



Working Paper Series

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ECINEQ WP 2016 - 392

Youth employment security and labour market institutions: a dynamic perspective*

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Abstract

In this paper we propose a dynamic perspective to analyse young people's labour market performance. The approach is based on the analysis of individual trajectories in the labour market, and focuses on young Europeans about five years after they left education. We use this approach also to examine the effects of employment protection legislation and labour market policies on objective youth employment security. Empirical findings suggest that the most disadvantaged groups, such as women and low educated workers, benefit from a more stringent regulation on temporary contracts and higher national expenditures on labour market policies.

Keywords: employment protection legislation, youth, job security, employment security, EU-SILC.

JEL Classification: J21, J48, J62.

*This paper is based on research carried out within the STYLE project (EU-7FP, <http://www.styleresearch.eu/>). The project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under Grant Agreement no. 613256.

1. Introduction

The debate on labour market institutions, developed in the early 1990s to explain the poor performance of the European economy, considered flexibility and security as diametrically opposed to each other. This apparent trade-off initially entailed the need to increase labour market flexibility by reducing employment protection legislation (EPL), i.e. loosening hiring and firing rules. Indeed, a large number of both theoretical and empirical studies had shown a negative relationship, at the aggregate level, between EPL (as measured by the OECD indicators) and employment (or hiring rates, or exit rates from unemployment), and a positive relationship with long term unemployment. In the mid-2000s, increasing concern for the growing insecurity associated with deregulation of the labour market induced the European Commission (EC) to recommend a mix of policies to increase labour market flexibility (i.e. reducing “job security”), while ensuring employment security (i.e. improving the employability of people through better training, public employment services, etc.), and adequate income support in the case of job loss. The so called “flexicurity” approach was based on less stringent regulation of permanent and temporary contracts (i.e. lower EPL) and higher expenditures on active labour market policies (ALMPs) in order to furnish employability and well-designed unemployment benefits to ensure income security, while reducing the risk of benefit dependency. However, the actual implementation of these recommendations to improve the labour market’s institutional settings has been problematic: in most countries, the labour market reforms have increased flexibility at the margin (i.e. easing the rules for new entrants while leaving the rules on firing almost unchanged and not increasing total expenditure on ALMPs), with widely acknowledged adverse effects on youth (EC 2010; see also O’Reilly et al. 2015 for a review of the literature).

A growing body of empirical work has been produced over the last three decades to assess the role of EPL (as well as other indicators for labour market policies and regulations) in labour market performance, at both the macro level and the micro level. In this paper we adopt a micro-approach in order to analyze the early labour market experiences of young Europeans. In particular, we are interested in explaining the security dimension of their employment condition, from an objective and dynamic perspective, and in examining whether the mix of EPL and labour market policies (active and passive) affect individual employment security, once other macro-level variables and individual characteristics are controlled for.

The main purpose of our analysis is to highlight differences across young individuals with respect to the “security” their experience in the labour market. To this end, we introduce two important distinctions: between job and employment security, and between the permanent and temporary component of the EPL.

The large increase in the use of temporary contracts, and the inconclusive debate on whether they are stepping stones or traps, implies that young people can remain in precarious employment conditions for quite a long time. It is thus necessary to go beyond the simple idea of job security associated with the type of contract (i.e. at a single point in time), and consider the conditions under which one can identify an individual employment condition in the labour market as “secure” (i.e. over a relatively long period of time). These conditions should account for the case of a person moving from one job to another, including inevitably some (short) unemployment spells. In this paper we propose a new operational definition of individual “employment security” based on

monthly employment status trajectories.¹ We also adopt a dynamic definition of “job security” by considering not the type of contract but the actual duration of the job. In other words, we consider as “job-secure” those individuals who did not change job from one year to the next (or changed it voluntarily to take up a better job).

Our methodological approach makes it possible to consider the effects of EPL and other labour market policies on the individual level of security (as defined above). In particular, it allows comparisons across countries (for example, the UK and Spain) with dissimilar labour market regulations and very different shares of youth employed on temporary contracts. With respect to the EPL indicator, we consider separately the two components relating to permanent and temporary contracts (EPL-P and EPL-T, respectively). Although many studies analyse the impact of the overall EPL index, the literature highlights that the consequences of modifying the legislation on temporary and permanent contracts are quite different. A high level of EPL-P should increase the probability of remaining in the same job once the individual has obtained one, but it may decrease the probability of being hired, causing difficulties in entering employment, especially for the weakest groups (youth, women and low educated workers). A low level of EPL-T should counter-balance this effect by increasing the probability for individuals to find a job, but it may also imply that these individuals experience employment trajectories with frequent status changes and short employment spells.

We focus on the employment condition of young people five years after they have left education. In this way, the entry effect of a strict regulation of permanent contracts should be overcome, and we can expect a high EPL-P to increase the probability of young individuals having secure jobs (remaining in the same job from one year to the next). At the same time, a more stringent regulation on the use of temporary contracts (high EPL-T) should increase the probability that individuals are hired with permanent contracts, and therefore also increase their probability of being job-secure. However, if young workers are particularly exposed to a prolonged use of temporary contracts when firing rules for permanent contracts are stringent, there may also be a negative correlation between EPL-P and job security, and a positive correlation between the latter and EPL-T.

The rest of the article is organized as follows. Section 2 reviews the relevant literature. Section 3 presents the data, describes the empirical methodology and discusses empirical findings. Section 4 concludes.

2. Literature review

2.1 *The debate on labour market institutions: from flexibility to flexicurity*

In the early 1990s, the dominant interpretation of the high and persistent unemployment in Europe attributed it entirely to labour market rigidities. Because the conventional understanding of the poor job creation capacity of the European economy rested almost entirely on labour market rigidities (eurosclerosis), the suggested recommendation was to deregulate the labour market in order to make

¹ In particular, we define as “employment-secure” those individuals who, over a period of 24 months, report employment spells lasting (each) at least six months, and unemployment spells lasting (each) at most three months. This implies that in each year individuals are employed for at least nine months (i.e. 75% of the time), and the search period to move from one job to the other is sufficiently short.

it more flexible. In short, employment protection legislation (EPL) attracted particular attention as an institutional factor at the root of the persistently low overall employment rate in Europe.²

Flexibility and security were seen as diametrically opposed to each other: it was possible to have one only at the expense of the other. The very flexible labour market in the US stood in stark contrast with the rigid labour market in Europe. This rigidity, usually described in terms of extensive social security and too generous welfare systems, was assumed to be responsible for the persistently high unemployment rate in Europe. The neo-liberal recipe demanded strategies to deregulate the labour market and to reduce the generosity of the welfare state in order to bring down unemployment (Lindbeck, Snower 1988). The debate on the eurosclerosis culminated with publication of the OECD Jobs Study (JS) in 1994 and the launch of the European Employment Strategy (EES) in 1997. Notwithstanding the array of issues considered in the two employment strategies (JS, EES), as well as the differences in their policy recommendations, both the academic and the political debate focused mainly on labour market flexibility (i.e. ‘adaptability’, in the Commission’s jargon).

As policy-makers started to implement labour market reforms enhancing flexibility, the debate quickly came to pivot around the stylized trade-off between more flexibility and growth, on the one hand, and increased inequality of income and labour market segmentation, on the other (Simonazzi, Villa 1999). Moreover, the underlying assumption that flexibility improves economic performance was disputed (Solow 1998; Esping-Andersen, Regini eds. 2000; Freeman 2005; Kahn 2010). The growing concern about the side effects of labour market flexibility led to some reformulations of the EC recommendations, with a shift of focus from the concept of “labour market flexibility” to that of “flexicurity”, i.e. a virtuous combination of flexibility (for firms) and security (for workers).³

There is no universally agreed-upon definition of flexicurity in the literature, although there is some broad agreement that it can be identified in terms of a combination of “flexible contracts” (i.e. low EPL-P and low EPL-T) and adequate support for the unemployed – that is, less rigid EPL combined with greater expenditure on unemployment benefits (UBs) and ALMPs.

In 2006 and 2007, the *Employment in Europe* dealt in detail with flexibility and security in the EU labour markets, identifying different flexicurity pathways across Member States (EC 2006a; 2007a). These studies constituted the basis for the Commission’s Communication on flexicurity, later published as a brochure (EC 2007b), where flexicurity – presented as an “integrated strategy to enhance, at the same time, flexibility and security in the labour market” – was identified as a complex of measures combining four components: effective ALMP, social security systems, flexible contractual arrangements, and comprehensive lifelong learning (EE0 2007). Thus, since

² Indeed, various studies had identified a negative effect of the overall indicator of EPL on the employment rate and/or a positive effect on the unemployment rate (e.g. Lazear 1990; Heckman and Pagés 2000; Nickell and Layard 1999; Garibaldi and Mauro 2002; Di Tella and MacCulloch 2005). Other studies found weaker evidence (Addison and Teixeira 2003; Autor et al. 2006). Gomez-Salvador et al. (2004) and Kugler and Pica (2008) provided evidence on the negative relationship between EPL and the hiring rate, as well as job creation. A OECD report (2004) showed that EPL tends to reduce the inflow rate into unemployment as well the rate of exit from unemployment; and to increase long-term unemployment.

³ The idea of flexicurity goes back to developments and debates in Denmark and the Netherlands (Wilthagens, Tros 2004; Bredgard et al. 2005; Jorgensen, Madsen 2007; Tangian 2007, 2011; Viebrock, Clasen 2009). These two countries were portrayed as having successfully achieved new combinations of increased labour market flexibility while maintaining some degree of social protection (Oecd 2004: 97; EC 2006b: 10).

2007, every Member State was recommended to implement structural reforms informed by the flexicurity agenda and had to report about improvements related to flexicurity.

The flexibility approach involves a shift in emphasis from “job security”, through high EPL, to “employment security” in the labour market (via efficient ALMPs combined with adequate and well- designed UBs); as such, flexicurity involves equipping individuals with the skills for their working lives (EC 2007c). Hence, it appears to address the balance of risks on the labour market, offering solutions to tensions between demands for flexibility by employers and security by employees. It is also seen as a means to address the ‘insider-outsider’ divisions and segmentation problems that affect many EU labour markets (EEO 2007). Despite its apparent appeal, the flexicurity approach has been criticized, and several criticisms rest on the fact that there is no universally agreed-upon definition of flexicurity (Viebrock, Clasen 2009: 308, 325; Mailand 2010; Heyes 2011), thus opening the door for ambiguous implementation of this policy approach.

In response to the recommendations to improve the flexibility of the labour market, a considerable number of EU countries started deregulating their labour markets in the 1990s, following what appeared to be the recommendations easiest to implement at the national level. Both political difficulties (opposition from public opinion) and budget constraints (lack of financial resources to be spent on expensive ALMP) encouraged policy makers to deregulate their national labour markets, without combining the increased flexibility with the promotion of some security, employment security via the strengthening of ALMPs, and income security via well designed UBs. Several Member States increased external flexibility ‘at the margin’, chiefly by easing EPL for temporary contracts (fixed-term and temporary agency work) and other non-standard forms of employment (part-time, quasi-self-employment), while keeping stringent rules for standard employment contracts (employees with open-end contracts) largely intact. This process has been referred to as ‘partial and targeted deregulation’ (Esping-Andersen, Regini 2000), ‘two-tier reforms’ (Boeri, Garibaldi 2007) and reforms ‘at the margin’ (EC 2010b: 121). This resulted in the development of segmented markets in which the burden of flexibility fell on the weakest individuals (young workers, females, and low educated).⁴

2.2 The reforms ‘at the margin’ and the effects on young workers

Although a number of Member States have been developing flexicurity policies, most countries have concentrated mainly on the de-regulation of so-called non-standard or atypical employment relations for particular groups at a disadvantage within the labour market, basically new entrants; but they left ‘standard’ employment and other contractual arrangements largely unchanged. Thus, where flexibility has been increased, this has been at the cost of security (Heyes 2011: 653; Boeri, Conde-Ruiz, Galasso 2012; Boeri 2011; Standing 2011; Berton, Richiardi, Sacchi 2012)⁵. Moreover, notwithstanding the general recommendations made by international organisations to European countries to coordinate their EPL reforms (to facilitate hiring and firing) by strengthening

⁴ Various empirical studies showed that EPL generally has little or no effects on the employment rates of prime-age men but tends to decrease the employment rates of both youth and women (Heckman and Pagés, 2000; Algan and Cahuc, 2004; Kahn, 2007). Cahuc and Postel-Vinay (2001) and Blanchard and Landier (2001) show that reforms making the use of fixed-term contracts easier, while keeping a stringent EPL for permanent contracts, favored job destruction, and increased labour turnover without reducing unemployment duration for young people.

⁵ The fact that the implementation of flexicurity policies has been unsatisfactory has been acknowledged in the Joint Employment Report as “improving the implementation of flexicurity in a comprehensive way remains a priority for most Member States’ labour markets” (Council of the EU 2012: 25).

ALMPs and improving the design of the unemployment benefit system, ‘employment regimes’ continue to vary across the EU (Boeri 2011; Eichorst et al., 2014).

The literature suggests that flexibility at the margin leads to the more frequent use of temporary contracts easing the entry of first job seekers into employment. The hiring of young workers via temporary contracts may be a way for companies to test workers’ skills and productivity before offering them an open-ended job. Temporary contracts are known to pay less, to offer less on-the-job training, and to be less satisfying than standard contracts (Khan 2007; EC 2010b: 133-135). Despite these penalties, temporary jobs are not to be blamed as long as they serve as stepping stones to more stable and better paid jobs. However, all too often temporary contracts are used as a cheaper alternative to permanent ones (Scherer 2004; Guell, Petrolongo 2007; Gash 2008; Kahn 2010; Baranowska et al. 2011; Berton, Devicienti, Pacelli 2011). When this occurs, the result is a segmented labour market, in which many young workers experience a sequence of temporary jobs alternating with unemployment, with little chance of moving to a more stable, open-ended contract and incomplete contributions to pension provisions. (Young) women are particularly at risk of falling into this segmentation trap (Van Lanker 2012; Lewis, Plomien 2009).⁶

There is evidence that in some countries – such as Germany, Austria, UK, Sweden – temporary contracts can be effective in helping people gain permanent positions (EC 2010b: 140-142). In other countries – such as Spain, Italy, Greece but also France and Poland – marginal jobs are seen as ‘traps’ from which there is little chance of escaping (Berloff, Modena, Villa 2014). In reviewing the literature on the scarring effects of temporary employment, Chung et al. (2012: 307) argue that low and decreasing transition rates from temporary into permanent employment may suggest that being in temporary work is a cohort effect rather than an age effect, meaning that younger generations may, in contrast to previous generations, be facing long-term labour market risks⁷.

Given that in many countries a large share of young individuals are employed with fixed-term contracts for a prolonged period, and that moving between jobs is increasingly frequent, in order to evaluate their employment condition in terms of security, we should go beyond the simple idea of job security associated with the type of contract (i.e. at a single point in time). In particular, we should consider employment status trajectories and specify the conditions under which these trajectories can be considered sufficiently “secure”. These conditions should account for the case of a person moving from one job to another, including inevitably some (short) unemployment spells. In the next section, we will discuss in more detail how we can define security in this context.

3. The determinants of job and employment security

In this section, we take an individual, rather than an institutional, perspective on job and employment security, and we examine the way in which the mix of EPL and LM policies affect

⁶ Casquel and Cunyat (2008) find that fixed-term contracts lead to permanent positions only in the case of the high educated but not for youth, women and low-educated workers. Garcia-Pérez and Muñoz-Bullón (2011) for Spain, Cockx and Picchio (2012) for Belgium, Rebollo-Sanz (2011) for Spain and Picchio, M. (2008) for Italy show that repeated spells of temporary employment have a particularly negative effect on the probability of obtaining an open-ended contract if they occur within the same firm.

⁷ A significant share of young people are finding it increasingly difficult to find long-term employment, even during periods of strong economic growth (OECD 2010). Young workers frequently rotate among temporary jobs, unemployment and/or periods of inactivity. This likelihood is much higher than with older workers, and several scholars argue that we are observing a steady increase in the precariousness of youth jobs (Scarpetta et al. 2010: 18-19; Standing 2011; Chung et al. 2012: fig. 4). In short, the recent global recession, together with the general flexibilization of labour markets, is affecting young people more severely with respect to previous cohorts.

individual security⁸, once other macro-level variables and individual characteristics are controlled for. In particular, we develop a new operational definition of individual employment security based on monthly employment status trajectories, and we compare it with a more familiar definition of job security, although not based on the type of contract, but on the actual duration of the job.

3.1 Definitions and methodology

Objective insecurity⁹ has been extensively analysed, with the focus on different forms of social exclusion, including unemployment, temporary employment contracts, and periods of inactivity. However, the comparison across countries of job insecurity is problematic. Many studies use the proportion of employees on non-permanent contracts as an indicator of job insecurity, yet there is still a wide degree of variation among countries in the security and other working conditions enjoyed by ‘permanent’ and temporary employees (Burchell 2002; Paugam, Zhou 2007; EC 2004b; Booth et al. 2002). Indeed, the lack of protection for permanent employees in liberal employment regimes is seen as important reason for the low rates of temporary employment in those countries. For this reason, we prefer to use a definition of job security that is not based on the type of contract, but on the actual duration of the job. We exploit longitudinal information about employment statuses and job characteristics available in the EU-SILC dataset to identify those individuals whose job can be classified as “secure”. In particular, we define job security in terms of being employed for two consecutive years, with either no changes in the job or a voluntary change to improve employment conditions.

As previously mentioned, the large increase in the use of temporary contracts, and the inconclusive debate on whether they are stepping stones or traps, implies that young people can remain in precarious employment conditions for quite a long time. We therefore need to go beyond the simple idea of job security and consider the conditions under which we would define an individual employment trajectory as “secure”, even if it comprises some (short) unemployment spells. Previous studies used transition probabilities across employment statuses (employment, unemployment and inactivity), or between different kinds of employment (e.g. part-time vs. full-time, temporary vs. regular contracts, low pay vs. high pay or low quality vs. high quality) as proxies for employment stability (Auer and Cazes, 2003; Bertola et al., 1999). However, considering only year-to-year changes may fail to distinguish between completely different situations in terms of individual insecurity: individuals who remain in the same status from one year to the next could have gone through various short unemployment spells between the two interviews; on the other hand, individuals who changed status may have remained employed for various months. Therefore, we prefer to look at monthly employment status sequences over a period of at least two years.¹⁰ In particular, we define as “employment-secure” those individuals who, over a

⁸ As regards the interaction of EPL with active and passive labour market policies, there is ample evidence of significant interaction between ALMPs and UB expenditures (Nickell and Layard, 1999; OECD, 2006). A major finding is that the moral hazard problems linked to UB systems can be largely offset by adopting and implementing appropriate ALMPs. However, since EPL tends to limit hiring while ALMP are designed to facilitate the transition from unemployment to work, EPL may reduce the potential effectiveness of ALMP.

⁹ Other studies have analysed the link between EPL and subjective security (i.e. individuals’ perceptions of their situation). OECD (2004) and Postel-Vinay and Saint Martin (2004) provide evidence, based on survey data, of a negative correlation between the strictness of EPL and workers’ perception of security. Clark and Postel-Vinay (2009) also find that perceived job security is negatively correlated with EPL, but they also show that it is positively correlated with the generosity of UB.

¹⁰ Other studies have considered employment sequences of young people entering the labour market, although not with the explicit aim of evaluating security (Brzinsky-Fay 2007; Quintini, Manfredi 2009). These and other studies show that

period of 24 months, report employment spells lasting (each) at least six months, and unemployment spells lasting (each) at most three months. This implies that in each year individuals are employed for at least nine months (i.e. 75% of the time), and the search period to move from one job to the other is sufficiently short.¹¹

In the empirical analysis, we model the probability of job security and employment security as a function of individual and institutional characteristics. We are particularly interested in the effect of the employment protection legislation, and on the active and passive labour market policies on this probability. Given the asymmetry between the regulation of permanent and temporary contracts, and the consequent emergency of a dual labour market in most of the European countries, the effect of the two regulations cannot be analysed in isolation (OECD 2013). Therefore, we consider separately the two OECD indicators of the strictness of regulation on regular and temporary contracts (EPL-P and EPL-T). While EPL-P measures the strictness of employment protection against individual dismissals, EPL-T measures the strictness of regulation on the use of fixed-term and temporary work agency contracts. Therefore, a higher value of EPL-P indicates a greater difficulty for firms in firing workers, whereas a higher value of EPL-T indicates a greater difficulty for firms in hiring workers on fixed-term contracts or through temporary work agency (TWA) contracts¹².

The effects of these regulations may be quite different if one considers the entry into the labour market, i.e. the years immediately after finishing education, or some subsequent periods. Since the initial phase of entering the labour market is the most unstable and insecure one, we prefer to examine employment security after individuals have been into the labour market for a reasonable period of time. Therefore, we focus our attention on the employment condition of individuals four-to-six years after they left education. In this phase, the entry effect of a strict regulation of permanent contracts should be overcome, and we can expect a high EPL-P to increase the probability of young individuals to have a secure job (remain in the same job from one year to the next). At the same time, a more stringent regulation on the use of temporary contracts (high EPL-T) should also increase the probability that individuals are hired with permanent contracts, and therefore increase their probability of being job-secure. However, if when the EP legislation for permanent contracts is stringent, young workers are trapped for a long time in temporary jobs, there

there are marked differences across European countries in both the speed of labour market entry and the individual trajectories (Scherer 2005; de Graaf-Zijl et al. 2011).

¹¹ Six months represent the reference period used in EU-SILC for defining the age at which individuals started their first regular job (a question that is designed to permit the calculation of the total potential time that the person could have spent in the labour force). Moreover, it is a reference length also for some labour market policies, such as the UK government's Youth Contract wage incentive, which was in place from 2012 to 2014, paying an incentive to firms that recruit long-term unemployed young people for at least 26 weeks. A maximum period of unemployment of three months is a reference period within the European Youth Guarantee, which requires Member States to provide unemployed people with a good-quality job or a training opportunity within four months.

¹² Both EPL-P and EPL-T range from 0 to 6, and are weighted averages of sub-indicators of employment regulation. The EPL-P indicator incorporates the following sub-indicators: i) Procedural inconveniences (notification procedures and delays involved before notice can start); ii) Notice periods and severance pay for no-fault individual dismissal (length of the notice period of dismissal and the amount of severance pay); iii) Difficulty of dismissal (definition of justified or unfair dismissal, length of trial period, compensation following unfair dismissal, and possibility of reinstatement following unfair dismissal). EPL-T incorporates the following aspects: i) Fixed-term contracts (valid cases for use of fixed-term contracts, maximum number of successive fixed-term contracts and maximum cumulated duration of successive fixed-term contracts); ii) Temporary work agency employment (TWA) (types of work for which TWA employment is legal, restrictions on the number of renewals of TWA assignment and maximum cumulated duration of TWA assignments). Detailed methodology is discussed in OECD (2013).

may also be a negative correlation between EPL-P and job security and a positive correlation between the latter and EPL-T.

Since the EPL effect can differ according to the level of expenditures on labour market policies, we control also for annual expenditures on active and passive policies per unemployed (Eurostat LMP database¹³). We do not express expenditures as a share of the GDP because this share would be too much influenced by the different ways in which European countries have been hit by the recent economic downturn. Since the correlation between the two policy variables is very high (see Appendix, fig. A.1 and A.2), we cannot control for both of them simultaneously; rather, we need to estimate different models. Furthermore, since we expect that these policies have different effects on various demographic groups, we interact them with educational and sex dummies.

3.2 Data and descriptive analysis

We use the 2009 to 2012 longitudinal waves of the European Union Statistics on Income and Living Conditions (EU-SILC), which cover the years from 2006 to 2012.¹⁴ The data make it possible to track individuals for a maximum of four interviews, but we restrict the analysis to individuals with at least three consecutive interviews in order to increase the sample size.¹⁵ Our analysis focuses on young individuals aged between 16 and 34, who left education three-to-five years before the first interview,¹⁶ and who have not been inactive during the entire period under consideration (less than 3% of our sample, mainly women). Because of data limitations, we are able to consider only the following 17 European countries: Austria (AT), Belgium (BE), Czech Republic (CZ), Denmark (DK), Estonia (EE), Greece (EL), Spain (ES), Finland (FI), Hungary (HU), Italy (IT), the Netherlands (NL), Poland (PL), Portugal (PT), Sweden (SE), Slovenia (SI), Slovakia (SK), and the United Kingdom (UK).¹⁷

As described above, we define as “job-secure” those individuals who: i) are employed both at the first and second interview (either as employees or self-employed workers; either on a full-time or part-time basis); ii) did not change job between the two interviews, or changed it voluntarily in order to take a better job, and the new job lasts for at least six months. We define as “employment-secure” those individuals who, during the two calendar years corresponding to the first two interviews, experienced only employment spells which lasted (each) at least six months, and

¹³ ALMPs include categories from 2 to 7 (training, job rotation and job sharing, employment incentives, supported employment and rehabilitation, direct job creation, start-up incentives) while PLMPs account for categories 8 and 9 (out-of-work income maintenance and support, early retirement). For details see Eurostat (2012).

¹⁴ With the revisions released in August 2013.

¹⁵ The reason why we need three complete interviews is explained in footnote 19. For individuals with four interviews, we keep the first three interviews, unless the first one is not complete. In this case we use the last three interviews.

¹⁶ In selecting the sample, we had to resort to data approximation/imputation because we did not have information on the year when the highest level of education was attained. Therefore, we used the official age at which each ISCED level is supposed to be completed, and we selected those individuals who, at the first interview, were older than this official age plus 3 but younger than this official age plus 5. The official age is taken from European Commission (2014). The difficulties faced by young entrants, qualified but lacking experience, should be overcome after a time span of around three years, with some variability depending on individual characteristics, labour market conditions and institutional settings. But this is not the case of a large share of youth (O’Reilly et al. 2015). Some young people, although they have appropriate educational qualifications and some labour market experience, may face persistent difficulties in accessing stable employment because they experience a series of short-term employment spells intermixed with periods of unemployment or inactivity.

¹⁷ IE is excluded because of the small sample size (less than 50 observations). BG, CY, LT, LV, MT, NO, RO are excluded because the policy variables that we use in the econometric analysis are not available for them.

unemployment/inactivity spells which lasted (each) at most 3 months.¹⁸ The shares of young people who enjoy job or employment security (for the sample including all countries and all waves) are reported in table 1. Note that, since the definition of job security relies on annual information, individuals who are classified as job-secure may not be necessarily also classified as employment-secure because the second interview may have taken place in the first quarter of the year and the individual may have subsequently experienced long unemployment spells.

Table 1. Descriptive statistics on job and employment security

	Job security (%)	Employment security (%)
All sample	65.68	67.97
Females	61.13	62.66
Males	70.05	73.08
Lower secondary education at most	40.30	41.36
Upper tertiary education at most	62.93	65.64
Tertiary education	76.27	78.24
Living independently	70.17	70.99
Living with parents	62.08	65.55

Source: Authors' own calculations based on EU-SILC panel data (2006-2012)

The first thing to note is that, overall, more than 30% of young people who participate in the labour market have an insecure employment condition about five years after having left education. Despite the less restrictive definition of employment security, the percentage of individuals with employment security is only slightly larger than the share of those with job security. There are clear gender differences in the attainment of both job and employment security, with females being clearly disadvantaged (their share is about 10 percentage points lower than that of males). And the gap seems to increase, although only slightly, when we move from job to employment security, suggesting that females who do not remain in the same job for two consecutive years are more likely to experience short employment spells and/or long unemployment ones.

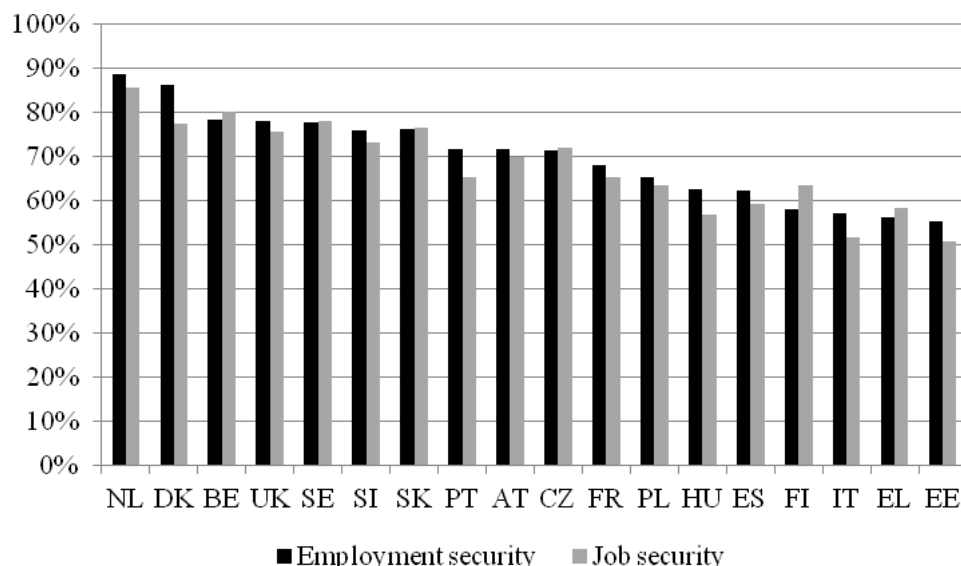
Education plays a crucial role in ensuring job and employment security: three out of four university graduates enjoy job and employment security, while only around 40% of individuals with lower secondary educations are in the same position. Becker et al. (2005) argue that higher youth insecurity is associated with a higher co-residence rate with parents. In line with this study, we also find that the percentage of young people enjoying job and employment security is lower among those who still live with the family of origin. A possible explanation is that young insecure people emancipate at later ages because of difficulties in accessing renting or mortgage borrowings (Cahuc, Kramarz 2004).

The degree of heterogeneity among the different countries with respect to both the shares of secure individuals and the gap between the two definitions is shown in figure 1. The Netherlands and Denmark present shares of employment security of about 85-90%, whereas all the other countries are below 80%. It is interesting to note that the ranking of countries does not correspond to the usual grouping: the security share of Finland is similar to that of Italy and Greece, whereas the security share of Portugal is similar to that of Austria, and the security share of Belgium is similar

¹⁸ We need three complete interviews in order to have an overlap in the time-period captured by our definition of job security (which is based on the job reported in the first two interviews), and of employment security (which is based on the monthly information relative to the same calendar period of the first two interviews, but which are reported by individuals in their second and third interview).

to that of Sweden and the UK. The largest gaps between employment-secure and job-secure shares are found in Denmark, Portugal and Hungary, suggesting that in these countries it is more common to move from one job to another, but with short search periods and sufficiently long employment spells. In Finland, the share of employment-secure is lower than that of job-secure, indicating that in this country, young people are more likely to exit from employment even if they have been in the same job for two consecutive interviews.

Figure 1. Share of young individuals enjoying job and employment security by country



Source: Authors' own calculations based on EU-SILC panel data (2006-2012).

Table 2. OECD EPL indicators, ALMPs and PLMPs by country

Country	EPL-P	EPL-T	ALMPs	PLMPs
AT	2.37	1.31	7.85	19.14
BE	1.81	2.38	4.40	19.40
CZ	3.17	1.13	0.52	1.02
DK	2.13	1.38	20.57	31.49
EE	2.74	1.88	0.16	0.81
EL	2.80	2.75	0.71	2.20
ES	2.36	3.12	2.89	7.68
FI	2.17	1.56	6.16	14.18
FR	2.45	3.63	5.42	10.88
HU	2.00	1.13	0.81	1.19
IT	2.76	2.00	3.56	7.46
NL	2.87	0.94	14.86	29.90
PL	2.23	1.75	0.78	0.85
PT	4.42	2.31	1.69	4.28
SE	2.61	1.32	8.60	9.09
SI	2.65	1.81	0.93	2.27
SK	2.22	0.83	0.22	0.59
UK	1.20	0.38	0.48	2.25

Source: Figures represent average values of the indicators in the period 2006-2010. ALMP and PLMP are expressed in thousands of Euros per unemployed.

The heterogeneity in the security-shares is accompanied by a high degree of heterogeneity in terms of EPL indicators and LM policy expenditures (see table 2). The correlation between the two EPL indicators and the two types of labour market policy expenditure are shown in the Appendix (figs. A.1-A.3). The UK is characterized by unrestrictive regulations on the use of fixed-term contracts and weak protection against individual dismissals. Nordic countries, together with AT, NL, CZ, HU

and SK, have loose regulations on the use of temporary contracts and weak to moderate protection against individual dismissals, with a relatively higher value of EPL-P in CZ and NL. Overall, the correlation between these two indicators is positive but weak (see Appendix, fig. A.3). Indeed, FR, ES and EL are the countries with the most restrictive regulations for temporary contracts, but their protection for permanent contracts is within or below the average. PT is the country with the highest level of EPL-P, but its level of EPL-T is close to the average. Nordic countries, together with AT, BE, FR and NL, display the highest expenditures on both ALMPs and PLMPs (although with some degree of heterogeneity with respect to their relative level). The lowest levels of expenditure are observed in Eastern countries, EL and the UK. As shown in the Appendix (figs. A1 and A2), the correlation between these two types of expenditure is positive and much higher than the one observed for EPL: in general, those countries with generous expenditures on PLMPs also have high expenditures on ALMPs.

3.3 Empirical findings

We estimate two probit models for job security and employment security, including individual and institutional characteristics as explanatory variables. In particular, individual characteristics include: sex, household and living arrangements, educational level, age, potential experience (measured as the difference between age and the age at which the individual began his/her first regular job). Institutional characteristics encompass the interactions of the two EPL indicators, and the LM expenditures per unemployed with education and gender. Further, we control for country and year fixed effects.

The estimation results are shown in table 3. The empirical findings are in line with what we observed in the descriptive analysis. Females are less likely than males to experience both job and employment security. This is even more so if they live in a couple, whereas living in a couple has a positive and significant effect for males. Young people still cohabiting with their family of origin are less likely to experience employment security. As expected, higher levels of education are associated with a higher probability of achieving job and employment security. Potential experience increases also the probability of achieving security.

As regards the mix of EPL and labour market policy expenditures, some interesting results emerge. For males, whatever the educational level, an increase in EPL-T is associated with a higher probability of employment security, with no significant effects on job security. This evidence suggests that an increase in the strictness of the regulation on the use of fixed-term contracts raises the likelihood of staying almost continuously in the labour market, although not with the same employer. In other words, a more stringent regulation on the use of temporary contracts is likely to reduce the possibility of having many short employment spells, enabling individuals to stay longer in employment, although not in the same job. For females, instead, a higher EPL-T is associated with a higher probability of achieving both employment and job security. This result may be related to the gender segmentation in employment contracts, i.e. to the fact that women are overrepresented in fixed-term contracts (Petrongolo 2004), which, however, are sufficiently long for them to remain in the same job for two consecutive years. Thus, a more stringent regulation on the use of fixed-term contracts improves female positions on the labour market.

The effect of the EPL regarding permanent contracts is limited to highly educated individuals. For young people with low and medium education, a higher level of EPL-P appears to be associated with a higher probability of being job-secure and a lower probability of being employment-secure,

but the result is not significant. For young people with tertiary education, instead, there is a significant negative association between EPL-P and employment security (and no effects at all on job security). In other words, where the regulation of individual dismissals is more restrictive, the relative advantage of highly educated workers (compared to individuals with medium or low education) in terms of employment security is reduced. A possible explanation is that the higher is the individual wage, the higher is the expected (discounted) total labour cost that firms face when firing the worker (i.e. not paying his/her wage any longer) is more difficult. In addition, it may be easier to hire higher educated individuals with short fixed-term contracts given their type of skills.

As expected, an increase in ALMP expenditures increases the likelihood of both job and employment security for the most disadvantage groups, i.e., low educated and female workers. In the Appendix (tab. A1) we show that we obtain comparable results when controlling for PLMPs instead of ALMPs. However, given the high correlation between ALMPs and PLMPs, we cannot disentangle the extent to which the observed effects of labour market policies on job and employment security are due to the active or the passive ones.

Table 3. Estimation results

	Job security		Employment security	
	Coef.	Std. Err.	Coef.	Std. Err.
Female	-0.31	0.15**	-0.45	0.16***
Female living with partner	-0.39	0.05***	-0.58	0.06***
Male living with partner	0.13	0.06**	0.17	0.07***
Cohabiting with parents	-0.06	0.05	-0.09	0.05*
Medium education	0.69	0.26***	0.94	0.26***
High education	1.54	0.27***	2.03	0.28***
Age	0.03	0.01**	0.01	0.01
Potential experience	0.05	0.01***	0.05	0.01***
EPL-T * Low education	0.13	0.13	0.30	0.13**
EPL-T * Medium education	0.08	0.12	0.21	0.12*
EPL-T * High education	0.08	0.12	0.23	0.12*
EPL-T * Female	0.14	0.04***	0.16	0.04***
EPL-P * Low education	0.25	0.27	-0.38	0.25
EPL-P * Medium education	0.25	0.27	-0.37	0.26
EPL-P * High education	0.03	0.28	-0.66	0.26***
EPL-P * Female	-0.09	0.06	-0.04	0.06
ALMPs * Low education	0.07	0.03**	0.07	0.03**
ALMPs * Medium education	0.00	0.02	-0.01	0.03
ALMPs * High education	0.00	0.03	-0.02	0.03
ALMPs * Female	0.03	0.01***	0.03	0.01***

Notes: Low education groups include ISCED levels from 0 to 2 - lower secondary education at most (reference category); Medium education groups ISCED levels 3 and 4 - upper secondary education at most; High education groups ISCED levels 5 and 6 - tertiary education. Country and year fixed effects are controlled for. Robust standard errors in italics. ***p<0.01, **p<0.05, *p<0.10.

4. Conclusions

In the long, intense and heated debate on labour market institutions, the balance between flexibility and security has been a controversial policy issue. The so called “flexicurity” approach was based on less stringent regulation of permanent and temporary contracts (i.e. lower EPL), higher expenditures on active labour market policies (ALMPs) to ensure employability, and well-designed

unemployment benefits to ensure income security, while reducing the risk of benefit dependency. The actual implementation of these recommendations to improve the labour market's institutional settings has been problematic: in most countries, the labour market reforms have increased flexibility at the margin, with widely acknowledged adverse effects on youth.

The aim of this study has been to analyse the effects of employment protection legislation (for regular and temporary workers) and labour market policy expenditures on objective youth employment security. To this end, it has adopted a dynamic perspective based on the analysis of individual trajectories. Since a higher degree of flexibility of the labour market implies a higher level of mobility across jobs, we have proposed a new operational definition of individual employment security based on monthly employment status trajectories. We have also adopted a dynamic definition of "job security" by considering, not the type of contract but the actual duration of the job. Using EU-SILC longitudinal data on employment trajectories of young people about five years after they left education, we have examined whether the mix of EPL and labour market policies (active and passive) affect individual employment security, once other macro-level variables and individual characteristics are controlled for.

The empirical results suggest that, overall, five years after having left education, more than 30% of young people who participate in the labour market still have an insecure employment condition. However, the heterogeneity across European countries is very large: this share varies from about 15% in the Netherlands and Denmark to more than 40% in Finland, Italy, Greece and Estonia. Females and low educated workers are clearly disadvantaged in terms of both job and employment security. However, a stricter regulation of temporary contracts and higher labour market expenditures significantly improve their security prospects. Regulation of permanent contracts appears to have no effect for these groups of people. Instead, a more stringent regulation on individual dismissals is negatively associated with employment security for highly educated young people. In terms of policy implications, these results suggest that more stringent norms on the use of temporary contracts, especially regarding the length of contracts, should be encouraged, given their effectiveness in enhancing the security prospects of more disadvantaged individuals.

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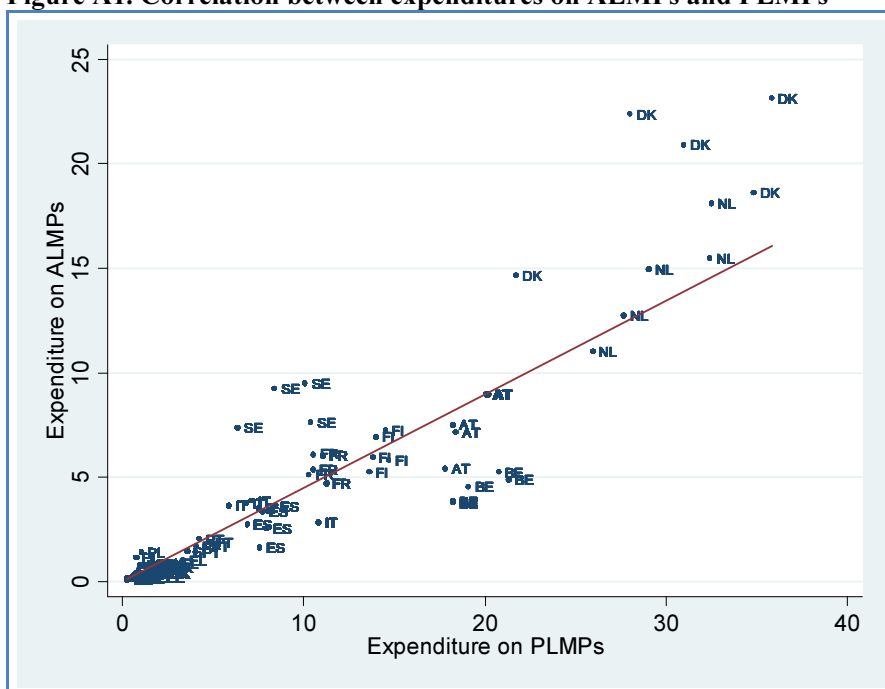
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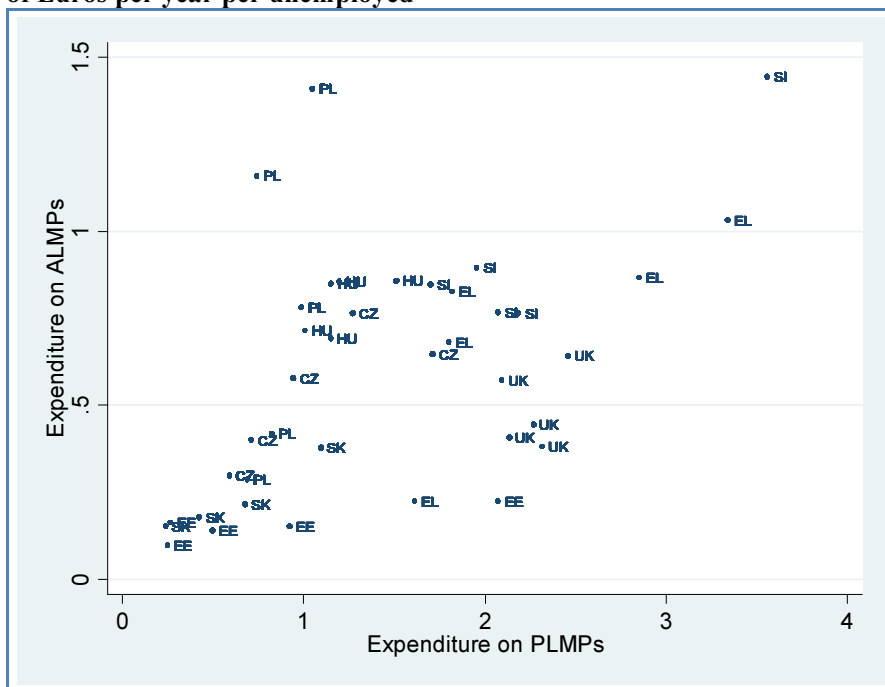
Appendix

Figure A1. Correlation between expenditures on ALMPs and PLMPs



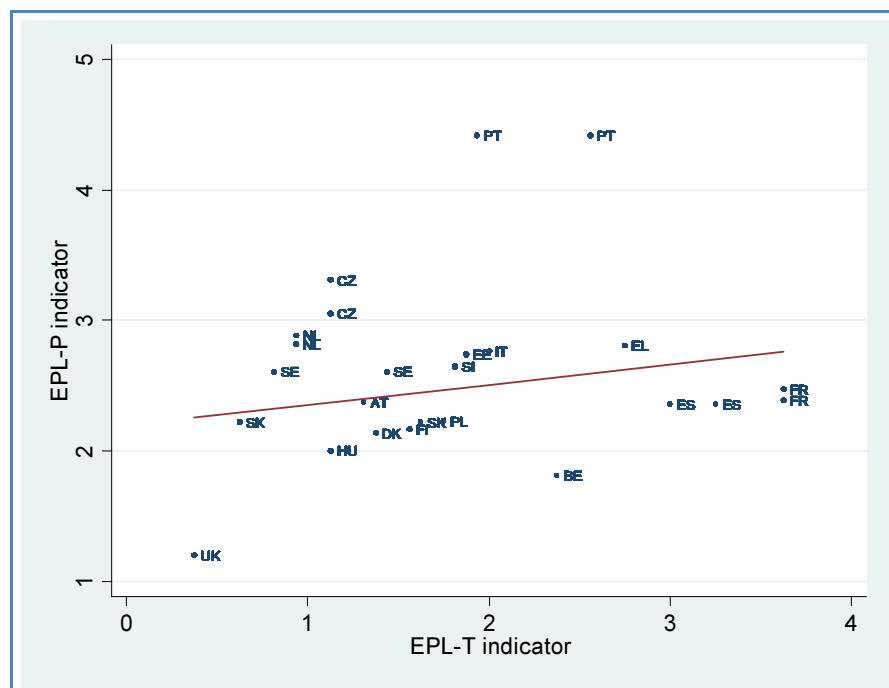
Source: Eurostat. Each dot refers to country values of ALMPs and PLMPs for the years from 2007 to 2011. Slope:0.45 statistically significant at 1% level.

Figure A2. Correlation between expenditures on ALMPs and PLMPs for PLMPs values lower than 4 thousand of Euros per year per unemployed



Source: Eurostat. Each dot refers to country values of ALMPs and PLMPs for the years from 2007 to 2011.

Figure A3. Correlation between EPL-P and EPL-T indicators



Source: OECD. Each dot refers to country values of EPL-P and EPL-T indicators for the years from 2007 to 2011. Slope:0.16 statistically significant at 1% level.

Table A1. Estimation results - EPL-P, EPL-T and PLMPs

	Job security		Employment security	
	Coef.	Std. Err.	Coef.	Std. Err.
Female	-0.33	0.15**	-0.49	0.16***
Female living with partner	-0.39	0.05***	-0.57	0.06***
Male living with partner	0.13	0.06*	0.18	0.07***
Cohabiting with parents	-0.06	0.05	-0.09	0.05*
Medium education	0.90	0.26***	1.15	0.27***
High education	1.74	0.28***	2.25	0.29***
Age	0.03	0.01**	0.01	0.01
Potential experience	0.05	0.01***	0.05	0.01***
EPL-T * Low education	0.12	0.13	0.28	0.13**
EPL-T * Medium education	0.09	0.12	0.21	0.12*
EPL-T * High education	0.09	0.12	0.24	0.12**
EPL-T * Female	0.12	0.04***	0.14	0.04***
EPL-P * Low education	0.22	0.27	-0.44	0.26*
EPL-P * Medium education	0.17	0.28	-0.47	0.26*
EPL-P * High education	-0.05	0.28	-0.76	0.27***
EPL-P * Female	-0.07	0.06	-0.02	0.06
PLMPs * Low education	0.04	0.02**	0.05	0.02***
PLMPs * Medium education	0.00	0.02	0.00	0.02
PLMPs* High education	0.00	0.02	0.00	0.02
PLMPs * Female	0.01	0.00***	0.01	0.00***

Notes: Low education groups include ISCED levels from 0 to 2 - lower secondary education at most (reference category); Medium education groups ISCED levels 3 and 4 - upper secondary education at most; High education groups ISCED levels 5 and 6 - tertiary education. Country and year fixed effects are controlled for. Robust standard errors in italics.***p<0.01,**p<0.05,*p<0.10.