 cases for those aged 60-64.

Over half of all participants in PANP (56.7%) had gone no higher than compulsory education (next table). Slightly under a quarter (23.9%) had engaged in some education beyond the compulsory minimum but had not completed university education and roughly one-in-five had gone to university.

Table 7 - Education level of PANP participants

Highest level of education	Frequency	Percent
Compulsory education or lower	1,260	56.7%
Post-compulsory education	530	23.9%
University education or higher	431	19.4%
Total	2,221	

Source: our calculations using data from the Catalonia region

The next table shows the number of PANP participants in each of the Catalonian provinces where the beneficiary entities were located. Slightly over two-thirds of PANP participants were in the province of Barcelona, with an additional 280 in Tarragona, 260 in Girona and 162 in Lleida.

**Table 8 - Regional distribution of PANP participants by beneficiary entity**

Municipality of the beneficiary entity (province)	Frequency	Percent
Barcelona	1,519	68.4%
Tarragona	280	12.6%
Girona	260	11.7%
Lleida	162	7.3%
Total	2,221	

Source: our calculations using data from the Catalonia region

Training activities

Some individuals participated in more than one training activity, and so 2,673 courses were undertaken by the 2,221 participants in PANP. Of these, 274 individuals had participated in two training activities and one individual had undertaken three courses. There was significant variation in the number of hours each individual spent on training activities, ranging from a minimum of 15 hours to a maximum of 190 hours. There was no record of hours spent on training activities for 98 individuals. The distribution of hours is shown in the next figure.

Figure 3 - Distribution of total hours of training (All participants)
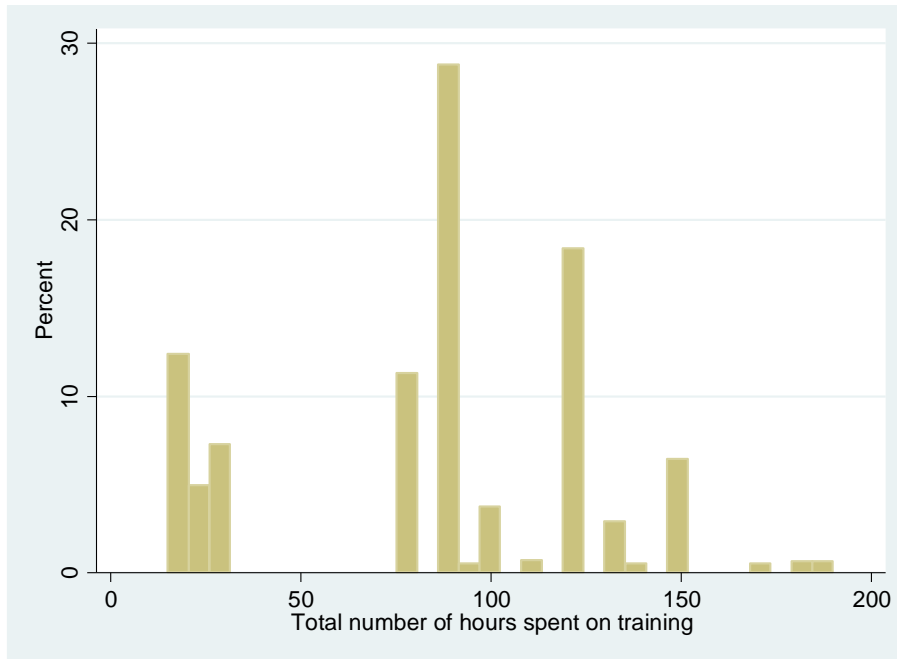
Source: our calculations using data from the Catalonia region

Comparing the mean number hours spent participating in training for the overall sample to that for the subset with an end date for participation in PANP, the mean is very similar at 80.8 and 82.0 hours respectively. Taking into account the average total number of days spent on PANP, this equates to each individual spending approximately 2.5 - 3 hours a week doing training.

As next table shows, the training activities encompassed a wide range of specialisms. Almost one-quarter of courses undertaken were on Administration and Management. The next most common activity was training in Socio-cultural services (9.2 per cent), followed by Commerce and Marketing (8.5%). However, for around two-in-five courses the training was described as 'additional' and the nature of the training was unknown.

Table 9 - Field of specialisation of the training of PANP participants

Field of specialisation of the training	Frequency	Percent
Additional training	1,101	41.2%
Administration and Management	646	24.2%
Socio-cultural services	245	9.2%
Commerce and marketing	226	8.5%
Safety and environment	148	5.5%
Building and civil works	108	4.0%
Agrarian	89	3.3%
Installation and maintenance	30	1.1%
Hospitality and tourism	27	1.0%
Food industry	14	0.5%
Electricity and electronics	12	0.4%
Energy and water	11	0.4%
Computers and communications	10	0.4%
Wood, furniture and cork	6	0.2%
Total	2,673	

Source: our calculations using data from the Catalonia region

As mentioned previously, the training provided as part of PANP could be either formal or informal. Just over half of all training (55.4%) undertaken by PANP participants was classed as formal, with the remainder considered informal training. The majority of training courses, whether formal or informal, were undertaken by individuals who had only completed compulsory education (Table 10). However, whereas around half of all training undertaken by this group was informal, around two-thirds of training courses undertaken by those who had participated in post-compulsory education or university education were formal. This is consistent with the intention that informal training should only be used in cases where PANP participants did not meet the qualification requirements for formal training.

Table 10 - Type of training undertaken by PANP participants, by education level

Highest level of education	Formal Training		
	Yes	**No**	**Total**
Compulsory	49.5	50.5	1,585
Post-compulsory education	64.0	36.0	707
University education	64.3	35.7	481
Total	1,481	1,192	2,673

Source: our calculations using data from the Catalonia region

The following table shows that formal training courses tended to last much longer than informal training activities. Part of the reason for this is likely to be because the regulations specified that formal training should last between 80 and 200 hours. By contrast, there were no fixed requirements on the number of hours of informal training. The mean number of hours spent on formal training by PANP participants was 107, while the average number of hours of informal training was 33. There were no participants who spent less than the required minimum number of hours on formal training, while the minimum number of hours spent on informal training was 15. The maximum number of hours spent on formal training was 190, just below the maximum limit of 200 hours. The maximum number of hours any individual spent on informal training was 120.

Table 11 - Hours in training activities for PANP participants (by training type)

Variable	Observations	Mean	Std. Dev.	Min	Max
Number of hours: Formal training	1,481	106.79	24.97	80	190
Number of hours: Informal training	643	33.26	23.77	15	120

Source: our calculations using data from the Catalonia region

Alongside PANP, individuals could participate in a range of other programmes. Of the 1,910 individuals who started on PANP and had either a recorded or imputed end date, around half (50.1 per cent) participated in at least one other programme or service whilst they were on PANP. Table 12 below shows the total number of additional programmes in which individuals participated. PANP participants took part in a total of 21 different activities whilst on PANP. The two most common activities were 'Programa experiencial amb corporacions locals (interès social)' and 'Procés d'orientació a les Oficines de Treball'. The first of these was an experiential programme with local companies. Around two-fifths (39.1 per cent) of PANP participants took part in this whilst on PANP. The second most common

type of support was guidance from the Labour office and around one-in-10 (11.3 per cent) PANP participants received this whilst on the programme. Fewer than 2 per cent participated in each of the other 21 activities whilst on PANP.

Table 12 - Distribution of additional programmes

Number of programmes	Frequency	Percent
0	954	49.9%
1	802	42.0%
2	140	7.3%
3	14	0.7%
4		%
Total	1,910	

Source: our calculations using data from the Catalonia region

CIE Methods

We explored the use of three main propensity score matching (PSM) techniques to match participants in PANP to a comparison group of non-participants. These were local linear regression matching (LLR), kernel matching and radius matching. The comparison group was drawn from 20,000 non-participants who were resident in Catalonia and met the requirements for PANP, but who did not participate in the programme. The comparison group sample was provided by the SOC authorities and was drawn from administrative data. Of the 20,000 non-participants, 13,121 were aged between 45 and 65 and were registered unemployed. Just over three-fifths (62.8%) of this sample had participated in one or more programmes in the period from 1 December 2016. Less than one-third (31.4%) of the comparison group had participated in more than one programme over the time-period observed in the dataset, and fewer than one-in-twenty had participated in five or more activities. Just over half (50.8%) of the comparison group had completed a questionnaire on their employability ('Qüestionari Q: factors d'ocupabilitat') and around one-in-six (16.5%) had received individual advice ('Assessorament individual'). The next most common programme was to receive guidance from the Labour Office ('Procés d'orientació a les Oficines de Treball'), which was the case for 14.0% of the comparison group. The comparison group as a whole participated in a total of 59 individual activities, but fewer than 1-in-25 participated in 50 of the 59 programmes and fewer than 1-in-100 participated in 44 of them.

For propensity score matching to give a credible estimate of the impact of the PANP programme, it is necessary to observe the characteristics which determine the likelihood that an individual participates in PANP as well as those characteristics which are related to the outcomes that they attain. Individuals in the treatment and comparison groups were matched on the following observed characteristics:

- gender;
- age;
- whether they were a Spanish national;
- education level;
- whether they had family caring responsibilities;
- the province in Catalonia where they lived;
- whether they had a disability;
- their history of claiming unemployment benefits (both contributory and non-contributory) at monthly intervals over the two years prior to starting on PANP).

Interaction variables between nationality and education level were also included in the matching.

As the comparison group did not actually start on PANP, they were randomly assigned a pseudo-start date to mirror the observed distribution of PANP start dates for the treatment group. Benefits history and employment outcomes were then calculated from this pseudo-start date. The next section shows how well-matched the treatment and comparison groups appeared after the propensity score matching.

Even when treatment and comparison groups are well-matched on observable characteristics there is a risk that individuals who are eligible for PANP, but who do not participate, are systematically different from participant. For example, they may choose not to participate in the programme because they are less motivated to work than participants. This lack of motivation may result in them being less likely to find work than PANP participants. If this is the case, the impact of PANP may be overstated, as the analysis may fail to take account of the impact of above-average levels of motivation by PANP participants.

However, in practice the number of places available on PANP is likely to be very small relative to the total number of long-term unemployed in the age range for PANP in Catalonia. The number of individuals starting on PANP was less than 0.5% of the total number of unemployed individuals in Catalonia at the time, so even allowing for the fact that only 53.6 per cent of this group were long-term unemployed (as mentioned in section 1.1.1.), and that a large proportion would be outside of the age range for PANP, it seems likely that there would be a large group of people who would have been eligible for PANP and willing to participate, but who would not have been offered a place.

The sample for analysis

As it was only possible to observe outcomes for participants for a period of 16 months after starting on PANP, it was only possible to estimate short-term impacts for participants who were on a 12-month work placement. For this reason, the main body of the analysis focuses on the subset of participants who were aged between 45 and 54 and who started on the programme in December 2016 or January 2017. As Figure 2 showed that these participants were predominantly on six-month work placements, outcomes could be observed around 10 months after completing the PANP work placement for the vast majority of participants in this age range.

1.1.2. Findings

In this section we show the main findings from the analysis on the available data from the Catalonian region. The section begins by reporting on the balance between the treatment and comparison groups after propensity score matching (PSM). This considers the differences between the two groups which remain after matching. It then moves on to present the estimates of the impact of the programme on the likelihood of being in employment up to 16 months after starting on PANP.

Testing the match between the treatment and comparison groups

If the observed characteristics of the comparison group do not mirror those of the treatment group following matching, the resulting impact estimates may be biased. This section starts by considering whether the comparison group appeared similar to the treatment group after the PSM. It focuses on the balance between the two groups for the local linear regression matching estimator, but differences between this and the findings from the other matching estimators are noted in the text.

Table 13 shows the percentage of the treatment and comparison groups with each of the listed characteristics. The final column reports the Mean Standardised Bias (MSB). This is a measure of the difference in the characteristics of those in the treatment and comparison groups following matching, taking into account the variation in the characteristic within each of the two groups[18].

Rubin's B[19] and R[20] give an indication of the overall balance on covariates. The treatment and matched comparison group samples are considered balanced if B is less than 25 and R is between 0.5 and 2. This was the case across of the samples considered in the analysis. Comparison group matches were found for the vast majority of the treatment group when using LLR, kernel and radius matching, meaning that the impact estimates were likely to be representative of the impact of the programme on almost all of those who participated in the programme.

Table 13 reports the balance for those who were aged between 45 and 54 and started on PANP in December 2016 or January 2017. The treatment and comparison groups were well-match on observable characteristics when using the LLR estimator. The MSB only exceeded 5 per cent in the case of gender, where a greater percentage of the treatment group appeared to be female compared to the matched comparison group. However, even in this case, the difference between the treatment group and the matched comparison group was not statistically significant. Around two-in-five individuals in both the treatment and comparison groups were female and there was a slight skew towards the older age category of 50 to 55.

Table 13 - Balance between treatment and comparison groups after PSM local linear regression matching - those aged 45 to 54

	Treatment group	Matched comparison group	Mean standardised bias (%)
Female	43.5	40.5	6.1
Aged 45-50	47.7	46.9	1.6
Aged 50-55	52.3	53.1	-1.6
Spanish	90.5	90.7	-0.5
Education level:			
Compulsory or lower	55.5	55.3	0.5
Post-compulsory education	25.4	25.6	-0.6
University education or higher	19.1	19.1	0.1
Family caring responsibilities	57.1	57.6	-1.1
Barcelona	66.8	67.4	-1.3
Girona	12.7	12.1	1.9
Lleida	7.2	6.9	1.0
Tarragona	13.3	13.5	-0.8
Disabled	2.1	2.4	-1.1
On benefits 1 month before programme start	4.8	6.4	-4.3
On benefits 2 months before programme start	9.5	10.7	-2.7
On benefits 3 months before programme start	16.5	16.3	0.3
On benefits 4 months before programme start	20.7	20.6	0.2
On benefits 5 months before programme start	25.1	24.9	0.3

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[18] The MSB is calculated by dividing the difference in means between the treatment and matched comparison groups by the square root of the mean sample variance and is expressed as a percentage.
[19] The absolute standardised difference of the means of the linear index of the propensity score in the treated and matched comparison groups.
[20] The ratio of treated to matched comparison group variances of the propensity score index.

On benefits 6 months before programme start	27.0	26.8	0.6
On benefits 7 months before programme start	29.1	29.2	-0.2
On benefits 8 months before programme start	33.9	33.6	0.7
On benefits 9 months before programme start	34.4	34.2	0.3
On benefits 10 months before programme start	33.7	34.6	-1.9
On benefits 11 months before programme start	34.9	36.1	-2.5
On benefits 12 months before programme start	36.9	38.6	-3.7
On benefits 13 months before programme start	38.3	39.9	-3.2
On benefits 14 months before programme start	38.2	39.7	-3.2
On benefits 15 months before programme start	37.5	39.2	-3.7
On benefits 16 months before programme start	35.0	36.4	-3.1
On benefits 17 months before programme start	32.0	33.1	-2.7
On benefits 18 months before programme start	30.4	31.3	-2.1
On benefits 19 months before programme start	28.8	29.2	-1.0
On benefits 20 months before programme start	24.7	25.3	-1.4
On benefits 21 months before programme start	20.1	20.8	-1.9
On benefits 22 months before programme start	16.1	17.1	-2.9
On benefits 23 months before programme start	12.6	13.7	-3.7
On benefits 24 months before programme start	8.0	8.7	-2.5
Comparison group	5,978		
Treatment group:	1,263		
Off support	6		
On support	1,257		
% off support	0.5		
Rubin's B	13.2		
Rubin's R	1.0		

Notes: ***=difference statistically significant at the 1 per cent level; **=difference statistically significant at the 5 per cent level; *=difference statistically significant at the 10 per cent level.
Source: our calculations using data from the Catalonia region

The vast majority of those in both the treatment and the matched comparison group were Spanish (over nine-in-10) and the proportions of each group achieving particular levels of education were similar, with around one-fifth having completed university education, an additional one quarter participating in some post-compulsory education below university level and over half only receiving compulsory education. Nearly three-in-five individuals in the treatment and matched comparison groups (around 57 per cent) had family responsibilities and more than two-thirds were from the province of Barcelona. Around one-in-seven were from Tarragona and one-in-eight from Girona. Lleida accounted for the smallest share of individuals in the treatment and matched comparison groups (around one-in-14). Just over one-in-fifty individuals in the treatment and matched comparison groups were disabled.

Finally, the treatment and matched comparison groups were similar in terms of the percentage claiming unemployment benefits in successive months prior to the date of starting on PANP (or the pseudo-start date in the case of the matched comparison group). Only around one-in-12 individuals in the treatment and matched comparison groups were on unemployment benefits 24 months before starting on PANP. The percentage on benefits rose steadily over the following year to peak at around two-in-five 13 months before the start on PANP. From this point, it declined to around 1-in-20 in the month before the start on PANP. This is consistent with those eligible for PANP exhausting their entitlement to unemployment benefits prior to starting on the programme.

As well as showing that the matched comparison group were similar to the treatment group on each of the observed characteristics considered, Table 13 also shows that the percentage of treated individuals for whom it was not possible to obtain good matches in the comparison group was low (less than 1 per cent) and the overall balance on covariates was within the acceptable range for both Rubin's B and R statistics. A similar picture was evident when using the kernel and radius matching estimators (reported in Annex II).

The good match between the treatment and comparison groups on observable characteristics after PSM suggests that the impact estimates should provide a robust estimate of the impact of PANP. The low percentage of treated individuals who could not be matched to comparators based on observable characteristics indicates that the results should be indicative of the impact of PANP across the full range of participants.

Impact estimates

This section reports the estimated impact of PANP on employment for each of the groups of participants described in the previous section over a period of 16 months following the start on PANP. As mentioned previously, this equates to around 10 months after the majority of those aged between 45 and 54 would have completed PANP. The results presented here focus on the analysis using the local linear regression estimator, but the text also describes how the results compare with those produced using alternative matching methods (kernel and radius matching).

In the figures which follow, the upper chart shows estimated counterfactual outcomes for the treatment i.e. the percentage of the treatment group who would have been expected to be employed in each successive month following the start on PANP if they had not actually participated. The lower panel shows the estimated impact of PANP on employment levels in each of the 16 months following the start on PANP. The impact estimate line shows the percentage point increase in employment brought about by participation in PANP. The two broken lines on either side of the impact estimate shows 95 per cent confidence intervals. If the confidence intervals were on either side of the X-axis, this would indicate that the impact estimate was not statistically significant. The analysis considers whether, compared to a null hypothesis that the programme had no effect on each of the outcomes considered, the magnitude of any impact was large enough to say with a 95 per cent degree of certainty that the programme did make a difference. The text focuses on results which are statistically significant at conventionally-accepted levels, i.e. the five per cent level or better.

The upper panel of Figure 4 shows that without PANP, around two per cent of the treatment group would have been expected to be in employment one month after starting on PANP. By six months, the employment rate would have risen to around 11 per cent. Even at the point sixteen months after the start of participation in PANP only around 23 per cent of the treatment group would have been expected to be employed if they had not participated in PANP.

The lower panel Figure 4 of shows the impact of PANP on employment rates for the treatment group. As PANP participation involved an initial period of employment of around six months for those aged 45 to 54, it is unsurprising to see that PANP had a substantial impact on the likelihood of participants being employed in the first five months following the start on PANP. This ranged from 95 percentage points in the first month after the start of participation to 89 percentage points in month five. The impact of PANP on the likelihood of being employed dropped dramatically in month six when the majority of participants would reach the end of the employment contract they were offered under PANP. At this point, PANP appeared to raise the employment rate by around 2 percentage points. The employment impact from PANP rose over successive months, to around 10 percentage

points eight months after the start on PANP. However, this may have been partly due to some PANP participants continuing on the programme for 12-months.

There was a noticeable dip in the impact of PANP on employment 12 months after the start on PANP, when it fell to 3 percentage points. At this point, all participants should have reached the end of the employment contract they were offered under PANP. There was evidence that the impact of PANP grew following the end of participation in the programme however, with employment levels being raised by 12 percentage points 16 months after participation in PANP. The estimated counterfactual and impact estimates were very similar when using the kernel and radius matching estimators (see Annex for further details).

Figure 4 - Impact of PANP on those aged 45 to 54, local linear regression matching
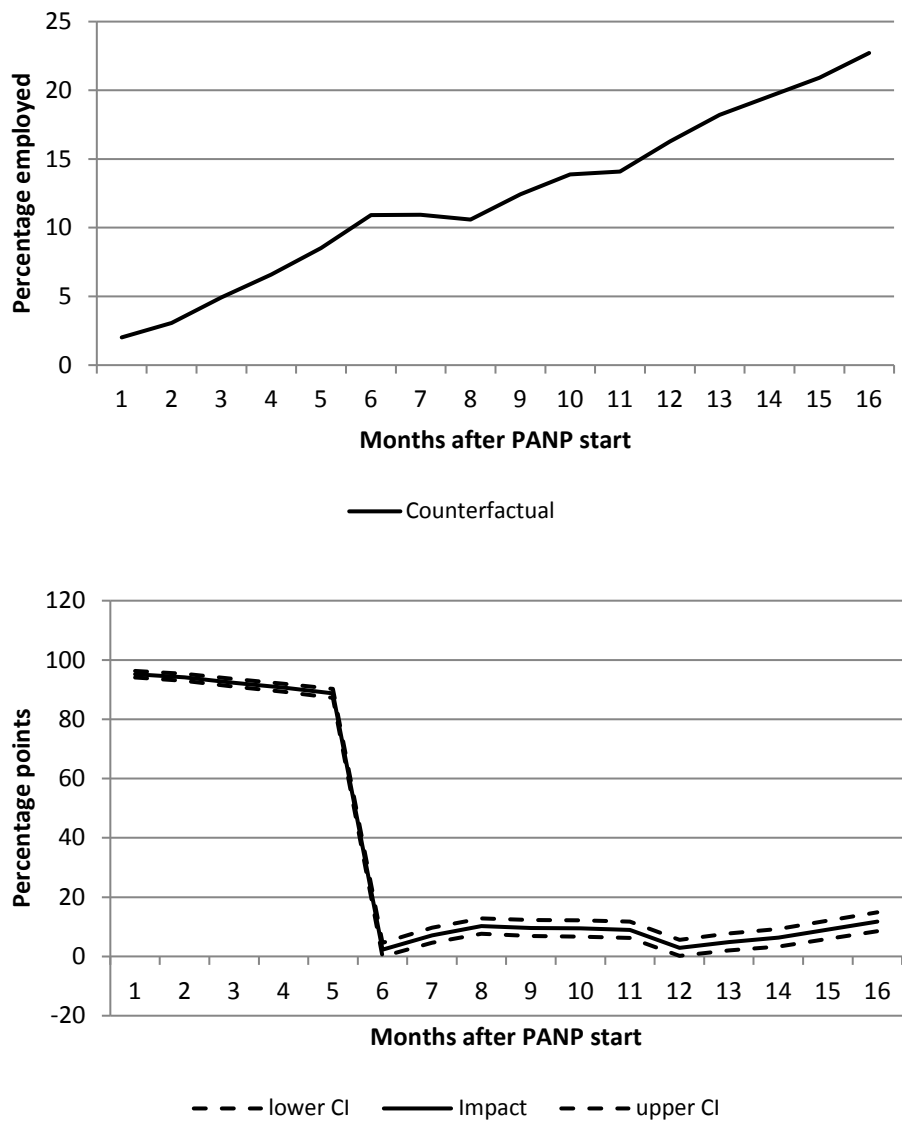
Notes: Based on analysis for 7,241 individuals for whom employment outcomes could be observed for 16 months after the start on PANP.
Source: our calculations using data from the Catalonia region

Whilst it is possible that the sizeable impacts from PANP which are seen between months 6 and 12 are partly explained by some participants still being on PANP during this period, after 12 months it is more credible that any impact on employment is due to PANP boosting the likelihood of the treatment group finding employment following their participation in

the programme. The impact of PANP on employment 12 and 16 months after the start on the programme are summarised in the table below.

Table 14 - Summary of main findings, local linear regression matching

Variable	Treated	Matched comparison	Impact estimate	S.E.	t-stat
16 months					
Employment rate	34.45	22.72	11.73***	1.62	7.24
12 months					
Employment rate	19.17	16.27	2.90**	1.37	2.12

Source: our calculations using data from the Catalonia region

1.1.3. Summary of the Spanish (Catalonia) pilot

In conclusion, the analysis suggests that it was possible to use methods of counterfactual impact evaluation to obtain a good match between the treatment and comparison groups. The analysis produced similar results regardless of the choice of matching estimator which increases confidence in the findings.

It was only possible to explore the impact of PANP over a period of 16 months following the start on the programme. This is a significant limitation given that the intervention itself could be expected to have a direct effect on the likelihood of being in employment for up to 12 months. Nevertheless, focusing on the subset of individuals aged between 45 and 54 who were predominantly offered six-month employment contracts under PANP, there was evidence to suggest that PANP did have a substantial impact on subsequent employment. These results were statistically significant. PANP increased employment by 12 percentage points 16 months after starting on PANP.

1.1.4. Annex to the CIE Pilot 3 - Spain (Catalonia)

Table A1 shows the extent to which each of the observed characteristics predicted whether the individual participated in PANP. This reflects differences in characteristics between the treatment and comparison groups prior to matching. In the text we focus on differences which were statistically significant at the 5 per cent level or lower. The table indicates that PANP participants were more likely to be aged between 45 and 50 than to be in the older age group and to be Spanish, rather than foreign, nationals. Participants were more likely to be educated to University level or higher than the wider population of unemployed people aged between 45 and 55. They were also more likely to be on benefits 8, 15 and 23 months before starting on PANP than the wider population of unemployed people in this age range. Other differences between the treatment and the control group are observable in terms of gender, of family caring responsibilities, territory of residence and disability status.

Characteristics associated with a lower likelihood of participating in PANP included being female, having family caring responsibilities, living in the province of Barcelona rather than Tarragona, being disabled and being on benefits 1, 2, 7 and 24 months before the PANP start or pseudo-start date.

Table A1: Treatment vs. comparison group, probit model

Variable	Estimate	S.E.	t-stat
Female	-0.387***	0.042	9.274
Aged 45-50	0.084**	0.040	2.117
Aged 50-55 (reference category)			
Spanish	0.403***	0.063	6.432
Education level:			
Compulsory or lower	-0.533***	0.058	9.167
Post-compulsory education	-0.142**	0.065	2.187
University education or higher (reference category)			
Family caring responsibilities	-0.108***	0.041	2.635
Barcelona	-0.233***	0.061	3.820
Girona	0.023	0.080	0.283
Lleida	0.043	0.098	0.436
Tarragona (reference category)			
Disabled	-0.887***	0.101	8.830
On benefits 1 month before programme start	-1.179***	0.105	11.187
On benefits 2 months before programme start	-0.551***	0.126	4.383
On benefits 3 months before programme start	0.238*	0.126	1.889
On benefits 4 months before programme start	-0.076	0.131	0.578
On benefits 5 months before programme start	0.150	0.137	1.098
On benefits 6 months before programme start	0.079	0.138	0.575
On benefits 7 months before programme start	-0.439***	0.140	3.128
On benefits 8 months before programme start	0.696***	0.135	5.142
On benefits 9 months before programme start	-0.120	0.132	0.914
On benefits 10 months before programme start	-0.088	0.141	0.626
On benefits 11 months before programme start	0.021	0.146	0.145
On benefits 12 months before programme start	-0.153	0.147	1.047
On benefits 13 months before programme start	-0.031	0.140	0.222
On benefits 14 months before programme start	-0.229*	0.134	1.709
On benefits 15 months before programme start	0.408***	0.134	3.052
On benefits 16 months before programme start	-0.141	0.136	1.033
On benefits 17 months before programme start	-0.028	0.140	0.200
On benefits 18 months before programme start	0.092	0.148	0.624
On benefits 19 months before programme start	0.174	0.151	1.153
On benefits 20 months before programme start	0.199	0.145	1.374
On benefits 21 months before programme start	0.071	0.150	0.472
On benefits 22 months before programme start	-0.230	0.159	1.450
On benefits 23 months before programme start	0.433***	0.158	2.746
On benefits 24 months before programme start	-0.731***	0.130	5.629
Constant	-0.252**	0.103	2.445

Notes: ***=difference statistically significant at the 1 per cent level; **=difference statistically significant at the 5 per cent level; *=difference statistically significant at the 10 per cent level.
Base: 7,241 individuals. Source: our calculations using data from the Catalonia region

Table A2 - Balance between treatment and comparison groups after PSM kernel matching - those aged 45 to 54

	Treatment group	Matched comparison group	Mean standardised bias (%)
Female	43.5	41.2	4.7
Aged 45-50	47.7	46.7	2.0
Aged 50-55	52.3	53.3	-2.0
Spanish	90.5	90.6	-0.3
Education level:			
Compulsory or lower	55.5	56.3	-1.7
Post-compulsory education	25.4	25.3	0.2
University education or higher	19.1	18.4	2.0
Family caring responsibilities	57.1	58.2	-2.2
Barcelona	66.8	68.1	-2.8
Girona	12.7	11.9	2.5
Lleida	7.2	6.8	1.5
Tarragona	13.3	13.2	0.3
Disabled	2.1	2.2	-0.1
On benefits 1 month before programme start	4.8	5.2	-1.1
On benefits 2 months before programme start	9.5	9.6	-0.1
On benefits 3 months before programme start	16.5	15.3	2.8
On benefits 4 months before programme start	20.7	19.7	2.3
On benefits 5 months before programme start	25.1	24.1	2.1
On benefits 6 months before programme start	27.0	26.1	2.0
On benefits 7 months before programme start	29.1	28.8	0.7
On benefits 8 months before programme start	33.9	33.0	1.9
On benefits 9 months before programme start	34.4	33.8	1.2
On benefits 10 months before programme start	33.7	34.4	-1.4
On benefits 11 months before programme start	34.9	36.0	-2.3
On benefits 12 months before programme start	36.9	38.4	-3.1
On benefits 13 months before programme start	38.3	39.7	-2.8
On benefits 14 months before programme start	38.2	39.4	-2.7
On benefits 15 months before programme start	37.5	38.6	-2.6
On benefits 16 months before programme start	35.0	35.9	-2.0
On benefits 17 months before programme start	32.0	32.6	-1.4
On benefits 18 months before programme start	30.4	30.6	-0.6
On benefits 19 months before programme start	28.8	28.5	0.7
On benefits 20 months before programme start	24.7	24.8	-0.2
On benefits 21 months before programme start	20.1	20.3	-0.6
On benefits 22 months before programme start	16.1	16.8	-2.1
On benefits 23 months before programme start	12.6	13.4	-2.7
On benefits 24 months before programme start	8.0	8.9	-3.2
Comparison group	5,978		
Treatment group:	1,263		
Off support	6		
On support	1,257		
% off support	0.5		
Rubin's B	12.2		
Rubin's R	1.3		

Notes: ***=difference statistically significant at the 1 per cent level; **=difference statistically significant at the 5 per cent level; *=difference statistically significant at the 10 per cent level.
Source: our calculations using data from the Catalonia region

Table A3 - Balance between treatment and comparison groups after PSM radius matching - those aged 45 to 54

	Treatment group	Matched comparison group	Mean standardised bias (%)
Female	43.5	41.3	4.4
Aged 45-50	47.7	46.6	2.3
Aged 50-55	52.3	53.4	-2.3
Spanish	90.5	90.6	-0.3
Education level:			
Compulsory or lower	55.5	56.3	-1.5
Post-compulsory education	25.4	25.3	0.2
University education or higher	19.1	18.4	1.9
Family caring responsibilities	57.1	58.4	-2.6
Barcelona	66.8	67.9	-2.4
Girona	12.7	12.0	2.4
Lleida	7.2	6.8	1.4
Tarragona	13.3	13.3	0.1
Disabled	2.1	2.2	-0.1
On benefits 1 month before programme start	4.8	5.3	-1.3
On benefits 2 months before programme start	9.5	9.7	-0.3
On benefits 3 months before programme start	16.5	15.3	2.7
On benefits 4 months before programme start	20.7	19.6	2.3
On benefits 5 months before programme start	25.1	24.1	2.1
On benefits 6 months before programme start	27.0	26.1	2.0
On benefits 7 months before programme start	29.1	28.7	0.8
On benefits 8 months before programme start	33.9	32.9	2.1
On benefits 9 months before programme start	34.4	33.7	1.3
On benefits 10 months before programme start	33.7	34.3	-1.2
On benefits 11 months before programme start	34.9	36.0	-2.2
On benefits 12 months before programme start	36.9	38.3	-2.9
On benefits 13 months before programme start	38.3	39.6	-2.6
On benefits 14 months before programme start	38.2	39.3	-2.4
On benefits 15 months before programme start	37.5	38.5	-2.4
On benefits 16 months before programme start	35.0	35.8	-1.9
On benefits 17 months before programme start	32.0	32.5	-1.2
On benefits 18 months before programme start	30.4	30.5	-0.3
On benefits 19 months before programme start	28.8	28.4	0.9
On benefits 20 months before programme start	24.7	24.7	0.0
On benefits 21 months before programme start	20.1	20.3	-0.4
On benefits 22 months before programme start	16.1	16.8	-1.9
On benefits 23 months before programme start	12.6	13.3	-2.5
On benefits 24 months before programme start	8.0	8.9	-3.2
Comparison group	5,978		
Treatment group:	1,263		
Off support	6		
On support	1,257		
% off support	0.5		
Rubin's B	12.2		
Rubin's R	1.3		

Notes: ***=difference statistically significant at the 1 per cent level; **=difference statistically significant at the 5 per cent level; *=difference statistically significant at the 10 per cent level.
Source: our calculations using data from the Catalonia region

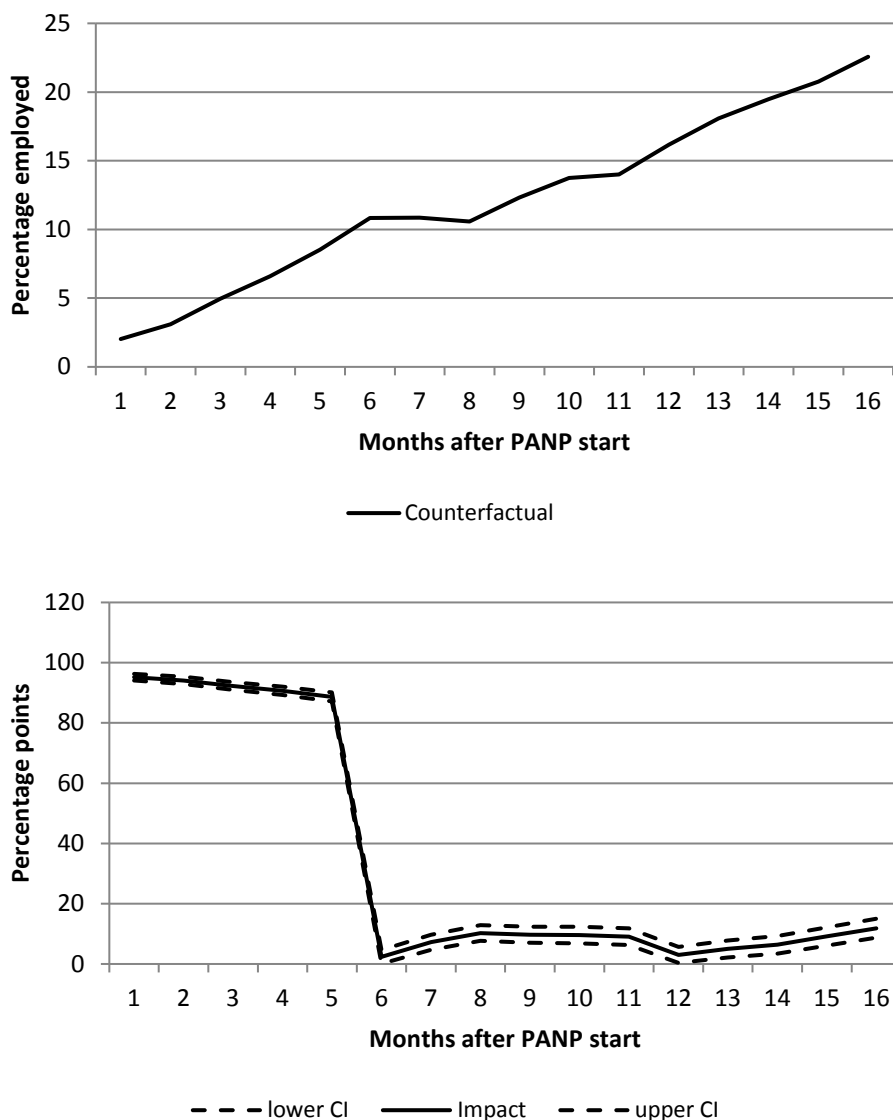**Figure A1 - Impact of PANP on those aged 45 to 54, Kernel matching**

Table A4 - Summary of main findings, kernel matching

Variable	Treated	Matched comparison	Impact estimate	S.E.	t-stat
16 months					
Employment rate	34.45	22.57	11.88***	1.61	7.39
12 months					
Employment rate	19.17	16.17	3.01**	1.36	2.21

Source: our calculations using data from the Catalonia region

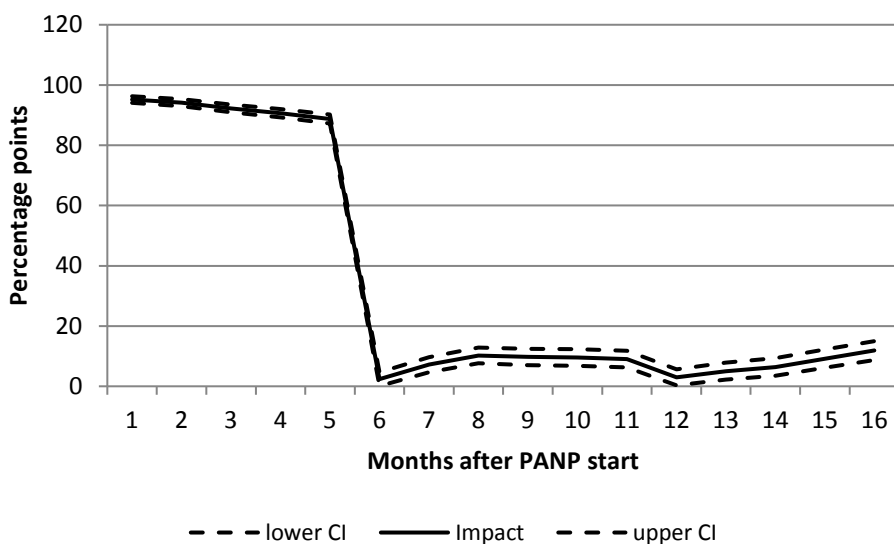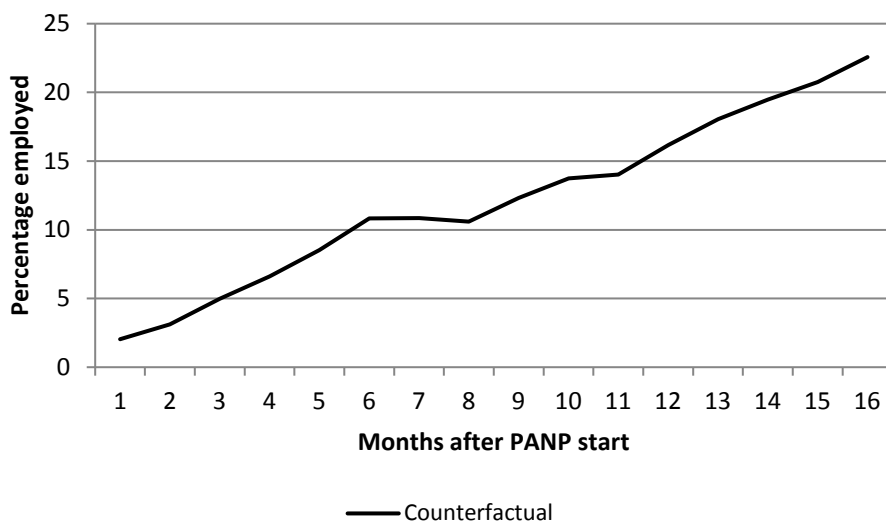**Figure A2 - Impact of PANP on those aged 45 to 54, Radius matching**

Table A5 - Summary of main findings, radius matching

Variable	Treated	Matched comparison	Impact estimate	S.E.	t-stat
16 months					
Employment rate	34.45	22.57	11.88***	1.61	7.40
12 months					
Employment rate	19.17	16.16	3.01**	1.36	2.22

Source: our calculations using data from the Catalonia region