



JRC TECHNICAL REPORT

Active Labour Market Policies in Flanders.

Evaluation of the ESF “Work Experience for Young Persons” programme

Giulia Canzian
Josephine Foubert
Elena Claudia Meroni
Giulia Santangelo

2020

This publication is a Technical report by the Joint Research Centre (JRC), the European Commission's science and knowledge service. It aims to provide evidence-based scientific support to the European policymaking process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of this publication. For information on the methodology and quality underlying the data used in this publication for which the source is neither Eurostat nor other Commission services, users should contact the referenced source. The designations employed and the presentation of material on the maps do not imply the expression of any opinion whatsoever on the part of the European Union concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Contact Information

Name: Giulia Santangelo

Address: Joint Research Centre, Via Enrico Fermi 2749, TP 361, 21027 Ispra (VA), Italy

Email: giulia.santangelo@ec.europa.eu

Tel.: +39 0332 785544

EU Science Hub

<https://ec.europa.eu/jrc>

JRC113899

EUR 30144 EN

PDF ISBN 978-92-76-17339-7 ISSN 1831-9424 doi:10.2760/623819

Print ISBN 978-92-76-17338-0 ISSN 1018-5593 doi:10.2760/468689

Luxembourg: Publications Office of the European Union, 2020

© European Union, 2020



The reuse policy of the European Commission is implemented by the Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Except otherwise noted, the reuse of this document is authorised under the Creative Commons Attribution 4.0 International (CC BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed provided appropriate credit is given and any changes are indicated. For any use or reproduction of photos or other material that is not owned by the EU, permission must be sought directly from the copyright holders.

All content © European Union, 2020

How to cite this report: Canzian, G., Foubert, J., Meroni, E.C., Santangelo, G., *Active Labour Market Policies in Flanders. Evaluation of the ESF "Work Experience for Young Persons" programme*, EUR 30144 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-17339-7, doi:10.2760/623819, JRC113899.

Contents

Foreword	1
Abstract	2
1 Introduction	3
2 "Work Experience for Young Persons" programme	3
2.1 Youth and the labour market in Flanders	3
2.2 Work experience for young people (WIJ!)	4
2.2.1 Background	4
2.2.2 Current call	5
3 Data	5
3.1 Description of the different datasets	5
3.2 Data cleaning	6
3.3 Sample selection	7
3.4 Outcomes of interest	7
4 Empirical strategy	8
5 Results	12
5.1 Heterogeneity by ESF intervention length	12
6 Methodological issues and possible avenues for future analyses	14
6.1 Ways to improve the matching and to better tackle selection bias	14
6.2 Other approaches: regression discontinuity design	14
6.3 What could be done in the future?	15
7 Conclusions and policy implications	15
8 Figures	17
9 References	22
10 Appendix	23
10.1 Notes on the WIJ program	23
11 Additional tables	25

Foreword

The Counterfactual Impact Evaluation (CIE) of the "Work Experience for Young Persons" (WIJ) programme was carried out within the "Data Fitness Initiative for CIE", launched in February 2016 by the Directorate General Employment, Social Affairs and Inclusion (DG EMPL) and the Centre for Research on Impact Evaluation (CRIE) to promote the use of CIE for the assessment of European Social Fund (ESF) interventions.

This study is the final output of the collaboration between the ESF Department of the Flemish Ministry of Employment and Social Economy¹ and the CRIE. The CRIE would like to thank the ESF Department of the Flemish Ministry of Employment and Social Economy for granting access to and collecting the data from the Public Employment Service of Flanders used in this paper.

The CRIE is grateful to Benedict Wauters and Benedict Schalembier from the ESF Department of the Flemish Ministry of Employment and Social Economy for valuable comments and suggestions.

¹ Josephine Foubert collaborated on this project while working at the Flemish Ministry of Employment and Social Economy.

Abstract

The aim of this report is to evaluate the "Work Experience for Young Persons" (WIJ) programme, implemented in Flanders from 2015 until 2018. The WIJ programme is targeted at unqualified young unemployed with the aim of facilitating their entry to the labour market, through an intensive guiding trajectory which includes labour market orientation and coaching, and possibly competence strengthening activities. The analysis is based on administrative data sources from the Flemish Public Employment Service. Using detailed information on the past labour market histories of youth, we apply matching approaches to evaluate the impact of WIJ in terms of probability of being employed or re-entering education for young unemployed. Our results suggest that those who have participated in the WIJ programme have lower employment and education probabilities. However, if we only consider those whose WIJ intervention lasted less than 14 months (which includes all participants within the standard trajectory), there are no significant differences between the treated and the control group in terms of employment probability. Furthermore, the negative effect on the probability of being enrolled in education is smaller in this group than in the whole sample. Those who followed the standard trajectory thus clearly outperformed those in extended trajectories. Because relatively little is known about the selection process of the treated individuals, these results should be interpreted with caution.

1 Introduction

Active labour market policies (ALMP) targeting youth have become particularly widespread in the last three decades. Northern European countries first launched several programmes for young people in the 1980s and the 1990s. Among the national initiatives, the broadest ones were the English New Deal for Young People (NDYP), the Danish Youth Unemployment Programme (YUP), and the German Jugend mit Perspektive (JUMP).

More recently, in 2013, the European Council created the Youth Employment Initiative (YEI) package in order to provide financial support to the regions mostly hit by youth unemployment². It primarily supports the implementation of the Youth Guarantee (YG), which targets young people not in employment, education, or training (NEETs), including long-term unemployed youngsters or those not registered as job-seekers - younger than 25 years. Sweden was a pioneering country in the implementation of the YG, since it launched the programme in 1984, followed by Norway in 1993, and Denmark and Finland in 1996.

The measures generally launched under the YEI and the YG include apprenticeships, traineeships, job placements, and further education leading to a qualification. Although the literature on the effectiveness of the YG programmes is still in progress due to the recent introduction, several studies examined its implementation at country level (Cabases 2016, Pastore 2015, Escudero Mourelo 2015).

From a broader perspective, the effectiveness of ALMP targeting youth has been extensively documented in the empirical literature (see among others the reviews by: Caliendo and Schmidl, 2016, Kluge, 2010 and Card et al., 2018). The evidence on particular types of interventions, such as training programmes and private sector incentives, is however mixed, since it has been shown that their impact varies over time. In their meta-analysis, Card et al. (2018) point out that these particular measures have in fact larger average effects in the medium and longer term. The absence of positive impact in the short-term may be attributed to the “lock-in” effects, as defined, among others, by Ham and Lalonde (1996). Unemployed participating in these programmes may drastically reduce their employment opportunities in the period immediately following the programme, namely in the short term, since they often reduce or suspend their normal job search efforts during the participation.

The aim of this report is to contribute to the evidence on the effectiveness of ALMP targeting youth, by analysing the “Work Experience for Young Persons” (Werkinlewing Jongeren, WIJ!) programme, implemented in Flanders in June 2015 by the Flemish division of the European Social Fund (ESF).

The project targets unqualified youth between 18 and 25 years old with a distance from the labour market. The WIJ programme consists of two main phases; the first one is focused on labour market orientation and ends with an action plan; the second phase consists of further coaching plus competence strengthening activities, aimed at facilitating the entry to the labour market of unqualified young unemployed. Important to mention is that the WIJ intervention is not the only one available to the target group. The regional Public Employment Service (PES) also provides employment services to unemployed youth. The WIJ trajectory, however, ought to be more individualised with explicit attention for a personal action plan and labour market orientation, after which additional competence strengthening training and internships can be provided. Considering the latter, this research examines the added value of the WIJ intervention comparing its effectiveness with that of other available labour market services provided by the Flemish PES, i.e. the Service for Employment and Vocational Training (Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding, VDAB). We perform the analysis using administrative data sources from the VDAB, which provide detailed information on the past labour market histories of youth. We exploit this information using matching approaches, in order to evaluate the impact of WIJ on the labour market status of young jobseekers, i.e. on the probability of finding a job, being unemployed, or re-entering education.

2 “Work Experience for Young Persons” programme

2.1 Youth and the labour market in Flanders

Leaving school unqualified has detrimental social and economic consequences. Future labour market performance is one of those heavily affected domains. Having good starting qualifications and acquired competences play a primary role in successful labour market entry. Continued use and application of competences are also necessary to maintain and preserve them. Increasingly, it is also highly important to expand and update the already acquired competences to stay in the market once entered.

Recent labour market indicators of Flanders regarding the labour market entry of youth give insight into the context in which the WIJ intervention was implemented. We refer to indicators of 2016 as this was the main period when the intervention was organised (Steunpunt Werk, 2018)³. The unqualified exit of youngsters between 18 and 24 years old is relatively low in Flanders compared to the European situation. Since 2010 this percentage of unqualified exit has been declining in Flanders. The numbers for 2016 show that in Flanders 6.8%

²These are defined as the areas where youth unemployment is higher than 25%

³Steunpunt Werk is the Centre of Expertise for Labour market Monitoring (CELM), a university-based knowledge centre for the monitoring and analysis of the labour market, acting on behalf of the Flemish Government.

of this population group stops education without a secondary school certificate, whereas the European average is 10.7%. Flanders aims to reduce the percentage to 4.35% by 2020 (Steunpunt Werk, 2018); a goal which is not yet reached.

Despite the lower rate of early school leaving, the unemployment rate of people between 15 and 24 years old in Flanders is considerably high. After a periodical peak in 2013 when it reached 16.6%, the rate settled on 14.1% in 2016 (Steunpunt Werk, 2018). Although the average rate in Flanders is still lower than the European rate (18.7%), it is still higher than in pre-recession periods (10.5% in 2008 in Flanders). The youth unemployment rate is also lower in neighbouring countries such as Germany (7%) and the Netherlands (10.8%). Considering the same age group, young men seem to be more at risk for unemployment (16.6%) compared to young women (11.1%).

Given the need to be qualified and to keep competences up to date, looking into the number of youth not in education, employment, or training (NEET) provides an interesting picture of those individuals certainly at risk of being alienated from the labour market. The Flemish numbers show that in 2016 7.5% of the youth between 15 and 24 years old was in a NEET-situation, which is below the Belgian target of 8.2% in 2020 (Steunpunt Werk, 2018). This percentage has been going down since the peak of 10.5% reached in 2013 because of the recession. This way, Flanders obtains a better result than the European average of 10.5% and neighbouring country France (11.9%), but performs worse than the Netherlands (4.6%) and Germany (6.6%).

Periods of long term unemployment are often moments in which skills and competences are not further developed. In Flanders, in 2017 71.2% of the young unemployed under 25 were unemployed for less than one year (VDAB, 2018). However, there was a considerable group of young people with a longer duration in unemployment: 17.5% having spent between 1 and 2 years in unemployment, and 11.3% over 2 years. Moreover, the percentage of young unemployed with lower education was approximately 65% for those with between 1 and 2 years of unemployment and 74% for those with over 2 years of unemployment.

Although the rate of unqualified school leavers is rather low in Flanders, employment and unemployment rates point to several obstacles, especially for lower educated people. The difference in employment rates between higher and lower educated young individuals is considerable. International variation also shows there is room for improvement.

2.2 Work experience for young people (WIJ!)

2.2.1 Background

The WIJ! intervention finds its origin in an earlier ESF-call (number 166) on 'job workshops for young unemployed' set up in 2010. This latter intervention was the result of an agreement between the Flemish government and its social partners (employers and employee organisations) to address youth unemployment during the recession. The call offered work experience to young people under 25 years who had been unemployed for more than one year, but with a rather attractive labour market profile in terms of qualification. The aim was preventing these unemployed people from ending up in a situation of long-term employment because of the recession. The intervention consisted of intake and orientation, competence strengthening activities (such as a group project, a short internship, and guidance), job hunting, job interview support, and possibly additional actions related to training or guidance.

During the evaluation of call 166, it was decided to redirect the focus to unqualified younger individuals for whom the regular PES actions would not be sufficient to foster the entry to the regular labour market without reverting to more specialised guidance techniques (such as the ones that exist for individuals with a work disability). As such, the WIJ calls were designed in order to include intensive work experience and competence strengthening activities for a target group that is usually less attractive for employers. The goal was to find work for the individual or to improve the technical or practical qualification to make the young individual more attractive to the labour market. The ESF prescribed that the intervention should contain individual guidance and orientation, job hunting and mediation, the possibility of an internship, aftercare (counselling, coaching, and follow-up) when the person finds work, plus competence strengthening training and guidance activities. Individuals were allocated to the intervention by the caseworkers of the regional PES. The intervention itself was performed by third-party partners, selected according to the project proposal and methodology based on the general call proposal of the ESF. The first call (number 259) was launched in 2012 with programmes starting from February 2013 to July 2014. The standard trajectory lasted 12 months, but could be extended to 18 months after agreement between all the partners. The executors received a maximum of 4000 euros per participant. 60% of this total was transferred for effort when the programme was completed (or started but stopped prematurely), while another 40% was transferred when the prescribed goals (qualifying training or work) were obtained.

2.2.2 Current call

This study focuses on the second call (number 312) which was launched in February 2015. Allocations of participants to WIJ activities started on 1 June 2015, although the data used for this evaluation contain information about the activities starting up to 18 October 2017. The length of the standard trajectory is 12 months, as in the previous call; however, compared to the first one, the second WIJ call was formulated in more concrete terms and prerequisites. Two main criteria were set to determine eligibility for participation in the intervention: age and educational qualification. First, in order to be admitted to the intervention, the person needed to be at least 18 years old and maximum 25 years old at the time of admission. Second, as regards qualification, the person had to have obtained no higher than a certificate of special needs secondary education (ISCED 2 level), a certificate of upper secondary general, technical or arts education (second grade of secondary education in Belgium – ISCED 3) or a certificate of upper secondary (part-time) vocational education (third grade in secondary education in Belgium – ISCED 3). However, some individuals were allowed to start the intervention at an older age (26); similarly, it was permitted for up to 5% of the unemployed to deviate from the qualification criterion if the guidance was also relevant for them. This deviation from the selection criteria is normally referred to as non-compliance. Moreover, despite the presence of these two objective criteria (age and level of education), very little is known about the actual selection process of individuals. Indeed we do not have detailed information to derive why, among the individuals aged 25 or younger and with low level of education, some are assigned to the ESF programme and others to the standard PES activities. This may depend on the personal choice of caseworkers, or on the availability of activities at the registration time. This is a crucial element to take into account for the methodological choice we had to make in the analysis.⁴

Individuals can participate in the intervention after allocation by the regional PES or after recruitment from the network of the third party executors whose intervention proposal was accepted by the ESF. As in the other call, the latter submitted their project proposals and their specific intervention description based on the ESF call.

In this second call, the ESF project includes two main parts: 1) orientation with action plan, and 2) coaching and guidance. The evaluation of the first WIJ call (259) clearly described the need of the target group for orientation and insight into one's own competences and possibilities, since the group of young unemployed is often characterised by learning fatigue, negative schooling, and job experiences, and shows difficulties to formulate realistic job targets and aspirations. As such, the first part was made explicit to provide the participants with more insight into their competences and skills, their opportunities on the labour market, and the barriers they may encounter to enter it. This part consists of a prescribed orientation phase where the PES caseworkers make an explicit analysis of the participant's situation and needs at the beginning of the intervention. In addition, in this first action, the caseworkers help the young unemployed registered with the PES to improve their knowledge of the labour market and to gain an insight into possible jobs, sectors, and relevant labour market actors, so as to facilitate the job search and help them enter the labour market successfully. A short summary of the specific intervention projects of the third party executors can be found in the Appendix.

After the preparatory phase, the second phase aims to provide the participants with an intensive guidance trajectory for work and competence strengthening. In this phase, the needs for (additional) qualification are met by providing short trainings, educational internships, job-hunting, job interview support, and other instruments. If the participant finds a job during the intervention, it is demanded that the executors still provide guidance in what is called the 'aftercare' period. If possible, the participation in specific trainings and internships is registered in a central PES database and documented by a certificate. The specific policy instruments used within the guidance may differ from participant to participant, as the trajectory is made to measure and depends on the participants' needs.

The ESF prioritises three main results within this intervention: 1) finding a job (with a minimum duration of the employment contract of three months), or 2) starting a qualifying educational programme (an officially recognised vocational training course organised by the PES, the centre for adult education or the general educational sector), or alternatively 3) completely executing the intervention with all the prescribed activities formulated in the project proposal of the third party executor.

This call is financed 60% by national funds and 40% by ESF. As in the previous call, results based financial management was chosen. The executors receive a maximum of 600 euros per completed action plan and an additional 2000 euros per guidance trajectory that obtains at least one of the three results above. If the intervention is extended for an additional six months, the latter amount can be increased up to 3300 euros.

3 Data

3.1 Description of the different datasets

The analysis carried out in this report is based on administrative data from the registries of the Flemish PES. In particular we had access to the following data sets:

⁴See section 6 for discussion.

- Catwz (PES information): complete unemployment trajectories of all registered unemployed (both treated and control units) as recorded by the PES on a monthly basis. In Flanders, all unemployed are obliged to register with the PES at the start of the unemployment period. Conversely, people who are studying or are employed can register voluntarily. Therefore, the Catwz contains information regarding almost all people who are unemployed within a certain period of time. Once registered, the PES keeps on updating the trajectories of unemployed. These include more than 30 different typologies of periods. We group them into broader categories, defining the four following states: 1) "Non-working job seekers", 2) "In education", 3) "Employed" (including also working job seekers) and 4) "Inactive" (including also unemployed individuals receiving social assistance).
- Dimona (Déclaration IMMédiate/ONmiddellijke Aangifte: work contracts information): system whereby all employers are required to immediately electronically register a new employee with the National Office for Social Security (Rijksdienst voor Sociale Zekerheid, RSZ). As such, Dimona records the complete work history for all individuals (both treated and control units) since they started working, including information about the contract start and end dates, and the typology - whether interim, temporary or not. The collected information is available on a monthly basis.
- WIJ deelnemers (WIJ treated units): information about the WIJ treated group. This data set includes all individuals who were channeled into the intervention. The collected information contains demographic characteristics, such as gender, date of birth, nationality, level of education, and province of domicile, in addition to information on the following characteristics: migrant background, disability and limited knowledge of the Dutch language. Finally, details about the ESF intervention, as start and end date, allow to identify months when unemployed were engaged in ESF activities. This database also includes people who did not complete the intervention.
- Controlegroep (control units): information about all the individuals who were not treated and were therefore selected to build the control group. This data set contains all the individuals born between 1987 and 1998, who appeared at least once in the unemployment registry in the period between June 2015 and October 2018. The data contain the same demographic characteristics as those contained in the treated group file.
- Trajecten, werkplekleren and opleidingen (ESF and PES activities): information on activities followed by both treated and controls units, including different kinds of training and workplace learning (internships). The Internship data set (werkplekleren) allows to distinguish among 16 different kinds of activities, which we grouped into the two major and most frequent categories: "Competence strengthening internship (building skills)" and "Orientation internship". The Training data set (opleidingen) allows to distinguish among four possible types of training: "Orientation training", "Job specific training", "Dutch for foreigners", and "General training". Finally, the third data set (trajecten) indicates whether the individual is followed by the employment office. For internship and training activities it is possible to identify whether these are "executed", "stopped" or "ongoing"⁵. For all activities the exact start and end dates (e.g. 11 March 2016) are recorded. However, in the data currently available, information on the end date of the trajecten is incorrectly recorded and missing in many cases. The problems associated with this issue will be discussed in the following sections.

These five data sets can be linked with each other by a unique individual identifier.

3.2 Data cleaning

Our final database has been constructed by merging the available data sets. In addition to socio-demographic characteristics, it contains information on the activity undergone in each month by each individual, enabling us to reconstruct individual labour market trajectories. In particular, for each registered unemployed we can define their status on a monthly basis distinguishing whether they were either unemployed, working, or participating in the WIJ intervention, etc.

Before implementing the analysis, we needed to revise the database in order to reconcile possible contrasting information. Indeed, we came across specific cases in which the individual status declared for a given month in one of the data sets was not compatible with the status reported in another data set. The procedure we adopted to tackle these issues is the following:

- in a first instance, we take the Catwz database as the reference, and for each month we create the individual variable "status";

⁵In case of overlapping different activities in a given month (for instance, "Orientation internship" and "Competence strengthening internship"), we keep the activity with a "better" status, favouring executed over ongoing over stopped.

- we then compare the Catwz status categorisation with the Dimona one, taking this latter data set as the reference source of information on working/non-working status. If in a given month Dimona contains records on work contracts, we update the status to "employed" for the corresponding month, regardless of the information reported in Catwz (for instance, either no information or a status different from employed).
- finally, we consider the information provided in the WIJ and PES activities database and update the status according to the activities undertaken. For example, if, according to the WIJ file, an individual is engaged in the ESF intervention, his/her status is updated to "ESF intervention"⁶.

As a result, the variable "status" can take the following values:

1. ESF intervention;
2. PES activities;
3. Employed;
4. In education;
5. Inactive;
6. Non-working job seeker.

Finally, we revise each individual working history to reconcile inconsistencies in the statuses declared over time. In particular, if in month n, the status is different from the statutes in months n+1, n+2, n-1 and n-2, but the statutes in these four months are the same, we replace the status in month n with the one of the adjacent months as shown by the following example⁷:

Year	Month	Status	Year	Month	Status
2015	05	Employed	2015	05	Employed
2015	06	Employed	2015	06	Employed
2015	07	Inactive	2015	07	Employed
2015	08	Employed	2015	08	Employed
2015	09	Employed	2015	09	Employed

3.3 Sample selection

The WIJ intervention started on 1 June 2015. Each participant was able to start the WIJ activities at the chosen date. For the purpose of our analysis, we only consider treated individuals who completed the intervention and exclude from the analysis (ii) those who were assigned but did not start the programme, and (ii) those who started but did not complete the intervention. We also exclude individuals starting the intervention after the age of 26 and individuals participating in multiple valid interventions (for example, individuals undertaking an intervention in 2016 and another one starting in 2017).

Of the 7000 proposed participants, around 500 are individuals who were assigned, started, but did not finish the programme and 1500 are individuals who were assigned but never started. The number of treated individuals considered in the analysis is thus around 5000.

The potential control group is composed of all individuals (i) appearing at least once in the unemployment registry between June 2015 and October 2018, (ii) who were born between 1987 and 1998. This potential control group counts more than 241,000 individuals.

3.4 Outcomes of interest

The WIJ intervention aimed at enabling unemployed either 1) to find a job (lasting a minimum of three months), or 2) to engage in a qualifying educational programme or alternatively 3) to completely execute the intervention with all the prescribed activities formulated in the project proposal of the third party executor.

Unfortunately, data availability prevent us from assessing whether Objective 3 has been reached. Indeed, the database contains information neither on individual plans nor on the detailed activities performed by each unemployed. Hence, we cannot evaluate if all individuals completed the plan agreed with their tutors. In addition, the particular outcome could only be identified for those participating in the programme, and therefore it cannot be used in a counterfactual framework which entails the comparison of treated and control outcomes.

⁶Note that in the months when they are not participating in the ESF intervention, treated individuals can also participate in the activities normally offered by the PES.

⁷When dealing with unemployment/employment spell data, this is usually done, see for example the paper by Sjögren and Vikström, 2015.

In this case, we would be prevented from identifying the control outcome since they did not benefit from the intervention.

Thus, we concentrate on the first two objectives: finding a job and re-entering education. To measure them we focus on the status of the individuals a given number of months after the intervention started. Since ESF interventions and PES activities have different durations, and we know that ESF interventions can last between 12 and 18 months, we decide to take month 12 after the start of the intervention - be it either ESF or PES - as our reference point. Using this, we identify outcomes assessing individual status every month from 12 to 30 months after the intervention starts and we recode all months after the starting date according to Dimona or Catwz. Therefore the variable status described in Section 3.2 will be equal to ESF intervention or PES activities only for the month when these activities start. From month 2 onwards it will take the value obtained combining Dimona and Catwz, as explained in Section 3.2, resulting in four possible alternatives: in employment, unemployed, in education, or inactive.

Finally, for each month we build a set of four dummy variables taking value 1 if the individual is either: 1) working, or 2) in education, or 3) unemployed, or 4) inactive. We then define the outcomes as the probability of being in these statuses n months after the starting month of the intervention.

For example, for an individual who started the intervention in April 2016 we first define his/her working/in education/unemployed/inactive status in May 2017 (12 months after the start); then in July 2017 (15 months after the start) and so on. Of course this is not possible for all individuals, but only for those that we observe for at least 12 months after the intervention start.

4 Empirical strategy

Our aim is to assess the effectiveness of the WIJ intervention in comparison to standard PES activities. To do so we would like to compare the outcome of an individual who receives the treatment, i.e. participates in WIJ activities, to the outcome of the same individual had she or he not received the treatment. Clearly the latter outcome is not observable: if an individual is treated we only observe her or his outcome conditional on the fact of having received the treatment. This is defined as the "fundamental problem of causal inference" in the economic literature: one cannot observe the status of a treated individual in the scenario where she or he did not receive the treatment (the counterfactual).

One possible way out of this problem is to use the outcome of the individuals who did not participate in the WIJ activities - but received the standard PES assistance - as the counterfactual. However, since the individuals assigned to the WIJ may be different from the ones assigned to the standard activities, we cannot simply retrieve the impact of the intervention by comparing the outcomes of the two groups, because the results would suffer from a bias related to the mechanism of selection for the treatment (selection bias).

Taking into account some features of the selection process and controlling for some observable differences between the two groups can help mitigate this bias. However, as highlighted in the empirical literature, the impact of individual characteristics which are not directly observables, such as motivation and orientation to paid employment, could be a problematic element since it represents a confounding factor in the estimation procedure. It may be that highly-motivated individuals are more likely to participate in WIJ and are also more likely to find a job or it may be that people more in need or less motivated, facing more difficulties in finding a job, are prioritized towards WIJ. The first case is referred to as "positive selection", while the second case induces "negative selection". Both scenarios induce bias in the estimates. Therefore, we need to select a group of individuals, not assigned to the WIJ, that is as similar as possible to the group of treated individuals, also in terms of these non-observable characteristics.

This issue is further exacerbated by the fact that very little is known about the selection process of eligible individuals, since the caseworkers play a crucial role in the selection of participants. If caseworkers are 'cream-skimming', that is, they select the best individuals for the WIJ, the intervention effects will be over-estimated. Conversely, intervention effects may be underestimated if the caseworker are targeting the least able. Basically, participation into WIJ activities is decided by the caseworker; if caseworkers are discriminating participants according to some specific characteristics, such as ability or motivation, but this process cannot be observed by the evaluator, the resulting estimates of the programme impact will suffer from some estimation bias.

Among the several econometric techniques that can help us in accomplishing the goal of reducing selection bias and perform a valid evaluation, the final choice of the most suitable counterfactual method is strongly related to institutional background and to data availability. Usually, matching techniques are used when there is no well defined rule for the selection into the treatment⁸. In addition, matching techniques perform best when there is a large number of individuals that could be chosen as controls, and when one can observe a large number of variables potentially affecting both the selection into treatment and the outcome.

⁸This is the case for instance where only individuals with duration in unemployment of more than one year are treated, or only individuals living in a particular province are treated

Table 1: Descriptive statistics in the treated and non-treated groups

	Controls		Treated		Difference
	(1) mean	(2) sd	(3) mean	(4) sd	(5)
Female	0.407	0.491	0.388	0.487	0.0188**
Low educated	0.428	0.495	0.805	0.396	-0.377***
Medium educated	0.572	0.495	0.195	0.396	0.377***
Age at last registration at PES	22.762	3.018	20.677	2.055	2.084***
First time registered at PES	0.269	0.443	0.184	0.387	0.0854***
Share unemployment (12 months)	0.097	0.225	0.125	0.240	-0.0288***
Province:					
Antwerp	0.308	0.462	0.350	0.477	-0.0425***
Brussels	0.002	0.045	0.001	0.024	0.00148*
Other than Brussels/Flanders	0.002	0.040	0.001	0.024	0.00105
Limburg	0.158	0.365	0.128	0.335	0.0295***
East Flanders	0.233	0.423	0.231	0.421	0.00221
Flemish Brabant	0.136	0.343	0.109	0.312	0.0267***
West Flanders	0.161	0.368	0.180	0.384	-0.0185***
Nationality:					
Belgian	0.797	0.403	0.816	0.388	-0.0190***
EU	0.074	0.262	0.063	0.243	0.0112**
Not EU	0.129	0.335	0.121	0.326	0.00787
Observations	102486		5093		

Note. Descriptive statistics of the mean and standard deviation of the variables in the treated (columns (3) and (4)) and non -treated group (columns (1) and (2)) and their differences (column (5)). *** p<0.01, ** p<0.05, * p<0.1.

The matching approach is based on the assumption that the selection into treatment is solely based on observable characteristics and that all variables that simultaneously influence treatment assignment and potential outcomes are observed. This is referred in the literature as Conditional Independence Assumption (CIA) or Unconfoundedness assumption and implies that, given a set of observable covariates which are not affected by the treatment, potential outcomes are independent of treatment assignment (Caliendo and Kopeinig, 2008). The validity of this assumption depends on the amount of this type of variables which can be observed in the data, i.e. on the richness of the data used in the matching procedures. However it must be said, that controlling for differences in observable characteristics does nothing to alleviate the bias due to unobservable variables, such as motivation or caseworker discretionary choice, as mention above. Nevertheless, it is worth mentioning that judicious use of observable characteristics can go some way towards minimizing the bias associated with unobservables. For example, observables which are thought to be highly correlated with motivation, such as pre-programme unemployment history, may capture some of the motivation effect, and that's what we will use in our estimates.

Our analysis fits well into the matching framework: the number of available potential controls is large (more than 200,000) as is the amount of information available both on socio-demographic characteristics and past working experiences. Hence, using the matching approach, we aim at maximising the balance of individual characteristics and past labour market outcomes in the two groups, so as to select as controls only those individuals who are very similar to the treated. This allows us to tackle the possible pre-existing differences between treated and controls, and to address the potential estimation bias resulting from the selection process, so as to clearly assess whether or not the WIJ programme made the difference for participants.

Table 1 presents some descriptive statistics for the time-invariant socio-demographic characteristics we are considering, in the two groups of interest (the individuals receiving the WIJ treatment and the individuals receiving standard PES assistance). Columns (1) and (3) report the average of the variables respectively in the control and in the treated group, and columns (2) and (4) report their standard deviation. In column (5) the difference between the two averages is reported, together with an indication of whether this difference is statistically significant. Treated and potential controls are statistically different in all the dimensions considered. This is why it is so important not to use the whole sample of non treated individuals for comparison, but to select only those individuals who share some similarities with the treated ones.

Among the variables we can use for the matching there are the usual demographic characteristics, such as gender, age and nationality; moreover, we include province of residence to capture, for example, the fact of being in the same local labour market and to have access to the same local employment offices. We also include two variables related to previous working history, the share of months spent unemployed the 12 months before

the last registration and an indication of whether the last registration was also the first one.⁹ These variables are very important, as they are recognized in the literature to be strongly correlated with motivation, and thus help us capturing also some characteristics which would be otherwise not observable (Biewen et al., 2014 and Caliendo et al., 2017)

In addition to those described in Table 1, we also include in the matching two important variables related to the date when the individuals last registered in the PES system and to the date when individual started an activity.

In order to better understand the choice of the variables on which the matching is implemented, recall that the aim of this study is to evaluate the added value of the WIJ programme compared to the standard labour market services provided by the Flemish PES. Hence, we aim to check the effectiveness of the orientation, coaching and guidance measures, which precede the standard training and internships and which are the peculiarity of WIJ. These measures could, for instance, also help the participant to better choose the kind of activities, i.e. the type of training and internships and the order in which to follow them. In this respect, the presence of different sequences of activities for treated and control units could itself be an intermediate result of WIJ. Also the length of the sequences could differ between treated and controls as a result of receiving or not receiving some advice regarding the most suitable activities to attend. Individuals who start the sequence of activities exactly at the same time can be considered very similar, since potentially they face the same opportunities in terms of availability of training courses or internships they can attend. This is the main reason for considering the perfect potential control as an individual who starts her or his first activity exactly at the same time as the treated one. Both can indeed choose from the same portfolio of activities, the only difference being that treated units are guided in their choice.

Following a similar reasoning, it is essential to condition on the timing of registration at the unemployment registry, to make sure that the unemployed individuals we focus on face similar working patterns and similar trends in the labour market.

As a matter of fact, since treated and control individuals have intermittent working careers with non-continuous spells of employment, they may enter and exit the PES registry multiple times depending on the succession of spells of unemployment/employment. To be able to compare them in a meaningful way, we need to realign their working histories so as to consider people that are unemployed in the same time and start ESF or PES activities during the same time period¹⁰. For this reason, among the bunch of observable characteristics, we take into account also the last date of subscription into the PES unemployment registry and the date in which the individual started an activity, either the WIJ ones for the treated or the standard PES activities for the controls.

An example could help in understanding the functioning of the matching algorithm. A treated person who last subscribed to the PES registry in December 2014 and started the WIJ activities in June 2015 will be matched with a control unit who last registered with the PES in December 2014 and who engaged in a PES plan in June 2015. Moreover, the algorithm imposes that the controls will be selected as matches for the treated individuals if they share similar age, education level attained, province of residence, etc.

Our analysis relies on two main matching techniques, namely Coarsened Exact Matching (CEM) and Propensity Score Matching (PSM).

The PSM method (Rosenbaum and Rubin, 1983) is based on the estimation of the so-called balancing score. This is estimated as a function of the relevant observed covariates, such that the conditional distribution of covariates given the balancing score is independent of assignment into treatment. The use of a balancing score allows to solve the “curse of dimensionality” arising from the need to condition on a high dimensional vector of relevant covariates. The Propensity Score is estimated as the probability of participating in a programme given observed individual characteristics. In addition to the CIA assumption, the PSM is also based on the Common Support assumption. This requires the overlap between the estimated probability of participating for treated and control units. It ensures that persons with the same values of covariates have a positive probability of being both participants and non-participants (Heckman, LaLonde, and Smith, 1999).

The CEM matches units by first coarsening observable attributes into groups. Indeed, the logic of the CEM consists in (i) temporarily coarsening each variable into substantively meaningful groups, (ii) exact matching on these coarsened data, and then (iii) only retaining the original (un-coarsened) values of the matched data. In this way, the CEM refines the standard exact matching procedure, by creating strata for the variables, and avoiding the limitation of few matches due to curse-of-dimensionality issues.

The CEM peculiarity, which differentiates it from other matching procedures such as the PSM, is that the balance between the treated and the control groups is chosen ex-ante. Therefore, this prevents the need to check the covariate balance after the matching, as in the PSM. The check on the validity of the common support assumption is not needed since the CEM automatically restricts the matched data to areas of common empirical

⁹Notice that for those individuals whose first and last registration coincide, we cannot observe their previous unemployment history.

¹⁰Controlling for the dates when individuals register as unemployed and start activities enables us to compare people facing similar business cycle characteristics, and hence to control for different labour market conditions that can alter their probability of finding a job.

support (King and Zeng, 2006). The key property of CEM is, in fact, that it belongs to the class of matching methods called Monotonic Imbalance Bounding (MIB). These MIB methods bound the maximum imbalance in some feature of the empirical distributions through an ex ante choice by the user (Iacus, King and Porro, 2008).

To assess whether the CEM improves the similarities of the two groups, one can look at the L1 statistic, which is a comprehensive measure of global imbalance, based on the difference between the multidimensional histogram of all pre-treatment covariates in the treated group and the same in the control group (Iacus, King, and Porro, 2008). It is an overall measure of imbalance with respect to the full joint distribution, including all interactions, of the covariates. L1 can assume values in the range [0,1], where L1=0 corresponds to perfect global balance, and larger values indicate larger imbalance between the groups. The maximum value of L1, L1 = 1, indicates complete separation, i.e. imbalance between the treated and control groups. The value of L1 is informative to compare the results of different matching solutions. A good matching solution should result in a reduction in the value of L1. The overall L1 measure is very informative because even if the marginal distribution of every variable is perfectly balanced, this does not guarantee the perfect balance of the joint distribution.

Robust estimates of the effect of the WIJ on the outcomes of interest are retrieved under three different empirical specifications.

In the first specification we implement the CEM using all of the available variables, without imposing a priori the size or the number of bins to coarsen the variables, which will be set automatically through the matching algorithm. However, as many of the control variables are dummies (like gender, educational level, province, first registration as unemployed), the only variables where there is some discretion about the size of the bins are the date of last registration with the PES, the start date of the ESF/WIJ activity, the age at the last registration and the share of months spent in unemployment before the last registration with the PES system. With this method, out of the 5093 treated individuals, only 3163 individuals can find a suitable match in the control group. The remaining 1930 treated individuals are not considered in the analysis. The L1 measure is reduced, but by very little (from 0.997 to 0.976).

One drawback of implementing the CEM on all covariates is that while it guarantees a perfect match of treated and controls, the number of treated individuals which are excluded from the analysis is very large because of the impossibility of finding proper controls, given the number of characteristics to be taken into consideration.

Therefore, in the second specification, we adopt less stringent constraints on the way treated and controls are matched. We apply the matching algorithm on three variables only, namely the last date of registration with the PES, the start date of the most recent ESF/WIJ activity, and a dummy variable which takes value 1 if the registration considered is the first one on the PES system. In this case, considering the performance of the matching algorithm, we do not need to coarsen the variables, and are able to match on exact values of the variables considered. For instance, for the last date of registration with the PES, unlike before, we do not construct time intervals which group consecutive dates. As an example, a treated unemployed who last subscribed to the PES registry in January 2015 having been already registered previously, and started the WIJ activities in August 2015, will be paired with those controls who share the exact characteristics, that is, the selected control units will be those who both lastly subscribed to the PES in January 2015, having been already registered previously, and started an activity in August 2015. What differentiates the matched units is only the fact that the treated attended the WIJ activities including personalised guidance while the controls attended canonical PES activities. Performing exact matching on these three variables leads to a sample of 4935 treated and 63111 controls. Hence, only 158 treated are not matched. The measure of imbalance (calculated on the three variables only) is reduced from 0.552 to 0, since we are using exact matching.

We then perform regression estimates of the treatment effect using the socio-demographic characteristics as additional variables in the regression, namely, gender, nationality, province of residence, education, and year of birth. In this way, we can control for potential imbalance remaining between the two groups.

Finally, we implement a two-step procedure in which (1) we condition on the following three variables: last date of registration with the PES, start date of the most recent ESF/WIJ activity, a dummy variable which takes value 1 for the first registration with the PES system; and (2) we estimate the PS based on the socio-demographic characteristics used above, namely, gender, nationality, province of residence, education, and year of birth. In order to condition on the first set of variables, we construct time intervals which group consecutive dates through the CEM algorithm. Hence, we combine CEM and PSM, matching individuals who have both (i) date of registration with the PES in the same intervals and start date of the most recent ESF/WIJ activity in the same interval, and (ii) similar values of PS. At the end of the matching procedure, we are left with 4,935 treated and 63,111 controls.

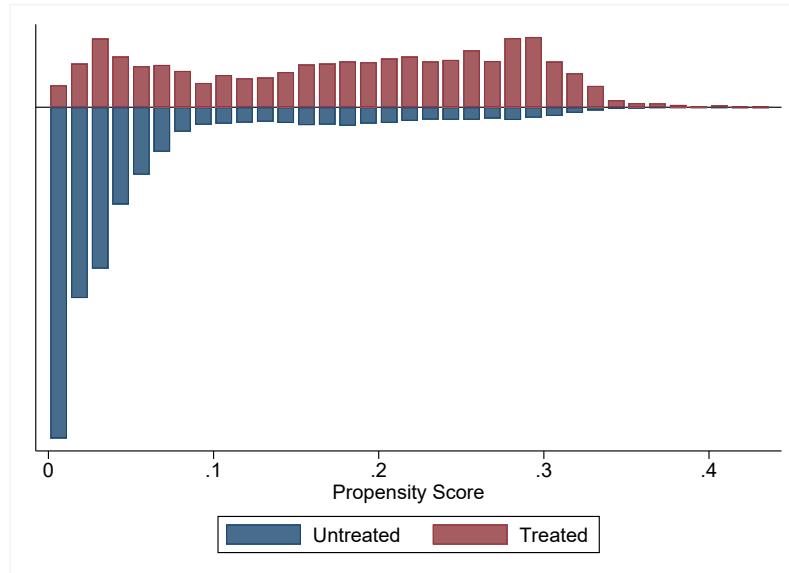
The three matching approaches enable us to estimate the average treatment effect for the treated (ATT) (Imbens, 2004). The ATT is the average effect of treatment on those subjects who ultimately received the treatment. Being defined only for those who receive the treatment, the ATT differs from the average treatment effect (ATE), which, instead, corresponds to the average effect at the population level.

For the third specification, where we combine CEM with PSM, we also report the results of the checks performed after implementing the PSM in order to assess the comparability of the treated group with the control

group selected through the matching. Figures 2 and 1 allow a graphical inspection of matching performance.¹¹

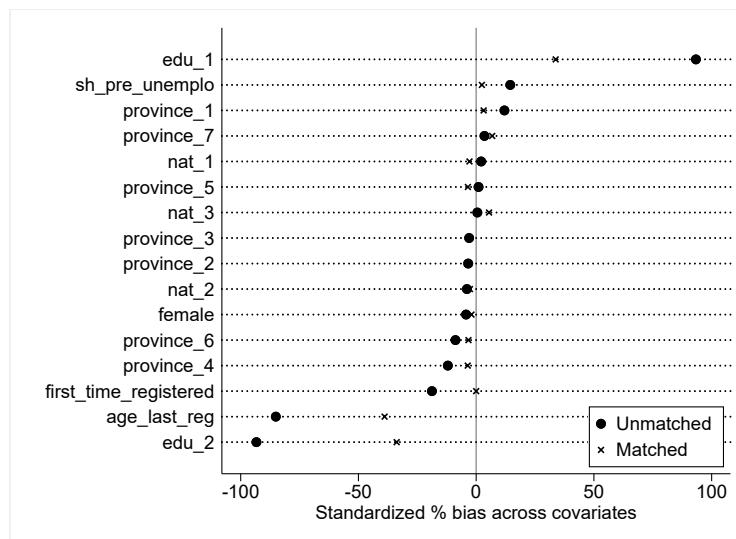
The “Common support” figure allows to assess the overlap between the distribution of the estimated propensity score in the treated and the selected control group, so as to check if the common support requirement is satisfied. We can see that for all values of propensity score of treated units there are control units with the same corresponding value of the probability of participating. This ensures that persons with the same covariates have a positive probability of being both in the treated and in the control group.

Figure 1: Common support



The “Imbalance” figure contains a dot chart for a graphical summary of covariates imbalance. This is represented in terms of standardised percentage differences, namely, for each covariate we can observe the standardised percentage bias before and after matching. The bias is calculated as the difference of the mean values in the treated and control group and is therefore a measure of imbalance between the groups. The covariates are ordered according to the values of standardised percentage bias before matching. As we can see from the comparison of the standardised percentage bias, after matching treated and control units by means of PSM the bias values align along the 0 line. This reduction in the bias takes place for all covariates.

Figure 2: Imbalance



¹¹ The two figures refer to the matching done on the first outcome, employment probability after 12 months. The checks were done for all the other possible combinations of the 4 outcomes, and the 19 months considered. We only report these two figures as an example.

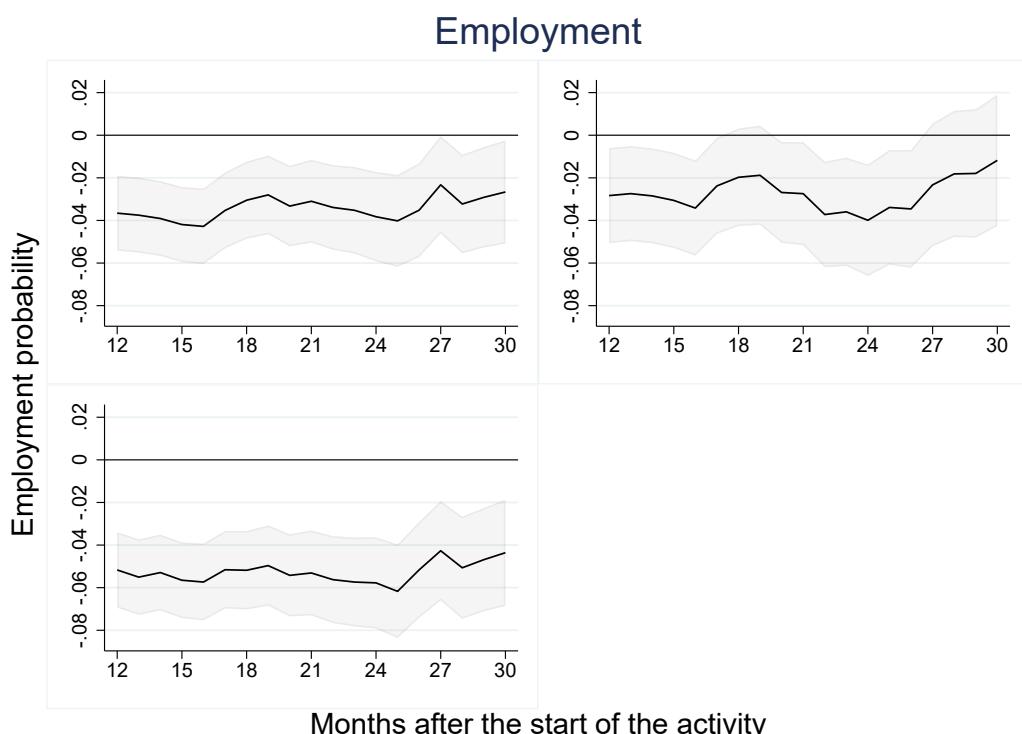
5 Results

Results of the three different specifications are reported in Figures 3, 4, 5 and 6. These show the ATT estimates for the four outcome variables considered: probability of being employed, probability of being unemployed, probability of being inactive, and probability of being in education following the intervention.

The ATT is estimated at different points in time, starting from 12 up to 30 months within the start of the activities. These correspond to ESF activities for WIJ participants and to standard PES activities for non-participants. In each graph the black line illustrates the evolution over time of the estimated ATT coefficient, while the grey band shows the confidence interval of the estimates. The narrower the confidence interval, the bigger the precision of the estimates. This reduces at the end of the time interval considered, for instance after 24 months within the start of the intervention, since the number of individuals which can be observed decreases over time, and the estimation is based on lower number of units.¹² If the confidence interval crosses the 0 line, the corresponding coefficient is not statistically different from 0. The top left graphs refer to the first specification (CEM using all the covariates), the top right graphs refer to the second specification (EM on the dates controlling for other variables in the regression), and the bottom graphs to the last specification (CEM combined with PSM). For all of the four outcomes considered, the estimates from the three different specifications are very similar, suggesting that the results are not driven by the selection of a particular method, but are robust to different specifications.

At first glance it seems that participating in WIJ, rather than in normal PES activities, has a detrimental effect on the outcomes considered: as compared to control units, for treated units employment probabilities are lower and unemployment probabilities are higher, for all of the months considered (from 12 up to 30 months after the beginning of the intervention). Treated individuals also have lower probabilities of being engaged in education or inactive. This latter result can be explained by the fact that treated individuals are more likely to extend their registration in the unemployment system.

Figure 3: Probability of employment



¹²At month 15, 3.6% of the sample is lost, at month 20, 20%, at month 25, 40% and at month 30 almost 60%, meaning that the analyses are based on the individuals starting the activity in 2015, beginning of 2016 only.

Figure 4: Probability of unemployment

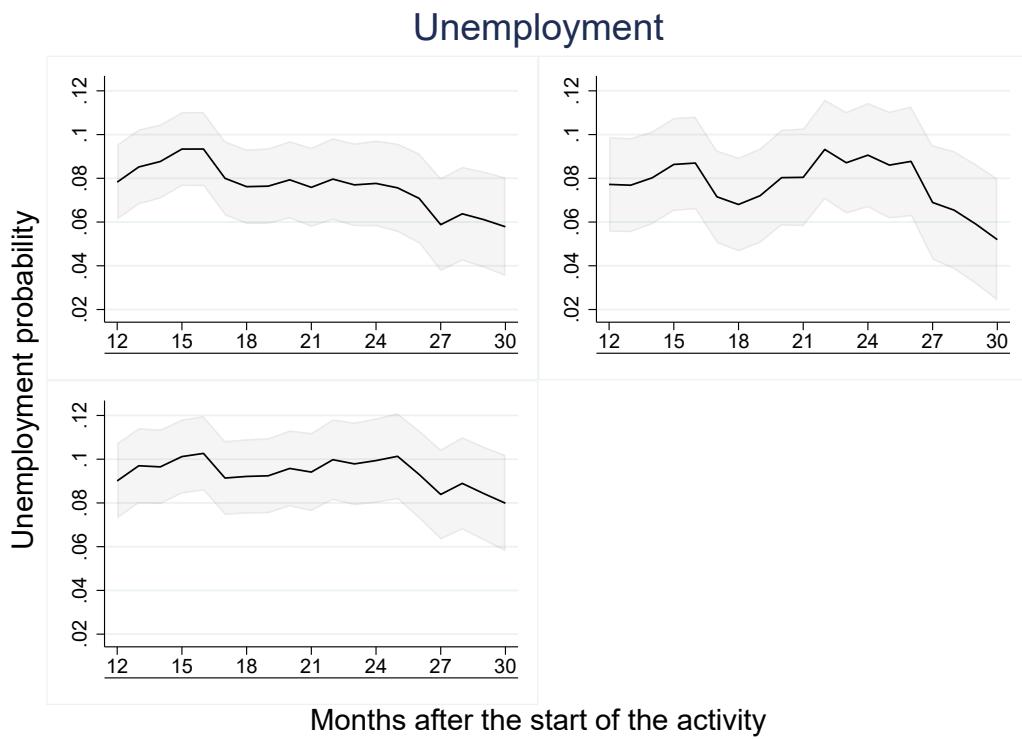


Figure 5: Probability of inactivity

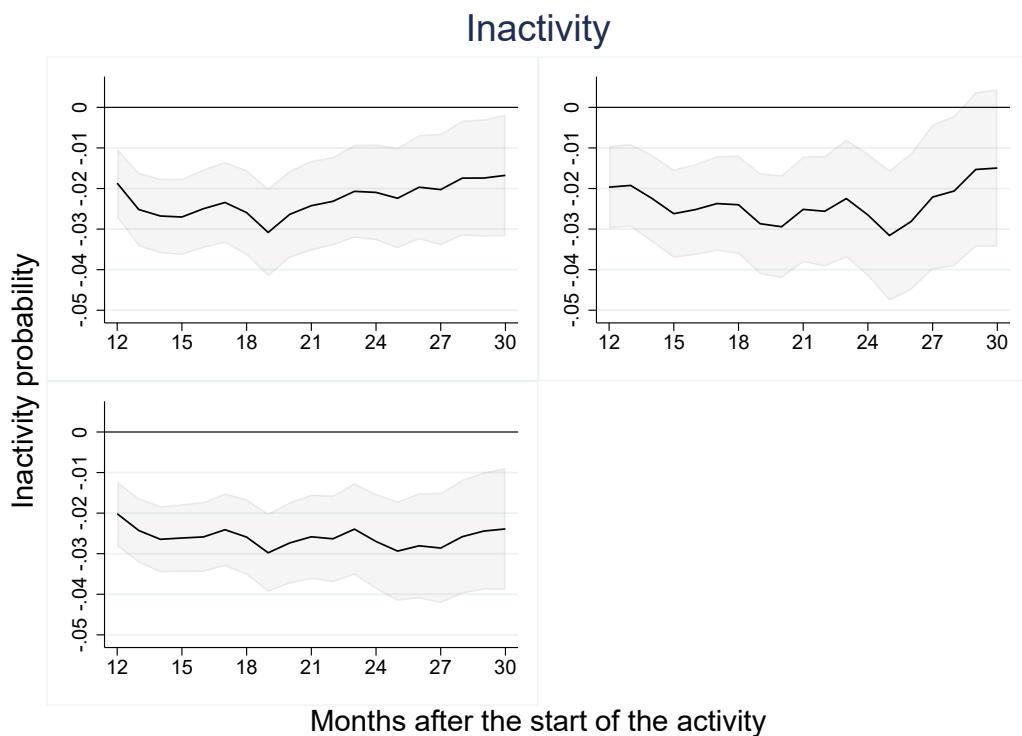
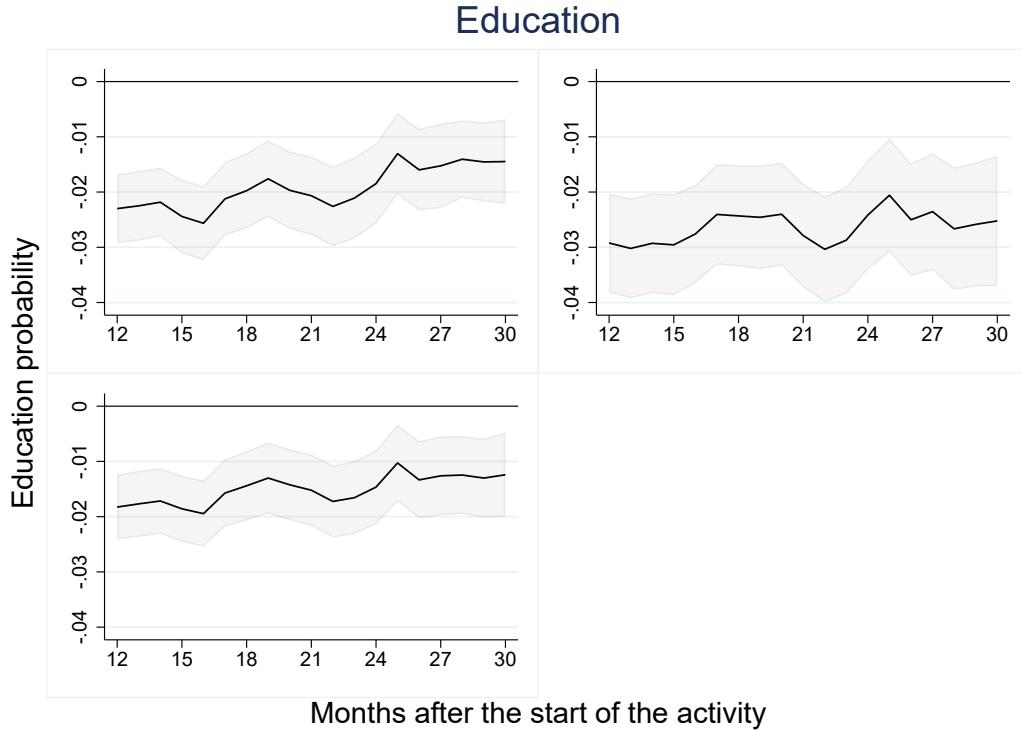


Figure 6: Probability of education



5.1 Heterogeneity by ESF intervention length

The length of the WIJ activities varies a lot within the sample of treated individuals. It ranges between 6 and 27 months, the average length is 15 months, the median is 14 months, and the 25th and 75th percentiles are respectively 14 and 16 months.¹³

Although the standard trajectory should last 12 months, it could be extended up to 18 months if agreed by all parties. We observe that a large number of individuals are followed for periods of more than 12 months. If the trajectory is extended additional funding is provided and therefore we can expect that the cost of extending WIJ interventions is very low for the promotor. It may be that WIJ interventions are extended for all those who after the first 12 months still did not find a job, or did not go back to education.

Since the median length of ESF intervention is 14 months, we investigate whether the impact is heterogeneous according to its length. We divide the sample of treated into two groups: those who follow WIJ activities for a time interval less than or equal to 14 months, and those who have longer WIJ trajectories. We replicate the analysis comparing these two groups to the group of people receiving standard PES activity. The results are reported in Figures 7 to 10. The pictures emerging from this analysis are very different from the results estimated for the whole sample. On one hand, for the probability of being employed and being unemployed, we see that for the group of individuals with WIJ duration of less than 14 months, the effect is almost 0. This means that for activities lasting less than 14 months there is no difference in terms of impact between WIJ activities or standard PES activities.

On the other hand, we notice that the negative effect found above for the whole sample is completely driven by the group of people who are engaged in WIJ for a longer period of time. While outcomes at the beginning of the period (12 to 18 months) may be not totally informative since by default individuals are still in unemployment if they are under WIJ activity, it is interesting to see that the negative effect persists even 30 months after the start of the intervention.

Results have to be interpreted with caution: the individuals who are still engaged in WIJ activities after 30 months are probably among the negatively selected treated: their WIJ intervention was extended since after 12 months they had not yet found a job. Looking at the results for WIJ trajectories shorter than 14 months, we can infer that for those following the standard WIJ trajectory (12 months), there is not a differential effect of WIJ activities compared to those of the PES, suggesting that the added value of ESF is null. For the education outcome, results follow the same trend, although we can observe a negative effect of participation for both groups (more or less than 14 months of activities) of WIJ participants compared to the people followed by the PES. The effect is however smaller for the ones engaged in shorter WIJ trajectories.

¹³Table 2 in the Appendix, reports the frequencies of ESF activities' length.

Figure 7: Probability of Employment, by ESF activity length

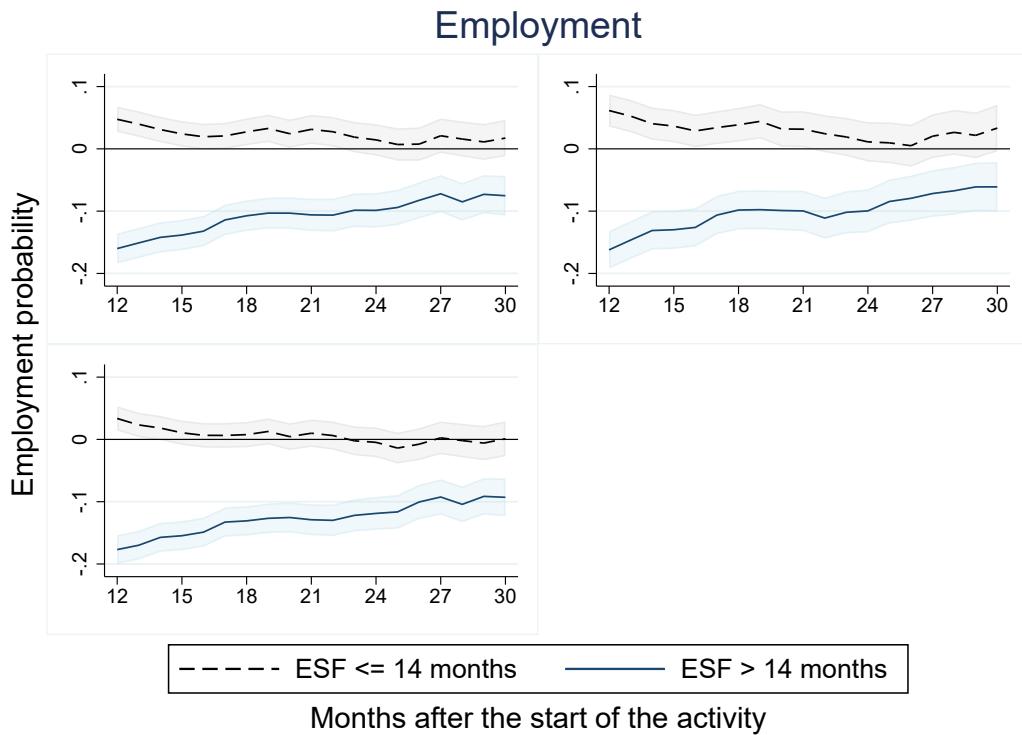


Figure 8: Probability of Unemployment, by ESF activity length

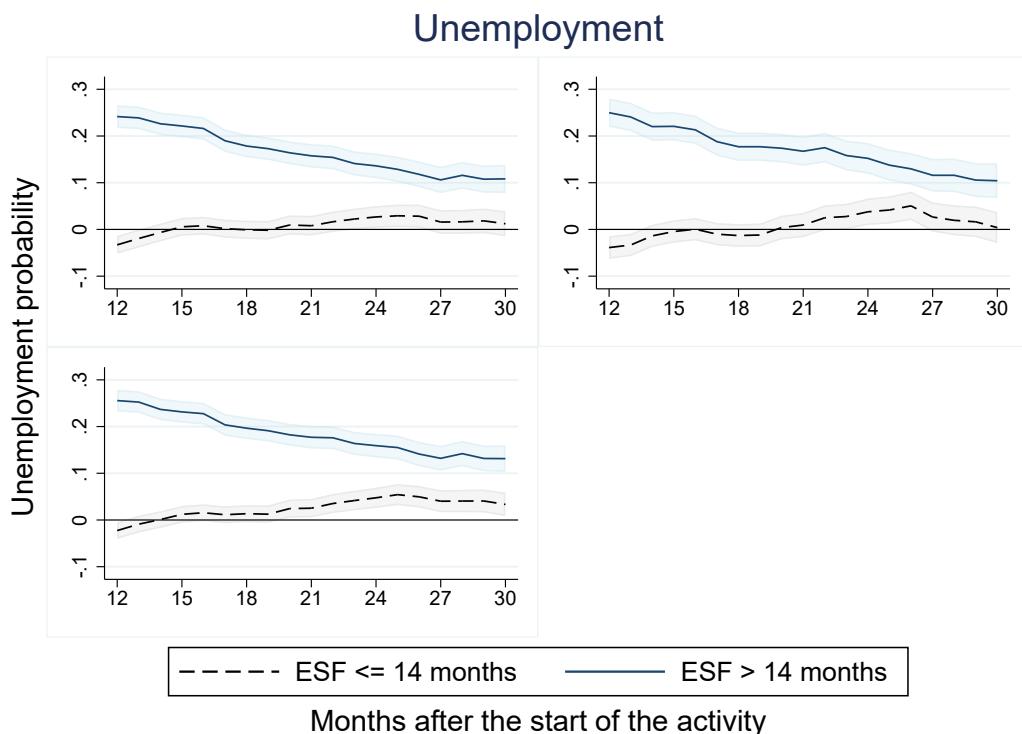


Figure 9: Probability of Inactivity, by ESF activity length

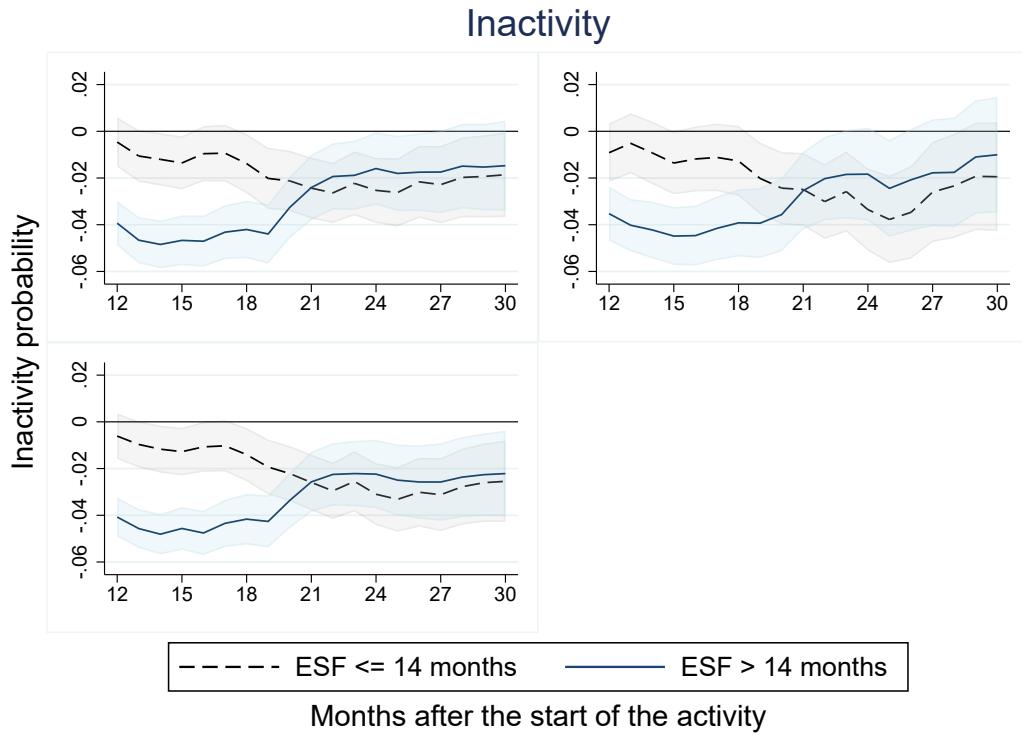
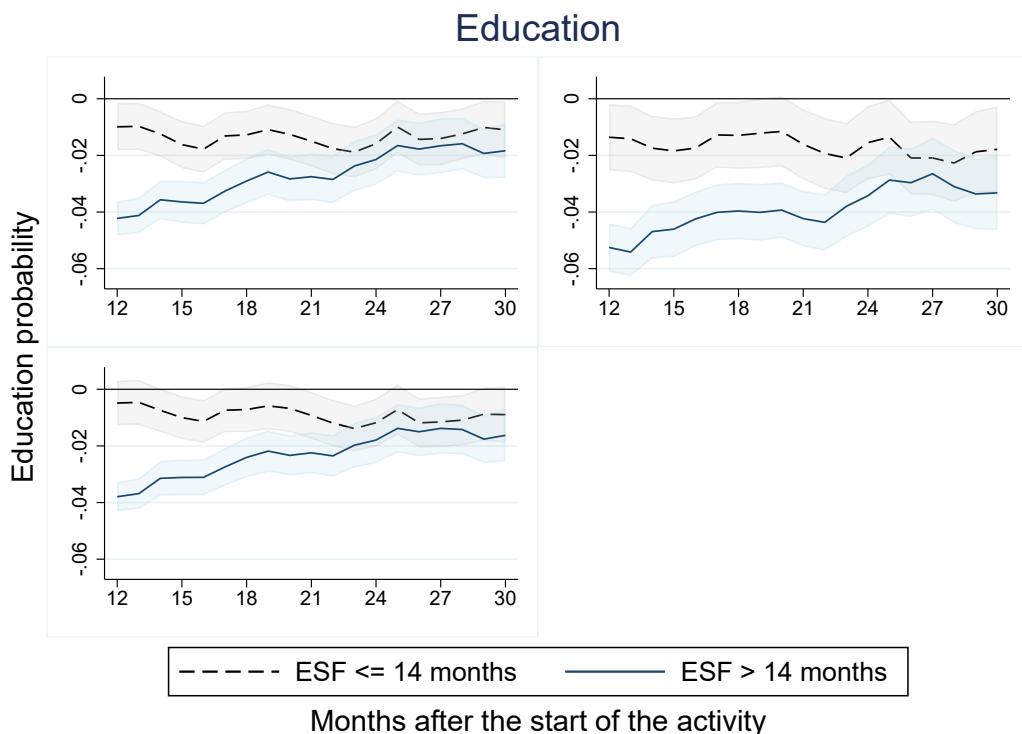


Figure 10: Probability of Education, by ESF activity length



6 Methodological issues and possible avenues for future analyses

6.1 Ways to improve the matching and to better tackle selection bias

One of the main issues concerning the evaluation of the WIJ intervention is that very little is known about how individuals are selected for the treatment. Indeed, although the selection process is based on two main objective eligibility criteria (age lower than 25, and low level of education), it is not known how individuals who comply with these two requirements are allocated to WIJ or to standard PES activities.

This is a problem as individuals who are selected for WIJ may be different from the ones assigned to standard PES activities. If these differences are not considered in the analysis, the estimates may be biased. In the methodological section we explained why the use of matching techniques can help in disentangling the true causal effect of participating in WIJ vs standard PES activities, eliminating (partially) the selection bias. The assumption underneath these methodologies is that the variables we control for are enough to explain the selection into the treatment.

In addition to the variables used for the matching procedure, reported in section 4, we exploited the richness of the administrative data at our disposal in terms of longitudinal information to perform a sequence analysis approach as proposed by Abbott (1995) and Barban et al. (2017). We applied optimal matching based on longitudinal information on previous labour market history of WIJ participants in the pre-intervention period, considering the 12 months before the last registration at the PES. However, given the focus on young unemployed with short labour market history, results did not change when taking into account previous working careers in the form of sequences or in the form of share of months worked. Therefore, we chose to work with the share of unemployment in our analyses as it was less computationally demanding.

However, to better tackle the selection bias issues, it would be good to access additional data. In particular, as pointed out by van den Berg and Vikstrom (2019), information on the caseworkers would help. For instance, in their paper they exploit the information on the assignment to caseworkers to analyse the effectiveness of caseworkers guidance, taking into account caseworkers' discretionary power over enrollment decisions. In our framework, the intensive career guidance provided by caseworkers' represents the distinctive feature of WIJ. Hence, the information on assignment to caseworkers and on meetings held would be useful to investigate potential differences in caseworkers' guidance and its impact.

Furthermore, in some countries extensive information from administrative registries is available to researchers. For example, Sianesi (2004, 2008) evaluates the effectiveness of some active labour market programmes in Sweden, using matching techniques. The data used for the matching included not only the standard demographic and educational variables (age, gender, nationality, specific and general education), but also detailed information about previous occupations, the type of job search and the past experience related to it, plus information from an overall evaluation by the caseworker on the job-seeker's situation, character and needs of service. This assessment relates to the job-seeker's degree of job readiness (judged to be able to take a job immediately, to be in need of guidance, or to be difficult to place) and to the job-seeker's preferences, inclinations, and sense of urgency (whether willing to move to another locality, looking for a part-time job or already having a part-time job). All this information would have been very useful for the evaluation of WIJ, to improve the matching procedure.

Finally, as already mentioned, beside further data, it would have been good to know more about the selection process in general.

6.2 Other approaches: regression discontinuity design

We considered using alternative methods to estimate the causal effect of interest. In particular, we explored the possibility of applying a Regression Discontinuity Design (RDD) using age as running variable. Indeed, according to the features of the intervention, WIJ activities could be offered only to individuals aged 25 or younger. Therefore, individuals just above and below the age threshold of 25 years, could be compared to estimate the WIJ impact on the outcome of interest.

However, this method was not appropriate for our case due to the following reasons: (i) there were individuals above 25 who received the treatment (non-compliance); (ii) among the ones aged 25 or younger, only a small proportion of the sample of eligible individuals was actually treated (non-compliance); (iii) in addition, individuals in the neighborhood of the age threshold of 25 years who received the treatment, were only a small proportion of the population of eligible individuals of the same age. In summary, in addition to two-sided non-compliance issues, the take up among the eligible population was very small.¹⁴

Furthermore, since the assignment to the treatment takes place not at one fixed point in time, but over a period of time, and age is a time varying characteristic, the eligibility condition changes over time. This

¹⁴For a discussion on the loss of precision of the estimates due to small sample size around the cut-off point, see Cattaneo, Idrobo and Titiunik (2019). As stated with reference to choice of optimal bandwidths, "as a larger sample becomes available, both bias and variance are reduced.

means that an individual is eligible as long as he is younger than 25, and becomes not eligible as soon as he reaches the 26th year of age. This element could be exploited in a dynamic setting, as the one developed by Cellini, Ferreira, Rothstein (2010) for the RDD, who estimate treatment effects in the presence of dynamics in treatment assignment. However, in a dynamic framework one could not estimate the standard ATE parameter of interest but a different parameter measuring the effect of joining the treatment in a given time t as compared to not having joined the treatment at time t yet. In our setting, this would not allow us to estimate the effect of ESF activities as compared to PES activities. All these features together make it unfeasible to properly estimate the effect of interest using RDD.

6.3 What could be done in the future?

In this section we discuss some potential developments of the analysis and the information necessary to implement them. The recent literature on the evaluation of labour market policies provides interesting examples of application of advanced counterfactual methodologies, which exploit the details of policy implementation so as to better tackle selection bias and other possible sources of estimation bias. In the following we will describe the aim of different empirical strategies, providing some recommendations in terms of data collection as to enable their implementation.

- Lechner and Wiesler (2013) evaluate the effectiveness of several labour market programmes by using administrative data on the Austrian labour force. They focus on programme sequences in order to assess whether the order and the timing of different activities, or multiple participation, can influence the programme impact. This type of analysis requires detailed information on activities, with exact data on activities sequences, start and end dates, and possible overlaps. In our case, it was not possible to investigate the sequences of training, internship and general guidance, given the predominance of activities recorded as “trajecten”.
- Lechner (2004) extends simple matching estimators normally used in static causal analysis by means of sequential matching. This allows to estimate dynamic causal effects of treatment sequences, and is done by using the information on the assignment mechanism repeated at the end of each activity. Therefore, in order to apply sequential matching estimation in our setting, we would need to use the information on meetings with caseworkers who follow young unemployed over time and assign them to different activities within the WIJ trajectory. A better recording of the various type of activities would be recommended.
- In our analysis we compare the effectiveness of WIJ and standard PES activities. We would have liked to complement our evaluation by focusing on the impact of WIJ intervention in itself, comparing WIJ participants with young unemployed who do not participate in any labour market programme. However, since it is not possible to identify such control units, this is not doable.
- As a last point, it should be mentioned that generally the best way to tackle selection bias issues is to assign eligible individuals to programmes through randomisation. Random allocation normally raises ethical concerns since some eligible individuals are excluded from the treatment. In the WIJ case as well, not all the individuals who comply with the selection criteria (age and level of education) are treated. Therefore, if it was possible to allocate randomly individuals to WIJ and to standard PES activities, this would allow getting rid of the selection bias, by guaranteeing that between the participants of WIJ and PES activities there are no systematic differences which drive the selection.

7 Conclusions and policy implications

The aim of this report was to evaluate the impact in terms of labour market outcomes of the “Work Experience for Young People” intervention (Werkinleven Jongeren, WIJ), implemented in Flanders for the second time in June 2015 by the Flemish division of the European Social Fund. Being part of the Operational Program of the ESF for 2014-2020, the WIJ intervention is directed to increase the labour market integration of lower educated youths. More generally, this evaluation contributes to the evidence on the effectiveness of Active Labour Market Programs (ALMPs) targeting youth.

The WIJ has to be approached as an activation measure for unqualified young people between 18 and 25 years old, primarily focusing on orientation within the labour market and human capital formation. Leaving school unqualified can have detrimental social and economic consequences. Future labour market performance is one of those heavily affected domains.

The intervention consists of labour market orientation and further coaching plus competence strengthening activities, aimed at facilitating the entry to the labour market of unqualified young unemployed. Within the ESF, the WIJ was deemed successful when the participant found paid work for at least three months, entered a qualifying training course or completed the guidance trajectory as planned.

It is important to mention that within the Flemish context, the WIJ intervention is not the only one available to the target group of young unemployed. The regional PES provides several employment services to unemployed and inactive youth. The WIJ trajectory, however, ought to be more individualised with explicit attention for a personal action plan and labour market orientation, after which additional competence strengthening training and internships can be provided. Considering the latter, the evaluation question of this report looked at the added value of the WIJ programme compared to the other available labour market services provided by the Flemish PES. In light of research recommendations and future calls, we highlight and discuss the main findings of the analyses based on the administrative data sources of the PES.

The main methodological issue this evaluation faces is that very little is known about the selection process. Although there are two objective eligibility criteria (age and education), it is not clear how treated individuals are ultimately selected among the pool of eligible individuals. A simple comparison of the treated and non-treated individuals would lead to biased estimates of the effect of the intervention, as those two groups can be composed by different people. To address the selection bias we rely on matching methods, which allow to select among the group of eligible non-treated individuals, a sample of people which is similar to the treated one, in terms of observable characteristics. The assumption underneath this methodology is that we are able to control for all the possible variables which affect the selection into the treatment and the outcomes (conditional independence assumption). We have used three different specifications in our analyses, all of which have similar results.

Four outcomes are considered: employment, unemployment, education and inactivity, for a period up to 30 months after the interventions started. Overall, it seems that individuals participating in the WIJ programme have lower employment, education and inactivity probabilities, and higher unemployment probabilities. However, when we distinguish between those individuals whose WIJ trajectory is longer than 14 months and those for who it is shorter than 14 months, different conclusions can be drawn. Those who were in the intervention for less than 14 months did not significantly differ from the control group in terms of employment and unemployment probabilities over time. In other words, the WIJ participants are not more or less likely to be employed at any time interval after starting their activities than the matched, but non-participating, young people. As such, based on the available data span, the ESF intervention does not have any added value compared to the other PES activities. When we focus on those whose intervention lasted more than 14 months, we find the same effect as in the general case, suggesting that the WIJ intervention could have a negative impact on the chance that an individual is employed or in education. This however should be interpreted with caution. Those with longer interventions are, by default, the one that did not find a job after 14 months. In an ideal setting, we would be able to compare these people to similar job-seekers who have followed, for approximately the same duration, similar PES activities. Unfortunately, the current data does not allow us to construct such a control group.

In a meta-analysis of recent ALMPs, Card, Klueve and Weber (2018) look at the conclusions of other ALMP evaluations regarding human capital focused interventions. They not only conclude that the average impacts of ALMPs are close to zero in the short run (effects after approximately one year), but also that how long it takes for an impact to manifest itself depends on the type of ALMP. While 'work first'- job assistance programs (including sanctions) tend to have similar impact in the short and long run, trainings tend to have larger average effects in the medium run (after approximately two years) and longer run (after three years). With our data, we managed to test effects up until 30 months after the start of the intervention, corresponding to 18 to 24 months after the end of the intervention. In addition, long term outcomes are available only for a small sample of the whole treated group: those individuals starting the intervention in 2015 and early 2016. Therefore we cannot conclude whether in the longer run (e.g. 3 years after the end of the intervention) the programme will be effective.

Most of the WIJ-trajectories were longer than one year and focus foremost on providing guidance. The most common WIJ-trajectory did not include any registered competence strengthening activities. As it was not possible for this evaluation to look into the peculiarities of the provided guidance, it is highly recommended to examine the characteristics and quality of the guidance provided under the WIJ-intervention. Considering the profile of the WIJ participants, the long orientation and guidance phase might also be necessary before the group can start other activities. In this case, the needs of the target group could explain this observation. Nevertheless, more research based on complementary forms of data is demanded to examine this hypothesis. Moreover, to better understand our findings, it is not only necessary to understand why the interventions follow the guidance-centered pattern, but also how the WIJ guidance differs, or does not differ, from the other PES coordinated guidance in terms of methodology, underpinning psychological and pedagogical models and intensity. As such information is not available within administrative data, acting on this recommendation would require case study research. In this case study research, it would be interesting to compare the pedagogical methodologies used within WIJ to those of the PES and other tenders.

8 References

- Biewen M, Fitzenberger B, Osikominu A, Paul M (2014) The effectiveness of public-sponsored training revisited: the importance of data and methodological choices. *J Labor Econ* 32(4):837-897
- Cabasés Piqué, M. À., Pardell Veà, A., & Strecker, T. (2016). The EU youth guarantee—a critical analysis of its implementation in Spain. *Journal of Youth Studies*, 19(5), 684-704.
- Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of economic surveys*, 22(1), 31-72.
- Caliendo, M., & Schmidl, R. (2016). Youth unemployment and active labor market policies in Europe. *IZA Journal of Labor Policy*, 5(1).
- Caliendo, M., Mahlstedt, R. and Mitnik, O.A. (2017) Unobservable, but unimportant? The relevance of usually unobserved variables for the evaluation of labor market policies, *Labour Economics*, 46, 14-25
- Cattaneo, M., Idrobo, N., & Titiunik, R. (2019). *A Practical Introduction to Regression Discontinuity Designs: Foundations (Elements in Quantitative and Computational Methods for the Social Sciences)*. Cambridge: Cambridge University Press.
- Card, D., Kluge, J., & Weber, A. (2018). What works? A meta analysis of recent active labor market program evaluations. *Journal of the European Economic Association*, 16(3), 894-931.
- Cellini SR, Ferreira F, Rothstein J. (2010). The value of school facility investments: evidence from a dynamic regression discontinuity design. *Q. J. Econ.* 125(1):215-61
- Escudero, V., & Mourelo, E. L. (2015). The Youth Guarantee programme in Europe: Features, implementation and challenges. Geneva: ILO.
- Ham, J. C., & LaLonde, R. J. (1996). The effect of sample selection and initial conditions in duration models: Evidence from experimental data on training. *Econometrica: Journal of the Econometric Society*, 175-205.
- Heckman, J. J., LaLonde, R. J., & Smith, J. A. (1999). The economics and econometrics of active labor market programs. In *Handbook of labor economics* 3, 1865-2097. Elsevier.
- Iacus, S. M., King, G., & Porro, G. (2012). Causal inference without balance checking: Coarsened exact matching. *Political analysis*, 20(1), 1-24.
- Imbens, G. W. (2004). Nonparametric estimation of average treatment effects under exogeneity: A review. *Review of Economics and statistics*, 86(1), 4-29.
- King, G., & Zeng, L. (2006). The dangers of extreme counterfactuals. *Political Analysis*, 14(2), 131-159.
- Kluge, J. (2010). The effectiveness of European active labor market programs. *Labour economics*, 17(6), 904-918.
- Pastore, F. (2015). The European Youth Guarantee: labor market context, conditions and opportunities in Italy. *IZA Journal of European Labor Studies*, 4(1).
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41-55.
- Sianesi, B., 2004. An evaluation of the Swedish system of active labour market programs in the 1990s. *Rev. Econ. Stat.* 86 (1), 133–155.
- Sianesi, B., 2008. Differential effects of active labour market programmes for the unemployed. *Labour Econ.* 15 (3), 370–399.
- Sjögren, A. and Vikström, J. 2015. How long and how much? Learning about the design of wage subsidies from policy changes and discontinuities. *Labour Econ.* 34, 127-137.
- Steunpunt Werk, (2018). Cijfers. Cijfers. Retrieved October 3, 2018, from
<https://www.steunpuntwerk.be/cijfers>
- VDAB. (2018). Detailtabellen Werkloosheid. Arvastat. Retrieved October 3, 2018, from
https://arvastat.vdab.be/arvastat_detailtabellen_werkloosheid.html

9 Appendix

9.1 Notes on the WIJ program

Intervention executors

As mentioned above, the WIJ intervention is executed by third-party executors of which the project proposal was approved by the ESF Flanders. Below we give a short overview of the different projects based on the two main phases in the intervention.

— Groep Intro vzw

Orientation: During a period of 3 weeks, the participants take part in 7 communal work moments and 4 hours of individual guidance.

Guidance: During this phase there should minimally be 2 contacts per week, of which at least one should be a physical meeting. Every two weeks there is an individual contact with the mentor. The mentor foresees a wide range of activities suited for the participant. Dependent on the need, possibilities and effort of the participation, they plan at least two of the listed activities a week:

- Individual guidance
- Job interview training
- Job hunting, jobmatching and mediation
- Person strengthening activities/training
- Competence strengthening

— Argos vzw

Orientation: During a period of 3 weeks, the participants receive 8 lessons of a half day. 4 hours of individual guidance is also provided.

Guidance: During this phase, there should minimally be 2 contacts per week. In addition, a weekly individual meeting is also scheduled. In addition to the individual conversations, they also provide a job interview atelier (e.g. a job interview room, training of job interview skills, exploration of job interview channels, introduction to the 'my career' application of the PES), and diverse workshops (e.g. company visits, guest lectures, job fairs, work ateliers, in-depth orientation, ...).

— SBS Skillbuilders

Orientation: During a period of 4 weeks, 8 group meetings are organized. Additionally, the individual guidance meetings vary from 1 to 3 moments a week.

Guidance: During this phase, the individual meetings are reduced to 1 meeting a month. There is a strong focus on the group activities. The trajectory is characterized by a large degree of flexibility. The group activities are mainly workshops that are provided on a regular basis. Examples of the workshops are attitude training, internships, job interview training, job coaching and hunting.

— Vokans

Orientation: During a period of 8 weeks, one weekly guidance session is organized. They try to provide an interchange of individual meetings (1 hour) and group sessions (3.5 hours). When this is not possible in reality, they provide more participant specific guidance and organize more individual meetings.

Guidance: In this phase, they alternate individual meetings with group meetings on a weekly basis as well. The group sessions can include the following aspects: job interview training, job hunting, company visits, guest lectures, visiting a job fair, on-the-job training) In this phase, they mainly focus on labour market specific competence strengthening and the allocation to work holds a central position. When possible they provide certificates of trainings that have been followed.

— Randstad

Orientation: During 5 weeks, they focus on a self-analysis of the participant by means of 3 individual meetings and additional collective orienting sessions. They focus on work history and experience, a competence analysis and description of job target. The orienting collective sessions, given in 8 sessions of 3 hours, provide additional insight into what the participants want and like to do.

Guidance: In the second phase, they provide a standard guidance approach that is adapted to the specific needs based on the action plan. In the first 6 months, they organize 4 monthly workshops, a weekly job atelier, 2 individual contacts per month and additional group strengthening activities. After 3 and 6 months there is an evaluation moment. After the 6th month, they can decide to prolong the followed

approach. The workshops include job interview training, more general education, communication and assertiveness, work attitudes, diversity and discrimination. The job ateliers are more connected to work: job fairs, company visits, jobdates, jobhunting.

— **T-groep**

Orientation: During 3 months, the project works on the labour market orientation of the participant. They combine individual with collective guidance moments. Additionally, they ask the participant to make home work to reflect on the different aspects. In the weekly collective moments (2 half days a week), the aim is to increase the knowledge and employability of the participants via life course analysis, workshops on the public employment system, job hunting, information on different jobs and kinds of internships. There are 6 individual meetings to reflect on the group meetings and provide additional coaching.

Guidance: This phase focuses on further competence strengthening and/or job search. Again individual meetings and collective sessions are interchanged. Beside the mentor, this project also works with a job hunter. At least twice a month, the participant and the latter meet. The workshops presented in this phase elaborate on the orientation. They organize for instance a job interview boot camp of three days, psychotechnical test training and training on contact with employers.

— **Wonen & werken**

Orientation: In this project, the orienting phase is estimated to last for 2 months. It consists of individual meetings with the mentor during which the motivation and experience of the participant are discussed and highlighted. Additionally, this project organizes a collective assessment phase of 16 half days of 4 hours. In these assessments, the focus lies on developing key competences (e.g. independence, flexibility, stress management, cooperation, communication, accuracy) but the specific project and topic are decided bottom-up by the group. The aim is to provide a better screening and analysis of the competence profile of the participant, based on the activities and self-evaluation.

Guidance: After the preparation with the mentor, the participant is brought into contact with the job hunter. During the start of this phase, the focus lies on gaining experience internships, evaluation of action points and possible competence strengthening activities when necessary. In a first internship, the project would organize a job orienting internship or educational internship. The aim is to provide a first well organized internship as a step towards competence strengthening and a second internship in the regular labour market. After the second internship the attention goes to job finding, for example at the company of the internship.

10 Additional tables

Table 2: Duration of ESF activities

ESF length	Frequencies	Percent	Cumulative
6	25	0.49	0.49
7	25	0.49	0.98
8	26	0.51	1.49
9	34	0.67	2.16
10	28	0.55	2.7
11	84	1.65	4.35
12	102	2	6.35
13	246	4.82	11.17
14	2,466	48.33	59.51
15	765	14.99	74.5
16	310	6.08	80.58
17	246	4.82	85.4
18	154	3.02	88.42
19	93	1.82	90.24
20	191	3.74	93.98
21	96	1.88	95.86
22	80	1.57	97.43
23	47	0.92	98.35
24	22	0.43	98.78
25	28	0.55	99.33
26	16	0.31	99.65
27	18	0.35	100
Total	5,102	100	

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696, or
- by electronic mail via: https://europa.eu/european-union/contact_en

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

EU publications

You can download or order free and priced EU publications from EU Bookshop at: <https://publications.europa.eu/en/publications>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see https://europa.eu/european-union/contact_en).

The European Commission's
science and knowledge service
Joint Research Centre

JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.



EU Science Hub
ec.europa.eu/jrc



@EU_ScienceHub



EU Science Hub - Joint Research Centre



EU Science, Research and Innovation



EU Science Hub



Publications Office
of the European Union

doi:10.2760/623819

ISBN 978-92-76-17339-7