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Evaluation of a Mixed Employment and Training Programme for Long-Term Unemployed with Special Labour Market Difficulties in Spain

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Abstract

This paper exploits Spanish Public Employment Services records for 2018–2020 to assess an active labour market policy for long-term unemployed workers facing severe labour market difficulties. The programme offers a 12-month full-time work experience contract in the public sector, skills training, and 15 months of job search assistance. Using the coarsened exact matching method, we analyse the effect of programme participation on the likelihood of gaining employment, distinguishing among high, medium, and low-quality jobs 6 and 12 months after programme completion. Results show a positive and significant participation effect of around ten percentage points, mainly in medium- and low-quality jobs. The effectiveness of participation is significantly higher for very long-term unemployed than long-term unemployed 12 months post-programme.

JEL Classification: J08, J68, J24

Keywords: active labour market policies, programme evaluation, subsidised public sector employment, long-term unemployment, vocational guidance.

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1. Introduction

Active labour market policies (ALMPs) aim to promote employment and address labour market imbalances, making them essential in combating unemployment. ALMPs have played a key role in supporting economic recovery after economic downturns by helping jobseekers secure employment and providing training and/or job search assistance to those most in need. During the Great Recession, ALMPs became a key focus of government policies to help tackle a wide range of labour market problems, including youth unemployment or persistent joblessness among displaced adults (see, e.g., Martin, 2015). These policies were also crucial in the labour market recovery following the COVID-19 crisis by connecting individuals to jobs through effective training, assisting companies in workforce retention and hiring, and assisting groups with major employment obstacles.

Although diverse types of ALMPs have been implemented for over 50 years, empirical evidence on their causal effects has only emerged in the last few decades (see LaLonde, 2003, for an overview). In a relatively brief time, the number of scientific evaluations has grown, shedding light on which types of programmes are most effective, under what conditions, and for which population groups (Kluve, 2010, 2016; Escudero et al., 2018; Levy-Yeyati et al., 2019; Sahnoun and Abdennadher, 2018; Romero and Kuddo, 2019; Arranz and García-Serrano, 2023, 2024; among many others). Evaluating the impact of ALMPs—whether redesigned or newly introduced in response to new labour market difficulties—is essential for governments' policy-making processes. These evaluations aim to detect best practices in ALMP design and serve as diagnostic tools to address possible inefficiencies. The importance of ALMP evaluation is among the current principles of economic policy and its mandatory nature was established in the Spanish Employment Strategy (EES) 2012–2014 (Royal Decree 1542/2011) and the more recent Spanish Active Employment Support Strategy 2021–2024 (Royal Decree 1069/2021, of 4 December).

An ideal evaluation of ALMPs involves three steps: (i) estimating the impact of the measures on individuals; (ii) assessing whether the measures yield net social gains; and (iii) determining whether similar results might have been obtained at a lower cost. However, as Koning and Peers (2007) pointed out, "the most important question evaluations of active labour market measures should answer is whether a person participating in a measure gets a higher chance to find a job as a result of it", that is, the first step. This paper focuses on the first step, evaluating the effectiveness of the Reactivation and Labour Market Insertion Programme for the Long-Term Unemployed with Special Labour Market

Insertion Difficulties[1] implemented by the Community of Madrid[2] in 2018. This programme is part of subsidised public mixed employment and training programmes that combine temporary paid work experience with training, guidance, and job search assistance.

Although direct job creation schemes in the public sector have proven to be generally ineffective (Heckman et al., 1999; Card, Kluve and Weber 2010, 2018; Caliendo, Hujer and Thomsen, 2008; Kluve, 2010; Escudero, 2018), Kluve et al. (2019) found strong evidence that programmes which integrate multiple interventions are more likely to succeed because they are better able to respond to the different needs of beneficiaries. Evidence suggests that when such measures are combined with training and job search assistance, they improve access to employment, promote job stability, and reduce temporary employment for vulnerable groups.

The main hypothesis this paper aims to test is that public employment mixed programmes that combine direct job creation, training, and job search assistance offer the long-term unemployed work experience and skills that reconnect them with the labour market, reduce the risk of human capital deterioration, and serve as effective tools to increase the employability of society's most vulnerable groups. Specifically, the mixed programme we aim to evaluate is an active labour market measure that combines 12 months of paid work experience (through a full-time contract in a public institution) with training in highly demanded job skills (i.e., languages, digital competencies, teamwork, etc.) and intensive counselling and job-search guidance for at least 15 months before, during, and after the work experience period.

A key aspect of this study is that the programme under evaluation targets a specific vulnerable group: long-term unemployed facing significant labour market difficulties. In particular, long-term unemployed jobseekers who meet at least one of the following criteria: i) individuals aged 45 or older; ii) low-qualified women (defined as those who have not completed lower secondary education); iii) very long term unemployed; and iv) individuals in or at risk of social exclusion (recipients of the minimum insertion income).

Long-term unemployment (LTU) increased during the Great Recession, becoming a major issue among European governments and prompting the European Commission to issue a Recommendation on the integration of the long-term unemployed into the labour market in 2016.[3] Although LTU in the EU has declined since its peak in 2014, it remains a persistent challenge. As of 2021, 6 million people

[1] Order of August 30, 2017, of the Minister of Economy, Employment, and Finance of the Community of Madrid, establishing the regulatory bases for the Reactivation and Employment Insertion Programme for long-term unemployed individuals with special difficulties in entering the labour market (BOCM of September 13, 2017).
[2] The Spanish public employment services comprise the regional employment services of the 17 autonomous communities, which collect regional data about job offers, job demands, and contracts. The Community of Madrid accounts for 14.2% of the total population over 15 years old and 19.4% of real GDP (2022).
[3] EUR-Lex - 32016H0220(01) - EN - EUR-Lex (europa.eu)

had been out of work for over a year. Young people have been particularly affected, with over 2.5 million youth experiencing prolonged periods of unemployment.[4] As in Europe, Spain reached a record-high LTU rate of 13% in 2014.[5] In response, the Spanish government developed innovative approaches to address the barriers hindering the reintegration of this group into the labour market. The main goal of the programme is to enhance participants' job skills, activate them for subsequent job searches, and improve their labour market access and hence their employability in the regular labour market.

Thus, an additional hypothesis we aim to test is that the programme's impact will vary depending on the quality of employment—categorised as low, medium, or high quality—in both the short and medium term, specifically 6 and 12 months after participation. Given the limited evidence on the impact of ALMP on employment quality (Caliendo and Schmidl, 2016), our study seeks to contribute to this line of research.

Our results provide evidence that subsidised public sector employment programmes that include training, job-search guidance, and monitoring assist the long-term unemployed with special labour market difficulties in reintegrating into the primary labour market. Overall, our findings suggest that this type of active labour market policy, targeted at the LTU, promotes the social inclusion of this vulnerable group and facilitates their return to the primary labour market. In particular, we find a positive and very significant overall participation effect that exceeds 10 percentage points and is primarily concentrated in medium- and low-quality jobs. The beneficial effect of participation is particularly pronounced among the very long-term unemployed (VLTU). However, the differential effect only becomes evident in the second half of the twelve-month follow-up period.

Some policy implications can be drawn from this paper. To address the problem of long-term unemployment and increase the employability of the most vulnerable groups, policymakers should focus on the design, implementation, and evaluation of well-targeted active labour market policies. In particular, these policies should be flexible, with a strong emphasis on equipping workers with the skills needed to stay connected to the regular labour market, thus reducing the risk of human capital deterioration. Effective measures should also include personalised, intensive counselling with, for example, low caseloads, multi-disciplinary approaches, mentoring, coaching, and post-placement support.

[4] Zero long-term unemployment (europa.eu)

[5] These trends in long-term unemployment have led to a growing interest in finding new tools to address the problem. Recent evidence has highlighted the effectiveness of intensive counselling and follow-up, in-work coaching, intra-agency cooperation, public-private partnerships, and a combination of services to tackle the multiple employment barriers faced by LTU individuals (Csillag, 2021; Konle-Seidl, 2020). In Spain, an important initiative in this regard was the Integrated Employment Plan (2019–2021), known as the REINCORPORA-T PLAN (Get-Yourself-Back-to-Work Plan), aimed at substantially reducing LTU and preventing individuals from falling into long-term unemployment.

The rest of the paper is organised as follows. Following the introduction, Section 2 reviews the literature on the effects of ALMPs. In Section 3, we describe the programme, while Section 4 explains the database used. Section 5 outlines the methodology and the matching procedure for selecting the control group. Section 6 presents the results**.** Finally, Section 7 concludes.

2. Literature review

Broadly speaking, ALMPs encompass measures aimed at the early activation of individuals who have lost their jobs can be classified into five main categories. The first category includes guidance and job search assistance programmes aimed at helping jobseekers navigate the job search process by providing information about market opportunities, individual counselling, and identifying skills gaps and areas for improvement to enhance their employability. The second category comprises measures designed to facilitate labour market mediation and improve job matching between firms and workers. The third category focuses on public training programmes that equip the unemployed with specific occupational skills and competencies, enabling them to apply for a wider range of jobs, thus increasing their employability. The fourth category includes measures aimed at improving the employability of groups facing significant labour market difficulties, often through subsidies and incentives for private-sector employment. Finally, the fifth category involves the provision of subsidies for (temporary) direct job creation in the public sector.

The programme analysed in this paper could be classified within this last category but differs from the traditional subsidised public sector employment programmes as it is combined with intensive counselling, guidance, and monitoring, as well as training. Programmes that incorporate multiple interventions and provide complementary services alongside the main intervention have been shown to achieve better outcomes (Malo, 2018).

The main purpose of ALMPs is to improve employability and/or salary prospects, particularly for individuals affected by long-term unemployment and other vulnerable groups that face significant difficulties in finding employment. Over the past decades, these measures have become an important component of labour market policies in most EU countries, especially during the last years of the Great Recession and the COVID-19 pandemic, when governments relied on these measures to address increasing unemployment and longer unemployment spells.

In addition to this surge in interest in ALMPs, concerns about the effectiveness and efficiency of such measures have gained special attention among policymakers in the EU Member States. Numerous microeconomic studies on the impact of these types of measures in developed countries can be found in the literature. Heckman et al. (1999) summarised approximately 75 evaluation studies from the US

and other countries. Card, Kluve, and Weber (2010, 2018) conducted two meta-analyses of 97 and 207 studies, respectively, based on 199 and 857 evaluation estimates of employment programme evaluations and highlighted the heterogeneity of the effects of different measures. Overall, the results suggest that there is a considerable degree of variation in impact estimates depending on the types of programmes and the macroeconomic conditions (Malo, 2018).

Among ALMPs, subsidised private-sector employment measures have been widely analysed in the international academic literature. Card, Kluve, and Weber (2010, 2018) found that employment subsidies in the private sector have a positive effect, particularly for the long-term unemployed and more so during periods of economic recession. In contrast, evaluations of subsidised public sector employment are relatively scarce (Card et al., 2018) and have generally shown limited effectiveness (Kluve and Schmidt, 2002). However, when these policies target vulnerable groups, they can produce positive effects (ILO, 2016). The two meta-analyses by Card et al. (2018, 2010), as well as the earlier influential review of Heckman et al. (1999), have highlighted the relatively poor performance of public sector employment programmes. A possible explanation for this is that private employers often undervalue the work experience gained in public sector programmes, likely because such programmes frequently lack skill-building components. As a result, they only serve to delay participants' transition to non-subsidised jobs. Similarly, the meta-analysis of Kluve (2010), based on 137 programme evaluations from 19 European countries (26 studies based on public sector employment but none for Spain), concluded that direct employment programmes are less effective than training programmes. In the same line, Jacobi and Kluve (2007) found that re-designing training programmes in Germany improved their effectiveness, while job creation schemes were detrimental to participants' employment prospects. Caliendo et al. (2008) reported negative or insignificant effects of job creation schemes aimed at hard-to-place individuals in Germany. However, they identified a notable exception among long-term unemployed individuals, who benefitted from participation. This finding underlines the importance of tailoring programmes more specifically to address the needs of this group.

A common criticism of subsidised public employment programmes for direct job creation in the labour market is that the jobs created are often disconnected from the actual labour market (Kluve, 2010; Filges et al., 2015; Hujer and Thomsen, 2010). Several mechanisms may contribute to this. First, these programmes often lack components that improve human capital. Second, they may create negative incentives for job searches by offering too-high wages that increase participants' reserve wages which could reduce their employment probabilities (Cockx and Ridder, 2001). Additionally, the long duration of these programmes, typically around 12 months, may further contribute to these issues. Finally, participation in ALMPs may stigmatise participants, thereby reducing their chances of securing regular employment (Boeri, 1997).

Another branch of the literature has found the opposite evidence. For instance, Gerfin et al. (2005) investigated the effects of two subsidised temporary employment schemes in Switzerland (a non-profit employment programme and a subsidy for temporary jobs in private firms) on the reintegration of the unemployed into the labour market. They found evidence of positive human capital effects for low-skilled unemployed participants in both types of programmes, with stronger effects observed in the case of subsidised private employment schemes. In the same line, Eichler and Lechner (2002) analysed the effect of a public employment programme running from 1989–1997 in East Germany consisting of a 12-month work experience in a public institution. The authors concluded that participation reduced participants' likelihood of unemployment. The meta-analysis of Vooren et al. (2019) found similar results. Specifically, they found evidence that subsidised labour and public employment programmes have negative short-term impacts, which gradually turned positive in the long run. Notably, their analysis highlights an important finding relative to the programme discussed in this paper: schemes combining subsidised labour with other services, such as job-search assistance and training measures, avoid these initial negative short-term effects and maintain positive outcomes 6 to 36 months after the start of the programme.

In a recent paper, Eppel et al. (2024) evaluated a wide range of ALMPs for the long-term unemployed in Austria during the period 2013–2017. They found that human capital-intensive training programmes and employment programmes (especially private sector wage subsidies) are effective. They highlighted that direct job creation in the public and non-profit sector may work if properly designed.

The evaluation of subsidised public sector employment in Spain is even more limited due to the lack of available data. However, several studies are worth mentioning. Clemente et al. (2012) exploited administrative records for the region of Aragón for the period 2005–2010 to analyse a mixed employment and training programme (combining work experience, training, and job search assistance). Using matching techniques, the authors found a positive effect of participation on employment probability, particularly in the medium term, and a more pronounced effect during the economic recession. Borra et al. (2012) analysed similar administrative data from Andalusia to evaluate a short-term programme (including training, job counselling, and work placements). They found positive effects on employment, job security, working hours, and earnings in the short run, though these effects were not maintained in the long run. Ramos et al. (2009) also reported a positive effect of a similar programme in Catalonia that included training and job search assistance. Rebollo-Sanz and García-Pérez (2021) evaluated two programmes consisting of local employment initiatives implemented in Andalusia from 2016 to 2018. The programme was aimed at unemployed individuals under the age of 30 and unemployed individuals over the age of 30 and consisted of offering publicly

subsidised employment for several months and specific guidance. In contrast to the previous findings, they found that the programme targeting young unemployed individuals does not improve the participants' employability. However, for the programme aimed at unemployed individuals over the age of 30, they observed that it only increases employability for unemployed people without previous work experience or those who have been out of the labour market for more than 24 months.

A common finding in the literature is the considerable heterogeneous effects concerning participants' characteristics such as gender, age, education, and local labour market conditions (see the review of Malo, 2018). As a result, it is recommended that these programmes be tailored to the specific characteristics of the target group to increase their overall effectiveness. For the particular case of the effects of ALMPs on the long-term unemployed, the meta-analysis of Card et al. (2018) found that the two types of programmes that deliver the best outcomes are training programmes and economic incentives for employment in the private sector. In contrast, the average impact of job search assistance programmes was not statistically different from zero.

Escudero (2018) analysed 31 countries between 1985 and 2010 and found that start-up incentives and measures targeting vulnerable populations are more effective than other ALMPs in reducing unemployment and increasing employment. In the case of Spain, Blazquez et al. (2019) found that both training and job-search assistance programmes have positive effects on the long-term unemployed, with training programmes having the strongest ones. As previously mentioned, the evaluation by Rebollo and García-Perez (2021) of a public employment programme found evidence of positive results for very long-term unemployed workers (those out of the labour market for over two years). These findings suggest that well-designed ALMPs might be an effective tool to combat long-term unemployment.

3. The Reactivation and Labour Market Insertion Programme for the Long-term Unemployed with Special Labour Market Insertion Difficulties

This subsidised public sector employment programme combines 12 months of paid work experience with at least 15 months of intensive job-search guidance, and monitoring by specialised job counsellors. Additionally, participants receive 90-120 hours of training in transversal skills, such as foreign languages, digital competencies, and teamwork, among others, which have a strong impact on employment outcomes. Guidance and counselling begin before the start of the work experience period and continue after contract completion. The programme targets long-term unemployed with special labour market difficulties. As previously mentioned, these groups include long-term unemployed jobseekers (defined as those who have been over 360 days in unemployment within an extended

period of 540 days) who meet any of the following criteria: over 45 years old, low-qualified women (defined as those with less than lower secondary education), very long term unemployed or individuals in or at risk of social exclusion (recipients of the minimum insertion income). The main goal of the programme is to strengthen and activate participants' job skills for future job searches, thereby improving their employability and facilitating access to the regular labour market.[6]

More specifically, this ALMP involves the provision of subsidies by the Community of Madrid to public institutions (such as city councils and other related local entities with competencies in the area of employment promotion) to cover the labour costs of hired jobseekers (wages and social security contributions), training costs, and the labour costs of job guidance counsellors. In 2018, the total subsidies amounted to 15.6 million euros.[7] During the 12-month work experience period (with a full-time contract at a public institution), participants receive a monthly salary that is 2.5 times the minimum wage for jobs in occupations belonging to social security contribution groups 1 and 2, and 2.0 times the minimum wage for jobs in groups 3 to 9.[8]

In the annual call of September 2018,[9] local public institutions were required to apply for subsidies for one or more job offers. Once the subsidy was granted, the corresponding local employment office provided the local entity a list of up to four highly vulnerable unemployed individuals for each subsidised position. Jobseekers were ranked on the list based on their duration of unemployment. Local public institutions were not allowed to reject the jobseekers proposed by the employment office, except if they failed to attend the interview or refused to participate in the programme. One of the requirements was that at least 50% of the participants be women.

[6] This financial benefit consists of a basic monthly payment and a variable supplement for vulnerable individuals lacking sufficient financial resources to meet their basic needs. Recipients are required to sign a formal agreement to participate in a mandatory individual integration programme and actively carry out the programme actions. The amount of the benefit varies according to the number of household members and their financial resources. One person living alone, with no other income, would receive €469.93 monthly (€587.41 and €662.52 for households of two and three members, respectively; the maximum amount is €1,134).

[7] The subsidies are intended to finance salaries and the social security contribution costs of the job guidance counsellors (maximum 3 times the minimum wage) and the unemployed participants (maximum 2.5 times the minimum wage), as well as the costs of training actions (maximum €8/hour face-to-face/participant). It also depends on the Social Security group.

[8] Groups 1 and 2 include engineers and graduates and technical engineers, experts, and qualified assistants, respectively. Groups 3 to 9 include administrative and heads of workshop; unqualified assistants; administrative officers; juniors; administrative assistants; first and second class officials; and third class officials and specialists. The minimum wage in Spain in 2018 was €735.90 per month (14 monthly payments).

[9] Extract of Order of 7 September 2018, of the Minister of Economy, Employment and Finance of the Community of Madrid calling for subventions in 2018 for the implementation of the Reactivation and Labour Market Insertion Programme for the Long-term Unemployed with Special Labour Market Insertion Difficulties.

4. Empirical Strategy

4.1. Administrative records

To conduct the subsequent analysis, we utilise microdata from administrative records of the public employment services of the Community of Madrid. The records include information about jobseekers, contracts, and services. We consider the period from 1 January 2018 to 28 February 2020. The limitation to February 2020 was necessary to prevent factors associated with the COVID-19 health crisis from biasing the assessment of the impact of participation.

The jobseeker record includes all individuals registered as unemployed jobseekers at public employment offices. Since the programme was designed to assist the long-term unemployed, who often encounter significant difficulties in integrating into the labour market, a subsample of long-term unemployed jobseekers who meet the criteria set out in the programme's regulatory bases was selected for the analysis. In particular, the programme's regulatory bases define long-term unemployed jobseekers as those registered at employment offices for 360 days within a 540-day period. Although registration is generally voluntary, individuals receiving unemployment benefits and jobseekers who wish to access active labour market measures and support for active job searches are required to register at the public employment office. The jobseeker record contains personal information (gender, age, education, nationality, language skills, specific occupational work experience, unemployment benefit, time enrolled in public employment services, and others), as well as additional data related to the job search process (geographical area of job search, type of workday selected in their job applications, desired occupation, etc.).

The contracts record comprises a comprehensive register of all employment contracts registered in the Community of Madrid. As it is mandatory for employers to register job contracts, the record contains all contracts that an individual may have had, as well as information on the characteristics of the contract (type of contract, duration, working hours, occupation, economic activity, etc.) and some data about the employer. Finally, the services record comprises all active employment services received by jobseekers, categorised according to a comprehensive range of measures.

Participation in the programme involves a subsidised 12-month period of paid work experience, after which all participants return to unemployment. Therefore, it is essential to examine the periods following the termination of the subsidised contract. The majority of subsidised contracts concluded in February 2019 (90.5%). Hence, the maximum period for analysis is 12 months after the end of the subsidised contract. Employment probabilities are assessed at 6 months and 12 months after the end of the subsidised contract (until February 2020).

4.2. Identification strategy

To estimate the causal effect of participation in an employment policy, the ideal approach would be to conduct a randomised controlled trial (RCT), in which programme participation is randomised (Rubin, 1974). Random assignment to treatment and control groups ensures compliance with the conditional independence assumption (CIA), that is, the selection mechanism is independent of the observed outcome, allowing for a direct comparison between the two groups. However, the available data are frequently based on non-randomised observational studies. Therefore, it is desirable to replicate a randomised experiment as closely as possible by obtaining treated and control groups with similar covariate distributions (Stuart, 2010). In this context, matching methods can be used to reduce the bias in the estimation of the causal effect of participation when analysing observational data. The availability of large-scale databases has facilitated the development of advanced matching techniques that mitigate issues associated with model dependence.

In this study, we employ the coarsened exact matching algorithm (CEM) proposed by Iacus et al. (2008, 2011a, 2011b) and Blackwell et al. (2009). There is evidence that CEM has greater capacity than commonly used matching methods in terms of its ability to reduce imbalance, model dependence, estimation error, bias, variance, mean square error, and other criteria (Iacus et al., 2008, 2011a, 2011b; King et al., 2011a, 2011b; King and Nielsen, 2019), as observed in propensity score matching. The CEM procedure ensures there are no discrepancies in the relevant variables between individuals in the treatment and control groups. In brief, the method first categorises all observations into distinct strata based on a set of pre-treatment variables. Individuals within each stratum share identical values for all coarsened covariates. Observations within any stratum that lack at least one observation for each unique value of the treatment variable are excluded. The objective is to identify a control group that is similar to the treated group. Therefore, using fewer covariates and strata results in more diverse observations, leading to a greater imbalance. Similarly, non-participating individuals who lack a "twin" participant are also excluded from the analysis.

It is important to note that, unlike other evaluations, the selection of the control group in this study represents a significant refinement, enabling a reduction in estimation bias. Following the procedure proposed by Sáez et al. (2011, 2012) and Blázquez et al. (2019), this study limits the potential control group to jobseekers who did not participate in the programme or in other ALMPs in the previous or subsequent 6 months. Furthermore, to ensure consistency and comparability, both the treatment and control groups must be registered as jobseekers in the same month. The accuracy of the treatment and control group selection is based on two criteria that work in opposite directions. First, a comprehensive set of pre-treatment variables must be chosen to appropriately define the strata. Second, a high matching rate for individuals in the treatment group must be achieved to ensure

that as few treatment individuals as possible are excluded from the analysis. This approach improves the efficiency of the estimates and reduces selection bias.[10]

The pre-treatment variables used to define the strata are gender, age (divided into the following groups: <25 years; 25–34 years; 35–44 years; 45–51 years; 52 and older), educational level (divided into the following categories: no studies, primary, lower secondary, upper secondary, intermediate vocational training, advanced vocational training, and higher education), nationality (Spanish or foreign), uninterrupted duration of unemployment as a jobseeker (less than 1 month, 1– 3 months, 3–6 months, 6–12 months, 1–2 years, 2 –4 years, more than 4 years), and experience in the desired occupation (no experience, 1–11 months, 1 year or more).

4.3. Data and variables

Following the identification strategy outlined above, the treatment group includes all participants in the programme. The universe of participants consists of 772 individuals; of whom we have complete information for 770. After the matching process, a match was obtained for 98.2% of the participants. The final sample includes 58,456 individuals in the control group and 756 in the treatment group, of whom 283 are men and 473 are women.

It is important to note that the majority of participants (95.5%) successfully completed the work experience period, while the remaining 4.5% did not. Therefore, for those who do not complete the work experience period, the probability of being employed is measured at 6 and 12 months after the work experience period. To ensure that the initial conditions of both participants and non-participants are the same at the start of their job search (i.e., both in unemployment), the employment probability of non-participants is measured at month 6 and 12 after participants begin the work experience period. The subsidised contracts under the programme began in February and March 2018 and concluded between February and March 2019. This means that the employment probability of individuals in the control group is measured starting in March 2018, while for participants it is measured starting in March 2019.[11]

Table 1 provides a summary of the main characteristics of the participants (treatment group). Although the programme requires that at least 50% of participants be women, the figure is much

[10] It can be observed that an increase in the number of variables employed to define the strata, or a reduction in the level of coarsening of the variables, is associated with a reduction in the percentage of exact matching.

[11] It is also important to note the potential existence of "lock-in effects", which suggest that programme participation may reduce participants' job search efforts (van Ours, 2004; Wunsch, 2016), while non-participants continue searching for a job. Initially, this difference in job search intensity typically leads to negative employment effects. However, as we are analysing distinct periods for the control and treatment groups, we can avoid these potential issues. According to the Spanish National Accounts, the GDP growth rate was 2.3% and 2.0% in 2018 and 2019, respectively.

higher, with women making up 62.6% of the participants. Of the total number of women, 23.7% are unqualified, lacking either the compulsory secondary education certificate or a professional qualification for the occupation. Regarding age, individuals over 45 account for 61.0% of the total sample, with just over 37% in the 45–55 age group).

[Insert Table 1 here]

The age of the participants varies by gender. Specifically, female participants tend to be younger and there is a higher percentage of women aged under 45 years old than men. Given the voluntary nature of the programme, this age difference by gender suggests that women under 45 and men over 45 are more likely to participate.

As regards unemployment duration, all participants are classified as long-term unemployed in accordance with the regulatory basis of the programme, which defines this situation as a period of 360 days of unemployment within a 540-day period. For the purpose of the analysis, two subgroups have been identified: long-term unemployed (LTU) if they have been continuously registered as jobseekers for less than 24 months, and very long-term unemployed (VLTU) if they have been registered as jobseekers for over 24 uninterrupted months. In accordance with this definition, 43.3% of participants have been classified as LTU, while 56.7% have been classified as VLTU. With regard to gender, there are fewer LTU men than LTU women (39.6% vs. 45.5%). Consequently, there are more VLTU men than VLTU women (60.4% vs. 54.5%).

As regards level of education, the largest group of participants has lower secondary education (37.3%), followed by those with primary education (18.7%). Of the total number of participants, 11.4% have no formal education. Approximately 12.8% have completed higher education: 3.3% with higher vocational training and 9.5% with a university degree. The distribution by gender reveals that women tend to have a higher level of education on average. It is noteworthy that the proportion of individuals with medium-high language skills is higher among men (24.4% males vs. 19.0% females). In terms of nationality, about 19% are immigrants, with a notably higher percentage among men (30% males vs. 12.1% females).

A closer examination of the requested occupations reveals that three are in especially high demand: elementary occupations, clerks, and service sector workers, which represent 28.4%, 25.5%, and 19.3% of the total number of participants, respectively. It is notable that there are significant gender differences. Amongst the male participants, the most frequently requested occupations were those classified as “Elementary occupations”, “Skilled workers in industry and construction”, and “Service sector workers”, with a respective prevalence of 30.4%, 25.1% and 12.7%. In the case of female participants, the most highly demanded occupation is that of “Clerks”, accounting for 35.1% of

the total, followed by “Elementary occupations”, which constitute 27.3% of the total, and “Service sector workers”, which represent 23.3% of the total.

It is important to note the significant discrepancies in terms of the participants’ labour market experience. Approximately one-third had accumulated more than two years of experience, with a slight discrepancy between the sexes (40.6% of men vs. 29.4% of women). The majority of participants have accumulated three to five years of experience (19.4% and 14.8% for men and women, respectively). Among those with no previous experience in the requested occupation (18.0% of the total), there is a greater proportion of women than men (20.7% vs. 13.4%). The largest group comprises participants with between one and 11 months of experience, with women having slightly more than men.

With respect to the geographical area in which the job searches were conducted, the majority of participants (over 85%) focused their searches within their own province or autonomous community. It is notable that gender differences in this regard were relatively minor. Finally, it is important to highlight that 90.2% of the sample was not receiving unemployment subsidies. This figure does not significantly differ across genders.

4.4. Empirical model

The programme evaluation focuses on estimating the probability of securing employment upon completion of the work experience period. To this end, we first estimate the probability of being employed after participating in the programme using a Logit model. We consider two distinct time horizons: 6 months and 12 months after the conclusion of the subsidised contract.

$$Pr(y_{it} = 1|P_i, X_i) = F(\beta_0 + \beta_1 P_i + \beta_2' X_i + \varepsilon_i) \quad (1)$$

where the main variable of interest, P_i, takes the value of 1 if the individual i has participated in the programme (treatment group), and 0 otherwise (control group). A positive and significant coefficient value associated with this variable will indicate a positive effect of programme participation on the likelihood of employment. X_i represents the vector of explanatory variables, which includes both personal characteristics (gender, age, nationality, educational level, and language proficiency) and labour-related attributes (labour market experience in the requested occupation, time registered as a jobseeker, requested occupation [white collar or blue collar], area of job search, requested working hours [full time, part time, or indifferent]), as well as a dummy variable indicating whether the individual receives unemployment benefits.

In the second step, the quality of the contract is considered. In accordance with the definition of Sáez et al. (2011, 2012) and Blázquez et al. (2019), the classification of job quality is based on three characteristics: type of contract (permanent or fixed-term), duration of the contract (in the case of temporary fixed-term contracts), and weekly working hours. A high-quality job is defined as a position with a permanent contract and a working week of at least 15 hours. Medium-quality jobs are defined as permanent contracts with a working week of less than 15 hours, temporary contracts of indefinite duration (interim contracts, works and services contracts, etc.) or a duration of at least 6 months, and a minimum working week of 15 hours in both cases. The remaining contracts are classified as low-quality jobs (temporary contracts of less than 15 weekly working hours or less than 6 months in duration). In this case, a multinomial logit model is estimated. Additionally, to ascertain which group benefits the most from participating in the programme, separate estimates are performed for gender, age, and time in unemployment.

5. Results

Before discussing the impact of participating in the programme on the probability of finding a job, Table 2 shows the average estimated probabilities for the entire sample, which includes both the treatment and control groups. The table further breaks down the probabilities by gender (men, non-qualified women, qualified women), age (over and under 45 years old), and duration of unemployment (LTU and VLTU).

[Insert Table 2 here]

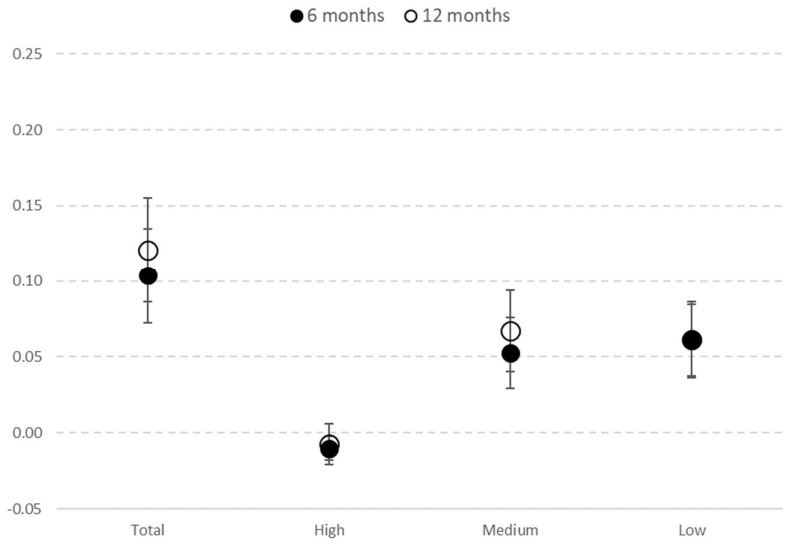
As expected, we find that the estimated probabilities are low (13.5% and 20.3% for the timeframes of 6 and 12 months, respectively), thus confirming that the individuals in our sample can be classified as individuals with special labour insertion difficulties. It is also noteworthy that the estimated probabilities differ across the various groups. For example, the LTU group exhibits the highest probabilities among all the groups considered (21.6% and 30.4% for the timeframes of 6 and 12 months, respectively). In contrast, the lowest probabilities are found among the VLTU (7.3% and 12.5%), thus highlighting the particular vulnerability of this group in terms employability. Males and individuals younger than 45 years old also display higher estimated probabilities compared to the total sample (15.8% and 18%, respectively vs. 13.5% within the following 6 months after the end of the programme). In contrast, both qualified women and individuals older than 45 show lower figures than the total sample (12% and 10.7%, respectively, for the 6-month timeframe).

Attending to job quality, it is noteworthy that, overall, the largest estimated probabilities are found in medium quality jobs. The figures corresponding to low quality jobs are higher than those of medium quality jobs only in the case of women who are either qualified or non-qualified.

In terms of the impact of participation in the programme, Figure 1 presents the estimated marginal effects for the entire sample (6 and 12 months after the conclusion of the subsidised contract) and differentiating by job quality (see also Table 3, first row). The first result that is worth noticing is that, overall, the effectiveness of participation is observed in the first 6 months after the end of the subsidised contract.[12] In particular, participation in the programme increases the probability of employment by 10.4 pp. No statistically significant differences were found for the effect of participation within 6 or within 12 months after the end of the subsidised contract. These effects are driven by medium and low-quality jobs, for which the estimated marginal effects are between 5 and 6 pp.

[Insert Table 3 here]

Figure 1. Marginal effect of participating in the programme

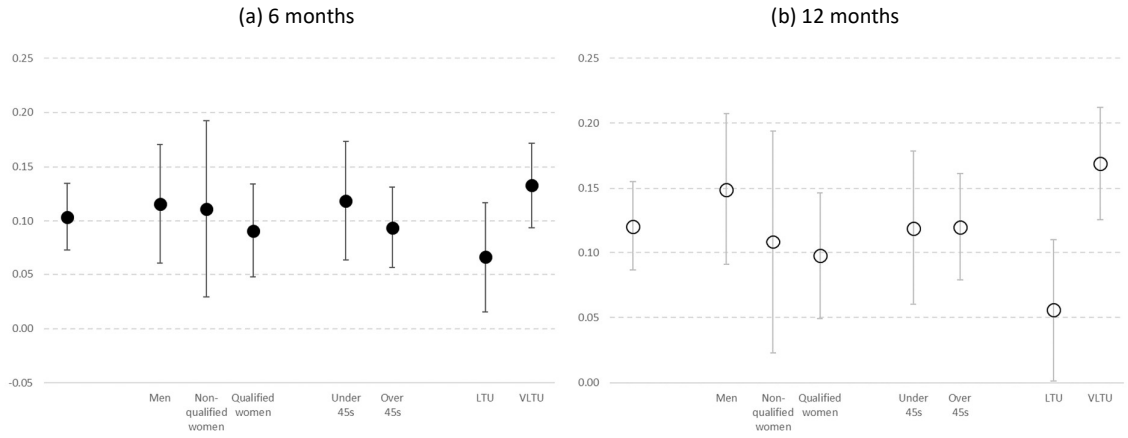


Note: Table 3 in the Appendix shows the numbers corresponding to this figure.

The impact of participation across groups is shown in Table 3 and Figure 2. Overall, no statistically significant differences are observed for the general pattern.

[12] We have tested the differences among the average estimated probabilities. All of them have been found to be significantly different from zero.

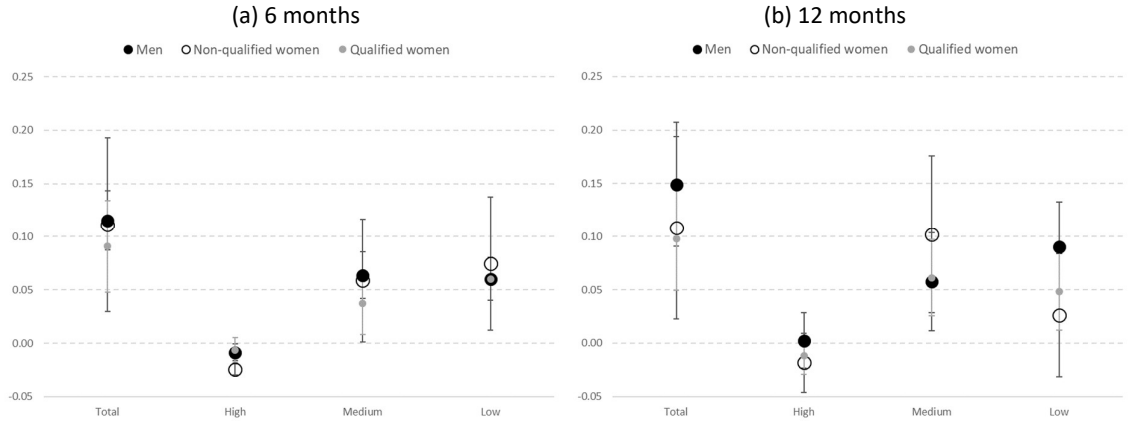
Figure 2. Marginal effect of participating in the programme by group



Note: Table 3, Column 1, in the Appendix shows the numbers corresponding to this figure.

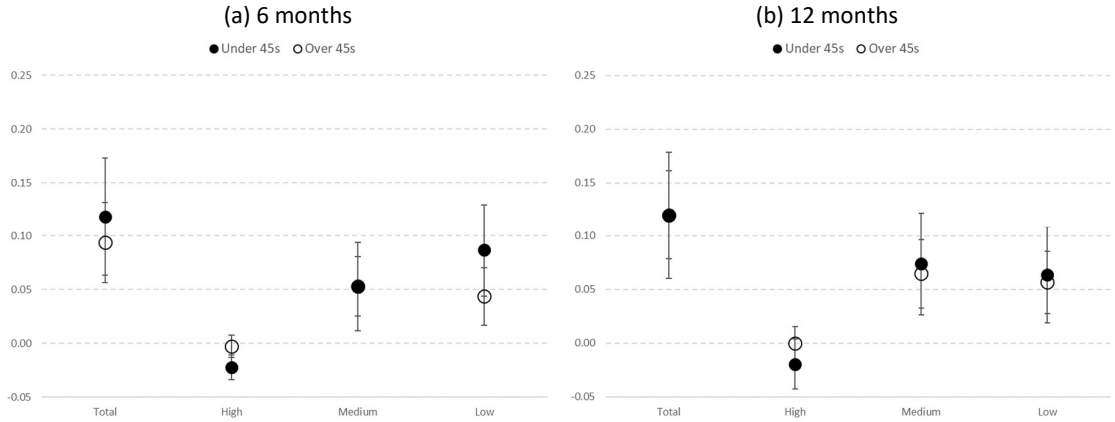
However, when taking a closer look by group, some interesting findings are worth noticing. First, our results provide evidence that the impact of participation does not differ across gender (Figure 3 and Table 3, Panel A). An examination of the impact of participation by age (Figure 4 and Table 3, Panel B) reveals that, again, the general trends hold. Finally, two findings concerning the impact of participation across groups according to their unemployment duration deserve attention (Figure 5 and Table 3, Panel C). First, the effectiveness of participation is found to be significantly higher for VLTU than LTU 12 months after the finalisation of the subsidised contract (16.9 pp vs. 5.6 pp). Since the difference between the two groups is not statistically significant within the first 6 months, we can conclude that the effectiveness of the programme becomes apparent from the seventh month onwards. Additionally, when considering job quality, this finding is only observed in medium-quality jobs, with estimated marginal effects of 9.4 pp for VLTU and 3.0 pp for LTU.

Figure 3. Marginal effect of participating in the programme by gender



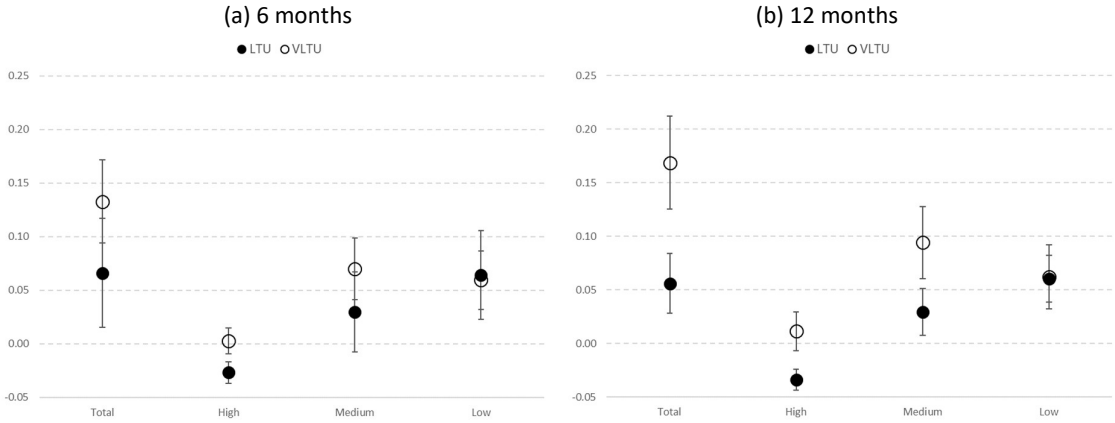
Note: Table 3, Panel A, in the Appendix shows the numbers corresponding to this figure.

Figure 4. Marginal effect of programme participation (age)



Note: Table 3, Panel B, in the Appendix shows the numbers corresponding to this figure.

Figure 5. Marginal effect of programme participation (duration of employment)



Note: Table 3, Panel C, in the Appendix shows the numbers corresponding to this figure.

As a robustness check, we repeated the analysis focusing only on jobseekers who do not receive unemployment subsidies. The results, which are available upon request, are consistent with the findings mentioned above.

In conclusion, the programme shows a clear and positive impact on employment outcomes, particularly in the medium- and low-quality job sectors. Regarding the most vulnerable groups, we find that the VLTU emerge as the most benefited group within 12 months after the subsidised contract ends, specifically through medium-quality jobs. These results highlight the programme's potential to support the VLTU by providing a pathway to improved employment quality following sustained participation.

7. Conclusions

In recent decades, ALMPs have become increasingly diverse in nature, adopting a more tailored approach to individual needs. A primary target group of ALMPS has been and continues to be the long-term unemployed, who remain a persistent policy concern in most EU countries. Indeed, the importance of addressing long-term unemployment was highlighted in the Joint Employment Report of 2017, which stated that "tackling long-term unemployment remains a priority" for Member States. At the individual level, long unemployment spells can lead to the deterioration of workers' human capital, making it increasingly difficult for them to find new employment as time passes, while also limiting their earnings and career prospects. This can significantly impact the well-being of the individuals involved, with long-term unemployment often being one of the main causes of household poverty. Therefore, securing employment for the long-term unemployed can boost income and reduce the risk of individual poverty. At the national level, persistently high long-term unemployment poses a threat to overall employment policy objectives, reduces the effectiveness of matching individuals to suitable jobs, hinders occupational and geographical mobility, and is a key driver of income inequality.

Although the long-term unemployed have been a primary target group of ALMPs, evidence suggests that these measures are often not tailored to their specific needs. Given this and considering that long-term unemployment remains a persistent issue in many European countries, there is growing interest in finding new approaches to improve the outreach and effectiveness of services that support the labour market integration of this group.

Direct job creation schemes in the public sector have been one of the "innovative" ALMPs piloted across Europe in recent years to mitigate the risk of long-term unemployment. However, such programmes, which involve subsidies provided to public institutions and are typically implemented for a short, fixed duration, have typically been found to have low effectiveness (Kluve, 2010; Card et al., 2018). Nonetheless, when subsidised public sector employment is integrated into a mixed employment programme together with other activation measures, its effectiveness in helping the long-term unemployed to re-enter the labour market is significantly improved (Kluve et al., 2010).

This paper confirms the empirical evidence for specific groups of long-term unemployed individuals, those with special labour market difficulties and, especially, those in very long-term unemployment. Specifically, we analyse the impact of participation in an ALMP implemented between 2018 and 2019 by the Community of Madrid called the Reactivation and Labour Market Insertion Programme for the Long-Term Unemployed with Special Labour Market Insertion Difficulties. This is a mixed employment and training programme that combines full-time paid work experience for a period of 12 months, training in transversal skills with a strong impact on employment, and job search

guidance and counselling for a minimum of 15 months. The programme aims to promote the hiring of long-term unemployed individuals facing particular challenges for insertion in the labour market, such as those over 45 years old, non-qualified women, very long term unemployed, and individuals in a situation or at risk of social exclusion.

We analyse the effect of programme participation on individuals' employment probability and job quality (high, medium, and low) and consider two timeframes: 6 and 12 months after the completion of the paid work experience period. Job quality is based on the type of contract, the working day, and the duration of the contract (in the case of temporary contracts). At the aggregate level, the impact of programme participation is positive and significant, exceeding 10 pp after the end of the subsidised contract. However, this positive impact is limited to medium- and low-quality jobs. As regards specific groups, we find that the very long-term unemployed obtain the greatest benefits from participation.

Our results suggest the need to design mixed employment programmes that can support the long-term unemployed in a more tailored and individualised way based on a step-by-step approach. Such targeted and personalised measures should start with an initial profiling to categorise jobseekers correctly prior to the intervention. In particular, and where appropriate, it is important to specify the target group beyond their status as long-term unemployed, for example, those aged 45 and over, unemployed female, or individuals who have experienced very long unemployment spells. In a second step, the labour market intervention should combine both measures to strengthen individuals' basic skills and provide coaching together with workplace-oriented training, vocational training, and job search assistance. Finally, in order to ensure continued employment, post-employment support services would be necessary once the long-term unemployed have found jobs.

Obviously, this would require strong institutional cooperation between public employment services and multiple stakeholders, including municipal governments, youth and family services, other social services, and employers. An important outcome of such cooperation would be the opportunity for all the parties involved to exchange data and information, as well as the establishment of single contact point for the long-term unemployed. In fact, this was one of the key recommendations by the European Commission (European Commission, 2016) to provide the long-term unemployed with individualised, tailored guidance and simplified access to employment and support services.

Additionally, countries should increase their efforts to integrate monitoring and evaluation mechanisms in their policy making processes if they want to provide effective responses to the new and evolving societal challenges. Fostering an evaluation culture is essential to ensure the effectiveness of ALMPs. Several factors can contribute to its development. First, a political commitment to evidence-based policymaking and accountability. Second, the establishment of legal

mandates for policy evaluation as well as requirements tied to European funding. Finally, the training and education of evaluators to ensure that evaluation is integrated throughout the policy cycle.

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Appendix A

Table 1. Main characteristics of programme participants (treatment group)

		Total	Men	Women
	Total	756	283	473
Specific groups	Men	37.4%	100.0%	-
	Non-qualified women[(a)]	14.8%	-	23.7%
	Qualified women	47.8%	-	76.3%
	< 45 years old	39.0%	27.9%	45.7%
	> 45 years old	61.0%	72.1%	54.3%
	LTU [(b)]	43.3%	39.6%	45.5%
	VLTU	56.7%	60.4%	54.5%
Educational level	No education	11.4%	17.7%	7.6%
	Primary education	18.7%	23.0%	16.1%
	Lower secondary education	37.3%	33.6%	39.5%
	General upper secondary education	13.2%	11.7%	14.2%
	Intermediate vocational training	6.6%	2.8%	8.9%
	Higher vocational training	3.3%	2.5%	3.8%
	University degree	9.5%	8.8%	9.9%
Nationality	Spanish	81.2%	70.0%	87.9%
	Foreign	18.8%	30.0%	12.1%
Time registered as jobseeker[(c)]	< 1 month	1.7%	1.4%	1.9%
	1-3 months	2.4%	3.2%	1.9%
	3-6 months	6.9%	4.9%	8.0%
	6-12 months	12.2%	13.4%	11.4%
	1-2 years	20.1%	16.6%	22.2%
	2-4 years	26.3%	26.9%	26.0%
	> 4 years	30.4%	33.6%	28.5%
Requested occupation	Managers	0.28%	0.47%	0.12%
	Professionals	1.04%	0.94%	1.11%
	Technicians	4.28%	5.83%	3.08%
	Clerks	13.34%	3.62%	20.94%
	Service workers	18.24%	9.61%	25.00%
	Skilled agricultural workers	3.66%	5.67%	2.09%
	Skilled workers in industry and construction	15.41%	31.34%	2.96%
	Operators	4.70%	7.87%	2.22%
	Elementary occupations	39.05%	34.65%	42.49%
Labour market experience	No experience	18.0%	13.4%	20.7%
	1-11 months	34.9%	32.9%	36.2%
	1-2 years	13.5%	13.1%	13.7%
	3-5 years	16.5%	19.4%	14.8%
	5-10 years	8.6%	9.2%	8.2%
	> 10 years	8.5%	12.0%	6.3%
Geographical area of job search	Local council	6.7%	4.2%	8.2%
	Province or Community of Madrid	86.2%	87.6%	85.4%
	Spain / Europe	4.9%	7.1%	3.6%
	Others	2.1%	1.1%	2.7%
Unemployment subsidy	No	90.2%	91.9%	89.2%
	Yes	9.8%	8.1%	10.8%

[(a)] Non-qualified women: They lack either the compulsory secondary education graduate certificate or a professional qualification for the occupation. Qualified women: They possess the professional qualification for the occupation or have a level of education of at least Compulsory Secondary Education or equivalent.

[(b)] LTU: Long-term unemployed. Registered as a jobseeker for at least 360 days during the 540 days prior to the date of joining the programme but less than 24 months of uninterrupted registration. VLTU: Very long-term unemployed. Registered as jobseekers for 24 uninterrupted months.

[(c)]Uninterrupted time.

Table 2. Mean values of estimated employment probability

	Total		High		Medium		Low	
Group/Time after programme	6 m	12 m	6 m	12 m	6 m	12 m	6 m	12 m
Total	13.5%	20.3%	2.1%	4.0%	5.9%	9.3%	5.5%	7.0%
Men	15.8%	22.0%	2.4%	4.3%	8.2%	12.5%	5.3%	5.2%
Non-qualified women[(a)]	13.4%	19.3%	2.4%	4.2%	4.5%	7.6%	5.8%	7.5%
Qualified women	12.0%	19.2%	1.8%	3.7%	4.6%	7.3%	5.5%	8.2%
Under 45s	18.0%	27.8%	3.0%	5.4%	7.7%	12.0%	7.3%	10.4%
Over 45s	10.7%	15.5%	1.6%	3.1%	4.8%	7.6%	4.3%	4.8%
LTU[(b)]	21.6%	30.4%	3.3%	6.0%	9.4%	13.6%	8.9%	10.8%
VLTU	7.3%	12.5%	1.2%	2.5%	3.3%	5.9%	2.9%	4.0%

[(a)] Non-qualified women: those who lack either a compulsory secondary education certificate or a professional qualification for the occupation. Qualified women: those who have a professional qualification for the occupation or level of education of at least a compulsory secondary education or equivalent.
[(b)] LTU: Registered as a jobseeker for at least 360 days during the 540 days prior to the date of joining the programme but less than 24 months of uninterrupted registration. VLTU: Registered as jobseekers for 24 uninterrupted months.

Table 3. Impact of programme participation on employment likelihood (marginal effects)

	Total		High		Medium		Low	
	6 m	12 m	6 m	12 m	6 m	12 m	6 m	12 m
Total sample	0.104	0.121	-0.010	-0.008	0.053	0.067	0.061	0.061
	(0.016)	(0.017)	(0.004)	(0.007)	(0.012)	(0.014)	(0.012)	(0.013)
PANEL A: Gender								
Men	0.115	0.149	-0.009	0.003	0.064	0.057	0.060	0.090
	(0.028)	(0.030)	(0.008)	(0.013)	(0.022)	(0.023)	(0.020)	(0.022)
Non-qualified women[(a)]	0.111	0.109	-0.024	-0.018	0.059	0.102	0.075	0.026
	(0.042)	(0.044)	(0.003)	(0.014)	(0.029)	(0.038)	(0.032)	(0.029)
Qualified women	0.091	0.098	-0.007	-0.012	0.037	0.061	0.060	0.048
	(0.022)	(0.025)	(0.006)	(0.009)	(0.015)	(0.018)	(0.017)	(0.019)
PANEL B: Age								
Under 45s	0.118	0.119	-0.022	-0.019	0.053	0.074	0.087	0.064
	(0.028)	(0.030)	(0.006)	(0.012)	(0.021)	(0.024)	(0.022)	(0.023)
Over 45s	0.094	0.120	-0.003	0.000	0.053	0.065	0.044	0.057
	(0.019)	(0.021)	(0.005)	(0.008)	(0.014)	(0.016)	(0.014)	(0.015)
PANEL C: Unemployment duration								
LTU[(b)]	0.066	0.056	-0.027	-0.034	0.030	0.030	0.064	0.061
	(0.026)	(0.028)	(0.005)	(0.010)	(0.019)	(0.022)	(0.021)	(0.022)
VLTU	0.133	0.169	0.003	0.012	0.070	0.094	0.059	0.062
	(0.020)	(0.022)	(0.006)	(0.009)	(0.015)	(0.017)	(0.014)	(0.015)

P-values in parentheses. Reference category: non-employed individuals. Controls: gender, age, educational level, nationality, language knowledge, (uninterrupted) time registered as jobseeker, labour market experience in the requested occupation, requested occupation, geographical are of job search, dummy variable of receiving an unemployment subsidy.
[(a)] Non-qualified women: those who lack either a compulsory secondary education certificate or a professional qualification for the occupation. Qualified women: those who have a professional qualification for the occupation or a level of education of at least a compulsory secondary education or equivalent.
[(b)] LTU: Registered as a jobseeker for at least 360 days during the 540 days prior to the date of joining the programme but less than 24 months of uninterrupted registration. VLTU: Registered as jobseekers for 24 uninterrupted months.