European Journal of Law and Economics
https://doi.org/10.1007/s10657-020-09654-6

"You reap what you sow": Do active labour market policies always increase job security? Evidence from the Youth Guarantee

Chiara Natalie Focacci[1,2]

© Springer Science+Business Media, LLC, part of Springer Nature 2020

Abstract
The paper uses non-experimental longitudinal data to study the effects of participation in the Youth Guarantee programme aimed at fighting youth inactivity in the European Union territory. Particularly, this analysis questions the value of active labour market policy as a valid instrument to help individuals otherwise isolated from the labour market and, thus, at risk of deterioration of human capital overcome their condition of occupational inactivity. A difference-in-differences model is exploited in this regard to investigate whether there exists an advantage for participants of the Youth Guarantee in terms of employment and job stability. Results show that participants are 7.4 and 4.4 percentage points more likely to, respectively, become employed and be offered an open-ended contract. An assessment of profiling is also provided.

Keywords Active labour market policy · Difference-in-differences · European Union · Flexicurity · NEET · Profiling · Training · Youth Guarantee · Youth unemployment

The author thanks the participants of the "Shifting from Welfare to Social Investment States" Conference at Erasmus University Rotterdam, the 35th European Association of Law and Economics Conference in Milan, the 15th Academic International Conference on Law, Economics and Politics in Oxford, and the 6th Polish Law and Economics Association Conference in Warsaw. Useful comments were given during the internal seminars at the Department of Economics of the University of Bologna, the Institute of Law and Economics at the Universität Hamburg, and the Rotterdam Institute of Law and Economics at Erasmus University. The author is thankful to the Agency of Labour of Trento for their collaboration as well as to two anonymous referees, Enrico Santarelli, Robson Tigre, Yuki Takahashi, Yu Bai, Margherita Fort, Jonathan Klick, Michael Faure, Chris Reinders Folmer, Peter Mascini, Jerg Gutmann, Paul Aubrecht, and Giulio Zanella for their comments.

✉ Chiara Natalie Focacci
chiara.focacci4@unibo.it

[1] Department of Economics, University of Bologna, Piazza Scaravilli 2, 40126 Bologna, Italy

[2] Rotterdam Institute of Law and Economics, Erasmus University Rotterdam, 3000 DR Rotterdam, The Netherlands

Published online: 09 May 2020

JEL Classification J00 · J08 · J78 · J88 · K00 · K31

Youth is the best time to be rich, and the best time to be poor.
Euripides, 416 b.C.

1 Introduction

Countries within the European Union are diverse as regards institutional and social characteristics and economic aspects, with many of them still not taking action against structural problems such as youth unemployment. Following the 92/2012 Fornero Law and the 183/2014 Jobs Act, for instance, temporary contracts tripled in Italy as they became cheaper for firms. As a result, part-time contracts reached 64% of the total in 2015 and left the majority of the young population with jobs lasting less than 6 months.[1] Not even the facilitated transition from education to work promoted by the German dual training system[2] or the social investment approach in Sweden reversed the trend of the youth inactivity rate, which in the European Union reached 33 million in 2012. For this reason, on 22 April 2013 the Council of the European Union recommended an ad hoc strategy, defined as the *Youth Guarantee*, and provided additional funds to member states with extremely high youth unemployment rates.[3] The policy was set in favour of one of the targets of the Europe 2020 strategy; namely, individuals aged between 15 and 24 years not in employment, not in education, and not in training (NEETs). The Council recommended the Youth Guarantee to fight youth inactivity and to provide them with 'a good quality offer of employment, continued education, an apprenticeship or a traineeship within a period of 4 months of becoming unemployed or leaving formal education'.[4] This study aims to understand the effect of the Youth Guarantee implemented in Northern Italy, specifically in the Province of Trento, at the individual level in terms of increased job opportunities. In particular, it represents one of the first econometric studies to focus on an active labour market policy (ALMP), the Youth Guarantee, that is acknowledged at the international level and that, therefore, affects the entirety of the member states of the European Union (EU) from a regulatory and practical viewpoint. Additionally, it is one of the first studies to provide policy implications that address the issue of NEETs in Europe by analysing occupationally inactive individuals in a normally developed area of Italy.

Except for Scandinavia, the rest of Europe is renowned for its focus on passive measures. Hence, the Youth Guarantee represents one of the milestones reached in legislative history in terms of active labour market policies, which aim to help the unemployed community find a job. They do so by offering classroom or on-the-job training, subsidised employment, or job search assistance. Since the 1990s, ALMPs

[1] See Cirillo et al. (2017).
[2] See Albert et al. in Schömann and O'Connell (2002).
[3] For instance, Spain and Italy.
[4] Council of the European Union, 2013.

have made incentives available for individuals to stay active for a present reward; namely, to keep their subsidies or to obtain participation monetary awards. They have provided the same incentives to individuals for a future reward too; namely, to upgrade their skills and, therefore, increase their chances to find not only a job, but a good one. This concept has been in place since the twentieth century. Scoville (1969), for instance, was one of the first scholars to stress that the broader the training individuals experience, the better individuals are situated when confronted with economic or technological changes. In other words, active measures are expected to provide disadvantaged individuals with better occupational or educational opportunities. The Youth Guarantee is particular in that it exclusively targets the younger population. It also represents a change of direction in respect to the more traditionalist assistance systems typical of certain European regions. On the other hand, the issue of NEETs is a problem shared by both Northern and Southern Europe.[5] It explains why the European Union invested substantial amounts of money in a policy that is, firstly, active and, secondly, targeted for the young population. In this paper, in particular, we investigate whether an active policy such as the one recommended by the European Union can succeed in helping governments fight youth inactivity. We do so by looking at the likelihood of participants to become employed after having taken part in the programme. The analysis focuses on Northern Italy and particularly on the Province of Trento for a series of reasons: namely, the accuracy of the data provided by the Agency of Labour and their leading national role in designing active labour market policies; their compliance with the European Union's requirement of timing and funding of the training programmes; and their socioeconomic similarity with other European countries like Austria, one of the pioneers of youth policies, and like Denmark, with which they share the organisational structure of the job centres.

In regard to the literature, the use of passive labour market policies in Italy,[6] has driven the development of extensive theoretical and empirical written work. The tendency to switch resources from passive to active programmes, however, has brought policy-makers to question the effectiveness of training programmes interested in upgrading the skills of the individuals rather than to just grant them monetary subsidies.[7] While empirical studies on youth unemployment remedies are scarce for Italy, a large number of descriptive reports on the most recent labour laws are produced at both regional and national levels. The Institute for the Evaluative Research of Public Policies (IRVAPP), for instance, has published accounts and statistics on the Italian *Garanzia Giovani* since its implementation, while Vesan and Lizzi (2017) recently analysed the institutional and political dynamics behind it within the new policy

[5] The financial contribution expected from all the member states of the European Union to fight youth unemployment makes the management and impact of the Youth Guarantee of relevance for both the poorest and the richest countries in the Community.

[6] In 2015, public expenditure on passive and active measures was, respectively, equal to € 21 billion and to € 6.8 billion in Italy.

[7] The latter are not always fruitful for their recipients. In Australia, reducing childcare expenditure through monetary benefits increased the labour supply of the parents only by 0.75 to 1 h per week. See Guest and Parr (2013).

design framework. Our paper, on the other hand, uses a difference-in-differences model and provides one of the first econometric evaluations of the most recent European active labour market policy. In particular, it attempts to answer the question of whether active labour market policies can work in countries like Italy where young individuals are usually the first ones to be fired and the last ones to be hired.[8] The issue of youth inactivity is addressed by investigating the occupational outcome of the individuals in respect to their probability to become employed and their probability to be offered an open-ended and, thus, stable contract. While the issue of youth unemployment is typical of the whole European Union territory, job instability is particularly pronounced in the flexinsecure regions of the South due to their institutional background.[9] The relevance of the study, therefore, is twofold. First, any finding in respect to occupational propensity is of interest to other neighbouring Italian and European regions such as Austria or Denmark that share institutional features with the Province of Trento in terms of social assistance and approach fighting youth inactivity. Second, while it is inappropriate to draw conclusions for Italy as a whole due to its particular historical nature, the paper aims to investigate the possibility to overcome an issue that affects the young population and that is typically Italian; namely, flexinsecurity and, thus, job instability. The reference to the Province of Trento (PT) is also significant in that it is nationally renowned for an expertise in the field of ALMP, which implies any policy recommendations for the PT could be of use for the less prepared Italian regions.

Overall, the study tries to understand whether commitment to such a policy is worth it on both the aspects of employment and job stability. In other words, it questions whether one can really 'reap' a job from what one sows; namely, the skills acquired by committing to a training programme. To do so, a difference-in-differences model is exploited to compare participating and non-participating individuals throughout the years. The paper is structured as follows. Section 2 reviews the literature on active labour market policies. Section 3 introduces the institutional background in which the Youth Guarantee is implemented, with particular reference to the Italian labour market. Section 4 presents the empirical strategy used; namely a difference-in-differences strategy. Due to the difficulty of Italian institutions to collect sensible data with respect to the Youth Guarantee, we are not allowed to test its parallel trends assumption in the standard way. A valid alternative is, however, provided in the paper. Section 5 describes the data analysed and provides some statistics. Section 6 discusses the relative results and robustness checks, while Sect. 7 concludes with policy implications. An in-depth analysis on profiling is presented in the "Appendix".

[8] See Andor and Veselý (2018).

[9] See Sect. 3.

2 Literature review

Since the 1990s, scholars have investigated both the macroeconomic and microeconomic consequences of, respectively, investing in active labour market policies and participating in such measures. Findings are mixed, as are the objectives of the single policies. The general hope is for active measures to make individuals more adaptable to the labour market and, thus, develop a degree of commitment towards becoming employed that also makes them more attractive to firms. Scholars have long debated over the impact of ALMPs on the aggregate economy, including their effect on wages, unemployment, and participation in the labour market. According to Katz (1994), ALMPs have a positive influence on economic growth and equity over the medium term, with active re-employment systems having a comparative advantage over simple income maintenance. In support of this theory, Boeri and Burda (1996) argued that active labour market policies decreased structural unemployment and, thus, contributed to the Czech economic miracle. Similarly, Altavilla and Caroleo (2018) highlighted the role played by internal shocks in the Italian economy but believed in the power of active measures to increase labour force participation. On the other hand, while ALMPs might decrease unemployment they are also likely to reduce regular employment. This is especially true when entitlement to unemployment benefits is conditional to participation in such measures. Calmfors et al. (2002) reached this conclusion for Sweden. In relation to the negative effects of ALMPs, the study by Estevao (2003) argues that active labour market policies increase competition in the job market but that they, too, reduce real wages. This has also been found by Bergemann et al. (2009) for Germany. Scholars have disagreed, as well, on what the preferred environment for the implementation of ALMPs should be. In fact, the effectiveness of ALMPs depends as well on the economic condition of the country in which they are implemented. Studies by Calmfors et al. (2002) and Dar and Tzannatos (1999) show that active measures usually lead to higher returns in times of economic stability. Conversely, the analysis by Card et al. (2011, 2010) points out how employers are more drawn towards hiring participants of ALMPs in times when the market does not work well.

Mixed results have led governments to question the capability of ALMPs to address issues related to unemployment. Scholars usually agree on the fundamental role played by labour market institutions in developing national active measures. In their study, Kazepov and Ranci (2016) noted that, while there certainly is no shortage of strong trade unions, the lack of coordination between social partners generally leads to low social investment in Italy. Indeed, where the density of unions is high, outsiders such as the long-term unemployed are unlikely to be supported. This paper is in agreement with previous findings such as Nickell's (1997), which stressed the difficulty of reaching high levels of flexibility in the labour markets of Southern Europe due to high unionisation. Similarly, Svejnar (2002) associated the lower rigidity of the Polish and Hungarian labour markets to lower union density, compared to other Central and East European countries. The same argument has also been brought by Howell et al. (2007) in

their cross-country assessment. It seems, indeed, that rather than because of their political ideology, governments decide to support investments in active measures as they seek electoral support. The study by Rueda (2006), for instance, highlighted the importance for social democratic governments to satisfy the interests of insiders rather than of employment itself. This has also been proved by Mechtel and Potrafke (2013) for Germany. It goes without saying that institutions have the power to influence state spending in ALMPs. According to van Vliet and Koster (2011), spending on ALMPs tends to be higher in countries where there are tripartite and coordinated councils, with debates from the members of the government, the trade unions, and the associations of employers. Conversely, underinvestment in ALMPs is often the result of fiscal free riding by countries that share borders, as argued by Franzese and Hays (2006). These are the countries that benefit from trained individuals but that are not interested in investing in their education and skills at the national level. The aforementioned issues suggest the importance of studying the aggregate effectiveness of ALMPs without ignoring the institutional background of the country under investigation.

Institutional constraints, for instance, make life difficult for ALMPs in Eastern Europe and Central Asia (ECA). According to a study by Kuddo (2009), they often cause both bad networking between private providers, firms, and the unemployment centres, and understaffing of the public employment services, with cases of single caseworkers in ECA regions having to deal with 1200 unemployed subjects. More flexible states, on the other hand, allow for quasi-competitive mechanisms where multiple providers compete to offer the best service, as described by Martin and Grubb (2001) and Lindqvist and Westman (2011) for Australia and Switzerland. States affect the impact of ALMPs also by the level of workfare and the enabling elements they decide to implement, according to Dingeldey (2007). Denmark, for instance, offers universal assistance to citizens; favours the local administration of labour market policies; invests in job rotation schemes and day-care institutions for families; and promotes the co-existence of public services and private agencies. In the words of Cox (1998), it admits a greater role of the state and makes the latter responsible for the enforcement of both rights and duties. Countries like Japan, on the other hand, do not need active policy in excess as they invest in ex-ante threat effects with strict eligibility conditions for benefits and social assistance. According to Martin (2015), the latter explains why individuals are strongly encouraged to find a job. A similar conclusion can be drawn for developing countries such as India and Ethiopia, where the mere existence of such active programmes are sufficient to create placebo effects that motivate individuals. The study by Mckenzie (2017) proves that, rather than being threatened, these disadvantaged individuals gain more confidence and, as a consequence, are more likely to commit to find a job. Indeed, ALMPs often have effects on behaviours that are not necessarily related to the labour market. Through active measures and together with labour market institutions, governments are able to solve internal social issues as well. ALMPs help, for instance, fight social exclusion. In accordance with this theory, Anderson (2009) observed how ALMPs succeed in increasing ties between insiders, such as the older and protected workers, and outsiders, such as the temporary and younger job candidates. Sarvimäki and Hämäläinen (2016), on the other hand, found that restructuring ALMPs significantly

increases immigrants' earnings in Finland. Additionally, ALMPs can help states overcome crime. A study by Bertrand and Crépon (2017) on Latin America highlights how skills training programmes do not always aim to increase employment but might as well be focused on reducing criminal activities. On this subject, the analysis by Fallesen et al. (2006) emphasises the association between participation in active labour market policies and reduction in men's propensity to commit crime, independent of their unemployment insurance condition. Overall, scholars usually agree on the concept of Caliendo and Schmidl (2016) that ALMPs should also guarantee social support. In effect, those who have been unlucky in the labour market are usually also unskilled in social interactions. ALMPs, then, may help overcome Katz's (1994) 'secession of the successful'.

Interestingly, much of the effectiveness of ALMPs regards the design and the aim of the programmes themselves. According to Bonoli (2010), active measures usually have four objectives: namely, incentive reinforcement, which is widely exploited in Italy; employment assistance, typical of the Scandinavian countries; occupation, usually supported by christian communities; and human capital investment, which is the reason ALMPs were born as industries started expanding in the 1960s. Whether individuals should participate in an active measure and what type of programme they should choose are two issues that are still highly debated by scholars. Most agree with Acemoglu and Autor (2012), according to whom more educated workers should be paid a larger salary anyway due to the surplus they bring into the firm in terms of human capital. There are, on the other hand, scholars like O'Higgins (2001) who believe in ALMPs being effective for the individual's skills only insofar the measures are actually interdependent. The nature of ALMPs varies and individuals cannot always experience the wide range of available programmes. Training, however, appears to be the most effective active measure according to most of the existing studies. In this regard, a study by Meager (2008) defined job training as the most successful measure at the aggregate level. Katz (1994), too, recognised the property of training to reduce the salary gap between high- and low-skilled individuals. Confirmation of the hypothesis came also from Card et al. (2011, 2010) who showed the larger gains produced by human capital accumulation compared to other labour market measures. According to Saniter and Siedler (2014), for instance, internships are to be considered 'door openers' in Germany for individuals with low orientation in the labour market, as they increase wage returns by 6%. Positive effects for on-the-job training were also presented in the studies by Bonnal et al. (1997), who observed better matching effects for the less educated young workers, and by Escudero (2018). Stephan (2008) reached the same conclusion for East Germany. According to the latter, employment opportunities were higher for participants in firm-internal training programmes. Undoubtedly, and as argued by Brown and Koettl (2015) as well, training programmes are more effective the nearer they are to regular jobs. On the other hand, vocational training can also be beneficial for individuals. This was detected, for instance, by Hujer et al. (2006) for participants in West Germany. The advantage of such measure is that it allows individuals to compensate for a more severe lack of human capital. In the developing countries studied by Mckenzie (2017), vocational training is even considered an effective substitute for schooling to build human capital. An analysis by Budría and P.T. (2008) for the Madeira Island also showed

that training could compensate for a lack in education. In particular, training programmes that are similar to schooling generally offer positive signaling to employers according to Caliendo and Schmidl (2016).

By contrast, scholars usually agree on the ineffectiveness of other types of ALMPs. On this subject, Fertig et al. (2002) shed light on the negative consequences of spending in public employment programmes. In support of this theory, Kuddo (2009) highlighted the possibility of public employment to cause social stigma in Poland. Caliendo et al. (2011a), too, defined public work in Germany as being harmful in both short and medium terms and ineffective in the long term, as Martin and Grubb (2001) previously demonstrated for the OECD countries. Other programmes fail to bring unemployed individuals back to work. A study by Doerr et al. (2016) stressed the potential locking-in effects of vouchers in Germany, as did Biewen et al. (2014) for other public-sponsored programmes and Caliendo et al. (2011b) years before. Using matching estimators, Ichino et al. (2008) evaluated the effects of temporary work agency jobs. Findings were positive in occupational terms for Italy. However, those who were assigned help jobs in the U.S. had actually lower chances to find a permanent job later on. Similar conclusions were reached by Lechner and Wunsch (2009) for job creation schemes in East Germany. In particular, the programmes failed to increase employment chances for participants in the long term. Training itself can have unexpectedly negative effects. Its impact on unemployment duration was declared insignificant in a study on France by Crépon et al. (2010). Both training and job creation reduced the chances of finding a job in Sweden according to an analysis by Fredriksson and Johansson (2008). The programmes also increased the locking-in effects of participants. Certainly, all types of programmes have pessimistic effects if misused. In the young population's case, for instance, there are often many individuals who become 'eternal interns'. In Germany and Italy, Cerulli-Harms (2017) found an average treatment effect for internships on employment chances of, respectively, -7.4% and -2.6%. In the same way, there are many individuals who simply accommodate to their unemployment condition, as synthesised by Crépon and van den Berg (2016).

All in all, although being the most expensive ALMPs, training is considered by many to be the best active measure. This is particularly true for the younger population, with generally little work experience behind them. As stressed by Boone and van Ours (2009), training might not succeed in accelerating the transition from unemployment to employment, but it certainly helps individuals increase the quality of their future jobs by making them able to distinguish between a good and a bad occupation. Despite this, there are still many individuals whose cognitive ability acquired during the programmes proves not sufficient to exit from their unemployment condition. This is shown by both Heckman et al. (2006) and Lindqvist and Westman (2011) for, respectively, the U.S. and Sweden. Much of what is achieved through ALMPs depends on what specific target the various programmes focus on. Disadvantaged subjects such as women, who usually have fewer opportunities in the labour market and experience a greater distance from it compared to men, usually benefit more from ALMPs. Higher returns for women, for instance, are presented in the work of both Svejnar (1999), Bergemann and van den Berg (2008), and Card et al. (2011, 2010). Women often have

to compromise personal decisions such as starting a family too, in order to accept a job offer. Fertility rates, for instance, tend to be negatively influenced by the closure of firms according to a study on Austria by Del Bono et al. (2014). On the other hand, Lechner and Wiehler (2011) observed how ALMPs made women postpone their pregnancies in this country and increased their attachment to the labour force. The study by Caliendo and Künn (2015), too, encourages women to exploit start-up subsidies to coordinate family and work life. Similar arguments are debated when comparing groups of individuals who differ because of age. While sanctions might not be effective for older cohorts in terms of increasing their participation in the labour market, they work well for young individuals according to Stephan (2008). According to Heckman (2000), for instance, training programmes are inefficient for adult men or older displaced workers, while they produce some benefits for the youth. On this subject, the scholar stressed the positive outcomes from the programmes of the *Big Brothers/Big Sisters of America*, the *Philadelphia Futures' Sponsor-A-Scholar*, and the *Quantum Opportunity Program* for disadvantaged minority students. In addition, he referred to the positive results obtained for the participants of the *Ohio's Learning, Earning, and Parenting* programme, the *Teenage Parent Demonstration*, and the *New Chance Program* for young parents lacking basic skills. As regards the *Jobstart* programme, this also proved beneficial for vulnerable young individuals such as high school dropouts and men who had been recently arrested. Therefore, while ALMPs might not be successful for the older cohort of workers, they seem to be useful for some disadvantaged young categories. In this regard, while Pehkonen (1997) found substantial displacement effects of ALMPs for the young Finnish population, results were non robust. Caliendo et al. (2011b), too, highlighted the heterogeneous effects of ALMPs in Germany. As stressed by O'Higgins (2001), young individuals are seldom considered good substitutes for adult workers, hence the need to study their issue thoroughly.

Overall, the mixed results presented make it difficult to understand whether investing in human capital is always beneficial or whether distinct measures should be provided to distinct categories of workers. As regards those individuals who are not in employment, nor in education, nor in training, Cammeraat et al. (2017) recently studied the Dutch mandatory activation programme *Wet Investeren in Jongeren* and found that the latter had no significant impact on NEETs. The policy neither increased their employment rate nor did it incentivise them to go back to their studies or start a training programme. Using matching on covariates, Cappellini et al. (2018) found, instead, positive effects for NEETs in the Italian region of Tuscany. This paper contributes to the relatively modern literature of policy evaluations in the European Union context, by adding empirical support to the descriptive studies produced in Italy on youth unemployment remedies. In particular, it is one of the first econometric evaluations so far of a programme originated from the Youth Guarantee. The considerable financial investment in the policy; the vulnerable nature of the participants; and the number of firms involved in the entire territory of the European Union justify the need to understand whether it is worth it or not to continue along this 'active' path (Table 1).

Table 1 Summary of literature and results

Type of policy	Impact observed	References
Active re-employment systems	(+) Reduced unemployment and increased labour force participation (−) Reduced regular employment and real wages	Katz (1994), Boeri and Burda (1996), Dar and Tzannatos (1999), Altavilla and Caroleo (2018), Card et al. (2011, 2010) Calmfors et al. (2002), Estevao (2003), and Bergemann et al. (2009).
Enabling welfare systems	(+) Increased job search and reduced social stigma	Cox (1998), Martin and Grubb (2001), Dingeldey (2007), Anderson (2009), Lechner and Wiehler (2011), Lindqvist and Westman (2011), van Vliet and Koster (2011), Martin (2015), Caliendo and Künn (2015), and Mckenzie (2017).
High unionisation	(−) Difficulty in implementation of active measures	Nickell (1997), Svejnar (2002), Franzese and Hays (2006), Rueda (2006), Howell et al. (2007), Kuddo (2009), Mechtel and Potrafke (2013), and Kazepov and Ranci (2016).
Training programmes	(+) Increased wages due to better matching and quality jobs	Katz (1994), Bonnal et al. (1997), Heckman (2000), Hujer et al. (2006), Meager (2008), Stephan (2008), Budría and P.T. (2008), Boone and van Ours (2009), Saniter and Siedler (2014), Brown and Koettl (2015), Caliendo and Schmidl (2016), Mckenzie (2017), Card et al. (2011, 2010), and Cappellini et al. (2018).
	(−) Locking-in or nonexistent effects	Pehkonen (1997), Heckman et al. (2006), Frederiksson and Johansson (2008), Crépon et al. (2010), Lindqvist and Westman (2011), Crépon and van den Berg (2016), Cerulli-Harms (2017), and Cammeraat et al. (2017).
Public employment or public-sponsored programmes	(−) Ineffectiveness in increasing employment	Martin and Grubb (2001), Fertig et al. (2002), Kuddo (2009), Lechner and Wunsch (2009), Caliendo et al. (2011a), Caliendo et al. (2011b), Doerr et al. (2016), and Biewen et al. (2014).

The table shows a summary of the relevant studies on active labour market policies mentioned in the literature review used for this paper. The first column presents the type of policy analysed in the studies of reference, while the second column indicates the impact described in such studies. The latter are reported in the third column

3 Institutional background

When looking at the institutional background regulating the labour market, one sees that reforms aimed at the creation of a more flexible labour market originated shortly before the twenty first century. They started, in particular, with the *Pacchetto Treu* of Law 196/1997; a set of reforms aimed at the promotion of part-time work and other atypical forms of contracts such as job-sharing. With respect to formation, Art. 18 stressed the necessity to '[attribute] formative credits for the activities carried out during the internships [to start] an employment relationship'. This type of implementation continued in the 2000s with the introduction of Law 328/2000 on social intervention, in which Art. 3 highlighted the importance of 'active policies of formation, introductions to work and re-employment', and of Decree Law 368/2001, which allowed fixed-term contracts to regular employees. The 30/2003 Biagi Law further extended the use of temporary work agencies with the Legislative Decree 276/2003. Art. 2, in particular, rigorously defined both the employment services associated to these agencies and the parties involved so as to 'ameliorate the ability of occupational integration of those who are unemployed or [first-time job seekers]'.[10] Importantly, the decree also stressed the financial and juridical requisites of the employment agencies, as well as their due objective; namely, to serve as an intermediary and support reinstatement.[11] The latter was supposed to be put into practice through 'active and workfare policies'.[12] Nonetheless, after Italian legislation tried to fight the existing mismatch of skills with more flexible institutions, the security of workers started to stagger.

In 2012, when polarisation between high and low skills was reaching its peak in Europe, the Italian Art. 18 of Law 300/1970, for instance, was amended. The former established that 'the judge [would] order the entrepreneur or non-entrepreneur employer to reintegrate the worker into the workplace, regardless of the formal reason given and regardless of the number of employees employed by the employer'.[13] Undoubtedly, this reduced the protection of workers in the case of layoffs deemed as invalid by the court. The subsequent Jobs Act of 2014 further aggravated the position of such individuals. On the one hand, its Art. 1 established the implementation of a specific National Employment Agency for the encouragement of active labour market policies and the 'promotion of a link between the income support measures for the inactive or unemployed person and the measures dedicated to its integration in the productive fabric'.[14] On the other hand, the Jobs Act cancelled Art. 18 of Law 300/1970 as a whole and replaced the reinstatement right with mere monetary compensation.[15] Also due to the Italian productive structure characterised by small

[10] See Art. 3 of the Legislative Decree 276/2003.
[11] See Art. 4 of the Legislative Decree 276/2003.
[12] See Art. 13 of the Legislative Decree 276/2003.
[13] See Art. 18 (c. 1) of Law 300/1970.
[14] See Art. 1 (c. 4p) of Law 183/2014.
[15] See Art. 1 (c. 7c) of Law 183/2014.

and micro firms,[16] the result in the recent decade, have been low-paid, low-qualified, and unprotected flexible jobs that made it difficult for active measures to step in and promote permanent employment growth. Indeed, although flexibility is considered capable of enhancing access to the labour market and increasing job creation, the discrimination of its use may have negative consequences on the more vulnerable subjects, including job destruction and little prospect for new job seekers. On this subject, Barbieri (2011) stressed how flexicurity, or better 'flexinsecurity', affected mostly, and negatively, the Italian young population. Not only was the increase in non-permanent contracts and, therefore, in reduced employment security not compensated by higher wages, but 'egoistically privileged generations of rentiers' outraced the younger individuals and deprived them of welfare entitlement.[17] The work by Berton et al. (2009), for instance, sheds light on how in Italy flexibility necessarily leads to precarity, or job insecurity, with respect to salaries, welfare measures, and permanent jobs available. Scholars Biewen et al. (2014), too, argued in favour of flexible and entry jobs only insofar they lead to better-paid and more stable jobs. The latter is even more emblematic when accounting for the negative impact that initial labour market entry conditions can have on job quality and earnings.[18] As regards further reforms, Art. 1 of the 190/2014 Law introduced the exemption from social security contributions paid by employers for each new open-ended contract offered, while the 2015–2017 Budgetary Laws granted additional hiring incentives in support of permanent contracts. Jessoula et al. (2010) observed how the 'security plus flexibility' formula is often applied differently to age groups, with individuals younger than 24 years suffering the most from the exploitation of fixed-term jobs.[19] On this subject, there is little Italian young individuals can do for the country remains one of the few that still lacks a proper national representative body for them.[20] As observed by Cirillo et al. (2017), the increase in permanent jobs almost exclusively regarded the older cohort of workers. In parallel, the younger job seekers were left, for the most part, with atypical contracts as the result of a going-flexible policy entirely *à l'italienne*. As former members of the European Commission and supporters of the Youth Guarantee, Andor and Veselý (2018) pointed out how it is the young people who usually are fired in difficult economic times.

The intervention of the European Union, thus, plays an essential role in bringing not only financial support but also awareness on youth unemployment; on the costs that the countries have to bear due to their inactivity; and on the necessity to turn to human capital investment. On 22 April 2013 the European Union's Council recommended a Youth Guarantee as part of the Europe 2020 strategy. According to the 120/01 Recommendation, countries should make sure that 'young people receive a good-quality offer of employment, continued education, an apprenticeship or a

[16] See Vasta and Di Martino (2017).

[17] See Barbieri (2011), pp. 19, 31.

[18] See Brunner and Kuhn (2014).

[19] With respect to exploiting vulnerable segments of the population, Korkeamäki and Kyyrä (2012) showed how employers of growing establishments in Finland tend to take advantage of disability retirement so as not to resort to standard dismissals.

[20] See Lenzi et al. (2018) and Acconcia and Graziano (2017).

traineeship within a period of 4 months of becoming unemployed or leaving formal education'.[21] Even if 'there is also a need for a short-term response to counter the dramatic effects of the economic crisis on the labour market',[22] the purpose of this Guarantee is to 'contribute to sustainable and inclusive economic growth'.[23] Andor and Veselý (2018), in this regard, defined the Youth Guarantee as a structural reform that aims to reduce the duration of youth unemployment and their non-participation in the labour market. Differently from a regulation, a directive, or a decision, a recommendation by the institutions of the European Union is not binding from a legislative perspective. Thus, it is up to the member states of the European Union to implement the suggestions recommended by the Council in their national jurisdictions. The funds available[24] (see Table 5 below) and the increasing number of inactive young people in the country, made it rather reasonable to the Italian government to follow the European Union's instructions. The creation of an Italian Structure of Mission, expected by the 99/2013 Law and then transformed into the national body ANPAL, or *Agenzia Nazionale per le Politiche Attive del Lavoro* of the 150/2014 Law Decree, revealed the prospect of implementing this European reform in the country 'in accordance with national, regional and local circumstances'.[25] According to the European Commission, most of the member states responded with relevant policy measures.[26] Similarly to Italy, where Regions or independent Provinces take care of the unemployed, Austria, Belgium, and the Netherlands, too, refer to a multi-layered system that involves a series of social partners. Many of the networks built by the public employment services (PES) consist of schools and other training institutions. In Belgium, for instance, students are informed about their opportunities when and if they register with the PES before leaving school, while Danish centres help them transition from compulsory school to any activity that could come next, both in educational and occupational terms. Austrian trade unions, on the other hand, cooperate with the Ministry of Labour for defining training programmes, while in Germany the private sector contributes to improving vocational training together with the Länder and the Government. In the Netherlands, too, networks between young candidates and potential employers are strengthened through elevator pitches in informal meetings. The incidence of the 120/01 Recommendation, with the European Union's institutions that claimed themselves that 'the Youth Guarantee is probably one of the [structural reforms] most rapidly implemented'[27] in Europe; the denomination of the latter as a social right within the European

[21] (5), p. 1 of 2013/C 120/01.

[22] (22), p. 3 of 2013/C 120/01.

[23] (1), p. 1 of 2013/C 120/01.

[24] For Italy equal to € 567 million from the Youth European Initiative, € 567 million from the European Social Fund, and an additional 40% of national co-funding, for a total of about € 1513 billion.

[25] (1), p. 3 of 2013/C 120/01.

[26] The document is available on the website of the European Commission and was drafted in Strasbourg on 4 October 2016.

[27] On the Commission's website, such a statement can be found in "The Youth Guarantee country by country" section.

Social Model[28]; and the fact that all the member states put it into effect explain the relevance of this study.

Interestingly, while the Italian government adopted a national normative for active policy only in 2014, an administrative body with the same functions already existed in the independent Province of Trento, part of the Trentino-Alto Adige region and granted a special independence statute since the 1940s. The legislative power of this province, which deals, too, with public interventions, social services, and the economy, led to a series of reforms that directly affected its population. The founding Provincial Law 19/1983, for instance, created a provincial structure ahead of its time where administrative, accounting, and management independence are combined with a full range of responsibilities in the field of labour policy in the Province of Trento. Today, it includes a central structure in Trento and 12 additional employment centres spread in the territory. Major objectives of this institution are to personalise active labour market policies and give them precedence over passive measures and to support female[29] and youth employment. In this regard, the Agency promotes internships; meetings in schools and in the employment centres to inform students about the labour market; apprenticeships to understand the business needs; mobility abroad services; and generational rotation and qualifying income to, respectively, favour hiring via open-ended contracts and enable individuals to benefit from an income support, reduce working hours, and bring them back to their studies. Their long-term expertise in the design of active labour market policies is also reflected in their compliance with the Council's requirements in temporal and financial terms. In addition to supporting inactive young subjects from a financial viewpoint during their on-the-job training, they also provide them with an offer of job or training within 4 months from having registered as such, and not within 6 or 7 months as generally happens for most of the Italian regions. As stressed by the aforementioned members of the European Commission 'a few months of unemployment or inactivity [for the youth] can have the same damaging effects that are usually associated with long-term unemployment in older generations'.[30] Their socio-economic similarity to countries that are considered the pioneers of youth policies in continental Europe, like Austria, and the organisational structure of its employment centres, reminiscent of the popular Employment Areas of Denmark focused on local employment questions, justify, too, our decision to give precedence to the data provided by the Province of Trento (see Table 2). While one should not expect Italian generalisations,[31] the peculiarity of this area allows us to draw conclusions relevant for its Northern neighbouring regions and other similar European regions. Thus, the contribution of this study should be intended as particularly significant for

[28] (4b), p. 12, European Pillar of Social Rights.

[29] This is relevant when considering the argument by Gaddis and Klasen (2013) according to which female labour force participation is more likely to increase due to local conditions and institutions rather than secular trends.

[30] Andor and Veselý (2018), p. 13.

[31] While Central Italy may share features of both South and North, it is never the case that conclusions for Sicily could, for instance, apply to Lombardy or vice versa.

the portion of the EU territory that includes some of the most renowned countries in the field of ALMPs.

With reference to the Youth Guarantee, the Province of Trento implemented the policy with the 807/2014 Decision of its Council. In particular, it started to provide NEETs aged between 15 and 29 years with different plans ranging from regular training programmes to experiences in the civil service. The same programmes have been offered and financed in the other Italian regions too (see Table 3 below). Programmes within the Youth Guarantee include internships, or on-the-job training at selected firms, apprenticeships, civil service, support for self-employment, professional formation, national and international mobility (see Table 3 below). According to national statistics, on-the-job training at selected firms is the measure that is most widespread (62.3%)[32] and most successful in offering opportunities in the labour market. Indeed, it helps individuals both transition from school to work and acquire the necessary skills for the job market.[33] Next are the services of accompaniment of the youth in the labour market and those regarding specialised formation. Some competence is also acquired through civil service, which includes activities in a series of sectors such as: services to individuals, environmental protection, cultural heritage, civil protection, and education for peace. Conversely, the *SELFIEemployment* support offered to those willing to start an enterprise is merely financial as is the occupational bonus granted to firms to support youth employment. Services of formation, instead, are generally offered to bring the individuals back to their studies or to provide them with vocational measures. Given the lack of empirical evaluations of the Italian Youth Guarantee so far, no estimates are available in the matter of the aggregate effects of the different programmes offered apart from some descriptive statistics (see Table 4 below). It is, however, possible to make qualitative conjectures in terms of whether the measures are expected to have a short- or long-term impact and whether the latter is likely to be positive or negative. Based on the nature of the measure itself and on how it is perceived by the Italian labour market, civil service, for instance is not likely to provide the youth with relevant training nor is it likely to increase her chances of becoming employed afterwards. On the other hand, specialised formation prepares candidates in a way that they are ready to start a profession and able to work in different specialised firms. The same is not necessarily true for apprenticeships.[34] The measure is not a popular contract in Italy and may even give a negative label to the candidate's competence in case of disputes with the employer, who is responsible of filling out a final report on the apprentice.

As regards the services offered by the Province of Trento within the Youth Guarantee policy, the distinction is fourfold: programme A, which is the most popular form of training offered to young people and combines a period of orientation and formation with one of on-the-job training, or internship; programme B, which

[32] See Isfol's report for 2016.

[33] Ibid.

[34] The fact that the former secretary of state for education Ugolini (2013) wrote an article on the national paper *Corriere della Sera* entitled "Why Do Apprenticeships Not Work in Italy?" is emblematic in this regard.

Table 2 Relevant occupational statistics for Austria, Denmark, and the Province of Trento

Year	Employment (%)			Unemployment (%)			Activity (%)		
	PT	AT	DK	PT	AT	DK	PT	AT	DK
2018	68.2	73	74.1	4.8	4.8	4.9	71.7	76.8	79.4
2017	67.6	72.2	73.2	5.7	5.5	5.7	71.7	76.4	78.8
2016	66	71.5	72.7	6.8	6.0	6.2	70.9	76.2	79.9
2015	66.1	71.1	72	6.8	5.7	6.2	71	75.5	78.5

The table shows the employment, unemployment, and activity rates for Austria, Denmark, and the Province of Trento in Italy. Data are collected from Eurostat and Istat for the years 2015, 2016, 2017, and 2018. PT refers to the Province of Trento; AT refers to Austria; and DK refers to Denmark

Table 3 Measures offered within the Youth Guarantee in Italy by region

Area	North West	North East	Centre	South and Islands	Total (%)
Internship (%)	50.2	62.7	64.9	76.2	62.3
Specialised formation (%)	6.5	16.7	2.4	5.3	6.8
Formation for education (%)	5.4	2.8	6.3	3.0	4.3
Apprenticeship (%)	n.a.	0.3	0.1	0.0	0.1
Accompaniment (%)	28.7	5.4	10.1	2.7	11.2
Civil service (%)	0.7	1.3	3.1	3.1	2.2
Self-employment (%)	0.0	1.0	0.4	0.3	0.4
Mobility (%)	0.1	0.0	0.3	0.4	0.2
Bonus (%)	11.6	9.8	12.4	9.0	10.5
Total	100	100	100	100	100

The table shows the available measures in Italy for young people interested in the Youth Guarantee. The national institution for the formation of the workers, Isfol (2016), provides statistics on the use of each measure according to the four macro-regions of the country

provides training for specialised professional profiles; programme C, which consists of apprenticeships in various sectors, from general company services to agriculture, and, therefore, is not assessed by the Agency of Labour as those who start an apprenticeship are automatically considered employed; and programme D, or civil service, which does not provide any particularly relevant form of training. In our analysis, we focus on the most popular and complete form of training programme; namely, *programme A*, defined within the EU Commission's Decision C(2014) 4969 of 11/07/2014.[35] Young individuals register on the Italian website of the Youth

[35] The current programmes available online on the Youth Guarantee website refer to the modified EU Commission's Decision C(2017) 8927 of 18/12/2017.

Table 4 Job placement of participants in the Youth Guarantee by region, gender, profiling, and education

Category	Employed at least once*	Employed**
Females	76.6	51.6
Males	74.9	49.8
15–18 years old	71.3	45.7
19–24 years old	76.8	51.3
25–29 years old	75.6	51.3
Middle school diploma	71.7	41.5
High-school diploma	76.8	51.7
Tertiary education	76.9	57.2
Low profiling	84.2	62.4
Medium profiling	80.4	62.2
High profiling	78.7	54.2
Very high profiling	67.7	39.4
North West	79.7	59.5
North East	82.5	60.7
Centre	77.9	53.0
South and Islands	68.4	38.2

The table shows the job placement rates for certain segments of the population and geographical areas of Italy at the end of 2018. *Is the ratio between the number of individuals who were offered a job at least once and the number of individuals who completed the programme. **Is the ratio between the number of individuals who work and the number of individuals who completed the programme. The profiling is computed based on the individuals level of education, employment history, presence in Italy, entrepreneurial density in the area of origin. A youths profiling indicator is low if the individual has a high probability to be reinstated in the labour market and its value falls between 0.000 and 0.250000; medium if it falls between 0.250001 and 0.50000; high if it falls between 0.50001 and 0.750000; and finally, very high if the indicators value falls between 0.750001 and 1, which indicates that the individual has a low probability to exit from her condition of occupational inactivity

Guarantee and are assigned a first appointment at the job centre of reference within 60 days from registration. The signing of a personalised service pact, or *Patto di Servizio*, with the job centre originates a formal agreement between the unemployed individual and the job centre. The personal project for the individual is chosen in respect to the availability to work of the individual; the measures of job search provided; and the consequences for the individual in the case of breach of agreement. Once collected the necessary information on the personal needs and skills of the individuals, the job centres are able to work as the German one-stop-shop agencies with a wide range of employment and training 'products'. In particular, they provide individuals with tailored services that are similar to the individual action plans offered by the structures of the Danish Employment Regions. Plans, in particular, should always be motivated by the job centre. As regards NEETs, they are first provided with services of orientation and general formation, which last, respectively, 8

Table 5 Total spending for the Youth Guarantee in Italy by region

Region	Amount spent (€)	Realised efficiency* (%)	GDP per capita**	Youth unemployment (%)
Piedmont	89,787.74	95.6	137,488.2	30.0
Valle d'Aosta	1428.09	100	4902.0	21.7
Liguria	18,747.86	100	50,109.1	36.3
Lombardy	91,542.82	99.4	380,331.2	20.8
PA Trento	4705.32	69.9	20,606.5	15.3
Venetia	58,428.75	100	163,171.3	21.0
Friuli-Venezia Giulia	13,533.74	91.3	38,139.6	23.7
Emilia-Romagna	67,748.52	100	161,705.8	17.8
Tuscany	44,626.02	92.3	117,748.3	22.9
Umbria	17,250.92	99.5	22,338.4	31.1
The Marches	21,592.62	91.7	42,914.4	22.1
Latium	93,011.28	90.8	197,742.7	34.5
The Abruzzi	19,333.51	100	33,596.2	29.7
Molise	3580.74	66.7	6342.2	40.3
Sardinia	30,042.57	89.7	34,541.7	35.7
Campania	123,956.79	89.8	106,071.6	53.6
Apulia	87,761.29	99.2	75,333.9	43.6
Basilicata	12,293.66	100	12,358.3	38.7
Calabria	22,751.11	100	33,142.8	52.7
Sicily	107,818.45	99	88,626.8	53.6

The table shows the amount that has been spent for the Youth Guarantee in Italy and the GDP per capita distinguishing between regions. Data have been collected from the National Agency for Active Labour Market Policies, or ANPAL, and refer to the report of 31 December 2018, as well as from the National Institute for Statistics, or Istat, also for 2018. *Indicates the ratio between the amount spent and the amount programmed for the spending. **At current prices. Youth unemployment rates are collected from Istat and refer to individuals aged 15–24 in 2018

and 26 h, and aim to introduce NEETs to the labour market. After the general formative period, which includes courses on safety at work, job search methods, IT and other transversal skills, NEETs are sent to selected firms to experience their on-the-job training, which lasts between 8 and 24 weeks. In order for the individuals to be eligible to the programme evaluated in this study they have to be both a NEET, i.e. to be unemployed, not in education, and not in training, and aged between 16 and 29 years (Table 5).[36]

[36] The reason why Italy decided to increase the age limits from 24 years, as recommended by the EU Commission, to 29 years probably originates from the existence of the 181/2000 Law Decree that guaranteed an offer of training, or professional retraining, to people up to the age of 29 years within 4 months from registration as unemployed. Moreover, the amount of European and national funds that Italy received for the programme were sufficient to cover not only the number of potential NEETs predisposed by the European Union 120/01 Recommendation (those under 24 years old, equal to 1,274,000 in Italy), but the annual flow of actual NEETs (those under 29 years old, namely 2,254,000 individuals). Additional information can be found on www.garanziagiovani.gov.it.

4 Empirical strategy

With the Youth Guarantee regulation in existence, deciding to participate or not to participate may make a difference in the individual's probability to find employment due to the potential benefits of the programme. The focus of the analysis will not regard inactivity per se but, more specifically, occupational outcomes; namely, the likelihood of individuals to find a job and their chances of being offered a stable contract. In particular, entrance into the labour market is considered successful if the individual is offered her first job since participation in the Youth Guarantee programme. To investigate the potential advantages of participation, we use a difference-in-differences model that exploits fixed effects. The model, in particular, compares the average occupational outcomes Y_{ict} of treated and untreated groups c of individuals i before and after treatment, i.e. over time t.

$$Y_{ict} = \alpha_{ic} + \lambda_{DD} PARTIC_{ict} + \sum_{g=1}^{3} \beta_g COH_{gc} + \sum_{p=2016}^{2017} \gamma_p YEAR_{pt} + \eta_{ict} \quad (1)$$

Our outcomes of interest Y_{ct} are the individual i's of cohort c probability to find a job and probability to be offered an open-ended contract, independent of her employment status,[37] in time t. In particular, we aim to investigate both the tendency to exit inactivity, understood as inactivity in the labour market, and the quality of employment offered, understood as job stability. Rationally, Y_{ct} is either Y_{0ct} or Y_{1ct}, depending on the participation status of the group members. $PARTIC_{ict}$ is the participation status of a member i of a specified age group c in a period t. The dummy is equal to 1 when the individual succeeds in completing her on-the-job training experience, or internship. $YEAR_{pt}$ are the 2 year dummies 2016 and 2017, with 2015 as the year of reference, or the time trends that are common to both treated and untreated individuals; while, COH_{gc} are the three age cohorts, with the individuals who are never eligible considered as the category of reference. We define, in particular, four groups depending on their age of reference, i.e. their age at the first available check date after having applied for the programme. This allows us to have at our disposal a group of people who are always eligible[38] in the time periods considered; a group

[37] For mathematical reasons, the probability of being offered an open-ended contract in a given period $Pr(Y_{OPEN\_t} = 1)$ is equal to the sum of the probability of being offered an open-ended contract conditional on the probability of becoming employed in a given period multiplied by the probability of becoming employed in a given period $Pr(Y_{OPEN\_t} = 1|Y_{EMPLOYED\_t} = 1)Pr(Y_{EMPLOYED\_t} = 1)$ and of the probability of being offered an open-ended contract conditional on the probability of not becoming employed in a given period multiplied by the probability of not becoming employed in a given period $Pr(Y_{OPEN\_t} = 1|Y_{EMPLOYED\_t} = 0)Pr(Y_{EMPLOYED\_t} = 0)$. As this last expression is null, then the the probability of being offered an open-ended contract in a given period $Pr(Y_{OPEN\_t} = 1)$ is equal to the sum of the probability of being offered an open-ended contract conditional on the probability of becoming employed in a given period multiplied by the probability of becoming employed in a given period $Pr(Y_{OPEN\_t} = 1|Y_{EMPLOYED\_t} = 1)Pr(Y_{EMPLOYED\_t} = 1)$.

[38] Assumed all training programmes have an average duration of minimum a year and based on the individual's birth date, eligibility is, for instance, flagged as equal to 1 in 2015 when at the check date of the year before the individual was observed as being under the age of 30 years old.

of people who are always eligible in the time periods considered except for the last period; a group of people who are always non eligible in the time periods considered except for the first period; and, finally, a group of people who are always non eligible in the time periods considered. As regards the error term, the nature of the model, which takes into account different periods of time, encourages us to use clustered standard errors so as to avoid serial correlation. The causal effect of interest is given by λ_{DD}, which measures a double difference; namely, the difference between the average occupational outcomes before and after treatment for the participants of the programme (*treat*) minus the difference between the average occupational outcomes before and after treatment for the non participants of the programme (*nontreat*). λ_{DD}, in particular, represents the effect observed for the treated individuals in the post-treatment periods.

$$\hat{\lambda}_{DD} = \overline{Y}_1^{treat} - \overline{Y}_0^{treat} - (\overline{Y}_1^{nontreat} - \overline{Y}_0^{nontreat}) \tag{2}$$

Given the nature of the outcomes studied, it follows that participation per se in the programme may be correlated with unobservables that are correlated with the error term. In particular, the cohort dimension allows to control for unobserved but fixed omitted variables. Individuals from a certain group, for instance, could be more experienced regardless of their participation in the programme. Similarly, candidates of another group could be offered better positions and earn higher salaries independent of their participation in the programme. In respect to this, the estimation assumes that the potentially unobserved group characteristics I_{ic} do not vary in time and that participation is as good as randomly assigned conditional on some individual- and group-specific qualities α_{ic}. Most importantly, for the design to hold, individuals from both treatment and control groups should experience parallel trends as regards the occupational outcomes. This means that:

$$E[Y_{ic,1} - Y_{ic,0}|treat_{ic} = 1] = E[Y_{ic,1} - Y_{ic,0}|nontreat_{ic} = 1] \tag{3}$$

Nevertheless, while the difference between treated and non-treated individuals, conditional on being observed in the same year and belonging to the same cohort, removes common trends, the linear model proposed does not discharge estimates from a potential selection bias. The latter is explained by the sampling bias due to self-selection in the programme on behalf of participants. As explained in Sect. 3, eligible individuals who are occupationally inactive have the same right to participate in any programme of the Youth Guarantee. However, they are required to voluntarily apply for participating in the Youth Guarantee, which requires applying online; setting up a meeting with the job centre of reference; and signing a contract of commitment to the programme with them. Since the effect we estimate recurring to (1) will give us a biased average treatment effect (ATT) due to sampling bias, we also study the intention-to-treat effect (ITT), which preserves the balance obtained from original randomisation independent of the treatment received. Because individuals need to apply in order to participate in the on-the-job training programme and any other job-placement service implemented within the Youth Guarantee context and offered by the Agency of Trento, one limitation of our analysis is that the

estimation of any potential treatment effect includes self-selection. Individuals who are interested in taking part in *programme A* select themselves in the group of the treated. For this reason, we also account for individuals who are registered at the Agency of Labour as unemployed, who only differ by their age, or eligibility, and who therefore do not give origin to a biased sample. In particular, we are interested in understanding whether there exists a benefit for eligible individuals compared to non-eligible individuals in terms of both finding a job and being offered an open-ended contract, such as in (4). In Sect. 6.2 we also provide an intention-to-treat analysis only for those individuals who are observed close to the eligibility cutoff. Reasonably, the actual effect of the on-the-job training experience promoted by the Agency of Labour of Trento in the context of the Youth Guarantee will be between the estimated treatment and intention-to-treat effects.

$$Y_{ict} = \alpha_{ic} + \omega_{DD} ELIG_{ict} + \sum_{g=1}^{3} \beta_g COH_{gc} + \sum_{p=2016}^{2017} \gamma_p YEAR_{pt} + \eta_{ict}, \tag{4}$$

where $ELIG_{ict}$ is the eligibility status of a member i of a specified age group c in a period t and according to which, the effect for eligible individuals on their probability to become employed and their probability to be offered a permanent position in the post-treatment periods is given by:

$$\hat{\omega}_{DD} = \overline{Y}_1^{elig} - \overline{Y}_0^{elig} - (\overline{Y}_1^{nonelig} - \overline{Y}_0^{nonelig}) \tag{5}$$

The decision to opt for a standard linear probability model to estimate the impact of the Youth Guarantee in the Province of Trento lies in the impracticality of non-linear models such as logistics, probabilistic, or tobit models. Based on Puhani (2012), the estimation from a non-linear model of the impact of a training programme such as the one investigated in this study may not be ideal as two, rather than one, cross differences would be necessary due to the existence of both the expectations of the observed outcomes and the potential outcomes. Estimations from a linear probability model, on the other hand, may suffer from the intrinsic problem of unbounded predicted probabilities with respect to the dichotomous outcomes of interest, namely Y_{ict}. This means that the fundamental law of probability may be not satisfied and that there could exist individuals for which the probability to become employed or to be offered an open-ended contract may be nonsensically smaller than 0 and bigger than 1. As argued by Angrist and Pischke (2008), the fact that regression may generate fitted values outside the limited dependent variables (LDV) boundaries 'bothers some researchers'; 'point conceded'. However, we agree with the authors that linear models are not necessarily 'inappropriate' for LDV analyses. This is because, due the fact that D_i, or the treatment dummy variable, is independent of potential outcomes, $E[Y_i|D_i = 1] - E[Y_i|D_i = 0] = E[Y_{1i}|D_i = 1] - E[Y_{0i}|D_i = 1]$, which is equal to $E[Y_{1i} - Y_{0i}]$. In other words, while non-linear regression functions, such as Tobit's, have been defined by Deaton (1997) as 'an awkward, difficult, and non-robust object', the technique of ordinary least squared is standardised. According to the authors, 'the fact that Y_i is a dummy means only that the average treatment effects are also differences in probabilities'. Even if in our analysis we are not interested in

such potential extreme outcomes but in rather the sensible average occupational outcomes, we find it considerate to compare the impact of the policy estimated from both a linear model and a non-linear model. However, non-linear models cannot be interpreted unless the output is transformed into what Angrist and Pischke (2008) call the average changes in the conditional expectation function $E(Y_i|D_i)$, or the marginal effects constructed by $E\{E[Y_i|X_i, D_i = 1] - E[Y_i|X_i, D_i = 0\}$. For this reason, in Sect. 6.2 we present the marginal effects from a logistic model that models the probability p for our binary dependent variable Y_{ict} to be equal to 0 or 1; namely, employed or not, or offered an open-ended contact or not, such as in:

$$Pr(Y_{ict} = 1|X_{ict} = F\left(\alpha_{ic} + \lambda_{DD} PARTIC_{ict} + \sum_{g=1}^{3} \beta_g COH_{gc} + \sum_{p=2016}^{2017} \gamma_p YEAR_{pt}\right), \tag{6}$$

where $F(z) = \frac{exp(z)}{1+exp(z)}$ is the logistic cumulative distribution function.

Finally, pre- and post-treatment observations are available at the individual level. However, the same individuals are not observed before the implementation of the Youth Guarantee in the European Union. For this reason, it is not possible to test the assumption of parallel trends according to the standard rule. First, we provide evidence on the similarity of the individuals in both treated and non-treated groups. Details are provided in the next section. Second, we present graphical evidence of the trend of eligible and non-eligible individuals, as well as participating and non-participating individuals, with respect to their probability to become employed and probability to be offered an open-ended contract over the 3 years of our observation period. Third, we exploit the measure of profiling with which participants are assessed so as to demonstrate that it is not this individual characteristic that drives the results in terms of treatment effectiveness, as well as we provide intention-to-treat estimates for individuals who are very close to the eligibility cutoff. This is presented in Sect. 6.2.

5 Data and descriptive analysis

We have access to longitudinal individual data on individuals who officially register as unemployed and that are directly collected by the Agency of Labour of the Province Trento. The panel covers three periods. Individuals are observed between 2014 and 2017. The sample analysed includes 48,888 observations for 16,296 individuals of age between 16 and 35 years and from 104 different countries. The data collected by the Agency of Labour cover all applicants and include information on their age, gender, country of origin, employment condition after the policy, and type of contract offered, if any. The same data source includes information that covers only the participants of the Youth Guarantee programme. The information available for participants also includes the number of days they stayed at the firm for their on-the-job training and the profiling indicator, defined as a measure of unemployment risk.[39] This information will be used in the "Appendix", which focuses exclusively

[39] The lower the profiling indicator, the lower the difficulty to reinstate the subject into the labour market and vice versa.

on participants. On this subject, it is, however, crucial to stress that our data set is made of individuals whose profiling is heterogeneous, as a high percentage of individuals with high or low profiling could bias the estimates on the real effect of the policy. As regards the gender and nationality of the individuals, Table 2 shows that these are well distributed across the sample. In 2015, 48.5% of the individuals are women in the treated group. The proportions remain constant over time. This is also true in respect to the nationalities that are registered at the Agency of Labour. In particular, we observe a larger proportion of Southern Europeans who participate, with 92.9% of them who are treated in 2015. On the other hand, there is an insignificant proportion of Northern Europeans who are treated over time. Similarly, individuals from Eastern Europe are only 8.6% of the total of the participants in 2017. We also find a relevant number of subjects originally from Africa (6.5%), the Arab countries (2.1%), and Latin America (1.6%). As expected, participants, who are averagely 24 years old in 2017, tend to be younger than non participants, who are averagely 32.1 years old in 2017 (see Table 6). Any potential significant difference between treated and non-treated individuals in terms of individual characteristics cancels out in the difference-in-differences strategy. Unfortunately, we do not have access to the employment histories of the individuals. However, we rely on the information provided by the Agency of Labour in respect to their official registration as unemployed. On the other hand, the fact that they are all registered at the Agency of Labour as unemployed implies that they can all tend to both employment or unemployment in the future.

The model used allows us to ignore the gender and nationality of the individuals as they are considered individual-specific qualities that do not change over time. In particular, we distinguish four groups of individuals who differ in their age and, thus, in their entitlement to participate in the programme. As the dates of start and end of the programme are not observed for all the individuals in the data set, we use dates that are common to everyone every year. These are the so-called check dates on 10 November 2015, 10 November 2016, and 10 November 2017; from now on 2015, 2016, and 2017. Entitlement to the programme and participation status are defined based on these dates. In particular, individuals are defined within the four groups based on the age they had at the first check date available following the start date of the programme. The participation dummy, on the other hand, is flagged as active when the individual has completed the training. This assures that the dates at which labour outcomes are registered are subsequent to the corresponding treatment. In respect to their entitlement to the programme, individuals are divided according to four groups. As for the first group, these are the individuals who are always eligible in the years taken into account for the analysis. This can be observed in Table 8, which also shows the treatment, employment, and job stability status of the members of each group.

As regards participation, 3% of the members who belong to our GROUP 1 appear to have completed their training by 2015. The proportion increases up to 19.7% and 15.8% for, respectively, 2016 and 2017. With reference to GROUP 2 these are the individuals who are always eligible except for the last year considered in the analysis. In particular, 1.9% of them completed their training by 2015, while the majority completed their training by the second year of the Youth Guarantee (7.4%). In the last

Table 6 Distribution of predetermined covariates by year

Covariates	Non treated [Mean]	Treated [Mean]	NT [Mean]	Treat. [Mean]	NT [Mean]	Treat. [Mean]
Year		2015		2016		2017
Age	29.6	25.7	31.1	24.7	32.1	24.0
(years)	(0.037)	(0.213)	(0.035)	(0.093)	(0.034)	(0.107)
	t = 13.526	*p*-value = .000	t = 59.913	*p*-value = .000	t = 64.043	*p*-value = .000
Gender	0.562	0.485	0.572	0.452	0.571	0.428
(Female = 1)	(0.004)	(0.031)	(0.004)	(0.013)	(0.004)	(0.015)
	t = 2.519	*p*-value = .011	t = 9.167	*p*-value = .000	t = 9.451	*p*-value = .000
Northern	0.002	0.000	0.002	0.000	0.002	0.000
Europe	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	t = 0.697	*p*-value = .486	t = 1.758	*p*-value = .079	t = 1.489	*p*-value = .136
Southern	0.625	0.929	0.608	0.835	0.616	0.808
Europe	(0.004)	(0.016)	(0.004)	(0.009)	(0.004)	(0.012)
	t = −10.258	*p*-value = .000	t = −17.879	*p*-value = .000	t = −13.067	*p*-value = .000
Eastern	0.251	0.045	0.266	0.079	0.260	0.086
Europe	(0.003)	(0.013)	(0.004)	(0.007)	(0.004)	(0.008)
	t = 7.783	*p*-value = .000	t = 16.418	*p*-value = .000	t = 13.335	*p*-value = .000
Developed	0.003	0.000	0.003	0.000	0.003	0.001
Asia	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
	t = 0.878	*p*-value = .380	t = 2.216	*p*-value = .027	t = 1.302	*p*-value = .193
Undeveloped	0.010	0.000	0.011	0.002	0.010	0.005
Asia	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.002)
	t = 1.649	*p*-value = .099	*t* = 3.354	*p*-value = .001	*t* = 1.673	*p*-value = .094
U.S.	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	t = 0.183	*p*-value = .855	*t* = 0.461	*p*-value = .645	*t* = 0.391	*p*-value = .696
Latin	0.019	0.015	0.020	0.012	0.020	0.016
America	(0.001)	(0.007)	(0.001)	(0.003)	(0.001)	(0.004)
	t = 0.522	*p*-value = .602	*t* = 2.164	*p*-value = .031	*t* = 0.945	*p*-value = .343
Arab	0.019	0.004	0.019	0.017	0.019	0.021
Countries	(0.001)	(0.004)	(0.001)	(0.003)	(0.001)	(0.004)
	t = 1.861	*p*-value = .063	*t* = 0.600	*p*-value = .549	*t* = −0.399	*p*-value = .690
Africa	0.071	0.007	0.071	0.055	0.070	0.065
	(0.002)	(0.005)	(0.002)	(0.006)	(0.002)	(0.007)
	t = 4.037	*p*-value = .000	*t* = 2.425	*p*-value = .015	*t* = 0.669	*p*-value = .503
Observations	16,028	268	14,729	1567	15,140	1156

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. In this table, the analysis is done for the predetermined covariates of the individuals; namely, their gender and nationality. The individuals of the sample come from 104 different countries, which are here agglomerated according to a classification of the macro-areas of the world. Standard errors are expressed in parentheses. Two-sample t-test statistics (difference) are also showed in the table.

Table 7 How participation varies: overall, between, within

Participation	Mean	SD Overall	VAR Overall	SD Between	VAR Between	SD Within	VAR Within
Panel A: All	0.061	0.240	0.058	0.129	0.017	0.202	0.041
Observations		N = 48,888		n = 16,296		T = 3	
Panel B: Group 1	0.128	0.334	0.112	0.162	0.026	0.292	0.085
Observations		N = 21,370		n = 7,126		T = 3	
Panel C: Group 2	0.039	0.193	0.037	0.107	0.011	0.161	0.026
Observations		N = 3545		n = 1183		T = 3	
Panel D: Group 3	0.023	0.149	0.022	0.084	0.007	0.123	0.015
Observations		N = 3256		n = 1090		T = 3	
Panel E: Group 4	0.001	0.031	0.001	0.018	0.000	0.025	0.001
Observations		N = 19,812		n = 6605		T = 3	

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The table shows the variation of the variable participation overall, between individuals, and within time. The table presents estimates overall and for the single groups. Group 1 represents individuals who are always eligible in the time periods considered; group 2 represents individuals who are always eligible in the time periods considered except for the last year; group 3 represents individuals who are never eligible in the time periods considered except for the first year; group 4 represents individuals who are never eligible in the time periods considered

available period of training of 2017, 2.4% of the members of this group completed their training. As regards the individuals who are never eligible apart from the first year of the Youth Guarantee, we observe that by 2015, only 1.8% of the members of GROUP 3 completed the programme. The reason we observe an insignificant minority of individuals from GROUP 4 as participants lies in the design of the data set, which exploits the yearly check dates and not the end dates of the training. In 2017 no member of this group is observed as having experienced treatment. Statistics, in general, show that the greatest variation with respect to participation is observed for the same individuals over time, and not across groups, or across time periods (see Table 7 below).

In respect to the outcomes of interest, the data at our disposal do not allow for inferring educational effects about NEETs. We, instead, investigate whether individuals who participate are more likely to find a job than those who did not take part in the programme. We also investigate whether the contract offered to the individual is stable; namely, if it is more probable for participants to be offered an open-ended contract, independent of becoming employed. In particular, we are interested in observing the first successful occupational outcome for each individual; namely, the first offer of job accepted by them, if any, and the type of contract issued. The majority of those who become employed in the period under investigation, for instance, sign a standard short-term contract (about 44.6%), a standard long-term contract (27.4%), or start a professional apprenticeship (8.7%). Options, however, include a range of other alternative contracts, including contracts of domestic work,[40]

[40] Which is expected to be direct and exclusive.

Table 8 Descriptive statistics for individuals registered at the Agency of Labour of Trento in 2014–2017

Variables observed	2015	2016	2017		2015	2016	2017
Group 1		*Mean*		*Group 3*		*Mean*	
Entitlement	1.000	1.000	1.000		1.000	0.000	0.000
	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)
Participation	0.030	0.197	0.158		0.018	0.051	0.000
	(0.169)	(0.398)	(0.365)		(0.131)	(0.219)	(0.000)
Employed	0.226	0.318	0.410		0.222	0.279	0.335
	(0.418)	(0.466)	(0.492)		(0.416)	(0.449)	(0.472)
Open-Ended	0.080	0.139	0.193		0.087	0.116	0.129
	(0.271)	(0.346)	(0.395)		(0.281)	(0.321)	(0.335)
Observations	7126	7122	7122		1086	1085	1085
Group 2		*Mean*		*Group 4*		*Mean*	
Entitlement	1.000	1.000	0.000		0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)
Participation	0.019	0.074	0.024		0.002	0.001	0.000
	(0.135)	(0.261)	(0.152)		(0.041)	(0.033)	(0.012)
Employed	0.229	0.292	0.324		0.198	0.255	0.301
	(0.421)	(0.455)	(0.468)		(0.398)	(0.436)	(0.459)
Open-Ended	0.090	0.124	0.144		0.072	0.111	0.129
	(0.286)	(0.330)	0.351)		(0.259)	(0.315)	(0.335)
Observations	1181	1182	1182		6602	6605	6605

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. For all unemployed individuals in the sample, we observe their gender and nationality, which are the subject-specific qualities of the individuals. In this table, we provide some statistics on the eligibility, participation status, and occupational outcomes of four defined cohorts of individuals. Group 1 represents individuals who are always eligible in the time periods considered; group 2 represents individuals who are always eligible in the time periods considered except for the last year; group 3 represents individuals who are never eligible in the time periods considered except for the first year; group 4 represents individuals who are never eligible in the time periods considered. Standard errors are expressed in parentheses

permanent collaborations,[41] work-for-hire projects,[42] occasional work, internships, socially useful work or activities financed by the Solidarity Funds,[43] on-call contracts, agency contracts, work bursary and other work experiences,[44] temporary

[41] *Co.co.co.*s expect the worker to work independently in the company and without obligations of subordination, but through a permanent and coordinated relationship with the customer, i.e. the employer of the company.

[42] *Co.co.pro.*s were abrogated with the 81/2015 Law Decree but are still active for those contracts registered as such. They, too, expect a service from the worker but the latter is independent and can either be involved for a whole project, a programme, or just part of it.

[43] If unemployed individuals have difficulty reaching for social networks in general, this is even harder for those NEETs who are totally inactive and, thus, probably socially isolated.

[44] Educational tool that uses work experience to facilitate the entry of socially weak categories, as are some not-in-employment, not-in-education, not-in-training individuals, into the labour market.

agency contracts,[45] or supply contracts,[46] self-employment, and independent work in the show business.

As regards the tendency of individuals to become employed, the proportions change among groups but always increase over time. In particular, individuals from GROUP 1 are employed 22.6%, 31.8%, and 41% of the time by, respectively, 2015, 2016, and 2017. On the other hand, they are offered an open-ended contract 8%, 13.9%, and 19.3% of the time by, respectively, 2015, 2016, and 2017. A similar increasing pattern is found for the members of the other groups. Individuals from GROUP 2 are employed 22.9%, 29.2%, and 32.4% of the time by, respectively, 2015, 2016, and 2017. They, too, are offered a stable contract 9%, 12.4%, and 14.4% of the time by, 2015, 2016, and 2017. As regards GROUP 3, its member find an occupation 22.2%, 27.9%, and 33.5% of the time by, respectively, 2015, 2016, and 2017. They start a permanent job 8.7%, 11.6%, and 12.9% of the time by, respectively, 2015, 2016, and 2017. Finally, individuals who are never eligible to the programme are offered a job 19.8%, 25.5%, and 30.1% of the time by, respectively, 2015, 2016, and 2017. On the other hand, they sign an open-ended contract 7.2%, 11.1%, and 12.9% of the time throughout the years of 2015, 2016, and 2017 (Table 8).

With respect to the assumption of existing parallel trends, and as mentioned in the previous section, the data used for this analysis do not allow for a standard test of the former. Pre- and post-treatment observations are, indeed, available only at the individual level. This means that the same individuals are not observed for a significantly long period of time before the official implementation of the Youth Guarantee in the European Union, which varies across countries, regions, job centres, and individuals. In addition to showing that the sample under observation is rather homogeneous in the proportion of males and females, as well as in the proportion of individuals from the different areas of Europe, Asia, Africa, Latin America, the U.S., and the Arab countries, we provide a graphical analysis of the trend towards employment and permanent occupation, or open-ended contracts, of both eligible and non-eligible individuals over 2015, 2016, and 2017. Figure 1a, in particular, shows that unemployed individuals registered at the Agency of Labour of Trento are not only similarly spread according to gender and nationality in our sample, but that their trend towards the likelihood of becoming employed follows the same upward direction over the years. The likelihood of becoming employed increases over the years for both eligible and non-eligible individuals. A similar pattern is found for eligible and non-eligible individuals as regards their trend towards permanent occupation. As can be observed in Fig. 1b, both types of individuals present an increasing tendency to be offered an open-ended contract from 2015 to 2017. Parallel trends in the probability to become employed and in the probability to be offered a permanent job are confirmed when we compare treated and non-treated individuals (see Fig. 2a, b).

[45] The agent promotes the conclusion of the contract between the interested third party and the worker, but leaves them with the responsibility of concluding and perfecting it, without taking any risk.

[46] Created with the 30/2003 Biagi Law to substitute the 196/1997 Law on the temporary, or *ad interim*, agency contract.

A visual inspection shows that the difference between the treated group and the control group stays constant over time.

6 Results

6.1 Treatment and eligibility effects

In relation to participation in the Youth Guarantee, findings from a linear probability model analysed on STATA suggest the latter is actually beneficial for individuals. Table 9 shows that participation in the on-the-job training experience leads to an increase in job opportunities for the individuals. Accounting for different groups of eligibility and for year effects, the first column shows that participants are 7.4 percentage points more likely to be offered a job compared to non participants. Similarly, the second column of Table 9 shows that participation in this EU active labour market policy leads to a higher probability to start a permanent employment relationship. Participants are indeed 4.4 percentage points more likely to be offered an open-ended contract, independent of becoming employed. Both estimates are significant at 1% level and robust to variations in the identification of the model (see Sect. 6.2). In particular, results from a logistic, or non-linear, model illustrate that the marginal effects are significantly positive for participants. The fact that linear and non-linear marginal effects present a larger gap and may fail to be 'indistinguishable', due to predictions being close to 0 (or 1) seems, according to Angrist and Pischke (2008), 'unlikely to be of substantive importance'. When we model the likelihood of an individual to become employed and to be offered an open-ended contract, we find a discrete change or relative advantage for treated units of, respectively, 5.5 and percentage points, significant at 1% level (see Table 10). Because of the potential issue of self-selection due to participants of the Youth Guarantee applying for taking part in the on-the-job training experience, we also provide estimates for the comparative advantage of eligible individuals over non-eligible individuals. In the 'once randomised, always analysed' context, Table 11 shows that the group of eligible individuals is more likely to become employed and be offered an open-ended contract by, respectively, 3.8 and 2.7 percentage points, significant at 1% level. Results from a robustness check described in Sect. 6.2 show that when restricting the sample under investigation to individuals who are close to the eligibility cutoff, intention-to-treat estimates are comparable to those estimated for treatment (see Table 12). Findings, in particular, are in line with the study by Cappellini et al. (2018) on the implementation of the Youth Guarantee in Tuscany. Results by Cammeraat et al. (2017) on Dutch NEETs could also take a positive turn once studied the impact of a European rather than national policy.

With respect to the impact of the policy in the Province of Trento and in Tuscany, its magnitude differs in the two Italian areas. The smaller impact found in the Province of Trento may be due to several reasons. The type of participants themselves matter and might contribute to influencing estimates. Statistics produced for the year 2016 by the Tuscan institute of research IRPET indicate that 60% of the participating individuals were assigned a low profiling indicator; namely, a low difficulty to

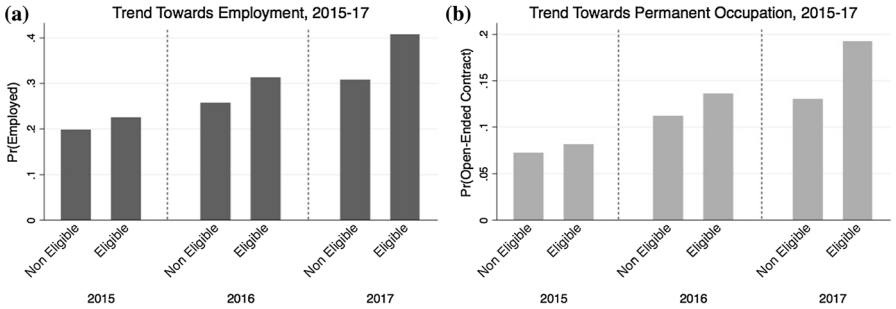

Fig. 1 Trend towards employment and permanent occupation by eligibility, 2015–2017

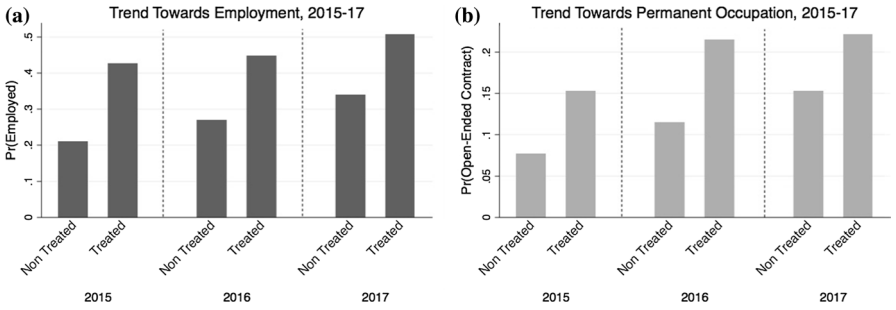

Fig. 2 Trend towards employment and permanent occupation by participation, 2015–2017

be reinstated in the labour market. Conversely, less than 5% of the participants were assigned a high profiling indicator. The same report also defines the average participant in Tuscany as a 20–24 year old Italian recent graduate.[47] Additionally, on this occasion, we evaluated one single programme; namely, that of on-the-job training. Cappellini et al. (2018), on the other hand, do not specify the focus of their analysis in terms of programme evaluated.[48] Indeed, they take into account any individual who registers for the Youth Guarantee independent of the programme, from internship or vocational training to civil or community service. The three aforementioned reasons contribute to justifying the slightly smaller magnitude of our estimates compared to this region of Central Italy. On the other hand, they are comparable as their analysis is likely to focus on an active labour market policy of the same type. Indeed, we know from official Italian statistics that internships are the most popular programme in both Italy (62.3%) and Tuscany.[49] We also know that Tuscany offers internships that are similar to the ones in the Province of Trento in that they follow the guidelines put in place by the European Union. Therefore, we can suppose

[47] For more information see "Piano di Attuazione Regionale Toscana N. 992", pp. 12–13.

[48] The Youth Guarantee offers a wide range of active measures.

[49] Isfol, Rapporto Sulla "Garanzia Giovani in Italia" (2016) for Italy and "Piano di Attuazione Regionale Toscana N. 992", pp. 12–13 for Tuscany.

Table 9 Difference-in-differences estimate of the effect of participation in the Youth Guarantee on Pr(employed) and Pr(open-ended contract)

Dependent variable	Pr(employed)	Pr(open-ended contract)
PARTIC	0.074***	0.044***
	(0.009)	(0.006)
GROUP1	0.110***	0.066***
	(0.009)	(0.005)
GROUP2	−0.033	−0.020
	(0.055)	(0.033)
GROUP3	0.122**	0.007
	(0.056)	(0.020)
YEAR2	0.067***	0.043***
	(0.003)	(0.002)
YEAR3	0.134***	0.078***
	(0.004)	(0.003)
CONS	0.159***	0.049***
	(0.007)	(0.004)
Observations	48,888	48,888
Individuals	16,296	16,296

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The analysis reported in the table looks at the probability of the individuals to become employed and to be offered an open-ended contract based on their participation, depending on their group of membership. Group 1 represents individuals who are always eligible in the time periods considered; group 2 represents individuals who are always eligible in the time periods considered except for the last year; group 3 represents individuals who are never eligible in the time periods considered except for the first year; group 4 represents individuals who are never eligible in the time periods considered. The year of reference is 2015 and the group of comparison is group 4. Errors are clustered at individual level and expressed in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *

that, even if not specified, what they evaluate for the most part in their analysis are on-the-job training experiences. Except for the slightly different magnitude of the estimates, our study contributes to confirming the positive impact of training on the young Italian population. Results are also in line with Heckman's (2000) argument of ALMPs being fruitful for young categories of individuals, such as adolescent high school dropouts and young parents.

As regards the significantly positive effect for participants, it seems that the theory of internships as immediate door openers holds for the Province of Trento. While job creation schemes and other measures appear not to be particularly fruitful, on-the-job training has been shown to be a successful ALMP in several studies

Table 10 Marginal effects on Pr(employed) and Pr(open-ended contract) from a linear and non-linear model

Marginal effects	Pr(employed)	Pr(open-ended contract)
From a linear model	0.074***	0.044***
	(0.009)	(0.016)
From a non-linear model	0.055***	0.076***
	(0.006)	(0.012)

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The table shows the marginal effects from both linear and non-linear (logistic) models. Estimating margins using a logistic model implies losing some observations due to the fact that the coefficient of the individual's fixed effect perfectly predicts her occupational outcome, contrarily to what happens in a linear estimation, where the fixed effect's coefficient is equal to zero. While the linear model keeps all the 48,888 original observations for both Pr(employed) and Pr(open-ended contract), in the logistic model the observations become 15,222 for Pr(employed) and 7257 for Pr(open-ended contract). Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *

for specific categories of individuals.[50] In respect to young individuals, training is a remedy that is likely to increase their job opportunities as it is precisely designed with the scope of upgrading their skills. Supposedly, participants are also sufficiently prepared to signal that their skills are good or that they have really improved during the internship. This allows them to have greater chances to become employed compared to the non participants, who did not have any contact with the employer in the same circumstances. According to Heckman (2000), the advantage of providing training in firms lies in the possibility for the employers to invest in those individuals with some potential from a perspective of skills. The success of the Center for Employment and Training in California, for instance, is to be attributed to the fact that many courses were taught by experts from the industry themselves and that a large number of employers were present in the advisory board. The programme in selected firms promoted by the Youth Guarantee seems to follow a similar pattern. Additionally, the combination of specialised training with services of general formation proves effective in making NEETs more flexible to the requests of the firms present in their territory. This is in line with the findings of Piva et al. (2005), which underline the importance of promoting general knowledge so as to prepare individuals to the organisational changes in the structure of Italian manufacturing firms. On this subject, the presence of a large number of firms involved in the Youth Guarantee allows for competition in terms of both type of training offered, future job opportunity, and professional mobility. This, according to Heckman (2000) would only bring further success.

[50] See Katz (1994); Bonnal et al. (1997); Meager (2008); Stephan (2008); Saniter and Siedler (2014); Card et al. (2011, 2010); Escudero (2018); and others.

Table 11 Difference-in-differences estimate of the effect of eligibility in the Youth Guarantee on Pr(employed) and Pr(open-ended contract)

Dependent variable	Pr(employed)	Pr(open-ended contract)
ELIG	0.038***	0.027***
	(0.008)	(0.006)
GROUP1	0.110***	0.066***
	(0.003)	(0.002)
GROUP2	−0.030	−0.018
	(0.049)	(0.029)
GROUP3	0.119**	0.004
	(0.058)	(0.013)
YEAR2	0.075***	0.049***
	(0.003)	(0.002)
YEAR3	0.144***	0.084***
	(0.004)	(0.003)
CONS	0.138***	0.034***
	(0.008)	(0.005)
Observations	*48,888*	*48,888*
Individuals	*16,296*	*16,296*

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The analysis reported in the table looks at the probability of the individuals to become employed and to be offered an open-ended contract based on their eligibility status. Group 1 represents individuals who are always eligible in the time periods considered; group 2 represents individuals who are always eligible in the time periods considered except for the last year; group 3 represents individuals who are never eligible in the time periods considered except for the first year; group 4 represents individuals who are never eligible in the time periods considered. The year of reference is 2015 and the group of comparison is group 4. Errors are clustered at individual level and expressed in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *

On the other hand, the recommendation of the European Union itself could also have contributed to increasing the expectations of both the participants, the employers, and the job centres. The European Union states, indeed, that despite there being 'a need for a short-term response, the establishment of such schemes is of long-term significance'.[51] Member states, for once, could haven taken this youth policy seriously. As regards job stability, more specifically, findings seem to highlight the ability of the Youth Guarantee to overcome flexinsecurity in countries like Italy. As stressed in Sect. 3, the discrimination of the use of flexibility can negatively impact the more disadvantaged subjects. In the Italian case, for instance, its misuse often

[51] (22), p. 3 of 2013/C 120/01.

Table 12 Intention-to-treat effect on Pr(employed) and Pr(open-ended contract) for individuals near the eligibility cutoff

Dependent variable	Pr(employed)	Pr(open-ended contract)
ELIG	0.084***	0.042***
	(0.021)	(0.012)
GROUP1	0.103***	0.055***
	(0.009)	(0.006)
GROUP2	−0.024	−0.014
	(0.039)	(0.022)
GROUP3	0.262	0.001
	(0.218)	(0.013)
YEAR2	0.072***	0.041***
	(0.008)	(0.006)
YEAR3	0.132***	0.069***
	(0.010)	(0.007)
CONS	0.055	0.015
	(0.040)	(0.021)
Observations	*11,712*	*11,712*
Individuals	*6418*	*6418*

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The analysis reported in the table looks at the probability of the individuals to become employed and to be offered an open-ended contract based to their eligibility status, depending on their group of membership. The analysis is done for individuals observed near the cutoff; namely, individuals between 28 and 31. Group 1 represents individuals who are always eligible in the time periods considered; group 2 represents individuals who are always eligible in the time periods considered except for the last year; group 3 represents individuals who are never eligible in the time periods considered except for the first year; group 4 represents individuals who are never eligible in the time periods considered. The year of reference is 2015 and the group of comparison is group 4. Errors are clustered at individual level and expressed in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *

leads to flex-'insecurity'.[52] Andor and Veselý (2018) themselves acknowledged that in some areas of the European Union, young people are likely to be faced with a cascade of insecurity in terms of job offers. This would signify that a programme such as the Youth Guarantee could only help individuals initially. Findings, instead, show that at least some of the participants will not have to worry so soon in terms of looking for other job vacancies as their likelihood to be offered an open-ended and, thus, a more stable contract increases too. This aspect is particularly relevant

[52] See Berton et al. (2009).

with respect to the sustainable integration[53] of these inactive individuals into the labour market. Had there been no Youth Guarantee, the majority of these young individuals who are distant from the labour market would probably still use their time to remain inactive. Findings support the idea by Heckman (2000) that early investments encourage later investments; namely, that efficiency is enhanced when human capital is invested in the young.[54] In this regard, it is also possible to hypothesise that the policy could have a long-term effect as 'skills beget skills' and due to their age, NEETs have a longer horizon at disposal 'over which to recoup the fruits of their investments'.[55]

In respect to the outcomes of interest, due to lack of data, in this paper we focused on employment as a valid alternative to inactivity, while we disregarded other activities such as going back to school or enrolling in a university programme. Thus, there could be a certain proportion of individuals whose inactivity observed in occupational terms corresponds instead to educational activity. According to national statistics (Istat), in 2014, among the individuals aged between 18 and 24 years who left school prematurely, only 8.5% were observed in the province of Trento. In the over-15 cohort of 2015, 14% had either no educational title or had only finished elementary school, 30% got a middle-school school-leaving qualification, 14.4% obtained a professional diploma, 27.7% a high-school diploma, but only 13.7% obtained a university degree. The trend persists in 2016 and 2017 and, indeed, suggests that some of the individuals might have enrolled in a university course soon after. In parallel, in 2017, 69.5% of the individuals aged between 25 and 44 years without a degree, were little satisfied with their current job, so that they may have decided to apply for a university course later on. Nevertheless, the intention of the Youth Guarantee is to fight a type of inactivity that is mainly related to the labour market. As former members of the European Commission, Andor and Veselý (2018) highlighted that the Youth Guarantee is about creating a set of interventions that aim to 'increase young people's aptitude for work, strengthen employers demand for their labour as well as [improve] the process of matching young people with available opportunities'.[56] Hence, the main focus of this European policy is to help young people find quality job opportunities rather than incentivise them to go back to their studies. The inactivity, therefore, is likely to be defined in terms of non participation in the labour market. This is also supported by the fact that the leaders of the European Union first debated over the question with labour ministers, rather than ministers of education, consulted at a later stage, and that the Youth Guarantee itself was born to overcome the human capital loss originated from the most recent economic crisis.[57] In the same study, Andor and Veselý (2018) also stressed that what should be expected from this Youth Guarantee is a European benefit that is fundamentally economic, in addition to being social. In this respect, we also studied the characteristic

[53] See Andor and Veselý (2018).
[54] See Heckman (2000), pp. 7, 42.
[55] Ibid., p. 42.
[56] See Andor and Veselý (2018), p. 5.
[57] Ibid., pp. 7–8.

of employability, reflected in the offer of open-ended contracts and, thus, the job quality that NEETs face in the labour market. The latter, in particular, supports the more urgent necessity of a sustainable integration in the labour markets required by the European Union.

As regards the magnitude of the impact of the Youth Guarantee in occupational terms, there may be individuals who started working informally in the market and that, therefore, are not present in the official statistics. Activities such as babysitting, cooking, producing hand-made products at home, or agricultural activities are often not declared, as well as services provided in the restaurants. In 2015, the black market's value amounted to 12.6% of the Italian GDP. Among the predominant activities, 37.3% of the added value was due to irregular work.[58] In the province of Trento alone, 23.2% of the employees aged between 15 and 29 years are supposed to have worked in restaurants and hotels. Although this is an issue observed in most policy evaluations, this suggests that there may be more individuals whose labour is not officially declared by their employers and, therefore, not observed.

6.2 Robustness checks

In this section we discuss the internal validity of the identification strategy used in the previous section. First, we produce difference-in-differences estimates manually in order to see whether results coincide. Second, we study the intention-to-treat effect for individuals who are near the eligibility cutoff and, therefore, very similar. Third, we prove that findings are robust to group-specific trends that would be there in spite of the programme. Fourth, we study potential time-varying effects. Finally, we also present an identification strategy that accounts for the measure of risk of remaining a NEET as regards the participants of the Youth Guarantee. If the parallel trends assumption holds, the indicator of profiling should not have any significant impact on the labour outcomes studied when interacted with participation.

As regards the impact of the policy on the labour outcomes of the individuals registered at the Agency of Labour, we estimate the following demeaned regression.

$$\overline{Y}_{ic} = \alpha_i + \lambda\overline{PARTIC}_{ic} + \sum_{g=1}^{3}\beta_g COH_{gc} + \sum_{p=2016}^{2017}\gamma_p\overline{YEAR}_p + \overline{K}'_{ic}\beta + \overline{\eta}_{ic}, \qquad (7)$$

where

$$\overline{K}'_{ic} = \theta_f\overline{FEMALE}_{ic} + \sum_{r=1}^{8}\theta_r\overline{REG}_{r,ic} \qquad (8)$$

[58] Istat report "L'Economia Non Osservata Nei Conti Nazionali" (11 October 2017).

$$Y_{ict} - \overline{Y}_{ic} = \lambda(PARTIC_{ict} - \overline{PARTIC}_{ic}) + \sum_{p=2016}^{2017} \gamma_p(YEAR_{pt} - \overline{YEAR}_p) + \\ + (\overline{K}'_{ic} - K'_{ic})\beta + (\eta_{ict} - \overline{\eta}_{ic}) \tag{9}$$

In this identification $FEMALE_{ic}$ indicates a dummy that is equal to 1 when the candidate is a woman. $REG_{r,ic}$ are dummy variables for the macro-region of origin of the individuals in the different cohorts, with the U.S. being the reference category, while $\theta_{r,s}$ accounts for differences between males and females in their macro-regions of origin, where labour market conditions are expected to differ. Results show that after having computed the individual averages in the different cohorts, exploiting the deviations from the means guarantees that the unobserved individual effects are removed, or *absorbed*.[59] Manual estimates suggest, as they should, the same results as if we were treating the group effects as parameters such as in equation (1). Over time, individuals who participate are 7.4 and 4.4 percentage points more likely to, respectively, become employed and be offered an open-ended contract.

As a robustness check that aims to exploit the balance obtained from original randomisation, we study the intention-to-treat effect for individuals who are near the eligibility cutoff; namely, individuals who are between 28 and 31 years old. The estimation is carried out in order to only include extremely similar individuals. Results from (10), restricted to the aforementioned sample, show that a comparative advantage can also be observed for eligible individuals who are 28 and 29 years old compared to non-eligible individuals who are 30 and 31 years old. Eligibles are, indeed, 8.4 and 4.2 percentage points more likely to, respectively, become employed and be offered an open-ended contract. Results are significant at the 1% level as shown in Table 12.

$$Y_{ict} = \alpha_{ic} + \omega_{DD} ELIG_{ict} + \sum_{g=1}^{3} \beta_g COH_{gc} + \sum_{p=2016}^{2017} \gamma_p YEAR_{pt} + \eta_{ict}, \tag{10}$$

As previously mentioned, there may exist some trends that would characterise certain cohorts despite the existence of a certain policy. For this reason, we also estimate the equation that follows, which accounts for group-specific trends. In

$$Y_{ict} = \alpha_{ic} + \lambda_{DD} PARTIC_{ict} + \sum_{g=1}^{3} \beta_g COH_{gc} + \sum_{p=2016}^{2017} \gamma_p YEAR_{pt} \\ + \sum_{g=1}^{3} \sum_{p=2016}^{2017} \omega_{gp} COH_{gc} \times YEAR_{pt} + \eta_{ict}, \tag{11}$$

$COH_{gc} \times YEAR_{pt}$ represents the group-specific trends, or the variations from the common trend that would be present in absence of treatment. Table 13, in particular,

[59] See Angrist and Pischke (2008).

Table 13 Difference-in-differences estimate of the effect of participation in the Youth Guarantee on Pr(employed) and Pr(open-ended contract) with group-specific trends

Dependent variable	Pr(employed)	Pr(open-ended contract)
PARTIC	0.092***	0.047***
	(0.007)	(0.005)
GROUP1	0.026***	0.007
	(0.008)	(0.005)
GROUP2	0.031**	0.018*
	(0.014)	(0.010)
GROUP3	0.024*	0.014
	(0.014)	(0.010)
YEAR2	0.020***	0.039***
	(0.008)	(0.004)
YEAR3	0.103***	0.056***
	(0.005)	(0.004)
*GROUP*1 × *YEAR*2	0.020***	0.012**
	(0.008)	(0.005)
*GROUP*1 × *YEAR*3	0.069***	0.051***
	(0.008)	(0.005)
*GROUP*2 × *YEAR*2	0.000	−0.007
	(0.014)	(0.010)
*GROUP*2 × *YEAR*3	−0.009	−0.003
	(0.014)	(0.010)
*GROUP*3 × *YEAR*2	−0.003	−0.011
	(0.015)	(0.010)
*GROUP*3 × *YEAR*3	0.017	−0.013
	(0.015)	(0.010)
CONS	0.197***	0.071***
	(0.005)	(0.004)
Observations	*48,888*	*48,888*
Individuals	*16,296*	*16,296*

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The analysis reported in the table looks at the probability of the individuals to become employed and to be offered an open-ended contract based to their treatment status, depending on their group of membership. It also takes into account group-specific trends. Group 1 represents individuals who are always eligible in the time periods considered; group 2 represents individuals who are always eligible in the time periods considered except for the last year; group 3 represents individuals who are never eligible in the time periods considered except for the first year; group 4 represents individuals who are never eligible in the time periods considered. The year of reference is 2015 and the group of comparison is group 4. Errors are clustered at individual level and expressed in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *

Table 14 Time-varying effects of participation in the Youth Guarantee on Pr(employed) and Pr(open-ended contract)

Dependent variable	Pr(employed)	Pr(open-ended contract)
PARTIC	0.082***	0.027***
	(0.010)	(0.007)
$PARTIC_{t-1}$	0.017*	−0.037**
	(0.010)	(0.007)
GROUP1	0.107***	0.072***
	(0.006)	(0.011)
GROUP2	−0.037	−0.014
	(0.056)	(0.030)
GROUP3	0.122**	0.007
	(0.056)	(0.020)
YEAR2	0.067***	0.044***
	(0.003)	(0.002)
YEAR3	0.135***	0.076***
	(0.004)	(0.003)
CONS	0.159***	0.050***
	(0.007)	(0.006)
Observations	*48,888*	*48,888*
Individuals	*16,296*	*16,296*

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The analysis reported in the table looks at the time-varying effects of treatment by adding the lag of the treatment dummy. It does so by considering 4 defined groups. Group 1 represents individuals who are always eligible in the time periods considered; group 2 represents individuals who are always eligible in the time periods considered except for the last year; group 3 represents individuals who are never eligible in the time periods considered except for the first year; group 4 represents individuals who are never eligible in the time periods considered. The year of reference is 2015 and the group of comparison is group 4. Errors are clustered at individual level and expressed in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *

shows that the effect of treatment is not particularly sensitive to the alternative model that includes group-specific trends. This is true for both outcomes of interest; namely, becoming employed and being offered an open-ended contract. Including group-specific trends keeps the treatment coefficients significant, with a slight variation in their magnitude. Individuals who take part in the internship offered in the Youth Guarantee policy are 9.2 and 4.7 percentage points more likely to, respectively, become employed and be offered a permanent position once group-specific trends are accounted for.

We also find that there are some particularly relevant time-varying effects. Indeed, when we introduce the lag $PARTIC_{ic,t-1}$ of the original treatment dummy in

the model, findings on λ_{lag} suggest that the Youth Guarantee produces larger effects over time as regards the likelihood of the individuals to become employed.

$$Y_{ict} = \alpha_{ic} + \lambda_{DD} PARTIC_{ict} + \lambda_{lag} PARTIC_{ic,t-1} + \sum_{g=1}^{3} \beta_g COH_{gc} + \sum_{p=2016}^{2017} \gamma_p YEAR_{pt} + \eta_{ict} \quad (12)$$

Table 14 shows, indeed, that the policy guarantees an additional 1.7 percentage points benefit 1 year after its adoption in terms of starting a job. On the other hand, the initial effect of the programme dissipates over time by 3.7 percentage points as regards the chances of the individuals to be offered an open-ended contract. In other words, 1 year after the implementation of the training programme, individuals are 3.7 percentage points less likely to be offered an open-ended contract. This is in line with the idea that the best jobs and, thus, the offers of permanent contracts are exhausted faster. In an atmosphere of fierce occupational competition among job seekers, the institutional context of the Italian labour market is not able to offer a wide number of open-ended contracts to young potentially new workers. As explained in Sect. 3, financial incentives for firms have usually been used to transform the contracts of individuals already employed by their firm; namely, insiders or workers of the older cohorts. As a consequence, young individuals who settle for atypical contracts, including part-time or fixed-term jobs, right after having participated in and completed the training programme with difficulty will be able to fill in the scarce open-ended positions, as these will already have been offered to their more skilled or advantageous colleagues. In particular, when analysing specific individuals who were not offered an open-ended contract, we see that while there no significant difference was observed between female (45.1%) and male (54.9%) candidates, a comparative disadvantage was observed for individuals whose nationality was registered as Southern European. As regards participation in and eligibility to the training programme, 79.7% and 66.1% of, respectively, participating and eligible European subjects from the South were not offered an open-ended contract.

As regards the alternative test for parallel trends, we account for the individuals' profiling. This is an indicator that is computed statistically and is based on individual characteristics such as the individual's presence in Italy, her level of education, or her previous work experience (see "Appendix"). The indicator ranges from 0 to 1. Lower values of the profiling indicator express a higher probability for the individual to be reinstated in the labour market. Vice versa, higher values of the profiling indicator signal that the individual is likely to remain a NEET. In particular, a youth's profiling indicator is low if its value falls between 0.000 and 0.250000; medium if the latter falls between 0.250001 and 0.50000; high if its value falls between 0.50001 and 0.750000; and finally, very high if the value of the indicator falls between 0.750001 and 1. A series of interactions $PARTIC_{ict} \times LOW_{ict}$, $PARTIC_{ict} \times MEDIUM_{ict}$, and $PARTIC_{ict} \times VHIGH_{ict}$ are created for the four different types of profiling. The high profiling dummy is used as the base category. Given that profiling accounts for personal characteristics and talents, the indicator is likely to explain part of the variation in the occupational

prospects of the individuals (see "Appendix"). Nevertheless, its effect should not be significantly different from 0 when combined with participation in the programme itself. Given that only participants are assessed with a profiling, we randomly assign a type of profiling to each individual every year so as not to produce over- or under-estimations.

$$\begin{aligned} Y_{ict} = {} & \alpha_{ic} + \lambda_{DD} PARTIC_{ict} + \lambda_{low} PARTIC_{ict} \\ & \times LOW_{ict} + \lambda_{medium} PARTIC_{ict} \times MEDIUM_{ict} \\ & + \lambda_{vhigh} PARTIC_{ict} \times VHIGH_{ict} + \sum_{m=1}^{3} \theta_{m,s} PROF_{m,ict} + \sum_{g=1}^{3} \beta_g COH_{gc} \\ & + \sum_{p=2016}^{2017} \gamma_p YEAR_{pt} + \eta_{ict} \end{aligned} \tag{13}$$

Results in Table 15 confirm, as they should, that participation increases the likelihood of NEETs to become employed and to be offered an open-ended contract by, respectively, 6.6 and 3.8 percentage points. On the other hand, the impact of their profiling $PROF_i$ is irrelevant when combined with treatment. This contributes to supporting the assumption of parallel trends for it suggests that the Youth Guarantee works independent of the type of individuals who join the programme and that results are not driven by a certain type of individual. The negligible difference with the main identification strategy (1), which does not include the interaction terms of profiling, indicates that profiling is unlikely to significantly influence the probability of individuals to become employed or to be offered an open-ended contract when participants and non participants are compared. Further evidence of the effectiveness of the policy, independent of the profiling assessed for each individual, can be found in the "Appendix". As explained in the "Appendix", individuals who have a high profiling, or a high probability to remain occupationally inactive based on their educational and employment histories, may experience social stigma and emotional unrest at the idea of 'needing' training to a larger extent compared to the other job seekers in order to find a job. When faced with a job interview, the quality of skills acquired in school or at University, as well as the existing job experience, are likely to play a role in being offered employment. Nevertheless, from a causal point of view, findings in Table 15 show that, when participating and non-participating individuals are compared in their likelihood to become employed and to be offered an open-ended contract, profiling does not have an economically significant effect contrary to participation.

7 Conclusions

Young generations of this era are often subject to the instability of short-term jobs and have to search for new ones as soon as their contract ends. As labour markets change, training is needed to guarantee effective transitions from unemployment to employment and from part-time to permanent employment. When individuals lose

Table 15 Effects of participation and profiling in the Youth Guarantee on Pr(employed) and Pr(open-ended contract)

Dependent variable	Pr(employed)	Pr(open-ended contract)
PARTIC	0.066***	0.038**
	(0.018)	(0.012)
PARTIC × *LOW*	−0.001	0.008
	(0.025)	(0.017)
PARTIC × *MEDIUM*	−0.003	−0.009
	(0.025)	(0.017)
PARTIC × *VHIGH*	0.037	0.029
	(0.025)	(0.018)
LOW	0.005	0.004
	(0.005)	(0.003)
MEDIUM	−0.000	0.003
	(0.005)	(0.004)
VHIGH	0.006	0.004
	(0.005)	(0.003)
GROUP1	0.114***	0.068***
	(0.012)	(0.008)
GROUP2	−0.034	0-−0.021
	(0.056)	(0.034)
GROUP3	0.122**	0.007
	(0.056)	(0.020)
YEAR2	0.067***	0.043***
	(0.003)	(0.002)
YEAR3	0.134***	0.078***
	(0.004)	(0.003)
CONS	0.154***	0.045***
	(0.009)	(0.005)
Observations	*48,888*	*48,888*
Individuals	*16,296*	*16,296*

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. The analysis reported in the table looks at the potential impact of the individual characteristic of profiling on the labour outcomes studied. The profiling is computed statistically based on individual characteristics such as the individual's presence in Italy, her level of education, or her previous work experience. The indicator ranges from 0 to 1. Lower values of the profiling indicate a higher probability for the individual to exit from her NEET condition. A youth's profiling indicator is *LOW* if it falls between 0.000 and 0.250000; *MEDIUM* if it falls between 0.250001 and 0.50000; *HIGH* if it falls between 0.50001 and 0.750000; and finally, *VHIGH* if the indicator falls between 0.750001 and 1. Profiling is randomly assigned to individuals every year so as not to bias estimates. A series of interactions are created for the four different types of profiling and participation. High profiling is used as the base category. Errors are clustered at individual level and expressed in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *

their marketable skills by becoming inactive, it becomes increasingly difficult for a labour market transition to be successful. The Youth Guarantee was recommended by the European Union precisely to help vulnerable individuals such as NEETs escape from their condition of complete inactivity. This paper, in particular, investigated the impact of the widespread *programme A* of the Youth Guarantee in Northern Italy. The analysis questioned whether participation in the programme increased not only the probability to become employed, but also the individual's chance to start a stable work relationship. Exploiting a difference-in-differences model, results show that on-the-job training preceded by profiling assessment succeeds in making individuals occupationally active. Participants are, respectively, 7.4 and 4.4 percentage points more likely to become employed and be offered an open-ended contract. The analysis, therefore, suggests that an active labour market policy such as the internship promoted within the framework of the Youth Guarantee can actually help individuals overcome their condition of exclusion from the labour market not only by providing them with a job, but also by succeeding in the promotion of quality employment through permanent contracts. In other words, the policy appears to be effective in terms of integration of individuals otherwise isolated from the labour market and, thus, at risk of deterioration of human capital.

Reasons for explaining these positive results may find support, firstly, in the nature of the active labour market policy studied,[60] which is specifically designed to upgrade the skills of the individuals involved; secondly, in local authorities having at their disposal specific guidelines from the European Union that may have helped them grasp the final objective of the policy; thirdly, in the quality of the training offered at the selected firms; and, fourthly, in the target of the policy itself. The positive results by Cappellini et al. (2018) for the youth population in Central Italy also support the effectiveness of such a programme. Despite the fact that training is, with certainty, the more expensive measure within active labour market policies, it also appears to produce significant benefits for the development of the younger population. The programme evaluated, for instance, represents a good compromise between theory and practice. On the one hand, the period of formation and orientation that is common to all candidates introduces, or reintroduces, the individuals to the reality of the labour market. On the other hand, the training at the selected firms encourages individuals to interact with experts; acquire new skills; and put them into practice. It also helps them to better direct their future work preferences.

On this subject, the implementation of similar programmes could potentially lead to a structural change in the way individuals transition from educational environments to permanent workplaces. In particular, the latter could promote an approach that is similar to the dual educational system typical of Continental Europe. Active labour market policies may not always be effective for the older population. However, they appear to be successful when they focus on the potential stock of competencies of the individuals and when they have a specific target such as NEETs. The latter aspect is relevant in that it contributes to reinforcing the theory according to which the more individuals are distant from the reality of the labour market the

[60] Namely, training.

greater the impact of ALMPs on them. Spending on active measures that focus on the training and job placement of the younger segment of the population, as well as efficiency in the use of the available funds, still varies across regions (see Table 5 in Sect. 3). Similarly, Italy has converged to an active labour market approach in the law that aims to obstruct the 'secession of the successful' only recently. Both facts imply that results from the Youth Guarantee can still be ameliorated by local institutions, including the Agency of Labour of Trento. However, the positive findings for the on-the-job training analysed in this study are likely to encourage inactive individuals to ask for assistance in the job centres of reference for finding employment. Similarly, the Province of Trento is likely to keep spending in training programmes able to upgrade the skills of occupationally inactive participants so as for the figures on youth unemployment to progressively resemble that observed in Austria or similar neighbouring countries. The success in guaranteeing not only a job but a permanent occupation to participants will presumably incentivise local, national, and international lawmakers to submit proposals for increasing the size and frequency of financial incentives for public and private firms, such as an employment bonuses, to hire individuals treated in the Youth Guarantee. All in all, the Youth Guarantee in the Province of Trento should continue to be designed as an opportunity for occupationally inactive individuals to be provided with an advantageous means to both employment and permanent occupation.

Unfortunately, owing to the lack of data we could not assess whether participation in the programme also induced an increase in participation in some other kind of educational programme. Official statistics for the Province of Trento, however, show that only a very small proportion of individuals left school once enrolled in an educational cycle. Hence, it is probable that no major effects of the programme are concentrated there. Keeping track of the NEET individuals both from an occupational and educational perspective could still be useful. A simple questionnaire would help distinguish whether the occupational inactivity of some of the individuals who did not become employed also corresponds to an educational inactivity. Notwithstanding, and as stressed by renowned members of the European Union Commission in respect to the Youth Guarantee, most of the efforts should be made to aid individuals in finding opportunities in the labour market.[61] On this subject, when the effect of participation in the training programme offered within the Youth Guarantee context is positive, this can be an indication for individuals who are not interested in pursuing their studies, such as dropouts, of the possibility to acquire specialised skills and apply them in the real world of work. As argued by Heckman (2000), learning often occurs in settings outside the standard institutions of education. With their rewarding results, the Province of Trento and other Italian regions such as Tuscany, where the Youth Guarantee is successful, can finally overcome the traditional Italian conception of theoretical education being always more fruitful than practical knowledge. With the Youth Guarantee, training programmes can become the ultimate European door openers for the new generations of occupationally inactive individuals.

[61] See Andor and Veselý (2018).

Due to their similar approach to both social assistance and youth inactivity, findings related to the likelihood of individuals to find a job in this area of Northern Italy may be of relevance for other European regions.[62] On the other hand, while the historical and social nature of the country makes it difficult to draw conclusions for Italy as a whole, the paper sheds light on the new opportunities created for the young population in terms of job stability. It demonstrates that even in a country where 'old is gold' prospects for the young people can actually change and that there can be more than a mere acceptance of flexinsecurity. The relevance of the study is, therefore, twofold in terms of geographical areas exposed to the issue. With respect to job instability, the training programme provided by the Youth Guarantee represents one step forward in respect to the issue of selective flexicurity, in that it increases the chances of young people to be offered an open-ended and, thus, a more stable contract. In this regard, the paper highlights the necessity for international policy makers to guide countries like Italy in the development of a healthy combination of flexibility and security in the labour market. Experts at the European Union institutions, in particular, should monitor thoroughly the distribution of contracts in the Italian labour market in terms of both the types of contract offered and the recipients of the contracts so as to avoid an unwanted retrogression. As mentioned in Sect. 3, the Italian labour market has generally been in favour of insiders such as the older cohorts of employees and of passive labour market policies such as monetary benefits. This study, however, shows how the recent Europeanisation of labour market policies succeeded in creating a valid point of departure for the Italian labour market in terms of giving value to young workers. Findings, in particular, emphasise the capability of Northern Italy to implement on-the-job training experiences under the guidance of the European Union in terms of both employment and employability. As regards policy recommendations, it would be advisable to give greater weight to the opinions of the European Committee of the Regions (CoR) that is consulted by the Commission, Council, and Parliament in the field of employment. In respect to this, it would be interesting to further explore the role of the local unions of workers and associations of employers so as to understand if the latter are willing to cooperate with the government and adapt to the new and European 'active' approach to unemployment. A recent report by the European Commission Expert Group (2016) found an exaggerated number of city commitments to invest in technological innovation for improving both domestic and international markets, as well as facilitate reskilling. 'Experience-sharing mechanisms' across regions, as well as subsidiarity among institutions, are fundamental to achieve a European Union model of youth employment services that are implemented at the local level. The increase in consultations between Ministries, the National Agency for Active Labour Market Policies, and the local Agencies of Labour registered in Italian labour law shows that increasing attention is given to the vulnerable segments of the population, including not only females, but also young inactive subjects (see Sect. 3).

Overall, the findings suggest that the European Union should keep investing in training and further promote it when individuals are willing to learn new skills and

[62] For instance, Austria.

invest in them.[63] They also invite policy makers to focus on outreach strategies for all those NEETs who did not apply to the Youth Guarantee in order to increase the overall impact of the policy. In this regard, it would be useful to investigate whether individuals avoid participation in response to certain social expectations. Due to their malleability in practical skills, the Youth Guarantee certainly has the potential to provide young individuals with higher economic prospects. However, it also offers them a social context that is recognised at the European level and in which to develop a professional and social identity. In particular, policy makers should design and implement training programmes like the ones promoted by the Youth Guarantee so as to include the largest number of participants. Studies by Albert et al. (2013) and Sanfey et al. (2014) show, respectively, young individuals are more sensitive to the effect of social stimuli in risky contexts and social sanctions are sometimes more effective in influencing individual behaviour than monetary sanctions. Thus, many occupationally inactive individuals may fail to participate in training programmes due to the effect of their subculture of reference and the threat of social exclusion that may derive from participation. When providing incentives for participation, policy makers should also account for the the social implications behind participation in active measures. In addition to financing programmes of awareness on the Youth Guarantee in schools, Universities, and other centres of education to inform non participants about the content and effectiveness of training, policy makers should also offer incentives that reach both potential participants and their occupationally inactive peers. Understandably, unemployed youths do not only seek a job or financial stability in their transition from school to work or from unemployment to employment, but they reasonably seek social inclusion too. The Youth Guarantee may appease both urgencies.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Appendix

Profiling and the Youth Guarantee

On the occasion of signing the service pact with the job centre of reference, individuals are ‘profiled’ according to their degree of risk of remaining inactive. The indicator of profiling is computed statistically for each youth and is considered itself an active labour market policy (ALMP). The profiling is based on a series of individual characteristics such as the individual’s presence in Italy; her level

[63] With reference to Heckman (2000), it is recommended to invest in the highly skilled, tax them, and provide older and unskilled workers with alternative measures of welfare, such as wage subsidies, so as to avoid ineffective training.

of education; her situation of employment 1 year before the start of the Youth Guarantee; and other local features including entrepreneurial density and variation in the unemployment rate of the area of origin. The indicator ranges from 0 to 1. Lower and higher values of the profiling indicator signal, respectively, a higher and lower probability for the individual to be reintegrated in the labour market. A youth's profiling indicator is low if its value falls between 0.000 and 0.250000; medium if it falls between 0.250001 and 0.50000; high if it falls between 0.50001 and 0.750000; and finally, very high if the indicator's value falls between 0.750001 and 1.

While participation in ALMPs may or may not have beneficial effects for participants, the threat caused by their mere existence may have an impact on the occupational prospects of the individuals involved. The study by Black et al. (2003), for instance, examined the consequences of profiling on unemployment insurance claimants. In particular, they found that the former reduced both the number of weeks of benefit receipt and the amount received. At the same time, the activity led to a significant increase in earnings for the treated individuals in the year after their claim for unemployment benefits, suggesting an anticipated entry in the labour market. Similar results were observed by Bergemann et al. (2008, 2011) for Germany and by Blasco and Rosholm (2011) for Denmark. Scholars agree on the fact that systems that guarantee active labour market policies usually increase the effort in job search so as to avoid actual participation in ALMPs. On this subject, there might be valid reasons for individuals to be significantly influenced by the presence of ALMPs in their labour market. Heckman and Rubinstein (2001), for instance, associated this threat effect to the fear of having to renounce alternative activities or of being stigmatised. As a result, individuals may accept non-quality jobs rather than attend active measures that demand a long-term commitment. The fear of producing a negative signal to external subjects such as potential employers has been widely discussed in the literature. Spence (1973), before all, defined the job market as a market where signaling is paramount, due to the lack of information on job candidates. On the one hand, the employer lacks the necessary knowledge about the real skills of the job candidates. On the other hand, the individuals have to select the information they aim to signal at a certain cost. This is particularly true for the more disadvantaged subjects who compete with better educated and, sometimes, more productive individuals. As observed by Connelly and Certo (2011), inferior signalers may take the risk of producing false signals, or cheat, for they are aware of their chances being lower anyway. In this regard, Hopkins (2012) shed light on the stronger signals sent by high-quality workers to firms. This would explain the different degree of difficulty for low- and high-profiled individuals to get a job in the first place.

A comparison between individuals who are and who are not profiled would be more useful in order to identify the potential *ex-ante* effect of profiling in the Youth Guarantee. On this occasion, however, we will present an analysis that focuses exclusively on the participants of the Youth Guarantee. This allows us to exploit the information relevant for the individuals on their profiling and the duration of their training in the selected firms. In particular, we aim to investigate how the different types of profiling indicators with which NEETs are assessed influence their

job opportunities. For the purpose of this analysis, we retain only those individuals who participate in the programme of the Youth Guarantee and, thus, who are profiled before starting their on-the-job training experience. The Youth Guarantee expects participants not to be engaged in employment, education, or training, and to be younger than 30 years old. In order not to produce biased estimates, associated to the duration of training, individuals who are still participating and who have 2100 as their year end date are dropped. As regards the most relevant controls, we account for the nationality of the participating individuals, their age, and their gender. A dummy IT_i for whether the individual observed is Italian or not is included in the model. Indeed, in contrast to Northern countries like Denmark or the Netherlands, job vacancies in the Italian labour market are likely to require candidates to have a perfect knowledge of the Italian language. To verify this, it is sufficient to check some of the job offers promoted online by Italian firms or the number of blogs that provide suggestions for foreigners on what actions to take in order to find a job in Italy. With regard to the average age of the labour force in Italy, the fact that there is a tendency on the part of individuals to live with their parents long after reaching their majority, developed a labour market where firms are used to older candidates. Recent statistics by Eurostat show that the average age at which Italians left their family nest in 2017 was about 30.1 years old, in comparison with Germans and Swedes who moved out at, respectively, 23.7 and 21. This justifies the need to consider the individuals' AGE_i as well. Because of the traditional history of female discrimination in the Italian labour market, we also account for a dummy $FEMALE_i$. On this subject, the use of illegal undated letters of resignation that employers obliged female employees to sign, so as to prevent the costs of maternity leave, only stopped recently, with the 2014–2015 Jobs Act.

In this analysis, we are particularly interested in investigating whether the profiling of an individual can actually influence employers when opting for a candidate rather than for another one. Additionally, we are curious about understanding whether attending the programme for a longer duration can work as a remedial to the potential 'stigma' brought by the initial assessment of the individual. The longer a disadvantaged youth attends the programme, the more likely it could be for her to acquire and develop any lacking skill or, vice versa, to fall victim to potential locking-in effects. Using standard OLS, we first look at the association of the different types of profiling $PROF_i$ with the two labour outcomes of interest Y_i; namely, the likelihood of the participants to become employed and to be offered an open-ended contract. In particular, we include the LOW_i, $MEDIUM_i$, and $VHIGH_i$ dummies for having, respectively, a low, medium, and very high profiling and use the dummy of high profiling as the base category. We then incorporate DUR_i in the model, or the duration of the internship measured in intervals of 100 days, to see whether there exists any compensation for having a particularly risky profile. A stronger commitment in the programme, or simply more time, may help the more vulnerable individuals overcome their occupational prospects. A distinction is made between short, medium, and long terms since the implementation of the Youth Guarantee, intended as the years 2015, 2016, and 2017.

Table 16 Descriptive statistics for individuals registered at Agency of Labour of Trento, 2014–2017

Variables observed for participants	Mean	SD
Predetermined covariates		
Age (years)	24.17	3.908
Gender (Female = 1)	0.445	0.497
Italian	0.834	0.373
Determined in Youth Guarantee		
Low profiling	0.218	0.413
Medium profiling	0.293	0.455
High profiling	0.327	0.469
Very high profiling	0.163	0.369
Duration of training (100 days)	3.236	0.485
Outcomes of interest		
Employed	0.396	0.489
Open-ended contract	0.168	0.374
Observations		*9120*
Individuals		*3040*

In this table, we provide descriptive statistics for the main variables observed in the data provided by the Agency of Labour of Trento for individuals who registered for participation in the Youth Guarantee between 2014–2017. For all unemployed individuals in the sample, we observe their gender and nationality, which are the subject-specific qualities of the individuals. For participants we also observe a profiling indicator that is computed statistically based on individual characteristics such as the individual's presence in Italy, her level of education, or her previous work experience. The indicator ranges from 0 to 1. This measure corresponds to the risk of the individual to remain unemployed and uneducated. A youth's profiling indicator is low if it falls between 0.000 and 0.250000; medium if it falls between 0.250001 and 0.50000; high if it falls between 0.50001 and 0.750000; and finally, very high if the indicator falls between 0.750001 and 1. We also observe for how long individuals attend the on-the-job training programme measured in intervals of 100 days.

$$Y_i = \alpha + \beta AGE_i + \theta_f FEMALE_i + \delta IT_i + \sum_{m=1}^{3} \theta_p PROF_{m,i} + \omega DUR_i + \epsilon_i \quad (14)$$

The descriptive statistics of Table 16 show that individuals are on average about 24.2 years old, with male participants being slightly younger. As regards the nationality of participating individuals, Italians make up the majority of the sample analysed. NEETs participate in the on-the-job training for 324 days averagely, with a variation of less than 2 months. In respect to the profiling, we observe that 21.8% of the individuals are assessed with a low profiling; 29.3% with a medium profiling; 32.7% with a high profiling; and 16.3% with a very high profiling. In particular, individuals who are at a low risk of staying unemployed are 25.1 years old on average, while NEETs with a high profiling are usually 23.1 years old. Conversely, there is no particular pattern when trying to understand the relationship between the type

Table 17 Descriptive statistics for individuals registered at Agency of Labour of Trento by profiling, 2014–2017

Variables observed | Types of profiling	Mean If *low*	SD	Mean If *medium*	SD	Mean If *high*	SD	Mean If *very high*	SD
Age (years)	25.06	3.435	22.09	3.573	23.07	3.423	23.07	3.423
Gender (female = 1)	0.441	0.497	0.474	0.499	0.445	0.497	0.401	0.490
Italian	0.900	0.300	0.949	0.219	0.799	0.401	0.605	0.489
Duration training /100d	3.239	0.465	3.245	0.485	3.191	0.520	3.306	0.429
Employed	0.544	0.498	0.418	0.493	0.321	0.467	0.310	0.463
Open-ended contract	0.261	0.439	0.179	0.384	0.121	0.326	0.121	0.326
Observations	1986		2673		2979		1482	
Individuals	662		891		993		494	

In this table, we provide descriptive statistics for the main variables observed in the data provided by the Agency of Labour of Trento for individuals who registered for participation in the Youth Guarantee between 2014–2017. For all unemployed individuals in the sample, we observe their gender and nationality, which are the subject-specific qualities of the individuals. For participants we also observe a profiling indicator that is computed statistically based on individual characteristics such as the individual's presence in Italy, her level of education, or her previous work experience. A youth's profiling indicator is low if it falls between 0.000 and 0.250000; medium if it falls between 0.250001 and 0.50000; high if it falls between 0.50001 and 0.750000; and finally, very high if the indicator falls between 0.750001 and 1. In this table, descriptive statistics are computed conditional on the type of profiling with which the individuals have been assessed at the Agency, distinguishing between low, medium, high, and very high profiling.

of profiling assessed and the gender of the individual. Indeed, women are the minority in both low- and very high-profiling categories with a proportion of, respectively, 44.1% and 40.1%. On the contrary, Italians are the predominant nationality in all the categories. Indeed, they make up 90% of the low-risk group and 79.9% of the high-risk group. As regards participation in the on-the-job training, individuals usually attend the programme for about 11 months, with low and medium profiles participating slightly longer. In terms of the relationship between the occupational prospects of the NEETs and their profiling, there is a moderate contrast between low and high profiles. Table 17, in particular, shows that employed NEETs are assessed with a low profiling 54.4% of the time and with a very high profiling 31% of the time. The gap is also present to a modest degree when looking at the type of individuals who are offered an open-ended contract, independent of becoming employed. While we only find 12.1% of the NEETs with a very high profiling ending up with an open-ended contract, the proportion increases up to 26.1% for those assessed with a low profiling.

As regards our identification strategy, the OLS estimates of Table 18 show that an increase in age corresponds to an increase in the probability for participants to exit from their unemployment condition in both short and medium terms. For Italian participants, there is an additional comparative advantage in the medium term of about 4.3 percentage points, significant at 10% level. The training programme appears to be more beneficial for female participants too, compared to their male

Table 18 OLS: explaining the probability to become employed through profiling

Y = Pr(employed)	Short term	Medium term	Long term	VIF
AGE	0.015***	0.011***	0.001	1.35
	(0.002)	(0.003)	(0.003)	(0.74)
FEMALE	0.036**	0.011	−0.005	1.03
	(0.015)	(0.018)	(0.018)	(0.97)
IT	0.021	0.043*	0.031	1.13
	(0.022)	(0.025)	(0.026)	(0.88)
DUR	0.009	−0.038**	−0.033*	1.01
	(0.016)	(0.018)	(0.019)	(0.99)
LOW	0.249***	0.153***	0.133***	1.70
	(0.024)	(0.028)	(0.028)	(0.59)
MEDIUM	0.021***	0.060**	0.072**	1.56
	(0.021)	(0.024)	(0.025)	(0.64)
VHIGH	0.026	0.010	−0.067**	1.31
	(0.023)	(0.027)	(0.028)	(0.76)
CONS	−0.022**	0.017**	0.538***	–
	(0.072)	(0.085)	(0.089)	–
R-squared	9.3%	3.5%	2.3%	–
Observations	3040	3040	3040	–

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. Estimates are obtained from an ordinary-least-squares regression on 3040 individuals. In this table, we show the extent to which covariates explain the probability of participants to become employed. The duration of the training is also taken into account in intervals of 100 days, given that the majority of participants attend the programme for more than 4 months. The identification also accounts for the different types of profiling of the individuals, with high profiling as the base category. A youth's profiling indicator is low if it falls between 0.000 and 0.250000; medium if it falls between 0.250001 and 0.50000; high if it falls between 0.50001 and 0.750000; and finally, very high if the indicator falls between 0.750001 and 1. The variation inflation factor is also estimated, with $\frac{1}{VIF}$ in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *. Standard errors are expressed in parentheses.

colleagues.[64] At least in the short term, women are 3.6 percentage points more likely to become employed. However, no such advantage is observed in the following periods. This is not particularly surprising given that the phenomenon of undated letters of resignation preventing maternity leave stopped with the 2014–2015 Jobs Act. While the latter might help explain the positive change in job opportunities observed for women in 2015, it did not guarantee its stability over time. Similarly, the fact

[64] This is line with the studies of Svejnar (2002), Bergemann and van den Berg (2008), and Card et al. (2011, 2010).

Table 19 OLS: explaining the probability to be offered an open-ended contract through profiling

Y = Pr(Open-Ended)	Short term	Medium term	Long term	VIF
AGE	0.002	0.002	−0.003	1.35
	(0.001)	(0.002)	(0.002)	(0.74)
FEMALE	0.035***	0.007	0.001	1.03
	(0.010)	(0.014)	(0.016)	(0.97)
IT	−0.016	0.035*	0.044**	1.13
	(0.014)	(0.019)	(0.022)	(0.88)
DUR	−0.006	−0.011	−0.024	1.01
	(0.010)	(0.014)	(0.016)	(0.99)
LOW	0.145***	0.128***	0.138***	1.70
	(0.016)	(0.021)	(0.025)	(0.59)
MEDIUM	0.029**	0.061***	0.073***	1.56
	(0.013)	(0.018)	(0.021)	(0.64)
VHIGH	−0.009	0.026	0.001	1.31
	(0.015)	(0.021)	(0.024)	(0.76)
CONS	0.028	0.068	0.305***	–
	(0.047)	(0.066)	(0.078)	–
R-squared	5.1%	2.3%	1.8%	–
Observations	3040	3040	3040	–

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. Estimates are obtained from an ordinary-least-squares regression on 3040 individuals. In this table, we show the extent to which covariates explain the probability of participants to be offered an open-ended contract, independent of becoming employed. The duration of the training is also taken into account in intervals of 100 days, given that the majority of participants attend the programme for more than four months. The identification also accounts for the different types of profiling of the individuals, with high profiling as the base category. A youth's profiling indicator is low if it falls between 0.000 and 0.250000; medium if it falls between 0.250001 and 0.50000; high if it falls between 0.50001 and 0.750000; and finally, very high if the indicator falls between 0.750001 and 1. The variation inflation factor is also estimated, with $\frac{1}{VIF}$ in parentheses. Significance at 1, 5, 10% levels correspond, respectively, to ***, **, and *. Standard errors are expressed in parentheses.

that older and Italian job candidates are slightly favoured confirms the hypothesis of the existing literature of a labour market in Italy that is used to older employees and that prefers compatriot individuals. In regard to our main covariate of interest, we are interested in understanding how much of the variation observed in the labour outcomes is explained by being assessed with a certain type of profiling. Table 18 shows that being assessed with a low profiling corresponds to a positive change in the probability to be offered a job of, respectively, 24.9, 15.3, and 13.3 percentage points in the short, medium, and long terms. Compared to high profiles, a similar pattern is also found for individuals assigned with a medium profiling. Having a very high profiling, on the other hand, contributes to explaining a negative variation in the probability to become employed by 6.7 percentage points in the long term. Estimates are similar as regards job stability. Table 19 shows that being assessed

Table 20 Correlation matrix for labour outcomes and profiling

Outcome of interest		Pr(employed)		Pr(open-ended)
Age (years)	+	0.184	+	0.109
Gender (Female = 1)	+	0.027	+	0.023
Italian	+	0.056	+	0.049
Duration training /100d	−	0.017	−	0.016
Low profiling	+	0.160	+	0.130
Medium profiling	+	0.028	+	0.019
Very high profiling	−	0.078	−	0.124

The data are provided by the Agency of Trento and refer to the unemployed individuals registered as such in the Province of Trento between 2014 and 2017. A correlation matrix is presented so as to understand the relationship between the labour outcomes of interest and the covariates, including the type of profiling with which the participants are assessed. A youth's profiling indicator is low if it falls between 0.000 and 0.250000; medium if it falls between 0.250001 and 0.50000; high if it falls between 0.50001 and 0.750000; and finally, very high if the indicator falls between 0.750001 and 1.

with a low or medium profiling indicator contributes to a positive variation in the probability of participants to be offered an open-ended contract. In the long term, for instance, the change is equal to, respectively, 13.8 and 7.3 percentage points. Results seem to suggest a greater difficulty for high profiles to produce positive signals to the potential employers in the labour market.

In this regard, we also take into account the possibility for participants to experience locking-in effects during their internship at the selected firms. Table 18 shows that attending the programme at the firm for 100 additional days corresponds to a reduction in the probability to become employed of 3.8 and 3.3 percentage points in, respectively, the medium and long terms. The latter supports the theory by Cerulli-Harms (2017) on the risks of becoming 'eternal interns'. Results do not differ as regards the probability of the participants to be offered an open-ended contract. Indeed, a longer participation in the programme does not appear to be remedial for the candidates. The assignment of a low or medium profiling, on the other hand, contributes to explaining part of the positive variation in this labour outcome. However, and as anticipated by the weak correlation coefficients in Table 20, findings are not powerful in terms of the extent to which profiling explains the labour outcomes of the individuals.[65] The latter is in line with the alternative parallel trends assumption provided in Sect. 6.2 according to which results are not driven by specific profiling types but solely by participation. Nevertheless, individuals who are profiled with a certain type of profiling may experience an emotional shock that increases awareness on their condition. This would then lead them to accept any job offer they receive in line with the idea that the latter is the best they can get anyway. One may consider whether individuals fear social stigma with respect to participation in active labour market policies or social pressure on the part of their families and peers. Further research should investigate the nature of the question.

[65] R^2 goes from 9.3% in the short term to 2.3% in the long term as regards the probability to become employed and from 5.1% to 1.8% as regards the probability to be offered an open-ended contract.

References

Acconcia, G., & Graziano, P. (2017). The Youth Guarantee: The cases of Milan (Lombardy) and Naples (Campania). In The political economy of local regulation: Theoretical frameworks and international case studies. London: Palgrave Macmillan UK.

Acemoglu, D., & Autor, D. (2012). The basic theory of human capital. In: *Lectures in labour economics*. Semantic Scholar.

Albert, C., Davia, M., Hernanz, V., & Toharia, L. (2002). Choosing between education, training and labour market entry'. In E. Elgar (Eds.), *Education, training and employment dynamics: Transitional labour markets in the European Union.*

Albert, D., Chein, J., & Steinberg, L. (2013). The teenage brain: Peer influences on adolescent decision making. *Current Directions in Psychological Science*, *22*(2), 114–20.

Altavilla, C., & Caroleo, F. (2018). The effect of active labour market policies on crime: Incapacitation and program effects. *Labour Economics*, *52*, 263–86.

Anderson, C. (2009). The private consequence of public policies: Active labour market policies and social ties in Europe. *European Political Science Review*, *1*(3), 341–73.

Andor, L., & Veselý, L. (2018). The EU Youth Guarantee: A broadly accepted reform in need of full implementation. *European Social Observatory Paper Series* (19).

Angrist, J., & Pischke, J. S. (2008). *Mostly harmless econometrics*. Princeton: Princeton University Press.

Audier, F. (2002). Segmentation in the labour market: An analysis of recruitment. In E. Elgar (Eds.), *Education, training and employment dynamics: Transitional labour markets in the European Union*.

Barbieri, P. (2011). Italy: No country for young men (and women). The Italian way of coping with increasing demands for labor market flexibility and rising welfare problems. In *Globalized labour markets and social inequality in Europe*. Palgrave Macmillan.

Bergemann, A., Caliendo, M., & van den Berg, G. (2009). The effect of active labour market programs on not-yet treated unemployed individuals. *Journal of the European Economic Association*, *7*(2/3), 606–16.

Bergemann, A., Caliendo, M., van den Berg, G. J., & Zimmermann, K. F. (2011). The threat effect of participation in active labor market programs on job search behavior of migrants in Germany. *International Journal of Manpower*, *32*(7), 777–95.

Bergemann, A., & van den Berg, G. (2008). Active labor market policy effects for women in Europe—A survey. *Annales d'Économie et de Statistique*, *85*(91–92), 385–408.

Berton, F., Richiardi, M., & Sacchi, S. (2009). Flex-insecurity: Perché in Italia la Flessibilità Diventa Precarietà. Il Mulino.

Bertrand, M., & Crépon, B. (2017). J-PAL skills for youth program review paper. *J-PAL*.

Biavaschi, C., Eichhorst, W., Giulietti, C., Kendzia, M., Muravyev, A., Pieters, J., et al. (2013). Youth unemployment and vocational training. *Foundations and Trends in Microeconomics*, *9*(1–2), 1–157.

Biewen, M., Fitzenberger, B., Osikomi, A., & Waller, M. (2014). The effectiveness of public-sponsored training revisited: The importance of data and methodological choices. *Journal of Labor Economics*, *32*(4), 837–97.

Black, D. A., Smith, J. A., Berger, M. C., & Noel, B. J. (2003). Is the threat of reemployment services more effective than the services themselves? Evidence from random assignment in the UI system. *American Economic Review*, *93*(4), 1313–27.

Blasco, S., & Rosholm, M. (2011). The impact of active labour market policy on post-unemployment outcomes: Evidence from a social experiment in Denmark. *IZA discussion papers* (5631).

Boeri, T., & Burda, M. (1996). Active labor market policies, job matching and the Czech miracle. *European Economic Review*, *40*(3–5), 805–17.

Bonnal, L., Fougère, D., & Sérandon, A. (1997). Evaluating the impact of French employment policies on individual labour market histories. *The Review of Economic Studies*, *64*(1), 683–713.

Bonoli, G. (2010). The political economy of active labour market policies. *Politics and Society*, *38*(4), 435–57.

Boone, J., & van Ours, J. (2009). Bringing unemployed back to work: Effective active labour market policies. *De Economist*, *157*(3), 293–313.

Brown, A., & Koettl, J. (2015). Active labour market programs: Employment gain or fiscal drain. *IZA Journal of Labor Economics*, *4*, 12.

Brunello, G., Garibaldi, P., & Wasmer, (2007). *Education and training in Europe*. Oxford: Oxford University Press.

Brunner, B., & Kuhn, A. (2014). The impact of labor market entry conditions on initial job assignment, human capital accumulation, and wages. *Journal of Population Economics*, *27*(3), 705–38.

Budría, S., & Pereira, P. T. (2008). The contribution of vocational training to employment, job-related skills and productivity. Evidence from Madeira Island. *International Journal of Training and Development*, *13*(1), 53–72.

Caliendo, M., Falk, A., Kaiser, L., Schneider, H., Uhlendorff, A., van den Berg, G., et al. (2011a). The IZA evaluation dataset: Towards evidence-based labor policy making. *International Journal of Manpower*, *32*, 731–52.

Caliendo, M., & Künn, J. (2015). Getting back into the labor market: The effects of start-up subsidies for unemployed females. *Journal of Population Economics*, *28*(4), 1005–43.

Caliendo, M., Künn, S., & Schmidl, R. (2011b). Fighting youth unemployment: The effects of active labour market policies performance. *IZA discussion papers* (6222).

Caliendo, M., & Schmidl, R. (2016). Youth unemployment and active labour market policies in Europe. *IZA Journal of Labor Policy*, *5*(1), 1.

Calmfors, L., Forslund, A., & M., H. (2002). Does active labour market policy work? Lessons from the Swedish experience. *Swedish Economic Policy Review, 8*(2).

Cammeraat, E., Jongen, E., & Koning, P. (2017). Preventing NEETs during the great recession. The effects of a mandatory activation: Program for young welfare recipients. *IZA discussion papers* (11090).

Cappellini, E., Duranti, S., Patacchini, V., & Sciclone, N. (2018). The Youth Guarantee: A real opportunity for NEETS?. *XXXIII AIEL conference*.

Card, D., Kluve, J., & Weber, A. (2010). Active labor market policy evaluations: A meta-analysis. *Economic Journal*, *120*(148), 452–77.

Card, D., Kluve, J., & Weber, A. (2011). Fighting youth unemployment: The effects of active labour market policies performance. *Journal of the European Economic Association*, *16*(3), 894–931.

Card, D., & Shore-Sheppard, L. (2004). Using discontinuous eligibility rules to identify the effects of the Federal Medicaid expansions on low-income children. *Review of Economics and Statistics*, *86*(3), 752–66.

Cerulli-Harms, A. (2017). Generation internship—The impact of internships on early labour market performance. *IZA Discussion papers* (11163).

Cirillo, V., Fana, M., & Guarascio, D. (2016). Did Italy need more flexibility? *Intereconomics*, *51*(2), 79–86.

Cirillo, V., Fana, M., & Guarascio, D. (2017). Labour market reforms in Italy: Evaluating the effects of the Jobs Act. *Economia Politica*, *34*(3), 1–22.

Connelly, B., & Certo, T. (2011). Signaling theory: A review and assessment. *Journal of Management*, *37*(1), 854–93.

Council, E. U. (2013). Council recommendation of 22 April 2012 on establishing a Youth Guarantee (2013/c 120/01). *Official Journal of the European Union*.

Cox, R. (1998). From safety net to trampoline: Labour market activation in the Netherlands and Denmark. *Governance*, *11*(4), 397–414.

Crépon, B., Ferracci, M., Jolivet, G., & van den Berg, G. J. (2010). Active labour market policy effects in a dynamic setting. *Journal of the European Economic Policy*, *7*(2–3), 595–605.

Crépon, B., & van den Berg, G. (2016). Active labour market policies. *Annual Review of Economics*, *8*, 521–46.

Dar, A., & Tzannatos, Z. (1999). Active labour market programs: A review of the evidence from evaluations. *World bank social protection discussion paper series* (9901).

Deaton, A. (1997). *The analysis of household surveys: A microeconometric approach to development policy*. Cambridge: Cambridge University Press.

Del Bono, E., Weber, A., & Winter-Ebmer, R. (2014). Fertility and economics instability: The role of unemployment and job displacement. *Journal of Population Economics*, *28*(2), 463–78.

Dingeldey, I. (2007). Welfare state transformation between workfare and an enabling state: A comparative analysis. *European Journal of Political Research*, *46*, 823–51.

Doerr, A., Fitzenberger, B., Kruppe, T., Paul, M., & Strittmatter, A. (2016). Employment and earnings effects of awarding training vouchers in Germany. *Industrial and Labor Relations Review*, *70*(3), 767–812.

Eichhorst, W., & Konle-Seidl, R. (2016). Evaluating labour market policy. *IZA discussion papers* (9966).

Eichhorst, W., & Neder, F. (2014). Youth unemployment in Mediterranean Countries. *IZA policy papers* (80).

Eichhorst, W., & Rinne, U. (2017). The European Youth Guarantee: A preliminary assessment and broader conceptual implications. *CESifo Forum*, *18*(2), 34–8.

Eichhorst, W., & Zimmermann, K. (2017). And then there were four: How many (and which) measures of active labour market policies do we still need. *Applied Economics Quarterly*, *53*(3), 243–72.

Escudero, V. (2018). Are active labour market policies effective in activating and integrating low-skilled individuals? An international comparison. *IZA Journal of Labor Policy*, *7*(1), 4.

Escudero, V., Kluve, J., Mourelo, E. L., & Pignatti, C. (2018). Active labour market programmes in Latin America and the Caribbean: Evidence from a meta-analysis. *Journal of Development Studies*, 1–18.

Estevao, M. (2003). Do active labour market policies increase employment? *IMF working papers, 3*(234).

Fallesen, P., Lars, P., Susumu, I., & Torben, T. (2006). Evaluating the dynamic effects of active labour market policies in Italy. *Labour Economics*, *20*(2), 349–382.

Fertig, M., Schmidt, C., & Schneider, H. (2002). Active labour market policies in Germany: Is it there a successful policy strategy? *Regional Science and Urban Economics*, *36*(3), 399–430.

Forrier, A., & Sels, L. (2003). Temporary employment and employability: Training opportunities and efforts of temporary and permanent employees in Belgium. *Work Employment and Society*, *17*(4), 641–66.

Franzese, R., & Hays, J. (2006). Strategic interactions among eu government in active labour market policies making: Subsidiarity and policy coordination under the european employment strategy. *European Union Politics*, *7*(2), 167–89.

Fredriksson, P., & Johansson, P. (2008). Dynamic treatment assignment: The consequences for evaluations using observational data. *Journal of Business and Economics Statistics*, *26*(4), 435–445.

Gaddis, I., & Klasen, S. (2013). Economic development, structural change and womens labor force participation: A reexamination of the feminization u hypothesis. *Journal of Population Economics*, *27*(3), 639–81.

Gerfin, M., & Lechner, M. (2002). A microeconometric evaluation of the active labour market policy in Switzerland. *Economic Journal*, *112*(482), 854–93.

Guest, R., & Parr, N. (2013). Family policy and couples' labour supply: An empirical assessment. *Journal of Population Economics*, *26*(4), 1631–60.

Heckman, J. (2000). Policies to foster human capital. *Research in Economics*, *54*(1), 3–56.

Heckman, J., & Rubinstein, Y. (2001). The importance of non-cognitive skills: Lessons from the GED testing program. *American Economic Review*, *91*(2), 145–9.

Heckman, J., Stixrud, J., & Urzua, S. (2006). The effect of cognitive and non-cognitive abilities on labour market outcomes and social behaviour. *Journal of Labor Economics*, *24*(3), 411–82.

Hopkins, E. (2012). Job market signaling of relative position, or Becker married to Spence. *Journal of the European Economic Association*, *10*(12), 854–93.

Howell, D., Baker, D., Glyn, A., & Schmitt, J. (2007). Are protective labor market institutions at the root of unemployment? A critical review of the evidence. *Capitalism and Society*, *2*(1).

Hujer, R., Blien, U., Caliendo, M., & Zeiss, C. (2006). Macroeconomic evaluation of active labour market policies in Germany: A dynamic panel approach using regional data. In *The European labour market. Regional dimensions*. Physica Verlag.

Ichino, A., Nannicini, T., & Mealli, F. (2008). From temporary help jobs to permanent employment: What can we learn from matching estimators and their sensitivity? *Journal of Applied Econometrics*, *23*(3), 305–27.

Isfol, Rapporto 2016 sulla "Garanzia Giovani in Italia" and "Piano di Attuazione Regionale Toscana N. 992", pp. 12–13.

Jessoula, M., Graziano, P., & Madama, I. (2010). Selective flexicurity in segmented labour markets: The case of Italian mid-siders. *Journal of Social Policy*, *39*(4), 561–83.

Katz, L. (1994). Active labour market policies to expand employment and opportunity. In *Proceedings economic policy symposium* Federal Reserve Bank of Kansas City.

Kazepov, K., & Ranci, C. (2016). Is every country fit for social investment? Italy as an adverse case. *Journal of European Social Policy*, *27*(1), 90–104.

Kluve, J. (2010). The effectiveness of European active labor market policy. *Labor Economics*, *17*(6), 904–18.

Korkeamäki, O., & Kyyrä, T. (2012). Institutional rules, labour demand and retirement through disability programme participation. *Journal of Population Economics*, *25*(2), 439–68.

Kuddo, A. (2009). Employment services and active labour market programs in Eastern and Central Asian countries. *World bank social protection discussion paper series*, (918).
Lalive, R., & Zweimüller, J. (2008). The impact of active labour market programs on the duration of unemployment. *The Economic Journal*, *118*(525), 235–57.
Lechner, M., & Wiehler, S. (2011). Kids or courses? Gender differeces in the effects of active labour market policies. *Journal of Population Economics*, *24*(3), 783–812.
Lechner, M., & Wunsch, C. (2009). Active labour market policy in East Germany: Waiting for the economy to take off. *The Economics of Transition*, *17*, 661–702.
Lenzi, G., Cuconato, M., Laasch, C., & Minguzzi, L. (2018). National report for the project youth policies and participation for Italy. *Dipartimento di Scienze dell'Educazione Università degli Studi di Bologna*.
Lindqvist, E., & Westman, R. (2011). The labour market returns to cognitive and noncognitive ability: Evidence from the Swedish enlistment. *American Economic Journal: Applied Economics*, *3*, 101–28.
Martin, J. (2015). Activation and active labour market policies in OECD countries: Stylized facts and evidence on their effectiveness. *IZA Journal of Labor Policy*, *4*(1), 1–29.
Martin, J. P., & Grubb, D. (2001). What works and for whom. A review of OECD countries experiences with active labour market policies. *Swedish Economic Policy Review*, *8*, 9–56.
Mckenzie, D. (2017). How effective are active labour market policies in developing countries. *The World Bank Research Observer*, *32*(2), 127–54.
Meager, N. (2008). The role of training and skills development in active labour market policies. *International Journal of Training and Development*, *13*(1), 1–18.
Mechtel, M., & Potrafke, N. (2013). Electoral cycles in active labour market policies. *Public Choice*, *156*(1/2), 181–94.
Muntenau, B. (2016). Youth unemployment in EU: A pressure to avoid long term social empoverishment. *Europolity*, *10*(2), 169–204.
Myck, M., & Reed, H. (2006). A review of static and dynamic models of labour supply and labour market transitions. *Institute for fiscal studies working paper* (W06/15).
Nickell, S. (1997). Unemployment and market rigidities: Europe versus North America. *Journal of Economic Perspectives*, *11*(3), 55–74.
O'Higgins, N. (2001). *Youth unemployment and employment policy: A global perspective*. Geneva: ILO.
Pastore, F. (2015). The European Youth Guarantee: Labor market context, conditions and opportunities in Italy. *IZA Journal of European Labor Studies*, *4*, 11.
Pehkonen, J. (1997). Displacement effects of active labour market policy: The youth labour market in Finland. *Empirica*, *24*, 195–208.
Perez, C., Vellinga, P., de Buck, P., Faulstich, M., Girouard, N., Gregori, G., et al. (2011). Europeanisation and the political economy of active labour market policies. *European Union Politics*, *12*(2), 217–39.
Piva, M. C., Santarelli, E., & Vivarelli, M. (2005). The skill bias effect of technological and organisational change: Evidence and policy implications. *Research Policy*, *34*(2), 141–157.
Puhani, P. A. (2012). The treatment effect, the cross difference, and the interaction term in nonlinear "difference-in-differences" models. *Economic Letters*, *115*, 85–87.
Rouault, S. (2002). Assessing the impact of experimental EU training policies in France, Germany and Ireland'. In E. Elgar (Eds.), *Education, training and employment dynamics: Transitional labour markets in the European Union*.
Rueda, D. (2006). Social democracy and active labour market policies: (insiders), outsiders, and the politics of employment promotion. *British Journal of Political Science*, *36*(3), 385–406.
Ryan, C., & Whelan, S. (2013). Age pension eligibility and female labour force participation. *Melbourne Institute of Applied Economic and Social Research*.
Sanfey, A., Stallen, M., & Chang, L. (2014). Norms and expectations in social decision-making. *Trends in Cognitive Sciences*, *18*(4), 172–4.
Saniter, N., & Siedler, T. (2014). Door opener or waste of time? The effects of student internships on labor market outcomes. *IZA Discussion Papers* (8141).
Sarvimäki, M., & Hämäläinen, K. (2016). Integrating immigrants: The impact of restructuring active labor market programs. *Journal of Labor Economics*, *34*(2), 479–508.
Schömann, K., & O'Connell, P. (2002). *Education, training and employment dynamics: Transitional labour markets in the European Union*. E. Elgar.
Scoville, J. (1969). A theory of jobs and training. *Industrial Relations*, *9*(1), 36–53.

Smith, J. (2000). A critical survey of empirical methods for evaluating active labor market policies. *Swiss Journal of Economics and Statistics*, *136*(3), 247–68.
Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, *87*(3), 355–374.
Stephan, G. (2008). The effects of active labour market programs in Germany. *Jahrbücher für Nationalökonomie und Statistik*, *228*(5–6), 586–611.
Svejnar, J. (1999). Labor markets in the transitional Central and East European economies. *Handbook of Labor Economics*, *3*(B), 2809–57.
Svejnar, J. (2002). *Labor market flexibility in central and east Europe*. William Davidson Working Paper (496).
Trattara, G., & Valentini, M. (2008). Can employment subsidies and greater labour market flexibility increase opportunities for youth? Revisiting the Italian on-the-job training programme. *Journal for Labour Market Research*, *42*(3), 197–212.
Ugolini, E. (2013). *Vi spiego perché in Italia non funziona l'apprendistato*.
van Vliet, O., & Koster, F. (2011). Europeanisation and the political economy of active labour market policies. *European Union Politics*, *12*(2), 217–39.
Vasta, M., & Di Martino, P. (2017). *Ricchi per caso: La parabola dello sviluppo economico italiano*. Il Mulino.
Verga, G. (1881). *I Malavoglia. Treves*.
Vesan, P., & Lizzi, R. (2017). The youth guarantee in Italy and the new policy design approach: Expectations, hopes and delusions. *World Political Science*. https://doi.org/10.1515/wps-2017-0005.
Vinci, F. (2017). Youth and employment: The effectiveness of the Youth Guarantee plan in Emilia Romagna and Sicily. *Sociology Study*, *7*(1), 43–55.
Wolfbein, S. (1967). *Education and training for full employment*. Columbia: Columbia University Press.
Zweimüller, J., & Winter-Ebmer, R. (1996). Manpower training programs and employment. *Economica*, *63*(249), 113–30.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.