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Youth employment security and labour market institutions: A dynamic perspective

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Abstract. *The shift of policy focus from job security to employment security calls for a more dynamic measurement of young people's labour market performance. This article uses data on monthly employment status trajectories and job duration to investigate young Europeans' employment security around five years after they finished education. The authors show that almost 40 per cent of "job-insecure" individuals actually enjoy employment security – i.e. they are able to re-enter paid employment rapidly after losing their job. The article highlights the need for policy measures to enhance employment security, and the positive role that stricter temporary employment protection, and ALMP expenditure, could play.*

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The debate that began in the early 1990s on the role played by labour market institutions in the poor performance of the European economy considered flexibility and security to be diametrically opposed. This apparent trade-off led to the need to increase labour market flexibility by relaxing employment protection legislation (EPL), i.e. with less stringent hiring and firing rules. By the mid–2000s, however, increasing concern for the growing insecurity associated with the deregulation of the labour market led the European Commission to recommend a mix of policies that would increase labour market flexibility, i.e. reduce "job security", while ensuring employment security, i.e. improving people's employability by providing better training, public employment services, and adequate income support in the event of job loss. This "flexicurity" approach was based on less stringent permanent and temporary EPL, accompanied by higher expenditure on active labour market policies (ALMPs) in order to improve employability, together with well-designed unemployment benefits to ensure income security but reduce the risk of benefit dependency.

The adoption of this approach by policy-makers has important consequencesfor the concepts and measures used by researchers to assess labourmarket performance. First, analysis of individuals' security should clearlydistinguish between employment security and economic (i.e. income) security. Indeed, these two dimensions are covered by different types of policies: ALMPs are designed to enhance the former, while passive labour market policies(PLMPs) are designed to ensure the latter. Second, researchers shouldrecognize that an individual's employment security is not the same as his orher job security. Indeed, labour market flexibility implies that workers canmove quite frequently across jobs, with possible unemployment spells in between. One should therefore adopt a definition

of employment security thatreflects a situation in which, over a long enough time period, individuals aremostly employed, with or without short unemployment spells between onejob and the next.

In most European countries, labour market reforms involved the deregulationof temporary employment, while retaining stringent protection forregular workers. For this reason, many empirical studies concerned with thesecurity aspects of individuals' employment focused on the type of contractthey had. In particular, the transition from fixed-term to open-ended contractswas studied, with the implicit assumption that individuals with fixed-term contractsare more "employment-insecure" than individuals with open-ended contracts (D'Addio and Rosholm, 2005; Ichino, Mealli and Nannicini, 2008; Berton,Devicienti and Pacelli, 2011). However, there is considerable variation in thesecurity – and other working conditions – enjoyed by "permanent" and temporaryemployees across countries (Burchell, 2002; Paugam and Zhou, 2007; European Commission, 2003; Booth, Francesconi and Frank, 2002). For example, the lack of protection for permanent workers in liberal employmentregimes is seen as a major reason for the low rates of temporary employmentin these countries. Therefore, even when examining job security, in a crosscountryanalysis one should adopt a definition that is not based on contracttype, but on actual job duration.

In this article, we propose a new operational definition of individual "employmentsecurity", based on monthly employment status trajectories, specifyingthe conditions under which these trajectories can be considered sufficiently "secure". We also adopt a dynamic definition of "job security" by looking atwhether individuals remain in the same job over a specified period, ratherthan at the type of contract they have. These two definitions are used to analysethe early labour market experiences of young Europeans. In particular, we focus on the job security and employment security of young people aroundfive years after finishing their education (secondary school or higher education),by which time the main problems encountered entering the labour marketshould have been overcome. Indeed, Eurostat statistics show that, three ormore years following completion of the highest level of education, three out offour young Europeans (aged 15–34) are employed, and that similar employmentrates are recorded after five years or more (Eurostat, 2015).

Our analysis has two main objectives. First, we want to quantify the shareof young people whose employment condition can be considered "secure" afterapproximately five years of (potential) labour force participation, and how thisshare changes according to the definition of security that we adopt. Second, we want to highlight whether, on average, EPL and expenditure on ALMPs/PLMPs influence the probability of being job-secure or employment-secure, once other macro-level variables and individual characteristics are controlledfor. To this end, we consider separately the two EPL components relatingto permanent and temporary contracts – EPLR and EPLT, respectively. TheEPLR indicator captures the stringency of regulations on the firing of "regular" or permanent employees, while the EPLT indicator captures the stringencyof regulations on the hiring of temporary workers (e.g. when temporarycontracts can be used, how often they can be renewed and their maximumcumulative duration).

The remainder of the article is organized into four sections. The first reviewsthe relevant literature. The second section sets out the definitions used, describes the data and provides a descriptive analysis of young Europeans'job security and employment security. The third describes the econometricmodel used to estimate the main determinants of job security and employmentsecurity and discusses the empirical findings, and the fourth and finalsection concludes.

Literature review

The debate on labour market institutions and flexibility "at the margin"

In the early 1990s, the persistently high unemployment levels in Europe wereattributed predominantly to labour market rigidities, and in particular to thestringency of EPL. The resulting recommendation was to deregulate the labourmarket in order to make it more flexible, and make the welfare state less generous,in order to reduce the number of unemployed (Lindbeck and Snower,1989).[1] As policy-makers started to implement labour market reforms to enhanceflexibility, the debate quickly came to focus on the trade-off betweenflexibility and growth, on the one hand, and the increased inequality of incomeand labour market segmentation, on the other (Simonazzi and Villa, 1999). Moreover, the underlying assumption that flexibility improves economic performancewas called into question (Solow, 1998; Esping-Andersen and Regini, 2000; Freeman, 2005; Kahn, 2010). The growing concern about the "side effects" of labour market flexibility led to some reformulations of the European Commission'srecommendations, 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).[2]

There is no universally agreed definition of flexicurity in the literature (Viebrock and Clasen, 2009; Mailand, 2010; Heyes, 2011), although there isbroad agreement that it involves a combination of "flexible" contracts andadequate support for the unemployed – i.e. less rigid EPL combined withgreater expenditure on unemployment benefits and ALMPs. The EuropeanCommission (2007b) has defined flexicurity as an "integrated strategy to enhance, at the same time, flexibility and security in the labour market". Furthermore, flexicurity was identified as a combination of measures consisting offour components: effective ALMPs, social security systems, flexible contractualarrangements, and comprehensive lifelong learning (European EmploymentObservatory, 2007). Unfortunately, the absence of a universally agreed-upondefinition of flexicurity paved the way for ambiguous implementation of thispolicy approach, with emphasis being placed on one component or another, according to political convenience and the availability of financial resources, ignoring the importance of integrating the different types of policies. In somecases, flexibility and security have been developed separately, not as the resultof a deliberate "synchronic" strategy (Wilthagen and Tros, 2004). More frequently, strong emphasis has been placed on external numerical flexibility andemployability (equipping individuals with the appropriate skills), as opposedto job security through stringent EPL and income security through overlygenerous unemployment benefits (Tangian, 2007; Burroni and Keune, 2011).

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[1] The debate on "Eurosclerosis" culminated with publication of *The Jobs Study* (OECD,1994) and the launch of the European Employment Strategy in 1997. Notwithstanding the arrayof issues considered in these two employment strategies, and the differences in their policy recommendations, both the academic and the political debate focused mainly on labour market flexibility ("adaptability" in the jargon of the European Commission).

[2] The idea of flexicurity originates in developments and debates in Denmark and the Netherlands (Wilthagen and Tros, 2004; Bredgaard, Larsen and Madsen, 2005; Jørgensen and Madsen,2007; Tangian, 2007 and 2011; Viebrock and Clasen, 2009). These two countries were portrayed ashaving successfully achieved new combinations of increased labour market flexibility while maintainingsome degree of social protection (OECD, 2004, p. 97; European Commission, 2006a). In2006 and 2007, the *Employment in Europe* report addressed the issues of flexibility and security inthe EU labour markets in detail, identifying different flexicurity pathways across Member States(European Commission, 2006b and 2007a). These studies constituted the basis for a communicationfrom the European Commission on the subject of flexicurity, which was later published as abrochure (idem, 2007b).

In particular, several EU Member States deregulated their national labourmarkets, without combining the resulting increased flexibility with thepromotion of both employment security (via the strengthening of ALMPs) andincome security (via well designed unemployment benefits). Moreover, theyincreased flexibility "at the margin" (European Commission, 2010, p. 121), i.e.by relaxing EPL for temporary contracts (fixed-term and temporary agencywork) and other non-standard forms of employment (part-time, quasi-selfemployment), while keeping stringent rules for regular workers – i.e. thosewith open-ended employment contracts – largely unchanged. This process hasalso been referred to as "partial and targeted deregulation" (Esping-Andersen and Regini, 2000) and "two-tier reforms" (Boeri and Garibaldi, 2007). This resultedin the development of segmented markets in which the burden of flexibilityfell on the most vulnerable individuals, such as young workers, women, and those with low levels of education (O'Reilly et al., 2015). In the case ofyoung people, these reforms produced a "vicious" flexibility–security nexus (Leschke and Finn, 2016): greater contractual flexibility means more frequentspells of unemployment and reduced access to unemployment benefits, sincethese benefits require the recipient to have been in employment for a certainamount of time.

Possible consequences of EPLR and EPLT for individual employment security

For individual workers, the mix of policies on which flexicurity is based shouldprovide what we define as "employment security" – i.e. a situation in which, over a long enough period, individuals are mostly employed, with or withoutshort unemployment spells between one job and the next. While flexible contractualarrangements increase job volatility – and thus job insecurity – forworkers, relaxing the rules on firms hiring workers, together with effectiveALMPs and comprehensive lifelong learning, should facilitate the re-entryof workers into employment (i.e. in a different job). Individuals can thereforebe employment-secure either because they have a secure job, or becausedespite experiencing a certain level of job insecurity, overall personal and labour market conditions allow them to find a new job after a sufficiently shortperiod of time.

The empirical literature on the consequences of labour market deregulation focused separately on two components of individual employment security:(1) ease with which a person can find a new job, and (2) job security. Onestream of literature examined the effects of EPL on aggregate indicators, measuringthe ease with which a person enters or re-enters employment: transitionto first job, exit rates from unemployment, and hiring rates.3 A second streamof literature focused on job security, analysing the use of temporary contracts (associated with less job security) and the transition towards permanent contracts (associated with greater job security).

The first stream of literature included studies that considered the correlationbetween the ease of moving between jobs and the overall EPL indicator.[3] Generally, results provide evidence of a negative relationship between EPLand: (1) the inflow rate into unemployment (more job security for

[3] A much larger number of studies examined the effect of EPL on static aggregate indicators, such as employment and unemployment rates, with the aim of assessing whether EPL has, overall, a positive or negative effect on aggregate occupational levels. Some studies identified anegative effect of the overall indicator of EPL on the employment rate and/or a positive effect onthe unemployment rate (e.g. Lazear, 1990; Nickell and Layard, 1999; Heckman and Pagés, 2000; Garibaldi and Mauro, 2002; Di Tella and MacCulloch, 2005). Other studies found weaker evidence (Addison and Teixeira, 2003; Autor, Donohue and Schwab, 2006). Some researchers showed thatstrict EPL generally has little or no effect on the employment rates of prime-age men but tends to decrease the employment rates of both young people and women (Heckman and Pagés, 2000; Algan and Cahuc, 2006; Kahn, 2007).

insiders);(2) the rate of exit from unemployment; (3) the hiring rate (more difficultyfinding new jobs); and (4) the speed of entry or re-entry into employment(Gómez-Salvador, Messina and Vallanti, 2004; OECD, 2004; Scherer, 2005;Wolbers, 2007; Kugler and Pica, 2008). These results suggest that EPL increasesemployment security for insiders (by ensuring job security and continuouslabour market careers), but decreases employment security for outsiders (whoneed to go through a long period of unemployment before finding a job).

Another group of studies within this first stream of literature distinguishesbetween EPLR and EPLT, to test the hypothesis that deregulatingtemporary contracts (i.e. less stringent EPLT) helps outsiders enter employment.Indeed, examining school-to-work transitions in Europe, Mills and Präg(2014) highlight the fact that higher levels of EPL restrictions (for either temporaryor permanent contracts) result in a significantly slower transition tofirst job (i.e. more stringent EPL increases the duration of unemployment fornew entrants and makes it more difficult to find a job). However, Cahuc andPostel-Vinay (2002) and Blanchard and Landier (2002) show that reforms thatrelaxed EPLT, while keeping stringent levels of EPLR, did not reduce unemploymentduration for young people (but increased labour turnover, creating more job insecurity). Similarly, Noelke (2016) finds that, where there is a highlevel of EPLR, deregulating temporary contracts actually increased youth unemploymentrates. These results suggest that less stringent EPLT might facilitatethe entry of first-time jobseekers into employment, but might also increasejob insecurity for those who entered through this channel. In general, resultsdiffer according to the level of EPLR.

The second stream of literature focuses on job security, and highlightsthe fact that temporary contracts are often used as a cheaper alternative topermanent contracts, thus reducing individual job security without any aggregategain in terms of employment (Scherer, 2004; Güell and Petrongolo, 2007; Gash, 2008; Kahn, 2010; Baranowska and Gebel, 2010; Berton, Devicienti andPacelli, 2011). In some countries – such as Austria, Germany, Sweden, the Netherlandsand the United Kingdom – temporary contracts can serve as a steppingstone to more stable and better-paid jobs (European Commission, 2010,pp. 140–142; de Graaf-Zijl, van den Berg and Heyma, 2011), in other countries– such as Spain, Italy and Greece, but also France and Poland – temporary jobs are seen as traps, from which there is little chance of escaping (D'Addio and Rosholm, 2005; Ichino, Mealli and Nannicini, 2008; Berloffa, Modena and Villa, 2014; Givord and Wilner, 2015). These results suggest that, in some countries, the job insecurity associated with the use of temporary contracts is limitedto the first few years of labour market entry, after which the individualenjoys the job security associated with permanent contracts. In other countries, the condition of being "job-insecure" lasts, instead, for a much longer period.

It should be noted, however, that in almost all European countries thereare legal restrictions regarding the length of temporary work (maximum number of contract renewals and/or extensions, and the maximum cumulative durationof successive temporary contracts). Generally, the legal limit is aroundthree years, or less. Empirical studies find evidence that the conversion to open-ended contracts happens when there is no legal way to retain the workeron a temporary contract (Güell and Petrongolo, 2007, for Spain; Berton, Devicientiand Pacelli, 2011, for Italy) or before the binding legal limit on length of contract (de Graaf-Zijl, van den Berg and Heyma, 2011, for the Netherlands).Therefore, the more stringent the EPLT, the slower the transition to the first job, but

also the faster the transition to a more secure job for thosewho entered employment with a temporary contract.[4]

Unfortunately, all these studies are not very useful when it comes toassessing individual employment security because they do not combine informationon job security with information on the length of individual unemploymentspells between different jobs. Since the overall debate summarizedin the previous section involves a shift in emphasis from "job security" (throughhigh levels of EPL) to "employment security", and since moving between jobsis increasingly frequent, it is useful to consider using employment status trajectoriesto evaluate youth employment security, and to specify the conditionsunder which these trajectories can be considered sufficiently "secure".

Job security and employment security: definitions and descriptive analysis

We now turn to an individual rather than an institutional approach to job security and employment security. In particular, we develop a new operational definition of individual employment security based on monthly employment status trajectories (comparing this with a more familiar definition of job security based on contract type) and a "dynamic" definition of job security based on job duration.

Definitions

As highlighted in the previous section, the literature on job security focuses mainly on the type of contract. However, cross-country comparison of job insecurity according to contract type is problematic. Many studies use the percentage of temporary workers as a share of total employment as an indicator of job insecurity; however, there is still considerable variation among countries in the level of job protection, and other working conditions, enjoyed by permanent and temporary employees (Booth, Francesconi and Frank, 2002; Burchell, 2002; European Commission, 2003; Paugam and Zhou, 2007). Furthermore, self-employed individuals are generally excluded from this type of analysis, but the share of these workers in many countries is not negligible. We therefore propose to use a definition of job security that is not based on contract type, but on actual job duration. In particular, given the features of the data used, 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 take up a better job.

This definition of job security is a first step in moving from a contractbased approach to a broader definition of security. However, the increasing frequency of job changes, and the concern of policy-makers to combine flexibility and security, require the object of analysis to be changed from a single job to an entire employment status trajectory. Previous studies have used transition probabilities across employment statuses (employment, unemployment and inactivity), or between different kinds of employment (e.g. part-time/fulltime; temporary/regular contracts; low pay/high pay; low quality/high quality) as proxies for employment stability (Bertola, Boeri and Cazes, 1999; Auer and Cazes, 2003). However, considering only year-to-year changes may fail to distinguish between completely different situations in terms of individual insecurity: individuals who keep the same status from one year to the next could have experienced various short unemployment spells

[4] Marinescu (2009) also finds that a shorter trial period for new hires leads to more selective recruitment practices and a lower probability of being laid off at the end of the trial period. In other words, more restrictive rules for firms lead to better selection and more job security for insiders (but probably longer unemployment periods for outsiders).

between the two survey interviews. Similarly, individuals who changed status may have remained employed for many months. In this article, we therefore prefer to look at monthly employment status trajectories over a certain period.[5]

While the overall length of the trajectories obtained depends mainly on data availability, the conditions under which the trajectory can be considered as "secure" depend on the approach taken regarding the minimum duration of employment spells and the maximum duration of unemployment between one job and the next. We define as "employment-secure" those individuals whose employment status trajectory encompasses employment spells lasting at least six months each, and unemployment spells lasting at most three months each. The appropriate length of spells of employment and unemployment that identifies a trajectory as "secure" is discretionary and open to discussion. We have chosen six months for spells of employment because this reference period is used in both surveys and policies. For example, the European Union Statistics on Income and Living Conditions (EU-SILC) data set refers explicitly to a minimum length of six months when defining individuals' first regular job.[6] Similarly, the United Kingdom's "Youth Contract" wage incentive scheme, which was in place from 2012 to 2014, paid an incentive to firms that recruited long-term unemployed young people for at least 26 weeks. For unemployment, a maximum period of three months is in line with the European Union's "Youth Guarantee", according to which EU Member States undertake to provide unemployed people with a good-quality job or a training opportunity within four months.

Data and descriptive analysis

We use the 2009–12 longitudinal waves of the EU-SILC data set. While it is possible to track individuals for a maximum of four interviews, we restrict analysis to individuals with at least three consecutive interviews in order to increase the sample size.[7] Our analysis focuses on young people aged 16–34, who finished their education three to five years before the first interview,[8] and were not inactive during the entire period under consideration (this leaves out less than 3 per cent of our sample, mainly women). We evaluate young people's job security and employment security at least three years after they finished their education, because at that point their labour market position appears to be more stable. Indeed, according to Eurostat (2015), three out of four young Europeans (aged 15–34) are employed three or more years after completion of their education, and similar employment rates are recorded after five or more years. Because of data limitations, we are able to consider only the following 18 European countries: Austria (AT), Belgium (BE), Czech Republic (CZ), Denmark (DK), Estonia (EE), Greece (EL), Spain (ES), Finland (FI), France (FR), Hungary (HU), Italy (IT),

[5] Other studies have considered the employment trajectories of young people entering the labour market, although not with the explicit aim of evaluating security (Brzinsky-Fay, 2007; Quintini and Manfredi, 2009). These and other studies show that there are marked differences across European countries concerning both the speed of labour market entry and individual trajectories (Scherer, 2001).

[6] The actual question individuals are asked is the age at which they started their "first regular job", which is designed to enable the total potential time they could have spent in the labour force to be calculated.

[7] The reason we need three complete interviews is explained in footnote 11. For individuals with four interviews, we use the first three interviews, unless the first one is not complete, in which case we use the last three interviews.

[8] 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 level defined by the International Standard Classification of Education is supposed to be completed, and we selected those individuals who, at the first interview, were older than this official age + three years, but younger than this official age + five years. The official age is taken from European Commission (2014).

the Netherlands (NL), Poland (PL), Portugal (PT), Sweden (SE), Slovenia (SI), Slovakia (SK), and the United Kingdom (UK).[9]

We start our analysis by comparing the share of young people classified as "job-secure" according to contract type (they are considered to be job-secure if they have a permanent contract and job-insecure if they have a temporary contract), and according to our definition based on job duration.[10] It will be recalled that under this definition, job-secure individuals are those who: (i) report as employed at both the first and second EU-SILC interview (either as employees or self-employed workers, either full-time or part-time) and (ii) did not change job between the two interviews, or did so voluntarily in order to take up a better job, lasting for at least six months. Looking at table 1, we see that, first, the contract-based definition of job security excludes from the analysis a substantial number of employed young people (866 – i.e. around 13 per cent of employed individuals), either because they are self-employed (58 per cent), or because they do not report their contract type (42 per cent). Second, among employees, the share of job-secure young people is much smaller if we consider the type of contract (71 per cent, compared to 84 per cent according to our definition). The reason for this is that having a temporary contract might be associated with a sufficiently stable employment condition. Indeed, around 72 per cent of individuals with a temporary contract are classified as job-secure according to our definition, mainly because their contract is renewed over time (63 per cent), or because it is converted into an open-ended one (31 per cent). Third, roughly 11 per cent of individuals with a permanent contract are job-insecure according to our definition. Almost 70 per cent of them actually lose their job or switch to a temporary contract from one year to the next.

Table 1. Classification according to a contract-based definition of job security (permanent or temporary contract) and a definition based on job duration[a] (young Europeans aged 16–34, around five years after finishing education)

	Job secure (employees with a permanent contract)	Job insecure (employees with a temporary contract)	*Total employees*	Self-employed	Missing information	Unemployed or inactive[(b)]	**Total**
Job secure[(a)]	3534	1186	*4720*	439	322	0	**5481**
Job insecure[(a)] but employed in at least 1 interview	447	437	*884*	64	41	621	**1610**
Job insecure[(c)] and never employed	0	0	*0*	0	0	995	**995**
Total	**3981**	**1623**	***5604***	**503**	**363**	**1616**	**8086**

Notes: [a] Job-secure individuals: (i) report as employed in both the first and second interview; (ii) did not change job between the two interviews, or changed it voluntarily in order to take a better job, which lasts for at least six months. [b] Individuals who report as inactive in both the first and second interview are not included. Young people who return to education (about 3 per cent of our sample) are also excluded. [c] Job-insecure individuals fail to meet one, or both, of the requirements for job-secure individuals.
Source: Authors' own calculations, based on EU-SILC panel data (2006–2012).

[9] Ireland, Iceland, Luxembourg and Norway are excluded because of the small sample size (less than 100 observations). Bulgaria, Cyprus, Lithuania, Latvia, Malta and Romania are excluded because the policy variables that we use in the econometric analysis are not available for them.

[10] In the descriptive statistics, we exclude young people who return to education for at least six consecutive months. They represent 3 per cent of our sample.

The second step is to compare the previous definitions of job security with our definition of employment security based on employment status trajectory. It will be recalled that we define as "employment-secure" those individuals who, during the two calendar years in which the first two interviews were carried out, experienced only spells of employment lasting at least six months each, and spells of unemployment/inactivity lasting at most three months each.[11] Table 2 reports the number of young people who are job-secure in that they have been in their job for more than two consecutive years, and those who are employment-secure according to their monthly employment status trajectory. When looking at the whole sample (8,086 individuals), there are slightly more employment-secure (5,723) than job-secure (5,481) young people, i.e. 71 and 68 per cent, respectively. However, for those individuals who reported as employed in at least one interview (for job security, 7,091 individuals) or who have been employed for at least one month (for employment security, 7,543 individuals), the share of young people who enjoy security is almost the same (77 per cent for job security, and 76 per cent for employment security).[12]

Table 2. Classification according to the definition of job security[a] and employment security[b] (young Europeans aged 16–34, around five years after leaving education)[c]

	Employment secure	Employment insecure but employed at least 1 month	*Tot. individuals employed at least 1 month*	Employment insecure with no months in employment	**Total**
Job secure	5107	371	*5478*	3[d]	**5481**
Job insecure but employed in at least 1 interview	598	968	*1566*	44[d]	**1610**
Tot. individuals employed in at least 1 interview	*5705*	*1339*	*7044*	*47*[d]	***7091***
Job insecure but never employed	18	481	*499*	496	**995**
Total	**5723**	**1820**	***7543***	**543**	**8086**

Notes: [a] Job-secure individuals: (i) report as employed in both the first and second interview; (ii) did not change job between the two interviews, or changed it voluntarily in order to take a better job, which lasts for at least six months.
[b] Employment-secure individuals are those who, during the two calendar years corresponding to the first two interviews, experienced only employment spells lasting (each) at least six months, and unemployment/inactivity spells lasting (each) at most three months. [c] Young people who return to education (about 3 per cent of our sample) are excluded. [d] Individuals who reported inconsistent information about monthly and annual employment statuses.
Source: Authors' own calculations, based on EU-SILC panel data (2006–12).

Nevertheless, the group of individuals behind these shares is not the same. First, about 7 per cent of job-secure individuals are actually employmentinsecure. Most of these are young people who have had long non-employment spells (longer than three months) either before the first interview or

[11] We need three complete interviews in order to have an overlap in the time period captured by our definitions of job security (based on the job status reported at the first two interviews) and employment security (based on the monthly information regarding the same calendar period covered by the first two interviews, but reported by individuals at their second and third interviews).

[12] For this reason, when we compare our definition of employment security and the contract based definition of job security, results are very similar to those reported in table 1, and therefore we do not report them.

after the second one. Second, and more importantly, almost 40 per cent of job-insecure individuals (who report as employed in at least one interview) actually enjoy employment security. These are individuals who lost or changed their job for various reasons (other than to take up a better job), but were able to reenter paid employment rapidly (i.e. they experienced a fairly continuous employment pattern). The presence and relative size of this group of individuals confirms the importance of looking at entire employment status trajectories and of adopting a trajectory-based definition of employment security.

A number of individual characteristics of job-secure and employment-secure young people are described in table 3. Clear differences can be seen between men and women when it comes to attaining job security and employment security; women are clearly disadvantaged, lagging behind men by approximately 10 percentage points. The gap seems to be larger for employment security than for job security, suggesting that women who do not remain in the same job for two consecutive years are more likely to experience short employment spells and/or long unemployment spells. This is confirmed by the gender differences in the shares of job-insecure individuals who actually enjoy employment security. Indeed, men who are job-insecure are much more likely to be employment-secure (i.e. to move quickly between jobs), whereas job-insecure women are more likely to experience long spells of unemployment or inactivity. Interestingly, education has similar effects. On the one hand, the share of young people experiencing job security and employment security increases significantly with education. Looking at the whole sample, this share is around 80 per cent for university graduates, and only around 45 per cent for young people with low levels of education. On the other hand, highly educated job-insecure young people are much more likely to move quickly across jobs, whereas those with low levels of education are more likely to experience long spells of unemployment or inactivity. Finally, as expected, the percentage of young people enjoying job security and employment security is lower among those who still live with their parents. This result is in line with the study by Becker et al. (2010), which shows that higher levels of job insecurity for young people are associated with higher rates of parental co-residence.[13] However, we also find that job-insecure young people who live with their parents are more likely to be employment-secure, especially if they have reported as employed in at least one interview. In other words, the main difference between young people who live independently and those who live with their parents is that the latter experience longer spells of unemployment or inactivity.

The share of job-secure and employment-secure young people varies considerably across countries (figure 1). Denmark and the Netherlands present shares of employment security of approximately 80 to 90 per cent, whereas most of the other countries are below 80 per cent. It is interesting to note that the ranking of countries does not correspond to the usual grouping: the shares in Finland are similar to those in Spain, whereas in Portugal and the Czech Republic they are similar to those in Austria, and in Belgium they are similar to those in Sweden and the United Kingdom. In almost all countries the share of employment- secure young people is slightly higher than the share of job-secure young people. In Denmark, Portugal, Hungary and Estonia this gap is relatively large, 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.

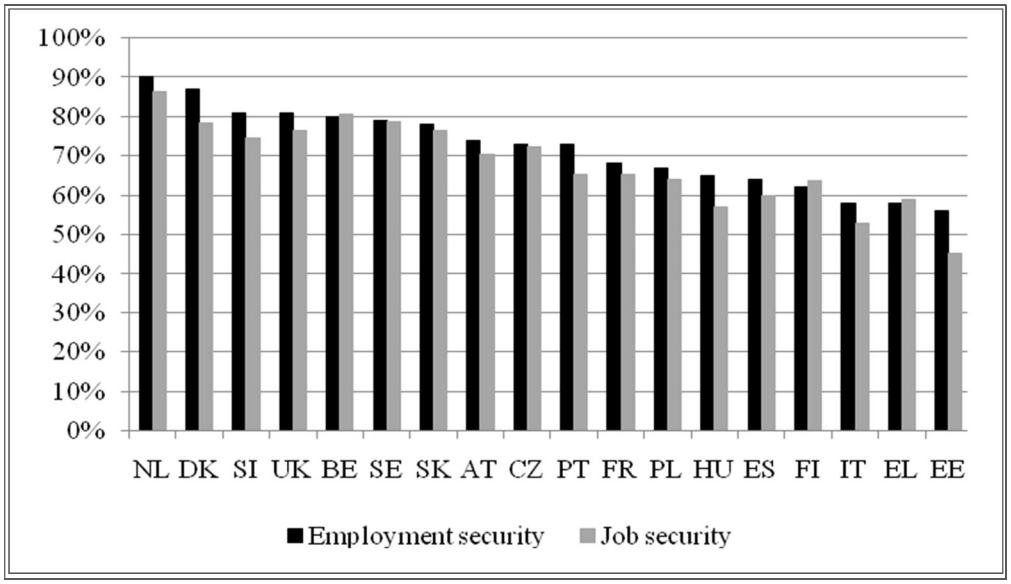
[13] 13 A possible explanation is that insecure young people leave the parental home at a later age because they cannot afford to rent or buy a home (Cahuc and Kramarz, 2005).

Table 3. Shares of job-secure and employment-secure individuals according to individual characteristics (young Europeans aged 16–34, around five years after leaving education)[a]

	Job security[(a)]		Employment security[(b)]		Job insecure but employment secure individuals	
	Whole sample	Sub-sample of young people employed in at least 1 interview	Whole sample	Sub-sample of young people employed at least 1 month	All job insecure individuals	Sub-sample of job insecure individuals employed in at least 1 interview
Sample	0.68	0.77	0.71	0.76	0.24	0.37
Females	0.63	0.74	0.66	0.72	0.20	0.33
Males	0.72	0.80	0.76	0.79	0.28	0.42
Lower secondary education	0.44	0.63	0.47	0.57	0.15	0.30
Upper secondary education	0.65	0.75	0.68	0.74	0.23	0.36
Tertiary education	0.79	0.83	0.80	0.83	0.31	0.42
Living independently	0.72	0.80	0.74	0.79	0.23	0.35
Living with parents	0.65	0.75	0.69	0.74	0.24	0.39

Notes: [a] Young people who return to education (about 3 per cent of our sample) are excluded. [b] Job-secure individuals: (i) report as employed in both the first and second interview; (ii) did not change job between the two interviews, or changed it voluntarily in order to take a better job, which lasts for at least six months. [c] Employment-secure individuals are those who, during the two calendar years corresponding to the first two interviews, experienced only employment spells lasting (each) at least six months, and unemployment/inactivity spells lasting (each) at most three months.
Source: Authors' own calculations based on EU-SILC panel data (2006–12).

Figure 1. Share of young individuals enjoying job security and employment security, by country (percentages)



Austria (AT), Belgium (BE), Czech Republic (CZ), Denmark (DK), Estonia (EE), Greece (EL), Spain (ES), Finland (FI), France (FR), Hungary (HU), Italy (IT), the Netherlands (NL), Poland (PL), Portugal (PT), Sweden (SE), Slovenia (SI), Slovakia (SK), and the United Kingdom (UK).
Source: Authors' own calculations, based on EU-SILC panel data (2006–12).

Econometric analysis

Methodological issues

We estimate a probit model for the probability of job security and employment security as a function of individual and institutional characteristics – in particular, the effects of EPL, ALMPs and PLMPs. The aim is to check to what extent – after controlling for country fixed-effects, macroeconomic conditions and various individual characteristics – aggregate EPL indicators and LMP expenditure levels are explanatory factors behind young people's job security and employment security. Given the asymmetry between EPLR and EPLT, and the resulting emergence of a dual labour market in most European countries, the effect of each type of EPL cannot be analysed in isolation (OECD, 2013); we therefore look at both EPL indicators together.[14] While the EPLR index measures the stringency of employment protection against individual dismissals, the EPLT index measures the stringency of regulations governing the use of fixed-term and temporary work agency contracts. Therefore, a higher EPLR value means that it is harder for firms to fire workers, whereas a higher EPLT value means that it is harder for firms to hire workers on fixed-term contracts or through temporary work agency (TWA) contracts.

The effects of EPLR and EPLT differ according to whether one considers the period of labour market entry – i.e. the years immediately after finishing education – or a later period. As described earlier, strict EPLR is likely to increase the probability of being job-secure for those who were able to find a job, but for those who were unable to find a job EPLR is also likely to increase the probability of remaining unemployed. However, the studies mentioned earlier also show that the second effect is particularly relevant for the early years of the education-to-work transition. Since we focus on individuals around five years after finishing education, the "entry effect" of stringent EPLR should be reduced, and we should expect a high EPLR index to increase the probability of individuals having a secure job (i.e. remaining in the same job for two consecutive years). At the same time, more stringent EPLT should also increase the probability that, in this phase of their labour market experience, individuals are hired with permanent contracts, and should therefore increase their probability of being job-secure (positive correlation between EPLT and job security). On the other hand, the easier it is to renew fixed-term contracts – i.e. less stringent EPLT – the higher the probability may be of remaining in the same job over time (i.e. being job-secure), albeit with a temporary contract. Therefore, a negative correlation between EPLT and job security is also possible. Since the effects of EPL can vary according to demographic group, we interact EPL with education and sex dummies.

[14] Both EPLR and EPLT indicators take the form of an index ranging from 0 to 6, indicating stringency of protection, from 0 (least stringent) to 6 (most stringent), and are weighted averages of sub-indicators of employment regulation. The EPLR 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). The EPLT indicator 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 fixedterm contracts); and (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).

With regard to labour market policies, we consider annual expenditure on ALMPs and PLMPs per unemployed person (Eurostat Labour Market Policy database)[15] as a share of per capita GDP.[16] Expenditure on ALMPs is an indicator of a country's overall effort to help individuals enter or re-enter employment (training, employment incentives, direct job creation, start-up incentives, etc.). One would expect that the greater the level of resources assigned to ALMPs, the more likely individuals are to move quickly across jobs, and therefore the more likely they are to be employment-secure. Expenditure on PLMPs is an indicator of the generosity of countries' financial assistance to compensate individuals for loss of wage or salary. One would expect that, the more generous the compensation, the easier it is for individuals to remain unemployed, and therefore the probability of being employment-insecure could increase. Unfortunately, since the correlation between the two policy variables is very high (see Appendix figures A1 and A2), we cannot control for both simultaneously, and must estimate different models. In the same way as for the EPL indicators, we expect LMP effects to vary according to demographic group, and therefore interact them with education and sex dummies.

The differences in EPL and LMP indicators across countries are summarized in table 4. The United Kingdom is characterized by low EPLT and EPLR indexes. Nordic countries, together with Austria, Czech Republic, Hungary, the Netherlands and Slovakia, have low EPLT indexes and low to moderate EPLR indexes, with relatively higher EPLR indexes in the Czech Republic and the Netherlands. Overall, the correlation between these two indicators is positive but weak (see Appendix figure A3). Indeed, France, Spain and Greece are the countries with the highest EPLT indexes, but have below-average EPLR indexes. Portugal is the country with the highest level of EPLR, but has a near-average level of EPLT. Nordic countries, together with Austria, Belgium, France and the Netherlands, have the highest expenditure for both ALMPs and PLMPs (although their relative levels differ to some extent). The lowest levels of expenditure are observed in Eastern European countries, Greece and the United Kingdom. As shown in Appendix figures A1 and A2, the correlation between these two types of expenditure is positive and much higher than the one observed for both types of EPL: in general, those countries with generous expenditure on PLMPs also have high expenditure on ALMPs.

Among individual characteristics we include sex, level of education, age, potential experience (measured as the difference between the individual's current age and the age at which they began their first regular job),[17] household and living arrangements. In order to control for business cycle fluctuations, we include the GDP growth rate. We also control for country and year fixed effects. All individual characteristics and the GDP growth rate refer to the first year of the two-year period used to measure job security and employment security. In contrast, all EPL and LMP indicators refer to the year preceding this two-year period.

[15] 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: http://ec.europa.eu/eurostat/cache/metadata/en/lmp_esms.htm.

[16] We do not express expenditure as a share of the GDP because this share would be overly influenced by the different ways in which European countries have been hit by the recent economic downturn.

[17] EU-SILC data do not provide information about the individual's employment status for the period between finishing education and the observation period. This information is important, however, because prior employment experience might help explain the observed labour market outcomes. However, we proxy prior work experience with the difference between the individual's current age and the age at which they began their first regular job.

Table 4. EPL indicators, ALMPs and PLMPs by country

Country	EPL-P	EPL-T	ALMPs	PLMPs
AT	2.37	1.31	0.23	0.57
BE	1.81	2.38	0.14	0.61
CZ	3.17	1.13	0.04	0.08
DK	2.13	1.38	0.49	0.76
EE	2.74	1.88	0.02	0.14
EL	2.80	2.75	0.03	0.11
ES	2.36	3.12	0.13	0.33
FI	2.17	1.56	0.18	0.42
FR	2.45	3.63	0.18	0.37
HU	2.00	1.13	0.08	0.12
IT	2.76	2.00	0.13	0.28
NL	2.87	0.94	0.40	0.81
PL	2.23	1.75	0.09	0.11
PT	4.42	2.31	0.10	0.26
SE	2.61	1.32	0.23	0.25
SI	2.65	1.81	0.06	0.16
SK	2.22	0.83	0.02	0.06
UK	1.20	0.38	0.02	0.07

Notes: Figures represent average values of the indicators in the period 2006-2010. ALMPs and PLMPs are expressed as national expenditures per unemployed divided by GDP per capita.
Source: Author's calculation, based on OECD employment protection summary indicators and EUROSTAT Labour Market Policy database.

Empirical results

Estimation results of the two probit models are shown in table 5. The empirical findings are in line with what we observed in the descriptive analysis. Women are less likely than men to experience both job security and employment security. However, the magnitude of the effect is much larger for employment security, confirming the descriptive analysis. Even when controlling for other individual characteristics, when women lose or leave their job it is harder for them to find another one quickly. This gender gap increases if women live as part of a couple, whereas living in a couple has a positive and significant effect for men. As expected, higher levels of education are associated with a higher probability of achieving job security and employment security and, in this case, the magnitude of the two effects is very similar. Potential experience also increases the probability of achieving security. Having controlled for this, since all individuals are in the same labour force participation phase, there is no residual effect associated with age. In contrast to the descriptive analysis, young people still living with their parents do not have a significantly lower probability of security than those who have left the parental home.

With regard to the EPL and LMP indicators, some interesting results emerge. Whatever the level of education, an increase in EPLT is associated with a higher probability of employment security, but has no significant effects on job security. This evidence suggests that more stringent EPLT increases the likelihood of individuals staying almost continuously in the labour market, although not with the same employer. In other words, more stringent EPLT is likely to reduce the possibility of a person having many short employment spells, enabling individuals to stay longer in employment, although not in the same job. For women, however, more stringent EPLT is associated with a higher probability of also achieving job security. This result may be related to the gender segmentation in employment contracts, i.e. the fact that women are overrepresented in fixed-term contracts (Petrongolo, 2004), although these contracts are sufficiently long for them to remain in the

same job for two consecutive years. Thus, more stringent EPLT improves women's position in the labour market. EPLR does not significantly affect young people's probability of achieving either job security or employment security.

Table 5. Probit model estimates for job security[a] and employment security[b]

	Job security		Employment security	
	Coef.	**Std. Err.**	**Coef.**	**Std. Err.**
Female	-0.272	0.155*	-0.450	0.162***
Medium education	0.993	0.292***	0.955	0.294***
High education	1.839	0.318***	1.969	0.321***
Potential experience	0.041	0.006***	0.044	0.006***
Age	0.010	0.015	0.015	0.015
Female living with partner	-0.424	0.055***	-0.580	0.056***
Male living with partner	0.146	0.067**	0.158	0.071**
Cohabiting with parents	-0.037	0.050	-0.077	0.052
EPL-T * Low education	0.097	0.141	0.383	0.144***
EPL-T * Medium education	0.088	0.129	0.227	0.133*
EPL-T * High education	0.114	0.132	0.265	0.137*
EPL-T * Female	0.102	0.040***	0.163	0.041***
EPL-P * Low education	0.163	0.451	0.184	0.460
EPL-P * Medium education	0.082	0.445	0.257	0.454
EPL-P * High education	-0.104	0.448	-0.024	0.458
EPL-P * Female	-0.066	0.057	-0.030	0.059
ALMPs * Low education	3.315	0.925***	2.574	0.959***
ALMPs * Medium education	0.833	0.760	-0.227	0.784
ALMPs * High education	0.584	0.796	-0.407	0.827
ALMPs * Female	0.611	0.369*	0.440	0.397

Notes: [a] Job-secure individuals: (i) report as employed in both the first and second interview; (ii) did not change job between the two interviews, or changed it voluntarily in order to take a better job, which lasts for at least six months. [b] Employment-secure individuals are those who, during the two calendar years corresponding to the first two interviews, experienced only employment spells lasting (each) at least six months, and unemployment/ inactivity spells lasting (each) at most three months. Low education groups: 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. Other variables included in the regressions are: GDP growth rate, dummy for return to education and country and year fixed effects.
*, ** and *** indicate significance at the 10, 5 and 1 per cent levels, respectively.

As expected, an increase in ALMP expenditure increases the likelihood of both job and employment security for individuals with low levels of education. An increase in ALMP expenditure also raises the probability of women achieving job security, but not employment security. This could mean that this type of measure helps women to find and keep a sufficiently stable job, but not to move quickly across jobs. However, further research would be necessary to understand the cause of this effect. Our analysis captures only a conditional correlation, and this could represent the effect of other omitted variables, correlated with ALMP expenditure. Indeed, as shown in Appendix table A1 we obtain comparable results when controlling for PLMPs instead of ALMPs, whereas they should have opposite effects. Therefore, we take this result simply as an indicator that a country's overall effort in helping individuals enter or re-enter employment generally has positive effects on more disadvantaged groups, but more work is needed to understand which specific measures are more effective.

Robustness checks

In order to verify the sensitivity of our results to the length of the period used to define job and employment security, we ran two robustness checks. First, for the same sample used in the baseline analysis, we defined job security based on a three-year period, using the annual information on employment status and job changes reported at the third interview. The share of job-secure individuals decreases by 8 percentage points compared to when the two year definition was used, but there are no significant composition effects. Indeed, in the probit model estimations using the three-year period (see table 6), individual characteristics have very similar effects to those described earlier. The only relevant differences concern the coefficients associated with our institutional variables. The effects of the EPLT index interacted with educational dummies are larger and significant, and comparable in magnitude and sign, with those estimated for the baseline analysis on employment security. This means that our measure of employment security based on the two-year definition is able to capture a relatively high degree of labour market security. Furthermore, a higher EPLR index tends to reduce women's probability of being job-secure, suggesting that women are less likely than men either to be hired with a permanent contract or to see their temporary contract converted into a permanent one.

Table 6. Probit model estimates for job security and employment security (defined over a three-year period)

	Job security over a 3-year period[(a)]		Employment security over a 36-month period[(b)]	
	Coef.	**Std. Err.**	**Coef.**	**Std. Err.**
Female	-0.246	0.150*	-0.594	0.149***
Medium education	1.148	0.304***	0.858	0.258***
High education	1.973	0.326***	1.627	0.293***
Potential experience	0.038	0.006***	0.029	0.006***
Age	0.021	0.015	0.019	0.015
Female living with partner	-0.472	0.054***	-0.594	0.052***
Male living with partner	0.130	0.064**	0.231	0.063***
Cohabiting with parents	-0.030	0.049	-0.112	0.048**
EPL-T * Low education	0.351	0.139**	0.185	0.179
EPL-T * Medium education	0.182	0.125	0.112	0.174
EPL-T * High education	0.226	0.129*	0.130	0.176
EPL-T * Female	0.164	0.039***	0.201	0.036***
EPL-P * Low education	-0.073	0.441	0.057	0.499
EPL-P * Medium education	-0.093	0.434	0.070	0.496
EPL-P * High education	-0.330	0.437	-0.095	0.501
EPL-P * Female	-0.132	0.055**	-0.050	0.053
ALMPs * Low education	2.126	0.919**	2.295	0.993**
ALMPs * Medium education	0.076	0.736	0.798	0.855
ALMPs * High education	0.468	0.770	-0.117	0.863
ALMPs * Female	0.889	0.348**	1.265	0.350***

Notes: [a] Individual observations refer to the period 2006-2012. [b] Individual observations refer to the period 2005-2011. See variable descriptions in the notes to table 5. *, ** and *** indicate significance at the 10, 5 and 1 per cent levels, respectively.

In the second robustness check, we defined employment security based on a three-year period, using the monthly information on employment status corresponding to the 12 months preceding the

first interview.[18] In order to continue to consider a time lag of at least two years, and at most four years, between the end of education and the start of the period used to define employment security, we had to focus on a different sample of young people (i.e. young people who finished their education four to six years before the first interview instead of three to five years). This means that more individuals in this sample are observed in the years before the recent economic crisis (i.e. 2004–2007) and fewer individuals in the years during the crisis (2008–2011). This might affect the estimation of the EPL coefficients, because most of the changes in EPLT occurred between 2007 and 2008. Indeed, while other coefficients are in line with the baseline analysis, the effects of EPLT are slightly smaller but no longer significant (when interacted with educational dummies).[19]

Conclusions

Over the past decade, the debate on labour market institutions and the socalled flexicurity approach has shifted the policy focus from "job security" to "employment security". The idea was to combine more labour market flexibility (which would increase job volatility and hence job insecurity for workers) with policies to improve workers' employability (i.e. facilitate their re-entry into employment). Thus far, researchers have been investigating job security (using the type of contract as a proxy) and employability (using probabilities of transition into employment, or hiring rates, as proxies) as separate issues. The lack of measures integrating both concepts is a severe limitation when it comes to quantifying accurately the effect of policies on individuals' labour market performance. In this article, we have proposed a new measure of individual employment security, based on monthly employment status trajectories, and a new measure of job security, based on job duration, instead of contract type. We use these two measures to analyse the employment situation of young Europeans aged 16–34, around five years after they finished their education.

Our results show that, independently of the measure considered, approximately 30 per cent of young labour force participants are still employmentinsecure five years after finishing education, with considerable differences across European countries. However, the group of individuals concerned varies according to the measure we use. Indeed, almost 40 per cent of job-insecure individuals actually enjoy employment security, i.e. they were able to re-enter paid employment rapidly after losing their job. Women and people with low levels of education are clearly disadvantaged in terms of job security, and even more so in terms of employment security. Our econometric analysis shows that, even when controlling for other individual characteristics, women find it harder to re-enter employment once they lose or leave their job. More stringent EPLT would increase their probability of achieving both job security and employment security, probably by reducing their risk of experiencing a large number of short employment spells. A similar effect is obtained for men, and is stronger for those with low levels of education. Women and individuals with low levels of education also appear to benefit from higher expenditure on ALMPs.

[18] 18 When we measure employment security based on a three-year period, we find that 60 per cent of job-insecure individuals according to the contract-based approach, i.e. who have a temporary contract in the first year, are employment-secure. This suggests that more than half of individuals with a temporary contract actually experience an almost stable employment pattern.

[19] For the same sample of analysis considered in this robustness check, we also estimated employment security over the first two years, instead of three. Results show that, as in the analysis based on a three-year period, the EPLT index interacted with educational dummies is not significant. This evidence supports our hypothesis that EPLT is not significant because of its low variability during the period under consideration.

When assessing individuals' employment security – in a context characterized by increasingly frequent job changes and a higher degree of labour market flexibility – our analysis confirms the importance of looking at entire employment status trajectories, rather than merely at the job held at a specific point in time. Our empirical findings highlight the pressing need for policy measures to enhance employment security for women and people with low levels of education, by helping them find a job and keep it for a reasonably long period, and also to move more quickly across jobs. To this end, potential measures include more stringent EPLT (especially in terms of contract duration), and higher – and better targeted – expenditure on active ALMPs.

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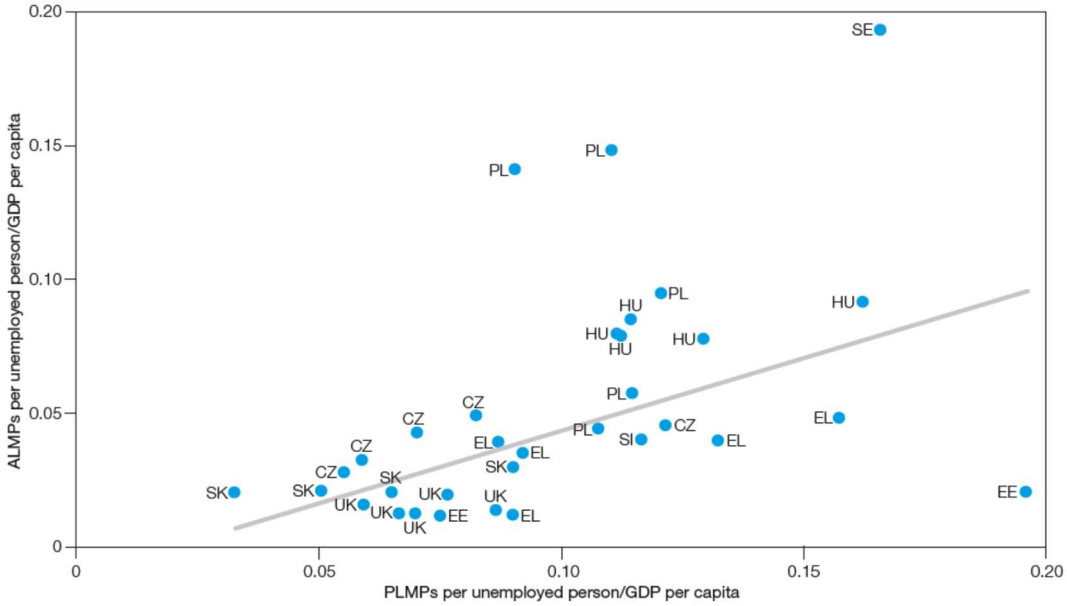
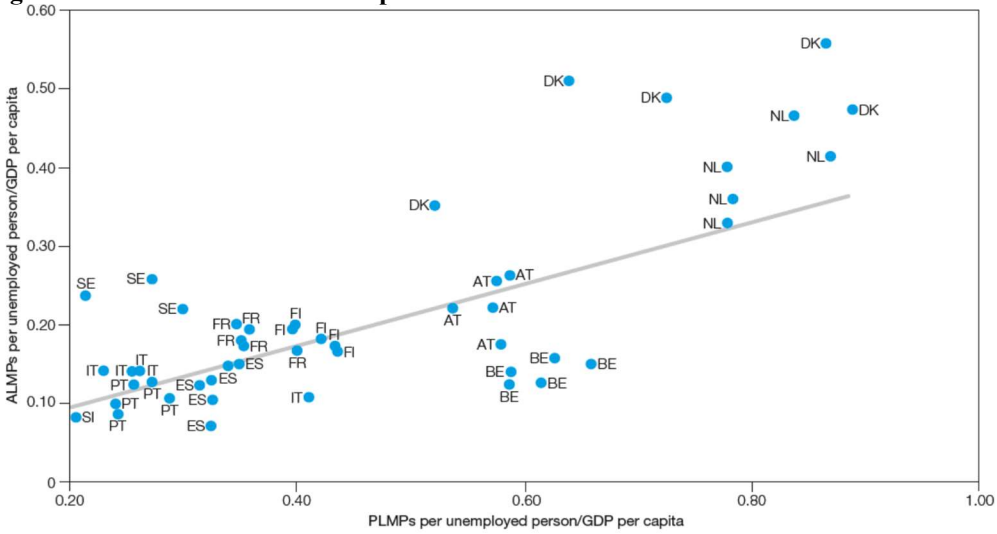
Appendix

Figure A1. Correlation between expenditure on ALMPs and PLMPs for PLMP values lower than 0.2



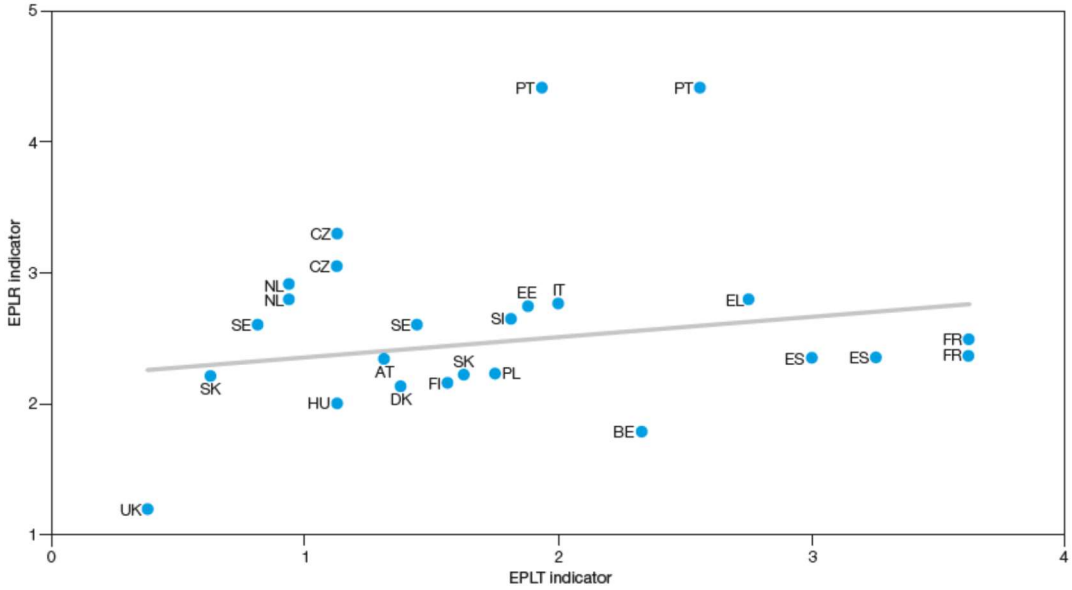
Notes: Each dot refers to country values of ALMPs and PLMPs (national expenditure per unemployed person, divided by GDP at market prices measured in euros per capita) for the years 2007–11. Slope of aggregate PLMP values reported in figures A1 and A2: 0.39 statistically significant at the 1 per cent level.
Source: Eurostat Labour Market Policy database.

Figure A2. Correlation between expenditure on ALMPs and PLMPs for PLMP values above 0.20



Notes: Each dot refers to country values of ALMPs and PLMPs (national expenditure per unemployed person, divided by GDP at market prices measured in euros per capita) for the years 2007–11. Slope of aggregate PLMP values reported in figures A1 and A2: 0.39 statistically significant at the 1 per cent level.
Source: Eurostat Labour Market Policy database.

Figure A3. Correlation between EPLR and EPLT indicators



Notes: Each dot refers to country values of EPLR and EPLT indicators for the period 2007–11. Slope: 0.16 statistically significant at the 1 per cent level.
Source: OECD employment protection indicators.

Table A1. Probit model estimates for job security and employment security with PLMPs

	Job security		Employment security	
	Coef.	Std. Err.	Coef.	Std. Err.
Female	-0.30	0.15**	-0.49	0.16***
Medium education	1.19	0.29***	1.15	0.29***
High education	2.03	0.32***	2.19	0.32***
Potential experience	0.04	0.01***	0.04	0.01***
Age	0.01	0.02	0.01	0.02
Female living with partner	-0.43	0.06***	-0.58	0.06***
Male living with partner	0.15	0.07**	0.16	0.07**
Cohabiting with parents	-0.04	0.05	-0.08	0.05*
EPLT * Low education	0.13	0.15	0.35	0.15**
EPLT * Medium education	0.15	0.13	0.22	0.14
EPLT * High education	0.18	0.14	0.28	0.14*
EPLT * Female	0.08	0.04*	0.14	0.04***
EPLR * Low education	0.17	0.46	0.23	0.47
EPLR * Medium education	0.07	0.45	0.28	0.46
EPLR * High education	-0.12	0.45	-0.01	0.46
EPLR * Female	-0.06	0.06	-0.02	0.06
PLMPs * Low education	1.39	0.63**	1.89	0.65***
PLMPs * Medium education	-0.41	0.58	-0.03	0.60
PLMPs* High education	-0.54	0.59	-0.28	0.61
PLMPs * Female	0.47	0.17***	0.41	0.18**

Notes: Low education groups: 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. Other variables included in the regressions are: GDP growth rate, dummy for return to education and country and year fixed effects. *, ** and *** indicate significance at the 10, 5 and 1 per cent levels, respectively.