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An evaluation of ALMP: the case of Spain

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ABSTRACT

In this paper we use non-experimental microdata to analyse the effects of several active labour market policies (ALMPs) carried out by the National Employment Institute (INEM) and the regional governments in Spain from 2001 to 2002. We compare the employment rates of the treatment group and the employment rates of a control group of non-participants selected by a random procedure from those unemployed registered in the employment offices who didn't participate in any program during the period of analysis. Our results differ depending on the group of beneficiaries: Participation in ALMP produced especially positive results for women and long-term jobseekers.

JEL Classification: J64, J68

Keywords: active labour market policies, evaluation, labour market

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1. Introduction

The aim of this paper is to analyse the effects of the main active labour market policies (ALMP) carried out by the Spanish National Employment Institute (INEM) and the regional governments in Spain from 2001 to 2002 (MTAS (2001)). It is customary to develop ex-post evaluation studies using some or a combination of the following variables, or a combination of them, all referring to a specific period after the individuals have participated in one of the LMP measures: i) probability of participants finding a job, ii) actual earnings of participants, and iii) duration of employment. However, the key objective of this paper is to estimate the first indicator and the main factors, which also influence its variations.

In its simplest form, the evaluation can be expressed as:

$$\Delta_i = Y_i^1 - Y_i^0 \quad [1]$$

where Y_i^1 is the outcome for an individual i if he participates in the programme and Y_i^0 is the outcome for the same individual i if he does not participate. The fundamental problem is to determine the labour success rate attained by an individual who took part in a programme as well as the result that the same individual would have reached in the hypothetical absence of ALMP (Heckman et al. (1999), Blundell and Costa-Dias (2000), Caliendo (2006) among others). Because this is not possible, the results for the counterfactual have to be estimated. In order to address this problem and to obtain operational results, for each of the programmes we compare the employment ratios of participants with those achieved by members of a control group (non-participants group). The data used in the evaluation are based on microdata from INEM and from the Spanish Social Security System (SSS) records.

Nevertheless, non-experimental data does lead to a selection bias because the researcher cannot control the decision to participate. The outcome would thus be different even without the programmes (Heckman (1979), Heckman et al. (1999), Eichler and Lechner (2002), Pierre (1999) among others). This means that there are other factors different from the participation itself that influences on the outcome; for example, variation in skills or in the

age of the individual that affects their employment probability. These kinds of factors are usually described as observable characteristics. There could also be other kinds of factors, such as motivation, the individual's social environment, social networks, as well as other factors that researchers cannot observe that produce a selection bias related to non-observable characteristics (Heckman (1979), Heckman et al. (1999)).

In this paper we have taken great pains to reduce the selection bias produced by the existence of observable characteristics. To that end, we have used a random procedure to construct a control group of the same size and characteristics, matching one-to-one with the treatment group. In this way we achieve a control group of non-participants that is similar to those of the participants.

The paper is organized as follows: Section 2 describes the procedure used to create the control group. Section 3 describes the analysed programmes and the data. Section 4 contains the employment rates for all the programmes and specific collectives (gender, age, etc). Section 5 estimates a discrete choice model where the employment status is the endogenous variable and the programme participation and others covariates are the explanatory variables. Section 6 proposes some conclusions and practical recommendations.

2. The control group

To analyse the effect of the programme, we have selected a control group of jobseekers that didn't participate in any ALMP after April 2001. Our objective was to find a group of jobseekers who were non-participants in any ALMP with the same labour and personal characteristics. This control group must also be of the same size as the treatment group.

To determine the potential control group members, for each month included in the period of analysis we compare the dataset of participants (e.g. 40.705 in April 2001, see table 1) with all the unemployed people registered at the Employment Offices who did not participate in any of the ALMP in that month, or any other month. Thus in April 2001 we selected the members of the control group from the 1.9 million unemployed jobseekers registered at the Employment Offices, excluding the jobseekers who participated in any ALMP. Taking into account this whole database, we proceeded, by a random procedure, to select the definitive

control group members, imposing the following restrictions: For each individual in the treatment group, we looked for a non-participant with the same labour characteristics (time spent searching for employment and regional labour market, defined by the Spanish Comunidades Autónomas), the same human capital (defined by his educational level¹) and the same personal characteristics defined by his gender and age (considering groups of ten years). For those cases where we found more than one non-participant who could be a member of the control group, we chose only one of them using a random procedure. The final result is that we have for each month included in the analysis, a control group of the same size and same observable characteristics of the treatment group. The detail of the database is shown in Table 1.

Table 1. Selection of the control group members

	Jobseeker participants in any ALMP (*) (1)	Unemployed registered at the Employment Office (2)	Potential control group members (2) – (1)	Jobseeker non-participants selected as control group
2001.04	40,705	1,910,453	1,869,748	40,705
2001.05	56,232	1,898,285	1,842,053	56,232
2001.06	74,446	1,842,556	1,768,110	74,446
2001.07	76,710	1,835,738	1,759,028	76,710
2001.08	46,096	1,878,513	1,832,417	46,096
2001.09	68,454	1,889,185	1,820,731	68,454
2001.10	92,544	1,940,909	1,848,365	92,544
2001.11	97,171	1,985,857	1,888,686	97,171
2001.12	58,586	1,988,715	1,930,129	58,586
2002.01	51,191	2,075,022	2,023,831	51,191
2002.02	50,236	2,149,908	2,099,672	50,236
2002.03	55,102	2,083,103	2,028,001	55,102
Total	767,473	1,956,520(**)	1,892,564 (**)	767,473

(*) Not including Disabled Workers Centres, Subsidies contracts for disabled workers, Self-employment Promotion, Employment Local Initiatives, Contract Subsidies or Unemployment Subsidies Capitalization

(**) Average period 04.2001-03.2002

Source: Main calculations, Spanish National Employment Institute and MTAS

¹ We have distinguished among nine different educational level categories in order to select the control group members: Without studies, Primary studies without degree, Primary studies' degree, Vocational training I, Vocational training II, Other vocational training, High Scholl, Medium university studies (less than 3 years), High university studies (3 years and more).

3. Programmes and data

The paper focuses on 17 ALMP: i) 6 directed at giving labour orientation to the unemployed, ii) 3 related to the workers training processes, iii) 2 promoting employment among disabled and marginalized people and iv) 6 directed at the creation and/or promotion of employment. The number of participants in each programme analysed is shown in Table 2.

Table 2. Programmes analysed and number of participants

	Number of Participants Analysed	Number of Non-Participants analysed
Insertion income (1)	106,110	106,110
General Orientation (2)	10,031	10,031
Individual job-search assistance (2)	214,407	214,407
Personal employment orientation plans (2)	54,957	54,957
Active job-search assistance (2)	29,681	29,681
Entrepreneurial assistance (2)	10,109	10,109
Vocational training (3)	260,155	260,155
Workshop schools (3)	16,454	16,454
Employment workshops(3)	7,201	7,201
Disabled workers centres (*) (4)	3,906	NCG
Contract subsidies for disabled (*) (4)	20,462	NCG
Public employment (Social Activities) (5)	58,368	58,368
Self-employment promotion (*) (5)	15,216	NCG
Employment through local initiatives (*) (5)	1,725	NCG
Contract subsidies (New) (*) (5)	263,764	NCG
Contract subsidies (Old) (*) (5)	14,286	NCG
Unemployment subsidy capitalization (*) (5)	16,233	NCG
Total	1,103,065	767,473

(*) No control group (NCG)

Source: Spanish National Employment Institute

(1) Income with the commitment from beneficiaries to collaborate in social activities organised by Public Employment Offices; (2) Orientation and assessment at Public Employment Offices directed at the unemployed; (3) Workers' training programmes; (4) Programmes directed at promoting employment among disabled and marginalized people through subsidies to companies; (5) Programmes directed at the creation and/or promotion of employment through subsidies to companies or self-employed workers.

In this paper we analyse 1,103,065 persons who have participated in any of the ALMP mentioned above from April 2001 to March 2002 (*Plan de Acción para el Empleo del Reino de España 2001*). The database was obtained from INEM unemployment records and also includes a further 767,473 individuals selected among those who did not participate in any active labour policies from April 2001 on. The main characteristic of this control group is that all its members are "exactly equal" to the participants in terms of the five types of variables that are available in the administrative records used: gender, age (groups of ten years), educational level (nine categories), unemployment duration and region (Spanish

“Comunidades Autónomas”).

Table 3 shows the main characteristics of the participants in each programme analysed. Regarding personal characteristics, 61.3% are women and the average age of participants is 33 years. 57% of the individuals have only completed their primary education and over 50% are older than 25 years and were searching for jobs for less than 12 months before the start of the programmes. 53% were unemployed jobseekers while the other 47% were not unemployed. Finally, 35.6% of the participants were receiving an unemployment subsidy, while 55.9% were not.

Table 3. Distribution by personal and labour characteristics

	Women	Age (average)	Educational level			
			Without studies	Primary	Secondary	Tertiary
Insertion income	54.7%	39.22	36.6%	60.1%	2.5%	0.8%
General orientation	60.4%	36.37	7.7%	62.2%	18.3%	11.8%
Individual job-search assistance	65.9%	32.60	5.3%	61.7%	19.3%	13.6%
Personal employment orientation plans	64.6%	33.07	2.1%	58.8%	22.8%	16.3%
Active job-search assistance	71.2%	31.64	4.5%	56.1%	21.0%	18.4%
Entrepreneurial assistance	51.2%	33.15	1.8%	51.5%	25.9%	20.8%
Vocational training	64.3%	30.30	0.9%	47.8%	32.9%	18.4%
Workshop schools	42.0%	19.98	3.4%	89.8%	6.5%	0.3%
Employment workshops	58.6%	38.54	7.5%	69.0%	10.6%	13.0%
Disabled workers centres (*)	32.0%	35.60	5.4%	78.7%	12.0%	3.9%
Contracts subsidies for disabled (*)	42.2%	31.61	2.1%	66.7%	21.8%	9.5%
Public employment	43.0%	38.66	16.0%	63.1%	10.2%	10.8%
Self-employment promotion (*)	43.6%	33.32	2.3%	67.7%	19.6%	10.4%
Employment through local initiatives (*)	48.0%	32.70	2.1%	62.2%	22.0%	13.7%
Contract subsidies (new) (*)	47.5%	29.61	1.5%	58.7%	20.7%	19.1%
Contract subsidies (old) (*)	43.8%	24.74	0.4%	22.5%	10.7%	66.4%
Unemployment subsidy capitalization (*)	22.6%	31.31	0.0%	65.1%	21.9%	13.0%
Total (**)	61.3%	33.03	8.7%	57.0%	20.9%	13.4%

(*) Programmes without control group

(**) Only programmes with control group

Table 3. Cont.

	J-D <25 years & <6 months searching job	J-D >=25 years & <12 months searching job	Long term job- seekers	Participants		Non-participants	
				Unem- ployed	Not unem- ployed	Unem- ployed	Not unem- ployed
Insertion income	6.9%	77.2%	15.9%	8.3%	91.7%	60.6%	39.4%
General orientation	24.1%	67.3%	8.6%	75.5%	24.5%	81.3%	18.7%
Individual job-search assistance	19.1%	51.4%	29.5%	62.3%	37.7%	78.9%	21.1%
Personal employment orientation plans	25.5%	53.4%	21.1%	84.3%	15.7%	85.5%	14.5%
Active job-search assistance	25.0%	49.0%	26.0%	65.1%	34.9%	78.0%	22.0%
Entrepreneurial assistance	12.7%	67.8%	19.5%	62.7%	37.3%	82.7%	17.3%
Vocational training	24.4%	53.1%	22.5%	55.3%	44.7%	80.1%	19.9%
Workshop schools	57.1%	0.8%	42.1%	24.0%	76.0%	71.6%	28.4%
Employment workshops	5.1%	69.7%	25.2%	60.2%	39.8%	84.7%	15.3%
Disabled workers centres (*)	-	-	-	-	-	-	-
Contract subsidies for disabled (*)	-	-	-	-	-	-	-
Public employment	9.9%	70.9%	19.2%	52.2%	47.8%	82.0%	18.0%
Self-employment promotion (*)	-	-	-	-	-	-	-
Employment through local initiatives (*)	-	-	-	-	-	-	-
Contract subsidies (new) (*)	-	-	-	-	-	-	-
Contract subsidies (old) (*)	-	-	-	-	-	-	-
Unemployment subsidy capitalization (*)	-	-	-	-	-	-	-
Total (**)	19.9%	56.6%	23.5%	52.7%	47.3%	77.4%	22.6%

(*) Programmes without control group

(**) Only programmes with control group

Table 3. Cont.

	Participants			Non-participants		
	No subsidy	Subsidy	Subsidy finished	No Subsidy	Subsidy	Subsidy finished
Insertion income	9.9%	84.3%	5.8%	39.0%	52.2%	8.8%
General Orientation	58.9%	34.3%	6.8%	59.0%	31.9%	9.2%
Individual job-search assistance	58.0%	33.5%	8.5%	59.4%	30.7%	9.9%
Personal employment orientation plans	56.4%	35.7%	7.9%	59.0%	31.7%	9.2%
Active Job-search assistance	60.4%	33.1%	6.4%	63.0%	28.0%	9.0%
Entrepreneurial Assistance	50.1%	34.8%	15.1%	56.4%	32.4%	11.2%
Vocational Training	71.0%	21.9%	7.2%	63.9%	26.7%	9.4%
Workshops Schools	95.7%	3.0%	1.3%	77.7%	17.5%	4.7%
Employment workshops	61.0%	19.1%	20.0%	52.4%	35.2%	12.4%
Disabled Workers Centres (*)	-	-	-	-	-	-
Contracts Subsidies for disabled (*)	-	-	-	-	-	-
Public employments	50.7%	28.4%	20.8%	48.5%	39.9%	11.6%
Self employment Promotion (*)	-	-	-	-	-	-
Employment Local Initiatives (*)	-	-	-	-	-	-
Contract Subsidies (News) (*)	-	-	-	-	-	-
Contract Subsidies (Olds) (*)	-	-	-	-	-	-
Unemployment Subsidies Capitalization (*)	-	-	-	-	-	-
Total (**)	55.9%	35.6%	8.5%	57.7%	32.8%	9.5%

(*) Programmes without control group

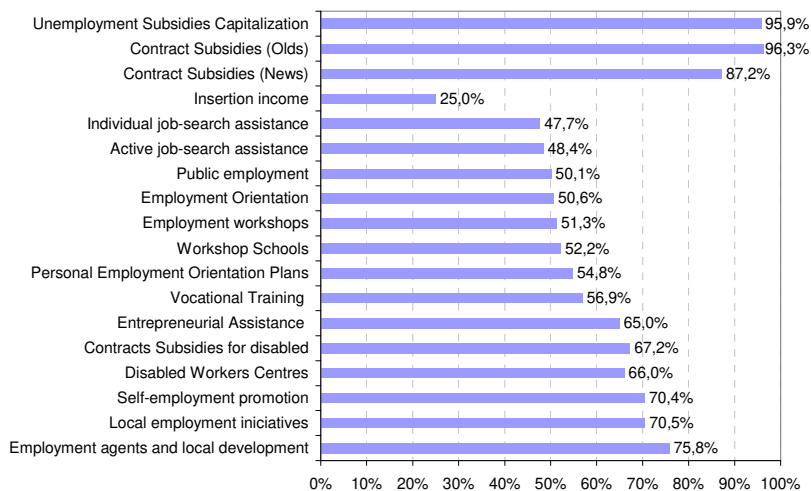
(**) Only programmes with control group

4. Employment rates: a descriptive analysis

This section shows the employment rates achieved by participants in all the programmes analysed here, differentiated by specific collectives. Additionally, the differences in the employment rate between the treatment group and the control group for all those programmes that need a comparison group can be seen. We assume as a hypothesis that all the differences between participants and non-participants are observables, which means that the recorded information managed by us is only relevant as a way of describing the personal characteristics of unemployed people: i.e. gender, age, educational level, region and the job search duration. Nevertheless, there are other factors that influence the results about which we do not have information. For instance, it was not possible to get information about characteristics such as social and labour integration of workers.

The employment rate is defined as the proportion of individuals that were still affiliated with Social Security in November 2003, which is approximately one-and-a-half years after participation took place. In order to avoid distortions, we have eliminated from the analysis those people who were affiliated with Social Security in November 2003 and were simultaneously receiving an unemployment subsidy. Chart 1 presents the employment rates for all the programmes.

Chart 1. Employment rates by programmes

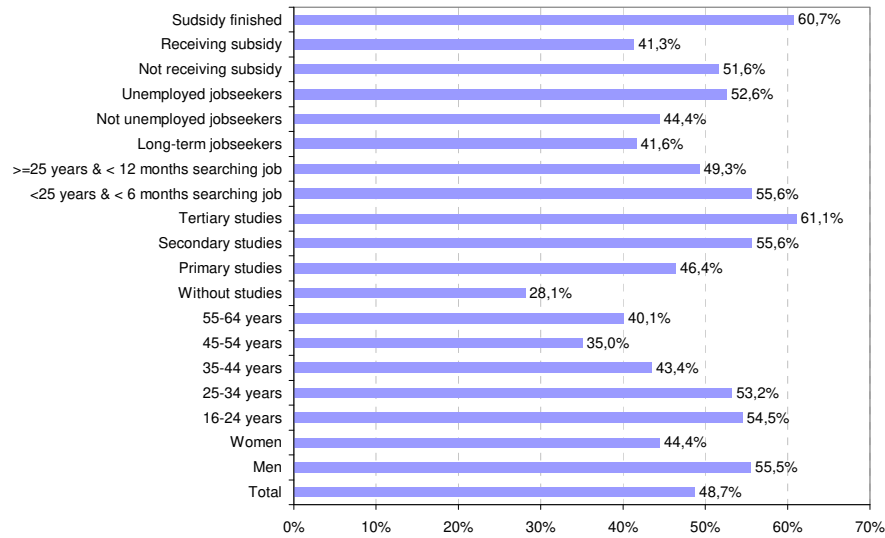


Source: Main calculations from the Spanish National Employment Institute (INEM) and Social Security System

As can be observed in Chart 1, the highest employment rates are achieved by those individuals who participated in *Employment agents and local development* (75.8%), *Local employment initiatives* (70.5%) and *Self-employment promotion* (70.4%), while participants in *Insertion Income* programme only reaches an employment rate of 25% (See notes to Table 2).

As the employment rate for all of the programmes is 48.7%, some differences between collectives can be observed. Men obtained an employment rate 11.1% higher than women. Also, people from 16 to 24 years reach a higher employment rate than the other age groups. Individuals with tertiary studies have an employment rate of 61.1%, and this percentage decreases as the individual's educational level decreases. Young people (less than 25 years) who have been searching for a job less than six months also have a higher employment rate (55.6%). Another difference can be observed when we look at the employment situation at the moment of programme participation: unemployed jobseekers reached higher employment rates than non-unemployed jobseekers. Finally, considering whether the individual was receiving an employment subsidy or not, we observe that the highest employment rates are reached by those participants who had finished their subsidy at the moment of participation (60.7%), while those who continued to receive a subsidy have the lowest employment rate (41.3%).

**Chart 2. Employment rates by specific collectives.
(Only programmes with control group)**



Source: Main calculations from the Spanish National Employment Institute (INEM) and Social Security System

More interesting is the comparison of the employment rate of the non-participants (that is, the real effect of programmes). Table 4 shows these results. The first and the second columns in Table 2 show the employment rate for the participants in the ALMP programmes and the non-participants respectively. The third column shows the difference in the employment rate between participants and non-participants, and the last column indicates the corresponding statistical significance level.

Comparing the different programmes, we find that only three programmes obtained higher employment rates than the non-participants. Individuals who participated in *Vocational training* reached an employment rate 0.3 percentage points (pp) higher than non-participants. Participants in *Personal employment orientation plans* also have higher employment rates than non-participants; the difference in this case is 0.8 pp. Nevertheless, the most important difference can be observed among the participants in *Entrepreneurial assistance* programmes: Participants reach an employment rate 8.8 pp higher than non-participants.

Although participants in *Workshop schools* and *Employment workshops* have lower

employment rates than non-participants, the significance level is much higher than 0.05, so these differences are not statistically significant.

When we look at gender, we observe that employment rates are always higher for non-participants, but the difference is much higher for men. The same occurs when we look at the age of participants: For every age group the employment rate of non-participants is higher than the participants' employment rate and the difference rises as age increases. Looking at the educational level, important differences in the employment rate exist for those less skilled (people without studies and people with only primary studies). Non-participants with tertiary studies also have higher employment rates than participants, but the difference in this case is not statistically significant. A positive difference of 0.14 pp can be observed for those individuals with secondary studies but, once again, the difference is not statistically significant.

In terms of the time spent searching for a job, only the participants who were long-term jobseekers have higher employment rates than non-participants, the difference being 0.9 pp. We can also observe a positive difference in the employment rates for those jobseekers who were not unemployed at the moment of participation.

Table 4. Participants' and non-participants' employment rates and statistical differences

	Treatment (Participants)	Control (Non- participants)	Difference (ER _{part} – ER _{non-part})	Sig. (*)
Total	48.72%	52.25%	-3.53%	0.000
Vocational training	56.91%	56.61%	0.30%	0.028
Insertion income	24.78%	43.04%	-18.26%	0.000
Public employment	50.08%	55.44%	-5.37%	0.000
Employment orientation	50.59%	56.80%	-6.21%	0.000
Individual job-search assistance	47.71%	50.10%	-2.39%	0.000
Personal employment orientation plans	54.75%	53.96%	0.79%	0.008
Entrepreneurial assistance	64.96%	56.16%	8.80%	0.000
Workshop schools	52.16%	52.86%	-0.70%	0.202
Employment workshops	51.31%	51.73%	-0.42%	0.618
Active job-search assistance	48.41%	50.99%	-2.57%	0.000
Men	55.51%	61.48%	-5.98%	0.000
Women	44.45%	46.45%	-2.00%	0.000
16-24 years	54.51%	55.90%	-1.39%	0.000
25-34 years	53.23%	55.57%	-2.34%	0.000
35-44 years	43.44%	49.01%	-5.57%	0.000
45-54 years	35.04%	39.67%	-4.63%	0.000
55-64 years	40.08%	52.86%	-12.79%	0.000
Without studies	28.11%	39.64%	-11.53%	0.000
Primary studies	46.41%	50.88%	-4.47%	0.000
Secondary studies	55.64%	55.50%	0.14%	0.416
Tertiary studies	61.05%	61.25%	-0.20%	0.358
Time searching a job				
<25 years & < 6 months searching job	55.64%	58.36%	-2.73%	0.000
>=25 years & < 12 months searching job	49.27%	54.94%	-5.67%	0.000
Long term jobseekers	41.60%	40.70%	0.90%	0.000
Not unemployed jobseekers	44.39%	43.36%	1.03%	0.000
Unemployed jobseekers	52.58%	54.84%	-2.25%	0.000
No subsidy	51.59%	50.26%	1.34%	0.000
Subsidy	41.33%	53.45%	-12.12%	0.000
Sudsidy finished	60.73%	60.15%	0.58%	0.028
Center of Spain	54.74%	55.29%	-0.55%	0.002
South Spain	40.41%	47.60%	-7.18%	0.000
East (Levante)	57.48%	57.90%	-0.42%	0.035
North Spain	56.19%	56.16%	0.03%	0.872

(*) Significance level Chi-square test

Source: Main calculations from the Spanish National Employment Institute (INEM) and Social Security System

Finally, an important negative difference in the employment rates can be observed for those people who were receiving the subsidy at the moment of programme participation, while the difference is positive if the individuals do not receive a subsidy or they have finished

receiving it. This is an important initial result for determining which persons should participate in active labour market policies. People who are receiving a subsidy have a higher opportunity cost than others and their reserve wage increases consequently, affecting their employment rate negatively (Herrarte, Moral-Carcedo and Sáez (2006)).

Nevertheless, in order to know which variables determine the employment rate, it is necessary to estimate an econometric model controlling for all the relevant explanatory variables as we do in the next section.

5. Econometric model and results

In this section we estimate the employment probability using an econometric model. Our endogenous variable is a binary variable, which is equal to one if a person is employed (has been affiliated with Social Security) in November 2003 (approximately a year and a half after participation) or zero if he or she is not. Taking into account the characteristics of the endogenous variable, and in order to interpret the results as employment probability, we have estimated a logit model defined by equation [2]:

$$\text{Prob}(Y_i = 1) = \frac{1}{1 + e^{-\alpha - \beta_k X_{ki} - \delta ALMP_i}} \quad [2]$$

where $i = 1, 2, \dots, 1,543,175$

The X_{ki} variables considered to be explanatory of the employment probability are: gender, age, educational level, time seeking employment, labour situation at the moment of participation (unemployed or not), whether the individual is receiving a subsidy at the moment of participation, and some regional characteristics such as the province of residence's employment rate and the increase in the employment rate of the province in 2003. Finally, we include four dummy variables referred to the regional residence zone.

The $ALMP_i$ regressor is a binary variable, which takes the value of 1 if the individual i is a participant in any ALMP and 0 if the individual i is a non-participant. This variable attempts to determine the effect of programme participation in Spain on employment probability.

5.1. Estimation results

First, we estimate the model for all the programmes together, and afterwards we present the results for each ALMP programme separately. The main results from the logit estimations for all the programmes are shown in Table 5.

The first feature to point out is that all variables included in the model have a statistical significance of 99%. Looking at the odds ratio shown in the third column, we can observe that women have a lower probability of being employed than men do (the odds ratio is only 0.55, which implies that the probability of being employed for women is 44% lower than for men). The results also show that any age group has lower probabilities than the one taken as a reference (16 to 24 years old). Additionally, the educational level referring to people without studies shows that a higher educational level implies a rise in the employment rate: The odds ratio of people with tertiary studies is 2.2. For young people with fewer than 6 months searching for a job, the variable that measures the time searching for a job shows that those older than 24 with fewer than 12 months searching for a job have higher probabilities of employment: The probability of being employed is 1.44 times higher than that of the reference group. On the other hand, long-term jobseekers have a lower probability of being employed than the reference group.

Table 5. Logit estimations: Programmes with control group

	B	Sig.	Exp(B)
Women	-0.581	0.000	0.559
Reference: 16-24 years		0.000	
25-34	-0.423	0.000	0.655
35-44	-0.606	0.000	0.545
45-54	-0.922	0.000	0.398
55-64	-0.508	0.000	0.602
Reference: Without studies		0.000	
Primary	0.288	0.000	1.334
Secondary	0.513	0.000	1.670
Tertiary	0.789	0.000	2.202
Reference: <25 years & < 6 months searching job		0.000	
>=25 years & < 12 months searching job	0.369	0.000	1.446
Long-term jobseekers	-0.130	0.000	0.878
ALMP Participation	-0.067	0.000	0.935
Unemployed	0.309	0.000	1.363
Reference: not receiving subsidy		0.000	
Receiving subsidy	0.053	0.000	1.055
Subsidy finished	0.444	0.000	1.559
Province employment rate 01-02	0.031	0.000	1.032
Employment rate change	0.020	0.000	1.020
Reference: Center of Spain		0.000	
South	-0.070	0.000	0.933
East (Levante)	0.021	0.000	1.021
North	0.069	0.000	1.072
Constant	-1.761	0.000	0.172
No cases	1,543,175		
Pseudo R2	0.10		
% correct predictions Yi=0	57.92 %		
% correct predictions Yi =1	64.64 %		
% correct predictions	61.31 %		

Source: Main calculations from the Spanish National Employment Institute (INEM) and Social Security System

Being unemployed increases the probability of being employed; the odds ratio in this case is 1.36. Looking at the subsidy variable, we can observe that people who were receiving a subsidy have a higher probability of being employed. The same can be observed for those who had finished their subsidy. Nevertheless, the effect is much higher for the latter, the odds ratio being 1.55 vs 1.05.

Variables relative to the province labour market situation show that those provinces with higher employment rates positively affect the probability of employment. Also, if the

employment rate increases, we also find a positive effect on employment probability. The dummy variable referring to the geographical zone where programme participation took place shows that, compared to the Center of Spain, the employment probability decreases in the South of Spain, but increases in the North and in the East zone (Levante).

Finally, the participation programme variable shows a negative coefficient, which implies that the probability of employment is lower for those people who participate in the programme.

Nevertheless, estimations included in Table 3 do not consider the joint effect of any of the explanatory variables, and the previous descriptive analysis suggests the necessity of considering the interaction between some of these variables. Specifically, we again have estimated the model [2] to include the interaction between gender and programme participation and especially the interaction between the time searching for a job and programme participation. The new estimation results are presented in Table 6. Table 6 contains the estimation for the global sample (all programmes included) and the specific results for each ALMP measure.

Looking at the global estimation for all the programmes together, the first significant result found is that when we consider the joint action of ALMP participation and time seeking employment, we find a positive effect of participation for the long-term jobseekers group. This result indicates that for this group of individuals participation in ALMP increases their employment probability (the odds ratio is 1.15). Nevertheless, the effect continues to be negative for jobseekers older than 25 with fewer than 12 months searching for a job. When we look at the interaction of gender and ALMP participation, we also find a positive effect of ALMP participation for women with an odds ratio of 1.15.

Table 6. Logit estimations including interactions (*)

	Total			Vocational training			Workshop schools (1)			Employment workshops		
	B	Sig.	Exp(B)	B	Sig.	Exp(B)	B	Sig.	Exp(B)	B	Sig.	Exp(B)
Women	-0.651	0.000	0.521	-0.467	0.000	0.627	-0.614	0.000	0.541	-0.748	0.000	0.473
Reference: 16-24 years	0.000			0.000			-0.004 0.410 0.996			0.000		
25-34	-0.421	0.000	0.656	-0.400	0.000	0.670	-	-	-	-0.481	0.007	0.618
35-44	-0.604	0.000	0.547	-0.632	0.000	0.531	-	-	-	-0.483	0.006	0.617
45-54	-0.921	0.000	0.398	-0.974	0.000	0.378	-	-	-	-0.684	0.000	0.505
55-64	-0.505	0.000	0.603	-0.746	0.000	0.474	-	-	-	-0.359	0.054	0.698
Reference: Without studies	0.000			0.000			0.000			0.000		
Primary	0.291	0.000	1.337	0.223	0.000	1.250	0.147	0.018	1.158	0.361	0.000	1.435
Secondary	0.515	0.000	1.674	0.346	0.000	1.413	0.343	0.000	1.410	0.537	0.000	1.710
Tertiary	0.792	0.000	2.208	0.627	0.000	1.873	0.940	0.000	2.560	0.900	0.000	2.458
Reference: <25 years & < 6 months searching job	0.000			0.000			0.000			0.000		
>=25 years & < 12 months searching for a job	0.423	0.000	1.527	0.398	0.000	1.489	-0.359	0.577	0.698	0.371	0.074	1.449
Long-term jobseekers	-0.201	0.000	0.818	-0.231	0.000	0.794	-0.211	0.000	0.810	-0.243	0.238	0.784
ALMP participation	-0.125	0.000	0.883	-0.128	0.000	0.880	-0.061	0.109	0.941	-0.365	0.018	0.694
ALMP part. & >=25 years & < 12 months searching job	-0.111	0.000	0.895	0.050	0.000	1.051	0.306	0.646	1.358	-0.011	0.944	0.989
ALMP part. & long-term jobseekers	0.141	0.000	1.152	0.292	0.000	1.339	0.232	0.000	1.261	0.337	0.048	1.400
Women & ALMP participation	0.139	0.000	1.150	0.153	0.000	1.166	0.055	0.229	1.057	0.472	0.000	1.603
Unemployed	0.301	0.000	1.352	0.102	0.000	1.107	0.133	0.000	1.143	0.064	0.117	1.066
Reference: not receiving subsidy	0.000			0.000			0.000			0.000		
Receiving subsidy	0.051	0.000	1.052	0.396	0.000	1.486	0.156	0.000	1.168	0.098	0.021	1.103
Subsidy finished	0.448	0.000	1.566	0.447	0.000	1.563	0.406	0.000	1.500	0.338	0.000	1.402
Province employment rate 01-02	0.031	0.000	1.032	0.012	0.000	1.012	0.019	0.000	1.019	0.017	0.000	1.017
Employment rate increase	0.019	0.000	1.020	0.029	0.000	1.029	0.041	0.006	1.042	0.021	0.305	1.021
Reference: Center of Spain	0.000			0.000						0.001		
South Spain	-0.071	0.000	0.932	-0.152	0.000	0.859	-0.083	0.042	0.920	0.079	0.231	1.082
East (Levante)	0.021	0.000	1.022	0.024	0.004	1.024	-0.061	0.220	0.941	0.132	0.017	1.141
North Spain	0.070	0.000	1.072	0.013	0.144	1.014	-0.100	0.014	0.904	0.220	0.000	1.246
Constant	-1.726	0.000	0.178	-0.507	0.000	0.602	-0.790	0.000	0.454	-0.854	0.008	0.426
No cases	1.543.175			520.309			32.908			14.402		
Pseudo R2	0.099			0.059			0.042			0.072		
% correct predictions Yi=0	58.75			57.67			52.04			60.61		
% correct predictions Yi =1	64.08			59.31			63.19			57.80		
% correct predictions	61.44			58.60			57.89			59.17		

(1) The age variable has been included in this estimation as a numeric variable because all the participants in this programme are younger than 25 years.

(*) All programmes with control group

Source: Main calculations from the Spanish National Employment Institute (INEM) and Social Security System

Table 6 (cont.). Logit estimations including interactions (*)

	General orientation			Individual job-search assistance			Personal employment orientation plans			Active job-search assistance		
	B	Sig.	Exp(B)	B	Sig.	Exp(B)	B	Sig.	Exp(B)	B	Sig.	Exp(B)
Women	-0.579	0.000	0.560	-0.674	0.000	0.510	-0.473	0.000	0.623	-0.628	0.000	0.534
Reference: 16-24		0.000			0.000			0.000			0.000	
25-34	-0.438	0.000	0.645	-0.373	0.000	0.689	-0.461	0.000	0.631	-0.441	0.000	0.643
35-44	-0.643	0.000	0.526	-0.505	0.000	0.603	-0.599	0.000	0.549	-0.585	0.000	0.557
45-54	-1.014	0.000	0.363	-0.835	0.000	0.434	-1.064	0.000	0.345	-0.882	0.000	0.414
55-64	-0.437	0.000	0.646	-0.450	0.000	0.637	-0.734	0.000	0.480	-0.535	0.000	0.586
Reference: Without studies		0.000			0.000			0.000			0.000	
Primary	0.300	0.000	1.350	0.241	0.000	1.272	0.049	0.262	1.051	0.350	0.000	1.420
Secondary	0.476	0.000	1.609	0.433	0.000	1.542	0.186	0.000	1.205	0.587	0.000	1.799
Tertiary	0.717	0.000	2.049	0.723	0.000	2.060	0.390	0.000	1.477	0.849	0.000	2.338
Reference: <25 years & < 6 months searching for a job		0.000			0.000			0.000			0.000	
>=25 years & < 12 months searching for a job	0.381	0.003	1.464	0.325	0.000	1.384	0.389	0.000	1.476	0.396	0.000	1.486
Long-term jobseekers	-0.368	0.002	0.692	-0.317	0.000	0.728	-0.193	0.000	0.824	-0.265	0.000	0.767
ALMP participation	-0.265	0.000	0.767	-0.066	0.000	0.936	-0.022	0.451	0.978	-0.063	0.137	0.939
ALMP part. & >=25 years & < 12 months searching for a job	-0.084	0.228	0.919	-0.084	0.000	0.920	0.011	0.709	1.011	-0.133	0.001	0.875
ALMP part. & long-term jobseekers	0.340	0.004	1.405	0.141	0.000	1.152	0.000	0.998	1.000	0.084	0.080	1.087
Women & ALMP participation	0.022	0.712	1.023	0.027	0.043	1.027	0.076	0.004	1.079	0.030	0.425	1.031
Unemployed	0.155	0.000	1.168	0.186	0.000	1.205	0.156	0.000	1.169	0.234	0.000	1.263
Reference: not receiving subsidy		0.000			0.000			0.000			0.000	
Receiving subsidy	0.303	0.000	1.354	0.113	0.000	1.119	0.316	0.000	1.371	0.137	0.000	1.147
Subsidy finished	0.562	0.000	1.754	0.471	0.000	1.601	0.494	0.000	1.639	0.455	0.000	1.576
Province employment rate 01-02	0.026	0.000	1.026	0.031	0.000	1.031	0.017	0.000	1.017	0.026	0.000	1.026
Employment rate increase	0.046	0.005	1.048	0.002	0.581	1.002	0.050	0.000	1.051	0.032	0.001	1.033
Reference: Center of Spain		0.000			0.000						0.000	
South Spain	-0.210	0.000	0.810	0.025	0.015	1.025	0.094	0.000	1.099	-0.020	0.434	0.980
East (Levante)	0.017	0.850	1.017	-0.016	0.171	0.984	0.041	0.088	1.042	0.050	0.098	1.051
North Spain	0.125	0.000	1.133	0.120	0.000	1.127	-	-	-	0.113	0.001	1.120
Constant	-1.340	0.000	0.262	-1.586	0.000	0.205	-0.767	0.000	0.465	-1.524	0.000	0.218
No cases	20.062			428.814			109.913			59.362		
Pseudo R2	0.089			0.089			0.071			0.083		
% correct predictions Yi=0	60.67			61.78			55.63			61.23		
% correct predictions Yi =1	62.52			60.33			62.75			60.40		
% correct predictions	61.66			61.07			59.50			60.82		

(*) All programmes with control group

Source: Main calculations from the Spanish National Employment Institute (INEM) and Social Security System

Table 6 (cont.). Logit estimations including interactions (*)

	Entrepreneurial Assistance			Insertion income			Public employment (Social Activities)		
	B	Sig.	Exp(B)	B	Sig.	Exp(B)	B	Sig.	Exp(B)
Women	-0.632	0.000	0.531	-0.860	0.000	0.423	-0.706	0.000	0.494
Reference: 16-24		0.000			0.000			0.000	
25-34	-0.353	0.000	0.703	-0.328	0.000	0.720	-0.256	0.000	0.774
35-44	-0.544	0.000	0.580	-0.415	0.000	0.660	-0.327	0.000	0.721
45-54	-0.949	0.000	0.387	-0.706	0.000	0.493	-0.524	0.000	0.592
55-64	-0.715	0.000	0.489	-0.218	0.000	0.804	-0.050	0.282	0.951
Reference: Without studies		0.000			0.000			0.000	
Primary	0.199	0.077	1.220	0.087	0.000	1.091	0.216	0.000	1.241
Secondary	0.323	0.005	1.381	0.364	0.000	1.440	0.440	0.000	1.552
Tertiary	0.520	0.000	1.682	0.727	0.000	2.068	0.863	0.000	2.370
Reference: <25 years & < 6 months searching for a job		0.000			0.000			0.000	
>=25 years & < 12 months searching for a job	0.295	0.008	1.343	0.226	0.000	1.253	0.346	0.000	1.413
Long-term jobseekers	-0.301	0.005	0.740	-0.131	0.004	0.877	-0.228	0.000	0.796
ALMP participation	0.342	0.000	1.408	-0.277	0.000	0.758	-0.233	0.000	0.792
ALMP part. & >=25 years & < 12 months searching job	0.058	0.535	1.059	-0.217	0.000	0.805	-0.151	0.000	0.860
ALMP part. & long-term jobseekers	0.090	0.404	1.094	-0.146	0.001	0.864	0.040	0.408	1.040
Women & ALMP participation	0.034	0.576	1.035	0.031	0.125	1.031	0.248	0.000	1.281
Unemployed	0.143	0.000	1.154	0.640	0.000	1.896	0.150	0.000	1.162
Reference: not receiving subsidy		0.000			0.000			0.000	
Receiving subsidy	0.143	0.000	1.154	-0.222	0.000	0.801	-0.122	0.000	0.885
Subsidy finished	0.473	0.000	1.605	0.407	0.000	1.502	0.365	0.000	1.440
Province employment rate 01-02	0.041	0.000	1.042	0.039	0.000	1.039	0.037	0.000	1.037
Employment rate increase	0.077	0.000	1.080	0.024	0.000	1.024	0.023	0.001	1.023
Reference: Center of Spain		0.000			0.674			0.000	
South Spain	0.037	0.525	1.038	0.003	0.990	1.003	-0.100	0.000	0.905
East (Levante)	-0.014	0.766	0.986	-0.280	0.462	0.756	0.069	0.001	1.072
North Spain	0.384	0.000	1.468	0.250	0.620	1.284	0.148	0.000	1.159
Constant	-2.231	0.000	0.107	-1.982	0.000	0.138	-1.883	0.000	0.152
No cases	20.217			212.219			116.735		
Pseudo R2	0.115			0.165			0.107		
% correct predictions Yi=0	61.19			66.64			59.89		
% correct predictions Yi =1	62.92			64.81			63.95		
% correct predictions	62.23			66.02			62.04		

(*) All programmes with control group

Source: Main calculations from the Spanish National Employment Institute (INEM) and Social Security System

Looking at the results for each programme separately, we observe the same effects of many of the variables included: Employment probability is higher for men, young people and individuals with a high educational level. We also find a positive effect on employment probability if the jobseeker was unemployed and if he spent fewer than 12 months searching for a job, while if he is a long-term jobseeker there is a negative effect on employment

probability. Living in a province with a high employment rate also affects employment probability positively.

Nevertheless, there are other variables that affect employment probability in a different manner, depending on the programme. This is the case of the subsidy variable. Although receiving a subsidy increases employment probability in the majority of the programmes, this does not occur for the *Insertion income* programme or for the *Public employment* programme.

Looking at our interest variables, we can see that ALMP participation has a negative effect for all the programmes except *Entrepreneurial assistance*. More interesting is the interaction between the time seeking employment and ALPM participation. Although jobseekers older than 25 with fewer than 12 months searching for a job have a lower probability of employment if they participate in an ALMP programme for the entire sample, this does not occur for the *Vocational training* programme, where we find a positive effect of participation. This also occurs for the *Workshop schools* and for the *Personal employment orientation plans* and, once again, for the *Entrepreneurial assistance* programme, although only the coefficient of the Vocational training programme has a high enough significance level.

Being a long-term jobseeker and having participated in any ALMP measure increases an individual's employment probability, except for participants in the *Insertion income* programme. The same occurs for women: Those women who have participated in an ALMP will have higher employment rates.

Finally, Table 7 shows the employment rates observed for all the programmes analysed, differentiating by gender, age, educational level, time searching for a job and whether or not the individual received a subsidy or not. All the employment rates for which we observed a higher employment rate for participants are marked with a grey shadow. The first feature to point out is that, as the estimation results showed, there are more positive differences for women than for men. Additionally, the majority of programmes, except the *Employment workshops*, *Active job-search assistance*, *Insertion income* and *Public employment*, also show higher employment rates for the long-term jobseekers; In the case of women, the

employment rates of participants are always higher for this group. These results underline the necessity of improving the selection of participants in active labour market policies to ensure an increase in their employment probability.

Table 7. Employment rates by programmes and specific groups

		Men				Women			
		Treatment	Control	Diff.	Sig.(*)	Treatment	Control	Diff.	Sig.(*)
Vocational training	16-24 years	58.7%	62.3%	-3.5%	0.000	56.2%	55.0%	1.3%	0.000
	25-34 years	66.9%	68.8%	-1.9%	0.000	58.0%	54.7%	3.2%	0.000
	35-44 years	62.7%	64.5%	-1.8%	0.002	48.8%	47.4%	1.4%	0.000
	45-54 years	52.5%	50.6%	1.9%	0.045	40.4%	40.1%	0.4%	0.560
	55-64 years	52.6%	66.8%	-14.2%	0.000	36.1%	49.4%	-13.4%	0.000
Workshop schools	16-24 years	58.0%	59.6%	-1.6%	0.029	44.2%	43.5%	0.6%	0.469
	25-34 years	-	-	-	-	-	-	-	-
	35-44 years	-	-	-	-	-	-	-	-
	45-54 years	-	-	-	-	-	-	-	-
	55-64 years	-	-	-	-	-	-	-	-
Employment workshops	16-24 years	57.7%	64.0%	-6.3%	0.123	53.3%	53.3%	0.0%	1.000
	25-34 years	57.7%	67.4%	-9.7%	0.000	49.9%	47.8%	2.1%	0.258
	35-44 years	55.7%	66.3%	-10.6%	0.000	48.8%	44.5%	4.3%	0.016
	45-54 years	52.7%	52.1%	0.6%	0.824	44.3%	34.1%	10.2%	0.000
	55-64 years	54.7%	66.0%	-11.4%	0.004	45.2%	43.8%	1.4%	0.814
General orientation	16-24 years	60.1%	67.0%	-6.9%	0.001	52.6%	56.3%	-3.8%	0.036
	25-34 years	64.4%	71.1%	-6.7%	0.005	49.4%	54.9%	-5.4%	0.001
	35-44 years	58.2%	65.4%	-7.2%	0.007	41.2%	48.8%	-7.5%	0.000
	45-54 years	40.6%	53.4%	-12.8%	0.000	32.9%	42.5%	-9.6%	0.000
	55-64 years	67.5%	67.7%	-0.2%	0.933	37.2%	42.6%	-5.4%	0.083
Individual job-search assistance	16-24 years	58.1%	59.9%	-1.8%	0.000	49.5%	49.8%	-0.3%	0.477
	25-34 years	62.5%	66.0%	-3.5%	0.000	44.7%	46.4%	-1.6%	0.000
	35-44 years	57.1%	61.3%	-4.2%	0.000	37.6%	40.7%	-3.0%	0.000
	45-54 years	46.0%	45.8%	0.2%	0.818	30.5%	33.1%	-2.6%	0.000
	55-64 years	52.2%	62.0%	-9.8%	0.000	28.7%	40.2%	-11.5%	0.000
Personal employment orientation plans	16-24 years	62.5%	62.5%	0.0%	0.992	56.8%	55.8%	1.0%	0.153
	25-34 years	66.5%	65.8%	0.7%	0.377	56.7%	53.0%	3.7%	0.000
	35-44 years	65.5%	63.2%	2.2%	0.050	49.9%	46.8%	3.2%	0.000
	45-54 years	48.8%	46.6%	2.1%	0.121	32.8%	33.7%	-0.9%	0.357
	55-64 years	45.2%	67.4%	-22.2%	0.000	28.2%	45.0%	-16.8%	0.000
Active job-search assistance	16-24 years	57.8%	60.6%	-2.8%	0.027	51.1%	51.6%	-0.4%	0.620
	25-34 years	63.1%	67.1%	-4.0%	0.002	47.0%	48.2%	-1.2%	0.127
	35-44 years	63.0%	63.1%	-0.1%	0.967	36.6%	41.5%	-4.9%	0.000
	45-54 years	42.6%	50.6%	-7.9%	0.001	30.3%	34.5%	-4.2%	0.005
	55-64 years	59.5%	61.7%	-2.2%	0.426	27.1%	39.7%	-12.5%	0.000
Entrepreneurial assistance	16-24 years	72.6%	61.1%	11.5%	0.000	60.5%	55.6%	4.9%	0.039
	25-34 years	76.5%	70.1%	6.4%	0.000	61.8%	50.8%	11.0%	0.000
	35-44 years	70.8%	62.8%	8.0%	0.000	53.0%	43.5%	9.4%	0.000
	45-54 years	60.6%	48.1%	12.6%	0.000	46.8%	36.1%	10.7%	0.002

		Men				Women			
		Treatment	Control	Diff.	Sig.(*)	Treatment	Control	Diff.	Sig.(*)
	55-64 years	60.7%	63.7%	-3.1%	0.621	44.4%	33.3%	11.1%	0.167
Insertion income	16-24 years	43.9%	59.5%	-15.5%	0.000	26.5%	42.8%	-16.3%	0.000
	25-34 years	37.1%	60.6%	-23.5%	0.000	18.3%	35.3%	-17.0%	0.000
	35-44 years	32.8%	56.7%	-23.9%	0.000	16.6%	33.4%	-16.8%	0.000
	45-54 years	27.5%	44.5%	-17.0%	0.000	12.8%	26.3%	-13.5%	0.000
	55-64 years	37.7%	52.4%	-14.7%	0.000	16.5%	35.9%	-19.4%	0.000
Public employment (Social Activities)	16-24 years	57.5%	61.6%	-4.1%	0.000	52.4%	53.0%	-0.6%	0.654
	25-34 years	58.8%	66.5%	-7.7%	0.000	48.6%	50.6%	-1.9%	0.008
	35-44 years	52.6%	63.5%	-10.9%	0.000	40.4%	43.3%	-2.9%	0.000
	45-54 years	50.2%	52.8%	-2.7%	0.001	35.1%	36.7%	-1.6%	0.154
	55-64 years	56.2%	68.8%	-12.7%	0.000	38.1%	43.0%	-4.9%	0.008
Vocational training	Without studies	52.8%	55.3%	-2.5%	0.238	36.8%	38.0%	-1.3%	0.500
	Primary studies	61.8%	64.9%	-3.1%	0.000	49.5%	47.6%	1.9%	0.000
	Secondary studies	61.7%	63.3%	-1.6%	0.000	55.6%	53.2%	2.4%	0.000
	Tertiary studies	65.5%	67.6%	-2.1%	0.000	61.6%	60.7%	1.0%	0.008
Workshop schools	Without studies	56.7%	56.0%	0.7%	0.836	39.6%	33.7%	5.9%	0.259
	Primary studies	57.9%	59.8%	-2.0%	0.008	43.4%	42.8%	0.6%	0.497
	Secondary studies	61.5%	56.9%	4.7%	0.172	50.4%	51.8%	-1.4%	0.607
	Tertiary studies	80.0%	80.0%	0.0%	1.000	63.6%	65.7%	-2.1%	0.848
Employment workshops	Without studies	43.7%	52.3%	-8.7%	0.041	36.9%	27.7%	9.2%	0.024
	Primary studies	55.2%	63.6%	-8.4%	0.000	44.8%	41.9%	3.0%	0.024
	Secondary studies	57.5%	65.0%	-7.5%	0.069	51.0%	49.6%	1.5%	0.651
	Tertiary studies	69.9%	70.3%	-0.3%	0.927	65.2%	52.7%	12.5%	0.000
General orientation	Without studies	36.8%	57.2%	-20.5%	0.000	35.6%	33.6%	2.0%	0.543
	Primary studies	61.6%	66.8%	-5.2%	0.000	41.2%	47.6%	-6.4%	0.000
	Secondary studies	60.8%	65.6%	-4.8%	0.065	51.1%	57.7%	-6.6%	0.001
	Tertiary studies	62.7%	66.1%	-3.4%	0.390	56.2%	64.2%	-8.0%	0.001
Individual job-search assistance	Without studies	43.6%	50.1%	-6.6%	0.000	26.1%	31.7%	-5.5%	0.000
	Primary studies	58.2%	61.4%	-3.1%	0.000	38.1%	40.7%	-2.5%	0.000
	Secondary studies	58.6%	60.6%	-2.1%	0.001	48.7%	49.3%	-0.6%	0.132
	Tertiary studies	64.0%	67.0%	-3.0%	0.000	55.9%	56.5%	-0.5%	0.248
Personal employment orientation plans	Without studies	50.7%	60.5%	-9.8%	0.001	36.3%	42.2%	-5.9%	0.034
	Primary studies	61.6%	61.2%	0.3%	0.582	46.7%	45.5%	1.2%	0.018
	Secondary studies	62.3%	61.9%	0.4%	0.712	55.9%	53.0%	2.9%	0.000
	Tertiary studies	61.7%	65.5%	-3.8%	0.008	59.4%	58.3%	1.1%	0.181
Active job-search assistance	Without studies	41.6%	49.0%	-7.4%	0.017	24.6%	33.8%	-9.2%	0.000
	Primary studies	59.6%	62.5%	-2.9%	0.003	38.8%	41.7%	-2.9%	0.000
	Secondary studies	57.7%	61.7%	-3.9%	0.019	50.2%	50.2%	0.0%	0.983
	Tertiary studies	64.1%	66.3%	-2.2%	0.245	56.3%	58.1%	-1.8%	0.103
Entrepreneurial assistance	Without studies	50.0%	62.0%	-12.0%	0.102	38.9%	30.0%	8.9%	0.210
	Primary studies	73.0%	63.9%	9.1%	0.000	51.8%	42.1%	9.7%	0.000
	Secondary studies	72.6%	64.6%	8.0%	0.000	61.6%	50.2%	11.5%	0.000
	Tertiary studies	73.0%	66.8%	6.2%	0.009	66.1%	58.5%	7.6%	0.000
Insertion income	Without studies	29.6%	46.9%	-17.3%	0.000	15.0%	27.8%	-12.8%	0.000
	Primary studies	36.5%	59.2%	-22.8%	0.000	17.1%	35.8%	-18.7%	0.000
	Secondary studies	41.2%	61.7%	-20.5%	0.000	29.9%	47.5%	-17.6%	0.000
	Tertiary studies	58.2%	70.9%	-12.7%	0.001	51.9%	55.2%	-3.4%	0.270

		Men				Women			
		Treatment	Control	Diff.	Sig.(*)	Treatment	Control	Diff.	Sig.(*)
Public employment (Social Activities)	Without studies	44.2%	55.6%	-11.4%	0.000	25.5%	32.5%	-7.1%	0.000
	Primary studies	55.9%	63.8%	-7.9%	0.000	38.3%	42.2%	-3.9%	0.000
	Secondary studies	60.2%	63.1%	-2.9%	0.033	55.6%	53.3%	2.3%	0.059
	Tertiary studies	67.8%	68.4%	-0.6%	0.708	65.0%	62.2%	2.8%	0.006
Vocational training	<25 years & < 6 months searching job	58.7%	63.7%	-5.0%	0.000	56.5%	56.8%	-0.3%	0.412
	>=25 years & < 12 months searching job	66.2%	68.6%	-2.4%	0.000	55.8%	55.6%	0.2%	0.455
	Long-term jobseekers	55.5%	54.0%	1.5%	0.006	48.0%	40.8%	7.2%	0.000
Workshop schools	<25 years & < 6 months searching job	57.7%	61.9%	-4.2%	0.000	46.5%	47.4%	-0.9%	0.452
	>=25 years & < 12 months searching job	-	-	-	-	-	-	-	-
	Long-term jobseekers	58.5%	55.4%	3.0%	0.011	41.7%	39.6%	2.1%	0.078
Employment workshops	<25 years & < 6 months searching job	57.8%	64.8%	-7.0%	0.102	51.8%	56.4%	-4.5%	0.499
	>=25 years & < 12 months searching job	57.0%	65.2%	-8.2%	0.000	50.6%	48.9%	1.7%	0.209
	Long-term jobseekers	49.0%	54.2%	-5.2%	0.101	42.8%	31.1%	11.8%	0.000
General orientation	<25 years & < 6 months searching job	60.0%	68.0%	-8.0%	0.000	52.5%	57.3%	-4.8%	0.011
	>=25 years & < 12 months searching job	59.8%	66.6%	-6.8%	0.000	42.9%	50.8%	-7.9%	0.000
	Long-term jobseekers	52.2%	48.0%	4.2%	0.328	40.0%	37.0%	3.0%	0.295
Individual job-search assistance	<25 years & < 6 months searching job	59.7%	62.2%	-2.6%	0.000	51.7%	53.2%	-1.5%	0.001
	>=25 years & < 12 months searching job	60.6%	65.6%	-5.1%	0.000	43.9%	48.2%	-4.3%	0.000
	Long-term jobseekers	49.9%	49.3%	0.6%	0.279	35.3%	34.0%	1.3%	0.000
Personal employment orientation plans	<25 years & < 6 months searching job	63.0%	62.8%	0.2%	0.839	57.3%	56.8%	0.5%	0.503
	>=25 years & < 12 months searching job	65.1%	64.6%	0.5%	0.412	53.7%	52.6%	1.1%	0.033
	Long-term jobseekers	46.3%	51.0%	-4.7%	0.000	38.8%	35.6%	3.3%	0.000
Active job-search assistance	<25 years & < 6 months searching job	58.6%	61.9%	-3.3%	0.018	53.6%	53.9%	-0.3%	0.732
	>=25 years & < 12 months searching job	61.7%	66.1%	-4.4%	0.000	44.2%	49.1%	-4.9%	0.000
	Long-term jobseekers	51.3%	51.4%	-0.1%	0.946	36.5%	36.1%	0.4%	0.611
Entrepreneurial assistance	<25 years & < 6 months searching job	74.0%	64.0%	10.0%	0.000	63.2%	57.7%	5.5%	0.046
	>=25 years & < 12 months searching job	74.7%	67.4%	7.3%	0.000	61.7%	51.4%	10.3%	0.000
	Long-term jobseekers	59.9%	50.1%	9.7%	0.000	44.9%	35.1%	9.9%	0.000
Insertion income	<25 years & < 6 months searching job	44.6%	61.5%	-17.0%	0.000	26.4%	44.4%	-18.0%	0.000
	>=25 years & < 12 months searching job	34.1%	55.2%	-21.2%	0.000	16.8%	33.4%	-16.6%	0.000
	Long-term jobseekers	27.1%	46.7%	-19.5%	0.000	15.1%	30.0%	-14.9%	0.000
Public employment (Social Activities)	<25 years & < 6 months searching job	58.3%	62.4%	-4.1%	0.000	53.8%	55.9%	-2.1%	0.159
	>=25 years & < 12 months searching job	56.0%	64.6%	-8.5%	0.000	45.4%	49.2%	-3.8%	0.000
	Long-term jobseekers	45.3%	52.0%	-6.7%	0.000	36.6%	34.4%	2.2%	0.011
Vocational training	Not receiving subsidy	58.5%	61.1%	-2.5%	0.000	51.7%	49.5%	2.2%	0.000
	Receiving subsidy	69.1%	69.5%	-0.4%	0.332	60.4%	58.0%	2.4%	0.000
	Sudsidy finished	70.6%	70.4%	0.2%	0.771	59.8%	56.1%	3.7%	0.000
Workshop schools	Not receiving subsidy	57.8%	57.6%	0.3%	0.738	44.0%	43.4%	0.7%	0.456
	Receiving subsidy	60.6%	63.9%	-3.3%	0.332	43.0%	42.3%	0.7%	0.834
	Sudsidy finished	63.5%	71.2%	-7.7%	0.091	51.5%	53.5%	-1.9%	0.754

		Men				Women			
		Treatment	Control	Diff.	Sig.(*)	Treatment	Control	Diff.	Sig.(*)
Employment workshops	Not receiving subsidy	56.5%	61.4%	-4.8%	0.009	47.2%	40.8%	6.4%	0.000
	Receiving subsidy	50.5%	62.9%	-12.3%	0.000	44.7%	46.3%	-1.6%	0.491
	Subsidy finished	58.9%	70.6%	-11.7%	0.000	55.5%	50.8%	4.7%	0.112
General orientation	Not receiving subsidy	56.3%	62.3%	-6.0%	0.000	44.7%	49.6%	-4.9%	0.000
	Receiving subsidy	61.0%	68.3%	-7.4%	0.000	41.9%	52.1%	-10.2%	0.000
	Subsidy finished	67.6%	69.9%	-2.3%	0.493	60.6%	59.6%	1.0%	0.779
Individual job-search assistance	Not receiving subsidy	56.4%	58.6%	-2.2%	0.000	43.5%	43.4%	0.1%	0.624
	Receiving subsidy	57.2%	62.2%	-5.1%	0.000	37.5%	44.6%	-7.2%	0.000
	Subsidy finished	67.9%	67.5%	0.5%	0.515	53.4%	51.1%	2.3%	0.001
Personal employment orientation plans	Not receiving subsidy	57.7%	58.7%	-1.0%	0.168	49.8%	47.6%	2.1%	0.000
	Receiving subsidy	64.3%	65.2%	-0.9%	0.239	51.9%	52.9%	-1.0%	0.126
	Subsidy finished	68.5%	65.0%	3.5%	0.020	58.8%	53.8%	5.0%	0.000
Active job-search assistance	Not receiving subsidy	56.5%	60.3%	-3.8%	0.000	45.8%	45.7%	0.2%	0.767
	Receiving subsidy	59.9%	63.2%	-3.3%	0.008	39.0%	46.9%	-7.9%	0.000
	Subsidy finished	70.4%	67.7%	2.7%	0.260	53.1%	51.9%	1.2%	0.514
Entrepreneurial assistance	Not receiving subsidy	69.9%	61.3%	8.6%	0.000	56.9%	46.4%	10.5%	0.000
	Receiving subsidy	70.2%	67.3%	3.0%	0.047	53.9%	50.8%	3.1%	0.092
	Subsidy finished	82.9%	68.0%	14.9%	0.000	72.1%	53.0%	19.2%	0.000
Insertion income	Not receiving subsidy	58.7%	58.0%	0.7%	0.357	43.1%	36.2%	6.8%	0.000
	Receiving subsidy	27.9%	50.5%	-22.5%	0.000	14.1%	29.0%	-14.9%	0.000
	Subsidy finished	54.5%	66.2%	-11.7%	0.000	33.6%	47.7%	-14.0%	0.000
Public employment (Social Activities)	Not receiving subsidy	59.5%	59.4%	0.1%	0.857	50.8%	44.0%	6.8%	0.000
	Receiving subsidy	40.4%	62.9%	-22.6%	0.000	22.0%	47.7%	-25.7%	0.000
	Subsidy finished	62.9%	70.0%	-7.1%	0.000	57.0%	54.8%	2.2%	0.093

(*) Significance level Chi-square test

6. Conclusions

The ALMP as a whole and from a global point of view represents an additional value in terms of employment probability for those people who have participated in some of the programmes included in such policies. Generally speaking, women have less probability of being employed than men. The results also show that any age group has lower probabilities than the group of those less than 25 years old. Additionally, the educational level referring to people without studies shows that a higher educational level implies a rise in the employment rate. Finally, the variable that measures the time searching a job shows that those older than 24 and those who spent fewer than 12 months seeking employment have higher probabilities of being employed; on the other hand, long-term jobseekers have a lower probability of being employed.

The evaluation suggests that there are great differences between programmes in reference to this probability, which are connected not only to the content of each programme but also to the applied criteria in the candidate selection process and with the general management of human and financial resources by the entity responsible for planning and development functions. For participants in programmes that were similar but located in different Spanish regions (Comunidades Autonomas), significant differences in the results have been confirmed.

Apart from other statistic sources referring to the labour market evolution, the use of surveys and samples of beneficiaries to collect data directly is one of the most common methods used in Spain to measure the effects of the ESF co-financed programmes. At the same time, the utilization of records of official institutions for similar purposes is quite infrequent, considering that these records are one of the least expensive existing sources of data, and the one with the most potential. Microdata offer not only the possibility of checking the labour itinerary followed by participants in LMP, but it is also the only real way to operate with rigorous control groups.

Experience has shown that the use of control groups also seems very advantageous, especially to analyze the ALMP impact on the labour market and over the ex-post labour insertion of specific groups benefited by these policies. The preparation of such representative groups of non-participants is nevertheless difficult and time consuming, because one must select individuals one-by-one with similar personal and professional characteristics to those who participated in

the ALMP. Taking into account these circumstances, the elaboration of these control groups requires a pure, random selection process crossing diverse data records. Nevertheless, the interpretation of these results must be done carefully and under flexible interpretation rules for both cases: those with higher results for the objective group versus the control group and those with higher results for the control group.

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