

D 10.2 Youth School-To-Work Transitions:

from Entry Jobs to Career Employment

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Executive Summary

In this report, we examine the way in which some of the labour market policies and institutions that inform flexibility and/or security in the labour market, affect the early labour market experience of young people in different European countries. Our focus is in particular on the type of employment *trajectories* that characterize the first years of labour market entry, and the possibility for young people to reach a *good-quality employment* condition within five-six years after leaving education. The central policy concern is whether active and passive labour market policies, besides employment protection legislation (with particular reference to temporary contracts), enhance the possibilities for young people to reach a long-enough good-quality employment condition within a reasonable period of time after leaving education. Since a higher degree of flexibility of the labour market implies a higher level of mobility across jobs, we evaluate employment quality and employment security, rather than job-quality and job-security. The main steps and results of our analysis are the following.

First, we identify different types of trajectories from education to the first relevant employment spell, and we analyse how labour market policies and institutional characteristics affect the probability of entering one type of trajectory or the other. Although by looking at simple unconditional correlations expenditures on active and passive labour market policies appear positively correlated with successful pathways and negatively correlated with unsuccessful pathways, once we control for individual characteristics, country and time dummies, they have either no significant effect, or a very limited one. Employment protection legislation concerning the use of temporary contracts, instead, displays some influence on school-to-work transitions. Stricter norms appear to limit the degree of instability of school-to-work trajectories, and provide some incentives to improve individual employability through a return to education. From a policy perspective, these results suggest that: i) since the actual mix of labour market policies is not effective, new policy tools should be implemented to increase young people's chances of achieving a relevant employment spell within a reasonable period of time; ii) a reduction in the strictness of the rules regulating the use of temporary contracts is not an effective policy tool to improve employment outcomes, especially when labour demand is weak, and it may worsen youth employment outcomes.

Second, we focus on the subsequent temporal phase of labour market experience (i.e., about 4 to 6 years after leaving education), and we analyse the performance of young people in terms of employment and economic security, and in terms of economic success and good educational-occupational match. We also analyse the type of employment trajectory that unsuccessful and insecure individuals are following. The empirical analysis reveals that more stringent norms on the use of fixed-term contracts enhance security for both low-educated individuals and females. On the contrary, an increase in expenditures for active labour market policies is effective in increasing the probability to achieve a secure employment condition only for high-school and university graduates, but not for low-educated and females. Passive labour market policies have no effects on security, but they improve the quality of employment trajectories for insecure individuals (by helping young people to find, or pushing them to search better for, a more stable/continuous employment). However, they seem to have some adverse effects for females, by increasing their probability of being inactive and reducing that of being always or prevalently employed. From a policy point of view, these results are in line with what we have underlined above. In particular, they suggest that: i) the actual mix of active and passive labour market policies is not effective and new policies should be designed and targeted to less educated individuals and females; ii) more stringent norms on the use of temporary contracts should be encouraged given their effectiveness in enhancing labour market outcomes of more

disadvantaged individuals.

Third, we present a synthetic index of the overall level of employment security associated with school-to-work trajectories of young people entering the labour market. The index is constructed in such a way that it can incorporate explicitly different value judgements in terms of whether insecurity is increased or not by the total number of periods of unemployment, the time at which they occur, and their consecutiveness. An explorative empirical application is presented. Our analysis shows that there are huge cross-country differences in the degree of insecurity associated with the labour market entry, and that these differences are generally enlarged if we give higher weights to sequences with more than one period in unemployment, and to those in which unemployment lasts longer. From a policy perspective, these results suggest that policy makers should move beyond a 'one-policy-fits-all' view. New policies to fight youth unemployment should take into account country specificities and the transient or more structural/persistent nature of unemployment.

Key words:

School to work trajectories; employment security; career employment; insecurity index; EU-SILC.

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Abbreviations

ALMPs	Active Labour Market Policies
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech republic
DK	Denmark
E	Employment
EC	European Commission
ECB	European Central Bank
Ed	Education
EE	Estonia
EL	Greece
EMCO	Employment Committee
EPL	Employment Protection Legislation
EPL-P	Permanent Contracts Legislation
EPL-T	Temporary Contracts Legislation
ES	Spain
ESD	Dynamic employment security indicator
ESTs	Employment Status Trajectories
ETUI	European Trade Union Institute
Eurofound	European Foundation for the Improvement of Living and Working Conditions
EU-SILC	European Union Survey on Income and Living Conditions
FI	Finland
FR	France
GDP	Gross Domestic Product
HU	Hungary
I	Inactivity
ILO	International Labour Organization
IR	Ireland
IS	Iceland

ISCED	The International Standard Classification of Education
ISCO	The International Standard Classification of Occupation
IT	Italy
LM	Labour Market
LMP	Labour Market Policies
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
NO	Norway
OECD	Organisation for Economic Co-operation and Development
OM	Optimal Matching
PL	Poland
PLMPs	Passive Labour Market Policies
PT	Portugal
RO	Romania
SE	Sweden
SHARE	Survey of Health, Ageing and Retirement in Europe
SI	Slovenia
SK	Slovakia
SWT	School to Work Trajectory
U	Unemployment
UA	Unemployment Assistance
UB	Unemployment Benefits
UI	Unemployment Insurance
UK	United Kingdom
UNECE	United Nations Economic Commission for Europe
USI-index	Unemployment Sequence Insecurity - index

1. Introduction

The European Commission defines ‘flexicurity’ as an “integrated strategy for enhancing, at the same time, flexibility and security in the labour market.” In this report, we want to examine the way in which some of the labour market policies and institutions that inform flexibility and/or security affect the early labour market experience of young people in different countries. In particular, our focus is on the type of employment *trajectories* that characterize the first years of labour market entry, and the possibility for young people to reach a *good-quality employment* condition within five-six years after leaving education.

Since a higher degree of flexibility of the labour market implies a higher level of mobility across jobs (and, indeed, it is more and more common for individuals to experience job changes in their employment history), we prefer to concentrate on the characteristics of youth employment spells, rather than on the specific job held in different time periods. Therefore, we will evaluate employment quality and employment security, rather than job-quality and job-security. This is also more in line with the type of data used in the analysis (EU-SILC panel data), which contain more detailed and robust information about employment statuses than about job histories.

1.1 Why a dynamic view of the labour market?

Standard measures of youth labour market performance usually focus on aggregate or individual conditions at single points in time (e.g. unemployment rates) and, when the temporal dimension is taken into account, it is usually limited to the description of trends in these static indicators. However, when we consider trends in unemployment rates, we have no information on whether the group of unemployed in the various years is formed by the same individuals experiencing very long unemployment spells or by different individuals experiencing short unemployment spells (moving in and out of unemployment over time). Setting priorities and designing appropriate policies requires to look at the evolution of employment statuses at the individual level over time. Indeed, a prolonged experience of difficulty in entering employment may affect the individual physical and cognitive capabilities, and shapes his/her future agency (motivation, preferences and understandings). These individuals should clearly be prioritized. At the same time, how to intervene depends on how many people are found in this situation. Countries with large groups of young people who remain persistently unemployed need different types of policies, compared to countries in which unemployment is only a short and transitory condition for most individuals.

Recently, researchers and policy advisors have started to look more carefully at individual year-to-year transitions and employment trajectories. For example, the Employment Committee (EMCO) Indicators Group, set up in 2006 to provide tools for monitoring the performance of the Member States with respect to the flexicurity domain, devised a dynamic employment security indicator to assess the degree of security of working trajectories, using annual labour market transitions (EMCO, 2009). Brzinsky-Fay (2007) and Quintini and Manfredi (2009), and more recently Erhel et al. (2015), analysed school-to-work trajectories, i.e. entire sequences of employment statuses over a long period

of time. These studies use the optimal matching (OM) technique to group young individuals according to differences in their trajectories. Results are similar: successful trajectories are favoured either in low-regulated labour markets, as in the UK, or in highly regulated labour markets but compensated by strong apprenticeship systems, as in Germany and Austria. On the contrary, highly segmented labour markets, typical of the Mediterranean countries, show the largest shares of at-risk youth due to the great use of atypical contracts. Since year-to-year changes do not allow us to distinguish between transitory and more persistent conditions, in this report we will focus on youth trajectories, mainly based on monthly information about individual employment statuses.

Besides looking at employment trajectories, we will also adopt a dynamic perspective to define the 'quality' of young people employment. In section 3, instead of looking at the characteristics of the first job, we consider the time needed to reach, and the pathway that led to, the first *relevant* employment spell after leaving education (which is defined as a period of employment lasting for at least six consecutive months). In section 4, we use a dynamic definition of four employment dimensions in order to identify what we label 'career employment': employment security, economic security, economic success, and education-occupation successful match.

1.2 Aims and organisation of this report

The main aim of this report is to examine, from a dynamic perspective, how individual and institutional characteristics affect the entry and early labour market experience of young Europeans. To this end, we consider (throughout the whole report) individuals aged 16 to 34, and we divide their early years of labour market participation into two distinct phases. The first phase focuses on the transition from education to the first relevant employment experience, whereas the second phase concentrates on the subsequent temporal spell, i.e. on the type of labour market conditions that young people face four-to-six years after having left education. These two phases are analysed separately in two different sections of this report (section 3 and 4 respectively). Since our analysis is based on the longitudinal EU-SILC dataset (which follows individuals for at most four years), we cannot examine these two phases for the same individuals. To overcome this problem (due to limitations in the database), we use different samples in section 3 and 4 (see section 2 for more details).

The identification of two different phases in the early labour market experience of young people, allows us to articulate our main aim into three more specific objectives:

- to examine how individual and institutional characteristics influence the employment trajectories of young Europeans in the first phase of their labour market experience, i.e. from education to the first relevant employment spell;
- to analyse how the same characteristics affect the probability that in the second phase (i.e. about four-to-six years after leaving education), young people are in a secure and economically successful employment condition, and, if not, what are the features of their employment pathway;
- to develop a new synthetic index that captures, at the country level, the degree of insecurity faced by young people entering the labour market, given the probability of following the different STW trajectories.

The report is organised in four main sections, plus this introduction and conclusions. In section 2 we present the main features of the data that will be used throughout the report and discuss in more

details some methodological choices. Section 3 is devoted to the identification of different types of trajectories from education to the first relevant employment spell, and to the analysis of how labour market policies and institutional characteristics affect the probability of entering one type of trajectory or the other. In section 4 we focus on the subsequent temporal phase of labour market experience (i.e. about 4 to 6 years after leaving education), and we illustrate the performance of young people in terms of employment and economic security, and in terms of economic success and good educational-occupational match, as well as the type of trajectories that unsuccessful individuals are following. In this section, we also present an econometric analysis of the way in which labour market policies and employment legislation affect outcomes (i.e. different trajectories). Section 5 presents a new idea for an insecurity index that considers entire employment-unemployment trajectories. The index is constructed in such a way that it can incorporate explicitly different value judgements in terms of whether insecurity is increased or not by the total number of periods in unemployment, the time at which they occur, and their consecutiveness. An explorative empirical application to young Europeans entering the labour market will be presented. Finally, section 6 presents our main conclusions.

2. Data and Methodological Issues

Throughout this report we focus on young people aged 16-34, and we use the 2009 to 2012 longitudinal waves of EU-SILC¹, which cover the years from 2006 to 2012. The data allows the tracking of 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 size². In each section, we further restrict the sample according to the purpose of the analysis. In particular, in section 3 we select only those individuals who left education during the three years covered by the three interviews; in section 4 we consider those individuals (aged 16-34) who left education three to five years before the first interview; in section 5 we focus on those who left education in the year preceding the first interview.

As already mentioned (in section 1), we adopt a dynamic view of the labour market, and we focus on employment status trajectories. The dataset contains both annual and monthly information about self-declared employment statuses. Unless otherwise stated (as in section 5), we use monthly information to identify individual employment *trajectories*³. For this reason, we select individuals with no missing information about their main activity during the 36 months covered by the three interviews.

A fundamental methodological issue in the analysis of individual trajectories, especially with a large number of periods/statuses, is how to classify these trajectories in various 'types'. Brzinsky-Fay (2007) and Quintini and Manfredi (2009) use the optimal matching (OM) technique to group trajectories into similar 'types'.⁴ OM is an explorative method of sequence analysis developed by molecular biologists in order to find similar patterns within DNA. The OM algorithm calculates the minimum distance between any two sequences, by considering the number of steps one must perform in order to make both sequences equal (steps may consist in either inserting or deleting an item into a sequence, or substituting an item with another one). A cost is associated to each step, allowing the distance between two sequences to depend on the type of steps taken to make them equal. The corresponding matrix of minimum distances is then used in a cluster analysis to group sequences into similar 'types'.

However, as argued by Aisenbrey and Fasang (2010), this technique presents some problems which may endanger the plausibility of the results and their theoretical interpretability. The first problem concerns the difficulties of linking *theory, time and transformation costs* (Levine, 2000). They could be related to the impossibility to settle states on a hierarchical order, the arbitrariness of cost assignment and to set the cost intervals between hierarchically ordered states. The second issue regards the validation of results, and the lack of a convincing way to ensure the goodness of the cluster analysis.

¹ With the revisions released in August 2013.

² 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.

³ Since monthly employment information refers to the calendar year preceding the interview, the analysis will often refer to the period 2005 to 2011.

⁴ Studies which did not use OM techniques considered either single events, such as the transition from one labour market status to another (Scherer, 2005), or sequences with at most three transitions between states (Sackmann and Wings, 2003).

Results of the cluster analysis could be biased when it is not satisfied the relative improvement rule, which implies to choose appropriately the number of clusters to minimize within-cluster and to maximize between-cluster distances. Missing and incomplete data could also have a harmful impact on the sequence analysis, either in terms of missing observations along the sequence or of differences in length of the sequences.

When sequence data are used to evaluate work histories, the most critical issue regards the consideration of the sequence as a “*holistic product of possible multiple interrelated processes*”, and “*the impossibility of distinguishing between causes and effects*” (Aisenbrey and Fasang, 2010). In other words, the OM technique does not take into account *the direction of time and the order of states across sequence* (Wu, 2000). This leads to a misinterpretation of the sequence because, for instance, it is crucial whether an unemployment spell occurs before or after a period of employment. In addition, the OM technique fails in evaluating the occurrence of a given status during the lifetime. Aisenbrey and Fasang (2010) exemplify that this weakness could lead to attribute the same relevance to a vocational training spell at the age of 18 and at the age of 28.

Even the so-called OM “second wave” extensions which account for the order and timing of trajectories (see Aisenbrey and Fasang, 2010, for a survey), may not be appropriate for specific research aims. In particular, they cannot be used to discriminate successful from unsuccessful trajectories according to a specific goal. Indeed, we cannot define a specific set of conditions that the OM technique should search for in order to rank trajectories from the most successful pathway to the worst scenario. The specific goal that the trajectory should include in order to be defined successful, and the other conditions to rank clusters of trajectories, should be found either in the economic theory or in the specific policy issue under investigation.

As mentioned in section 1, in this report we are concerned with the labour market performance of young people from a dynamic perspective. Indeed, the early years of labour market experience are quite critical because they can have a significant effect on individual employment career over the entire life course. On the one hand, a prolonged difficulty in entering employment may affect the individual physical and cognitive capabilities, and shapes his/her future agency (motivation, preferences and understandings). On the other hand, a prolonged experience of precarious jobs, with many short-term employment spells intermixed by periods of unemployment or inactivity, may also result in subsequent disadvantages (i.e. lower wage, less training, no career advancement, less job satisfaction). This implies that the process of labour market integration is not necessarily completed by entry into one’s first job, and that we should pay attention to both the number and the duration of the employment/unemployment spells.

When looking at the labour market entrance, a first important dimension to be examined is the time needed to reach, and the pathway that led to, the first *relevant* employment spell after leaving education. In order to define a relevant employment spell, we follow the convention implicit in the EU-SILC definitions, which considers individuals as having ever worked if they had a period of employment lasting for at least six consecutive months⁵. Therefore, in section 3 we will distinguish

⁵ In EU-SILC, the six-months period is also referred to in the question about the age at which individuals started their first regular job (a question that is designed to permit the calculation of the total potential time 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 has been in place from 2012 to 2014, paying an incentive to firms that recruited long-term unemployed young people for at least 26 weeks.

successful and unsuccessful trajectories, according to the achievement of a relevant employment spell (i.e. an employment spell that lasts for at least six months), and we will identify various sub-groups according to whether individuals experienced a small number of long unemployment spells or a large number of short employment and unemployment spells.

The focus of section 4 is on the quality of employment four-to-six years after leaving education. As will be described in more details in section 4, the quality of employment is defined by considering four dimensions: employment security, economic security, economic success, and education-occupation successful match. We also want to distinguish the insecure or unsuccessful group according to the type of employment trajectory that individuals are following in this phase of their labour market experience. Indeed, there might be a high degree of heterogeneity among this group, and labour market policies and regulations may affect more the type of experience of unsuccessful individuals than the probability of being successful. From a policy perspective, it is important to distinguish individuals who remain for long periods in unemployment or inactivity, from individuals with frequent status changes, because they clearly need different types of intervention. Therefore, we group individual trajectories according to whether individuals experienced long spells (of at least 12 months) in either employment, unemployment or inactivity and few spells in other statuses, or they changed their employment status several times.

3. From Education to the First Relevant Employment Spell

Gabriella Berloff, Gabriele Mazzolini, Paola Villa

In this section, we use EU-SILC panel data from 2006 to 2012 to identify different school-to-work trajectories (SWT) types, addressing appropriately the order and timing in sequences, and accounting for some other key features of trajectories. Furthermore, we conduct an empirical analysis to identify how much dissimilarities in labour market institutions (labour market policies and labour market regulations) explain the heterogeneity found across EU-countries.

3.1 School-to-Work Trajectories of Young Europeans

Using monthly employment status information⁶ for young people who leave education (aged 16-34), we identify SWT-types, according to whether individuals reached a relevant employment spell. Some other characteristics that we take into account are the number of months between leaving education and the relevant employment spell, the presence of other non-relevant employment spells, the decision of returning to education after a sufficiently long period in the labour market or in inactivity. These criteria produced six different SWT-types, five of which can be distinguished in successful and unsuccessful, according to the achievement of a relevant employment spell.

a) Successful trajectories:

- the *speedy* pathway: those who entered a relevant employment spell within six months after leaving education;
- the *long search* pathway: those went through a period of unemployment or inactivity of at least six months before entering a relevant employment spell;
- the *in&out successful* pathway: those who entered a relevant employment spell after a sequence of unemployment and non-relevant employment spells.

b) Unsuccessful trajectories:

- The *In&out unsuccessful* pathway: those who entered only non-relevant employment spells;
- The *continuous unemployment/inactivity* pathway: those who stayed continuously in unemployment or inactivity, without spending even a month in employment.

c) *Return to education* pathway: those who go back to education for at least six months, after having been in the labour market or in inactivity for more than six months.

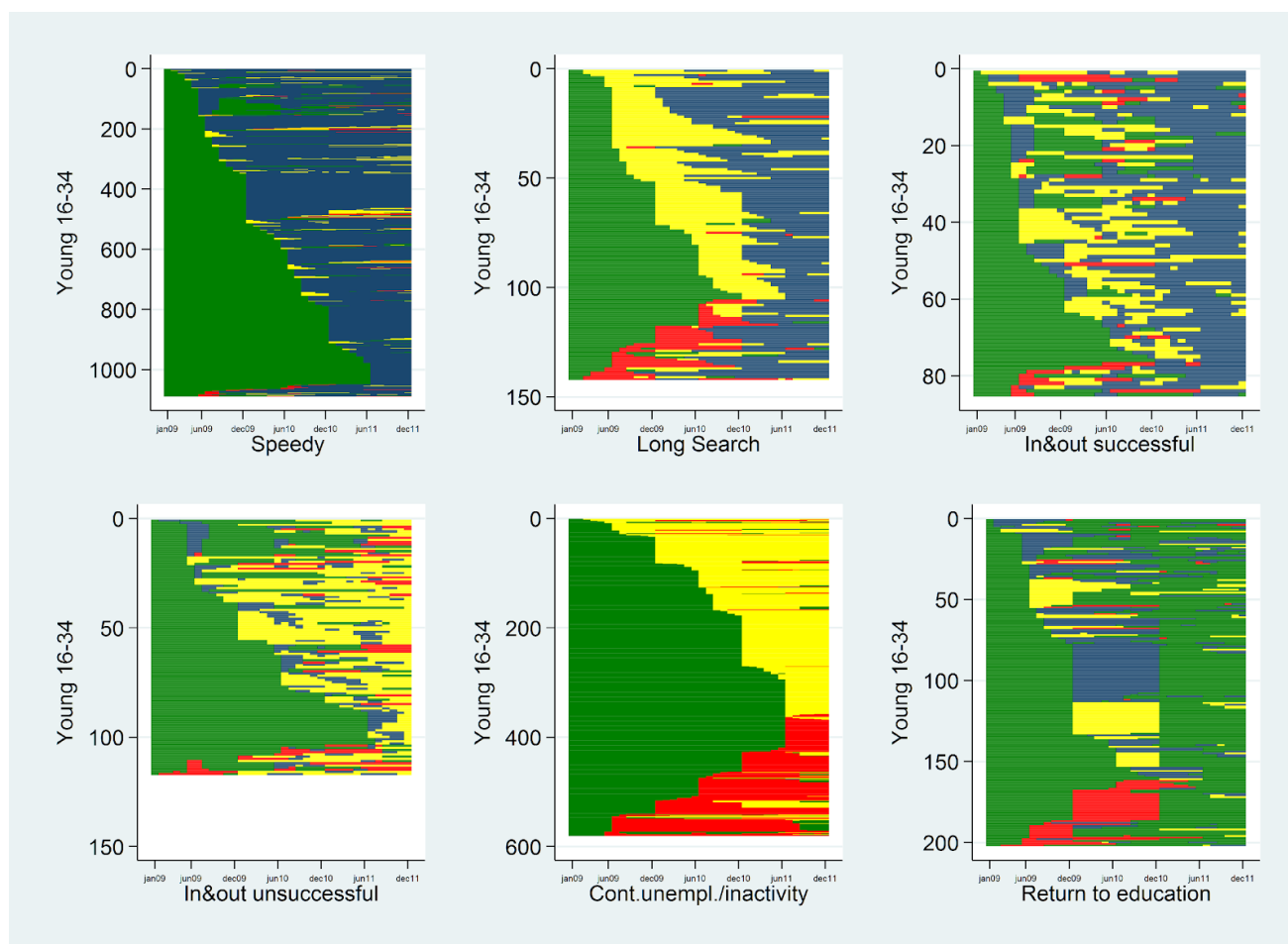
This last pathway implies a new long spell in education. Therefore, we preferred to keep it separate,

⁶ We identify four main employment statuses: employed (if the individual self-declares to be currently employed or self-employed either full-time or part-time); unemployed; in education (if the individual self-declares to be a pupil, student, further training, or in an unpaid work experience); and inactive (a residual category).

given that it is not possible to identify the most relevant episode of the STW transition, as it could clearly lead either to a successful or an unsuccessful trajectory in the future, when the individual leaves education again.

A graphical illustration of these SWT-types for the last wave of EU-SILC longitudinal data is presented in Figure 3.1.

Figure 3.1: Individual School-to-Work transitions by trajectory type (aged 16-34)



Legend: Green: education; Blue: employment; Yellow: Unemployment; Red: Inactivity

Source: Author's computation based on EU-SILC longitudinal data (2010-2012).

Table 3.1 shows the unconditional distribution of the six SWT-types across European countries, grouped according to their prevailing labour market institutional settings⁷. Successful trajectories are more frequent in the Nordic countries and, in particular, in Denmark and in the Netherlands, the so-called flexicurity countries, where the share of young people following a *speedy* pathway is higher than 80%. In Sweden and Finland, instead, there is a higher share of individuals in unstable pathways: the percentages in *in&out successful* (Sweden) and *in&out unsuccessful* (Finland) are the

⁷ For the grouping of countries, we use the classifications adopted by the European Commission (2006), which is based on the results of the principal component analysis applied to four variables measuring the flexicurity principles.

highest among the countries considered (11.72% and 10.67%, respectively). The UK presents a share of 'speedy' that is similar, and sometimes larger, than in Nordic countries (69%), but it has a somewhat larger proportion of young people in continuous unemployment/inactivity (8.3%). In Continental and Eastern countries (with the exception of Hungary) the share of speedy individuals is around 60%, but the share in *continuous unemployment/inactivity* is much larger than in the previous groups (between 15% and 20%). Mediterranean countries show the worst youth labour market outcomes, but with a clear difference between Italy and Greece on the one hand, and Spain and Portugal on the other hand. Young people with speedy trajectories are more than 50% in Spain and Portugal, and only about 35% in Greece and Italy. On the contrary, individuals in *continuous unemployment/inactivity* are more than 40% in Greece and in Italy, and only about 20% in Spain and Portugal.

Table 3.1: Distribution of young people (aged 16-34) by SWT-types within European countries

	Successful trajectories			Unsuccessful trajectories		Return to education
	Speedy	Long search	In&out successful	In&out unsuccessful	Continuous unemployment/inactivity	
Nordic countries						
Denmark	80.06	0.61	0.56	0.54	7.15	11.07
Finland	63.62	3.75	6.35	10.67	7.16	8.45
Netherland	87.76	0.00	2.21	0.36	3.97	5.69
Sweden	67.18	0.79	11.72	8.34	4.30	7.68
Continental and British countries						
Austria	60.25	4.52	2.76	6.44	14.48	11.55
Belgium	59.17	5.78	1.53	5.00	20.87	7.66
France	59.70	6.00	3.69	5.93	22.64	2.03
Luxemburg	64.45	14.65	0.10	1.69	13.49	5.63
UK	69.11	3.65	4.87	3.84	8.33	10.20
Mediterranean countries						
Greece	35.61	6.66	1.55	4.49	40.03	11.66
Italy	33.24	6.20	2.16	6.25	41.16	10.99
Spain	54.12	4.07	3.56	5.76	19.28	13.20
Portugal	56.26	7.14	0.76	4.80	21.81	9.23
Eastern countries						
Czech Republic	65.50	7.78	2.71	3.40	16.83	3.78
Hungary	50.39	9.64	2.89	4.85	24.26	7.96
Poland	59.82	8.93	2.77	2.95	20.90	4.63
Slovenia	58.97	7.45	2.30	1.37	19.80	10.10
EU	57.02	5.62	3.31	4.98	21.50	7.57

Source: Author's computation based on EU-SILC longitudinal data (2006-2012).

Table 3.2: Distribution of young people (aged 16-34) by SWT-types and SWT-years (all countries)

Period of analysis	Successful trajectories			Unsuccessful trajectories		Return to education
	Speedy	Long search	In&out successful	In&out unsuccessful	Continuous unemployment/inactivity	
2005-2007	64.13	6.63	3.37	3.66	16.48	5.72
2006-2008	60.41	4.82	3.20	4.28	20.16	7.12
2007-2009	53.29	5.03	2.87	5.32	23.14	10.36
2008-2010	51.37	6.40	2.60	5.72	25.84	8.08
2009-2011	51.62	5.24	5.15	7.15	24.52	6.31

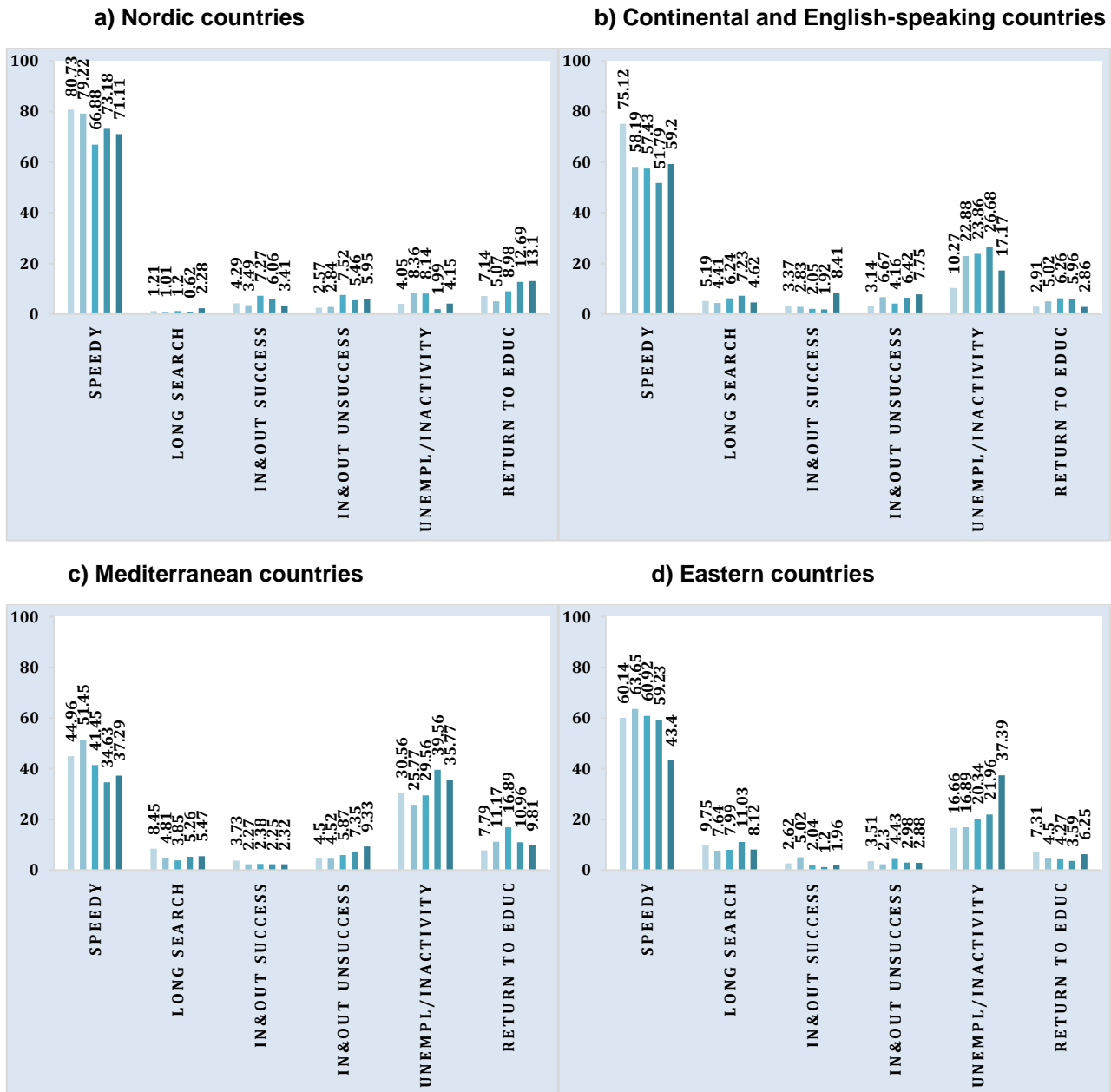
Source: Author's computation based on EU-SILC longitudinal data (2006-2012).

Given the dramatic deterioration of labour market conditions in the EU labour market over the period considered, we expect the share of young people in the six SWT-types to be affected by the economic downturn. Indeed, if we consider the distribution of individuals by different waves (table 2), we can see that the share of young people with *speedy* trajectories decreased by more than 10 percentage points from the years 2005-2007 to the years 2008-2010 (from 64% to 51%). This is reflected in a contextual increase of individuals with unsuccessful trajectories: from 16.5% to 25.8% for *continuous unemployment/inactivity* trajectories, and from 3.7% to 5.7% of *in&out unsuccessful*. Two other interesting pieces of evidence emerge from Table 3.2. First, the *return to education* pathways increased during the first years of the crisis, reverting in the subsequent years to the initial levels. Second, there seems to be an increase in the overall share of individuals with unstable pathways (*in&out*) in the very last wave, with a contextual slight reduction of all the other non-speedy pathways (*long search*, *continuously unemployed* and *return to education*).

In order to see how the crisis affected the different groups of countries, we present the evolution of the shares of young people in the six SWT-types in

Figure 3.2. All groups of countries were affected by a massive reduction of the *speedy* pathways. In Nordic countries, the share of *speedy* individuals decreased from 80.7% in 2005-2007, to 66.9 in 2007-2009, counterbalanced by an increase in all the other types of trajectories (except *long search*). In Continental countries, the worst period was 2008-2010, when the proportion of *speedy* pathways fell to 51.8% (from 75.1% initially), with a contextual increase of individuals in *continuous unemployment*. Also in Mediterranean countries, the years 2008-2010 were the worst, with *speedy* individuals decreasing to 34.6% (from 45% initially) and those in *continuous unemployment/inactivity* reaching 39.6% (from 26% initially). In the Eastern countries, the effect of the economic crisis seems to show up a bit later (2009-2011), with again a huge reduction in *speedy* trajectories (from 60% to 43%), and a huge increase in the *continuous unemployment/inactivity* pathways (from 17% to 37%).

Figure 3.2: Distribution of young people (aged 16-34) by SWT-types, SWT-years, and group of countries



3.2 The effect of labour market institutions

We examine now the role of labour market policies, i.e. active labour market policies (ALMP) and passive labour market policies (PLMP), as well as employment protection legislation (EPL) in influencing youth SWTs. The literature on the effect of labour market institutions⁸ is rather recent and

⁸ The term 'labour market institutions' is used here to refer to the main policy dimensions relevant for the functioning of the labour market: EPL (rules concerning individual and collective dismissals and temporary contracts), ALMPs (public employment services, training, employment subsidies, et.) and support measures, such as unemployment benefits (UB) and other welfare support (including unemployment assistance).

mainly focused on the macroeconomic consequences of EPL and unemployment insurance (Pissarides 2001; Postel-Vinay and Saint Martin 2005; Boeri et al. 2012). Some papers provide evidence on the impact of flexicurity policies on perceived job security (Clark and Postel-Vinay 2009; Origo and Pagani 2009, 2012; Mazzolini and Origo 2014). The most recent studies (Jørgensen 2011; Madsen 2013) have looked at the macroeconomic resilience of the Danish flexicurity model during the economic crisis. They show how domestic demand was more stable in Denmark during the recent downturn, thanks to high unemployment benefits and relatively high social assistance benefits, but these positive results came at the expense of a rising public deficit.

In the following analysis, we use three variables to account for the role of labour market institutions. First, we compute country and year specific active and passive policy expenditures per unemployed (based on Eurostat LMP database and measured in thousands of Euro), and we assign to each individual the level of these expenditures corresponding to the initial year of the trajectory. Usually eligibility criteria for unemployment benefit (UB) require a minimum employment period; therefore the generosity of the public support (captured by PLMP expenditure per unemployed)⁹ should not affect significantly the behaviour of new entrants into the labour market. However, in an uncertain environment, it might increase the search effort of young people, and/or their willingness to accept jobs even if employment conditions are not optimal, in order to gain access to future protection. Therefore, we expect that PLMP could either have no effect on the probability of following the different SWTs, or reduce the probability to remain unemployed for a long time. Similarly, expenditure for ALMPs could increase the probability for young people to find a job more quickly and/or to return to education.

As regards EPL, we use the sub-component of the OECD index that refers to the temporary contracts legislation (EPL-T), which reflects the stringency of the rules on hiring workers on temporary contracts¹⁰. Given the increasing use of atypical contracts, especially for young people (Barbieri 2009; Berloff, Modena and Villa 2014), this index could have more direct effects on young entrants into the labour market than the overall EPL index (which includes also rules on individual and collective dismissals). Since a higher level of the EPL-T index implies more difficulties for firms in hiring workers with flexible contracts, we expect a negative correlation between this index and successful trajectories, and a positive correlation with unsuccessful trajectories. As before, we assign to each individual the country-specific EPL-T index corresponding to the initial year of the trajectory, and also a dummy indicating that the EPL-T index has been reduced in the preceding five years¹¹.

Figure 3.3 and Figure 3.4 show the unconditional correlations between expenditures on PLMPs and ALMPs and the different types of SWTs. Both PLMPs and ALMPs appear positively correlated with *speedy* and *return to education* pathways, and negatively with *long search* and *continuous unemployment*. They seem also positively correlated with *in&out* trajectories, but this correlation is

⁹ Support measures, hence total expenditure on PLMPs, include UB (which are contributory schemes in most EU countries) but also other welfare support measures for unemployed people not entitled to receive UBs.

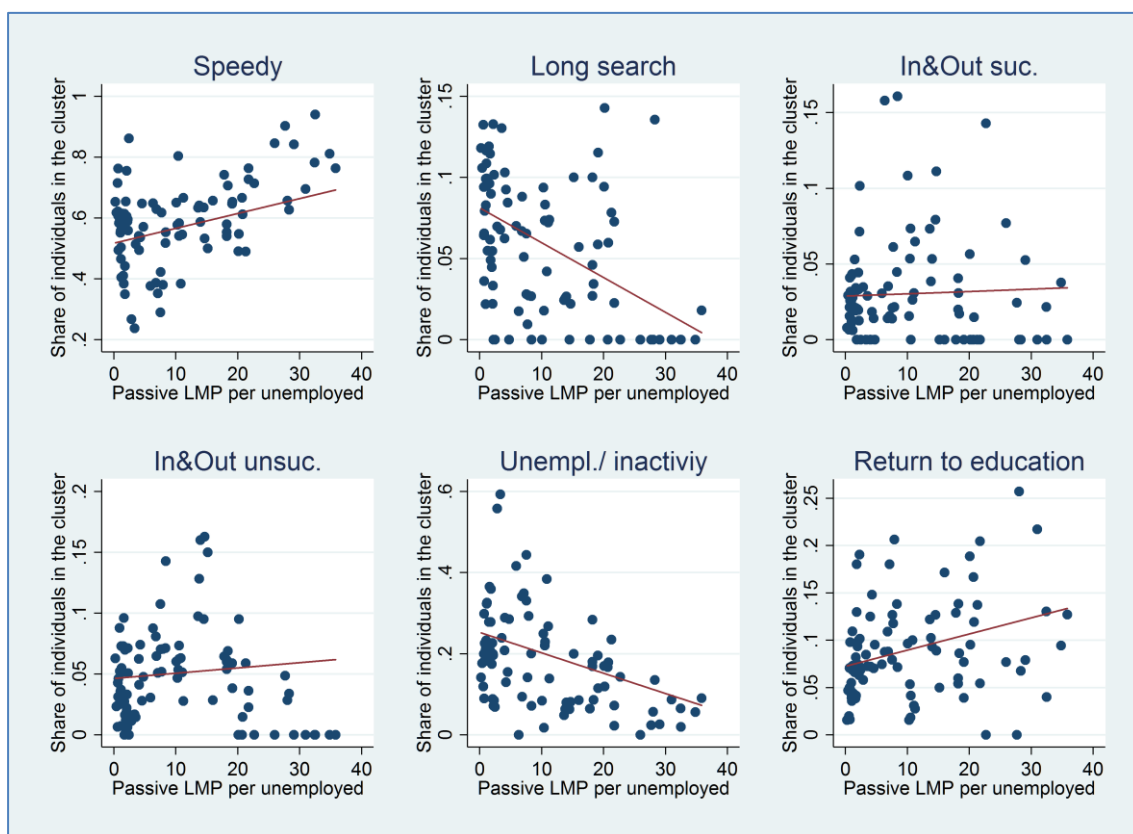
¹⁰ In details, the EPL-T index includes regulation of fixed-term and temporary work agency contracts with respect to the types of work for which these contracts are allowed and their duration; regulation governing the establishment and operation of temporary work agencies; requirements for agency workers to receive the same pay and/or conditions as equivalent workers in the user firm, which can increase the cost of using temporary agency workers relative to hiring workers on permanent contracts.

¹¹ The correlation between EPL-T index and the dummy indicating whether the EPL-T index has been reduced is equal to 0.19 but not statistically significant.

much weaker. In Figure 3.5 we depict the relationship between the EPL-T index and the various SWTs. The correlation is negative with the *speedy* pathway (i.e. the latter is more frequent in countries where it is easier to hire workers using temporary contracts), and positive with the share of individuals who are *continuously in unemployment/inactivity*.

Unconditional correlations, however, can be influenced by various individual and country characteristics. Therefore, we estimate a multinomial logit model for the individual probability of experiencing the various SWT-types, controlling for gender, age, education, previous experience in the labour market, year and country fixed effects, as well as for ALMPs, PLMPs, and EPL-T. Results are reported in Table 3.3a and Table 3.4b. Table 3.3a presents the marginal effects of the various regressors on the probability of following a successful SWT (*speedy*, *long search* and *in&out successful*), whereas Table 3.4b reports the marginal effects for unsuccessful trajectories (*in&out unsuccessful*, *continuous unemployment/inactivity*, and *return to education*).

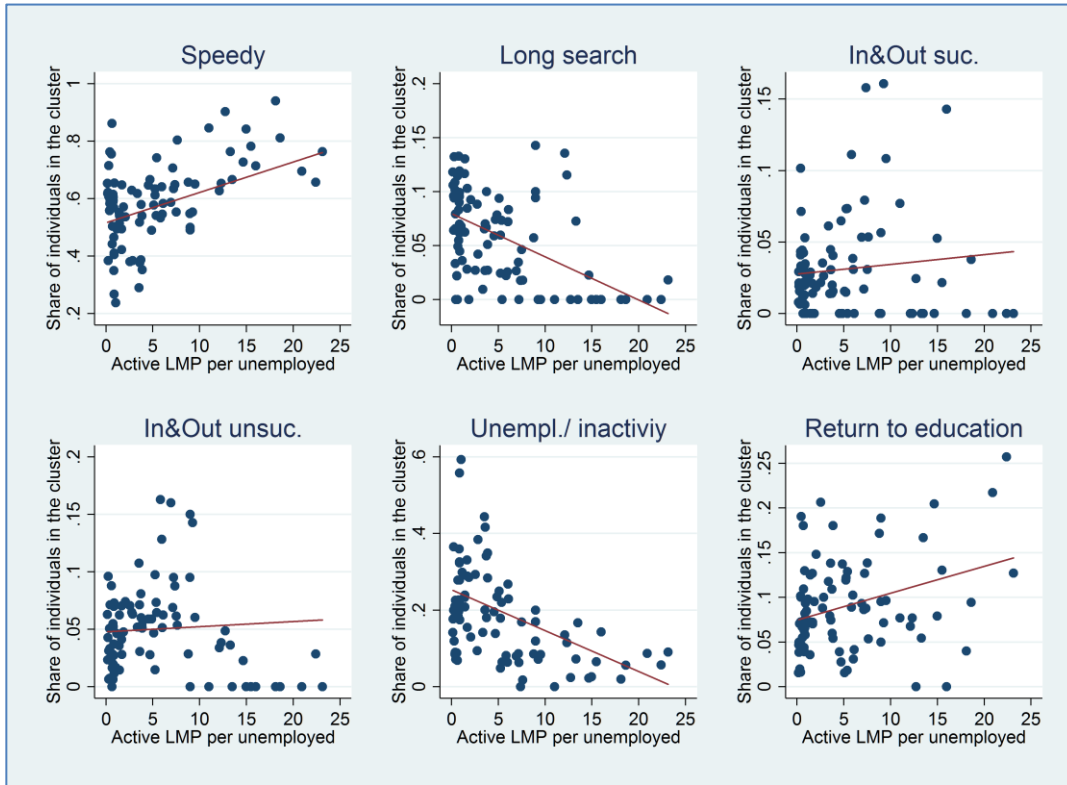
Figure 3.3: The correlation between PLMP expenditure per unemployed and the SWT-types



Note: each dot represents a country-wave combination. Countries are those listed in table 1; EU-SILC waves are: 2005-2007; 2006-2008; 2007-2009; 2008-2010; 2009-2011.

Source: Authors' calculation on EU-SILC longitudinal data.

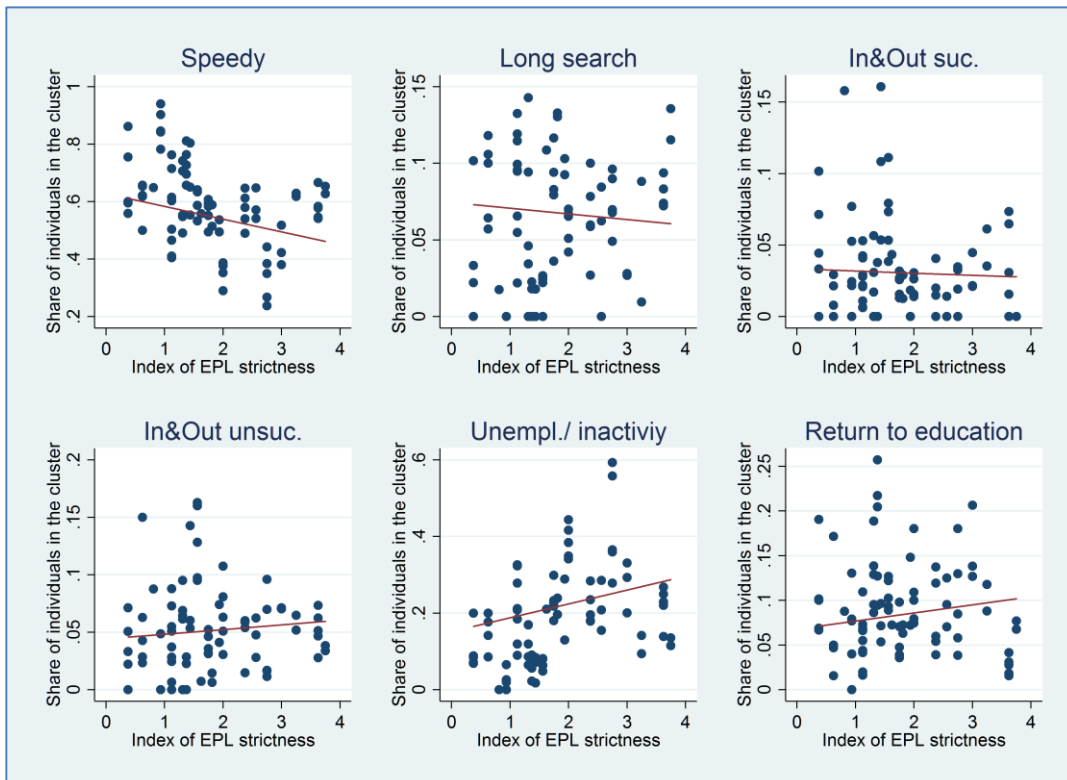
Figure 3.4: The correlation between ALMP expenditure per unemployed and the SWT-types



Note: each dot represents a country-wave combination. Countries are those listed in table 1; EU-SILC waves are: 2005-2007; 2006-2008; 2007-2009; 2008-2010; 2009-2011.

Source: Authors' calculation on EU-SILC longitudinal data.

Figure 3.5: The correlation between EPL-T index and the SWT-types



Note: each dot represents a country-wave combination. Countries are those listed in table 1; EU-SILC waves are: 2005-2007; 2006-2008; 2007-2009; 2008-2010; 2009-2011.

Source: Authors' calculation on EU-SILC longitudinal data.

As regards individual characteristics, results highlight a clear gender difference, with males having a higher probability of following a successful pathway (*speedy* or *in&out successful*), and a lower probability of being continuously unemployed or inactive. Age and education also generally increase the probability of entering successful trajectories (with sizable marginal effects), and decrease that of following an unsuccessful pathway, with some differences with respect of *in&out* and return to education. Age increases the probability of *in&out successful*, and decreases that of returning to education. Education reduces the probability of *in&out unsuccessful*, and increases that of returning to education. Previous working experiences contribute to gain a stable and relevant employment after leaving education (both through a *speedy* and an *in&out* pathway), and reduce the probability of remaining in *continuous unemployment/inactivity*, or returning to education. However, it has also a small positive and significant effect on remaining in an unsuccessful *in&out* pathway.

Table 3.3a Marginal effects from Multinomial Logit Model of the probability to follow Successful SWT

	Speedy			Long search			In&out successful		
Baseline exp. Probability	0.5428			0.0672			0.0317		
Personal characteristics									
Male	0.0409	0.0121	***	-0.0014	0.0047		0.0074	0.0035	**
Age	0.1258	0.0184	***	0.0061	0.0091		0.0101	0.0041	***
Age squared	-0.0025	0.0004	***	-0.0001	0.0002		-0.0002	0.0001	***
Secondary education	0.1046	0.0203	***	-0.0112	0.0112		0.0092	0.0063	
Tertiary education	0.1691	0.0226	***	-0.0151	0.0139		0.0026	0.0055	
Experience	0.0363	0.0045	***	-0.0046	0.0039		0.0021	0.0010	**
Country fixed effect									
Denmark	0.0679	0.0904		-0.0093	0.0428		-0.0355	0.0410	
Finland	0.0006	0.0315		-0.0369	0.0183	**	0.0223	0.0108	**
Sweden	0.1091	0.0640	*	-0.1045	0.0384	***	0.0446	0.0187	***
UK	0.0495	0.0528		-0.0536	0.0376		0.0409	0.0134	***
Austria	-0.0773	0.0442	***	0.0550	0.0243	**	-0.0086	0.0138	
Belgium	-0.1267	0.0676	**	0.0772	0.0342	**	-0.0361	0.0319	
Luxemburg	0.3419	0.1009	***	0.1766	0.0422	***	-0.4775	0.0509	***
France	0.0490	0.0674		0.0693	0.0316	**	-0.0372	0.0338	
Greece	-0.1482	0.0556	***	0.0360	0.0249		-0.0458	0.0276	*
Spain	-0.0259	0.0611		0.0030	0.0375		-0.0295	0.0289	
Portugal	0.0579	0.0444		0.0352	0.0193	**	-0.0651	0.0248	***
Italy	-0.3019	0.0372	***	0.0368	0.0167	**	-0.0321	0.0158	**
Czech republic	0.0744	0.0242	***	-0.0130	0.0160		-0.0097	0.0100	

Hungary	-0.1087	<i>0.0229</i>	***	-0.0009	<i>0.0115</i>		0.0049	<i>0.0072</i>
Poland	0.0053	<i>0.0226</i>		-0.0054	<i>0.0121</i>		-0.0188	<i>0.0096</i> ***
Slovenia	0.0094	<i>0.0345</i>		0.0260	<i>0.0090</i>	***	-0.0260	<i>0.0101</i> ***
Year fixed effect								
2006-2008	0.0060	<i>0.0155</i>		-0.0172	<i>0.0087</i>	**	0.0083	<i>0.0056</i>
2007-2009	-0.0424	<i>0.0125</i>	***	-0.0227	<i>0.0088</i>	***	-0.0026	<i>0.0065</i>
2008-2010	-0.0909	<i>0.0148</i>	***	-0.0094	<i>0.0094</i>		0.0025	<i>0.0052</i>
2009-2011	-0.1198	<i>0.0119</i>	***	-0.0105	<i>0.0108</i>		0.0143	<i>0.0056</i> ***
Welfare Regime								
ALMP exp/unemployed	-0.0039	<i>0.0096</i>		0.0016	<i>0.0046</i>		0.0009	<i>0.0037</i>
PLMP exp/unemployed	0.0092	<i>0.0047</i>	**	-0.0052	<i>0.0025</i>	**	-0.0004	<i>0.0020</i>
EPL-T strictness	-0.0388	<i>0.0277</i>		-0.0164	<i>0.0125</i>		0.0210	<i>0.0132</i>
Reduction in EPL-T (dummy)	-0.0409	<i>0.0212</i>	**	-0.0141	<i>0.0144</i>		0.0044	<i>0.0078</i>

Notes: Robust standard errors in italics. ***p<0.00, **p<0.05, *p<0.10. The reference category are females in the Netherlands, with primary education, over the years 2005-2007. We also control for the initial number of months in education.

Table 3.4b Marginal effects from Multinomial Logit Model of the probability to follow Unsuccessful SWT

	In&out unsuccessful		Unempl/inactivity			Return to education		
Baseline exp. probability	0.0518		0.2194			0.0851		
Personal characteristics								
Male	0.0040	<i>0.0053</i>		-0.0411	<i>0.0101</i>	***	-0.0097	<i>0.0073</i>
Age	-0.0082	<i>0.0083</i>		-0.0932	<i>0.0137</i>	***	-0.0405	<i>0.0105</i> ***
Age squared	0.0001	<i>0.0002</i>		0.0020	<i>0.0003</i>	***	0.0007	<i>0.0002</i> ***
Secondary education	-0.0169	<i>0.0064</i>	***	-0.1135	<i>0.0176</i>	***	0.0278	<i>0.0111</i> ***
Tertiary education	-0.0275	<i>0.0100</i>	***	-0.1617	<i>0.0216</i>	***	0.0326	<i>0.0117</i> ***
Experience	0.0046	<i>0.0015</i>	***	-0.0331	<i>0.0038</i>	***	-0.0053	<i>0.0024</i> **
Country fixed effect								
Denmark	-0.0046	<i>0.0412</i>		-0.0339	<i>0.0912</i>	**	0.0155	<i>0.0311</i>
Finland	0.1180	<i>0.0202</i>	***	-0.1183	<i>0.0259</i>	***	0.0144	<i>0.0109</i>
Sweden	0.0760	<i>0.0200</i>	***	-0.1477	<i>0.0820</i>	**	0.0225	<i>0.0198</i>
UK	-0.0335	<i>0.0238</i>		-0.0924	<i>0.0443</i>	**	0.0892	<i>0.0301</i> ***
Austria	0.0579	<i>0.0244</i>	***	-0.0265	<i>0.0386</i>		-0.0004	<i>0.0149</i>
Belgium	0.1113	<i>0.0420</i>	***	0.0257	<i>0.0754</i>		-0.0514	<i>0.0295</i> *
Luxemburg	0.1954	<i>0.0670</i>	***	-0.1038	<i>0.1068</i>		-0.1326	<i>0.0451</i> ***

France	0.1703	<i>0.0620</i>	***	-0.0431	<i>0.0852</i>		-0.2084	<i>0.0392</i>	***
Greece	0.1185	<i>0.0492</i>	***	0.0775	<i>0.0816</i>		-0.0381	<i>0.0283</i>	
Spain	0.1629	<i>0.0536</i>	***	-0.0681	<i>0.0789</i>		-0.0424	<i>0.0325</i>	
Portugal	0.0919	<i>0.0359</i>	***	-0.0983	<i>0.0683</i>		-0.0216	<i>0.0235</i>	
Italy	0.0953	<i>0.0310</i>	***	0.1863	<i>0.0419</i>	***	0.0156	<i>0.0145</i>	
Czech republic	-0.0057	<i>0.0218</i>		-0.0168	<i>0.0223</i>		-0.0293	<i>0.0134</i>	**
Hungary	0.0172	<i>0.0162</i>		0.0563	<i>0.0203</i>	***	0.0312	<i>0.0157</i>	**
Poland	0.0363	<i>0.0210</i>	*	0.0057	<i>0.0252</i>		-0.0231	<i>0.0170</i>	
Slovenia	-0.0118	<i>0.0259</i>		0.0082	<i>0.0244</i>		-0.0058	<i>0.0108</i>	
Year fixed effect									
2006-2008	0.0024	<i>0.0080</i>		-0.0048	<i>0.0191</i>		0.0053	<i>0.0119</i>	
2007-2009	0.0151	<i>0.0086</i>	*	0.0322	<i>0.0180</i>	**	0.0205	<i>0.0134</i>	
2008-2010	0.0068	<i>0.0084</i>		0.0740	<i>0.0169</i>	***	0.0170	<i>0.0124</i>	
2009-2011	0.0096	<i>0.0073</i>		0.0746	<i>0.0165</i>	***	0.0316	<i>0.0117</i>	***
Welfare Regime									
ALMP exp/unemployed	0.0004	<i>0.0034</i>		-0.0036	<i>0.0081</i>		0.0046	<i>0.0038</i>	
PLMP exp/unemployed	-0.0018	<i>0.0019</i>		-0.0027	<i>0.0045</i>		0.0008	<i>0.0021</i>	
EPL-T strictness	-0.0556	<i>0.0232</i>	***	0.0385	<i>0.0336</i>		0.0514	<i>0.0157</i>	***
Reduction in EPL-T (dummy)	-0.0185	<i>0.0103</i>	**	0.0442	<i>0.0266</i>	*	0.0248	<i>0.0105</i>	***

Notes: Robust standard errors in italics. *** $p < 0.00$, ** $p < 0.05$, * $p < 0.10$. The reference category are females in the Netherlands, with primary education, over the years 2005-2007. We also control for the initial number of months in education.

Nordic countries are those with higher probabilities of successful pathways and, in particular, *speedy* trajectories (together with Luxemburg and Czech Republic). However, in Finland and Sweden, SWTs appear more unstable. In Austria and Belgium, higher probabilities of *long search* and *in&out unsuccessful* compensate lower probabilities of *speedy* trajectories. In the UK, a lower probability of being continuously unemployed, counterbalance a higher probability of *returning to education*. Returning to education is less likely in France, where there are higher probabilities of *long search* or *in&out unsuccessful* trajectories. Italy is the country with the lowest probability of entering a *speedy* trajectory, and the highest probability of being continuously unemployed or inactive. Together with the other Mediterranean countries it also has a higher probability associated to the *in&out unsuccessful* trajectory, and, with Portugal, a higher probability of long search and a lower probability of *in&out successful*. Eastern countries are also heterogeneous: speedy trajectories are more likely in the Czech Republic, and less likely in Hungary, where it is instead more likely to follow a *continuous unemployment/inactivity* and a *return to education* trajectory.

The negative consequences of the economic crisis are quite clearly revealed by the model estimates: there is a continuous reduction in the probability of entering a *speedy* trajectory, and an increase in the probability of being *continuously unemployed/inactive*. A significant increase in the probability of *returning to education* is estimated only for the very last wave, whereas no systematic patterns emerge with respect to the *in&out* trajectories.

After controlling for individual characteristics, country and time dummies, ALMP expenditures have no significant effect on the likelihood of entering the various SWTs. Also the effects of PLMP are very limited: they increase the probability of entering a *speedy* pathway and reduce that of having a *long search* period, but the magnitude of the effect is very small. In contrast, the rules on temporary contracts seem to display some influence on STW transitions. In particular, two main effects emerge from our estimates. First, a higher level of the EPL-T index (i.e. more stringent rules on temporary contracts) is associated with a lower probability of following an *in&out unsuccessful* pathway, and a higher probability of *returning to education*. This suggests that more stringent norms limit the degree of instability of SWTs, and provide some incentives to improve individual employability through additional education. Second, a loosening of these rules in the five years preceding the end of education is associated with a *reduction* in the probability of entering a *speedy* trajectory, and an increase in the probability of remaining *continuously unemployed or inactive*. Since the countries that have reduced the EPL-T index are mainly Mediterranean ones¹², this result seems to suggest that encouraging the use of temporary contracts (by reducing the strictness of the rules regulating their use), is not an effective policy tool to improve employment outcomes, especially when labour demand is weak (i.e. the economy has entered a deep recession), and it may even have undesirable effects¹³.

¹² Spain in 2006-2007 and 2010-2011; Portugal and Sweden in 2007-2008; Greece in 2010-2011 and 2011-2012.

¹³ This is in line with the data presented in ESDE 2014 (EC 2014b, pp. 77-78), suggesting that neither reductions in EPL for permanent workers (during economic downturn) nor for temporary contracts appear to be clearly correlated with improvements in the transition from unemployment to employment.

4. The quality of employment in the early labour market experience

Gabriella Berloff, Eleonora Matteazzi, Alina Sandor, Paola Villa

As argued in Section 1, the analysis of youth labour market performance should account for the dynamics of labour market transitions in order to study the entry into the labour market (i.e. school-to-work transitions) and subsequent trajectories. While the previous section focussed on the years immediately following the end of education, in this section we analyse the employment outcomes of young people in the subsequent temporal phase of labour market experience (i.e. about 4 to 6 years after leaving education).

Indeed, it might take some time, after leaving school, before a young person holds a solid position in the labour market in terms of skills, competences, experience, networking and employment opportunities. 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 for a large share of youth (O'Reilly et al. 2015). Some young people, although with appropriate educational qualification and some labour market experience, might face persistent difficulties in accessing stable employment, as they experience a series of short-term employment spells intermixed by periods of unemployment or inactivity¹⁴. For some of these young people, fixed-term contracts act as a bridge towards good and stable employment opportunities, but for others they act as traps in precarious jobs. Temporary contracts not only pay less than standard contracts, but have several other disadvantages (i.e. less training, no career advancement, less job satisfaction), including a higher unemployment risk.

The objective of this section is therefore to introduce a dynamic perspective on 'employment quality', and to illustrate the performance of young people in terms of: i) their ability to access what we identify as 'career employment'; ii) the type of employment status trajectories (ESTs) that characterize this phase of their labour market experience. Our analysis builds on the extensive work developed in the literature on job quality and skill mismatch in order to identify some features that characterise the idea of 'employment success'. We focus on those aspects that have been shown to be particularly important for young people's successful inclusion in the labour market: low risk to become unemployed, a decent labour income, good matching between educational qualification and skills, some career advancements (in terms of earnings and occupation). The analysis we propose represents a first ambitious attempt to define the concepts of 'employment quality' and 'career

¹⁴ It is widely acknowledged that the increased labour market flexibility has created segmented labour markets, especially in Mediterranean countries, where the burden of flexibility falls by and large on young workers with atypical contracts (EC 2014; O'Reilly et al. 2015).

employment' within a dynamic perspective, and with reference to a sequence of employment statuses, instead of to a single job.

4.1 From job-quality to a dynamic view of employment quality

The influential Report by the Commission on the Measurement of Economic and Social Progress (Stiglitz, Sen, Fitoussi 2009) states that, besides Gdp per capita, other aspects of life contribute to the well-being of nations, and job quality is a significant element of that well-being. Job quality is a complex and multidimensional concept that has been extensively analysed in the literature. At the time of the Report, a number of studies had already identified important aspects of job quality, other than wages, on which analyses and policy should focus, drawing on a long tradition of studies in social sciences (Gallie et al. 1998; Green 2006). Moreover, in recent years several international organisations, such as European Parliament (2009), Eurofound (2002; 2012), OECD (2014), ILO (with the development of the 'decent work concept'), and EC (2014a), have made efforts to assess and quantify job quality¹⁵.

There are a variety of perspectives on job quality. First, it is commonplace to distinguish between the perspective of workers and their employers, as they may not always coincide, and between the objective and subjective concepts of job quality. The subjective approach assumes that each worker values one feature against another, in a different way. According to this approach, job quality is the 'utility' that a worker derives from his job, and that utility depends on job features (i.e. wage, hours, type of work), but it is subjective in that each worker has preferences over the different job features¹⁶. The objective approach assumes that job quality comprehends job features that meet worker's needs. Objective measures of job quality are derived from a theory of human needs and measure how far jobs meet these needs (Green 2006).

Different academic fields conceptualise objective job quality in different ways. Nevertheless, there is some convergence in terms of the features that are considered to be crucial for workers' well-being. In particular, they always include some indicators on the level of earnings (and its distribution) and on job insecurity (i.e. unemployment risk)¹⁷. It follows that the concept of objective job quality is assessed by a *selected* set of indicators, measuring various dimensions associated with the job. And the selection depends on the research focus.

Extending this approach to dynamic employment conditions, we define 'employment quality' according to four dimensions that we consider essential for a successful inclusion of young people in the labour market:

¹⁵ See EC (2014a, Annex 1, pp. 172-179) for a synthetic review of objective definitions of job quality developed by various international organisations in recent years.

¹⁶ Some scholars (Green 2006; Muñoz de Bustillo et al. 2011) argue that although emotions play a contributory role in validating indicators of job quality, measures of job satisfaction or of well-being at work are not constitutive of job quality. Well-being measures do not necessarily correspond to the satisfaction of needs, so they are not adequate as proxies for job quality.

¹⁷ Other dimensions considered in the literature include education and training, working environment (i.e. health and safety, nature and content of work performed, working time arrangements), work-life and gender balance.

- 1) employment security – identified in terms of being employed for two consecutive years, with either no changes in the job or a voluntary change for improving employment conditions;
- 2) economic security – identified in terms of earning a decent *annual labour* income for two consecutive years, with no reduction of it over time;
- 3) economic success – identified in terms of having stable or increasing *monthly* earnings higher than the median;
- 4) educational and occupational success – identified in terms of a good matching between educational qualification and occupation.

The last dimension is not usually considered in the literature on job quality. We decided to include it given the increasing relevance of skill mismatch in EU countries, especially for young people, and the implications in terms of wage penalty/premium.

Indeed, skill mismatch between workers' competences and what is required by their job is a widespread and increasing phenomenon in Europe (EC 2012; ECB 2014; ILO 2014a). Among the many types of skill mismatch¹⁸, the concept of over-education¹⁹ has received most attention in literature. It should be pointed out that educational qualifications are considered an imperfect proxy of the skills and competences possessed by individuals, as they fail to account for the dynamic process of skill gains/losses related to work experience, as well as differences across education and training systems (EC 2012: 362)²⁰. However, measuring skill mismatch between workers and jobs is not easy, for lack of appropriate data²¹. As a result, most studies use educational qualifications as proxies for competences. According to recent estimates of vertical mismatch (computed using educational qualifications) among 25-64 year olds, in EU-27 over 2001-11, nearly 15% of EU employees are over-qualified, while 21% are under-qualified, implying a total incidence of about 36% (EC 2012: 360 and Annex 2: 388)²². However, there is significant variation across countries and socio-demographic groups, with youth more likely to be over-qualified than older workers. The literature on over-education shows that over-qualified workers are found to earn less than their equally-qualified and well-matched counterparts (but more than appropriately-qualified workers doing the same job); while under-qualified workers are found to earn more than their equally-qualified and well-matched counterparts (but less than appropriately-qualified workers doing the same job) (Quintini 2011: 17 and tab. A1.2).

¹⁸ Qualitative mismatch takes many different forms: vertical qualification mismatch, horizontal qualification mismatch, skill mismatch and skill obsolescence (see EC 2012, tab. 1, p. 358; Cedefop 2010).

¹⁹ This concept was first introduced in 1976 by Richard Freeman in his influential book based on US experience (Freeman 1976).

²⁰ "Though much of the early literature focused on education mismatch, recent evidence has highlighted that it can be weakly correlated with skill mismatch. Educational credentials cannot provide a full picture of the quality of individuals' human capital, in particular their skill gain and skill loss over their careers." (EC 2012: 358).

²¹ Three alternative methods of measuring vertical mismatch have been used in the literature: the job evaluation method based on information included in formal job descriptions, the worker self-assessment method (that relies on the subjective response of workers about educational requirement of their job), and the empirical method (that calculates vertical mismatch from the distribution of schooling levels across a given occupation). Each method has its own strengths and weaknesses. Nevertheless the approaches used to estimating the incidence of over-qualification tend to yield broadly consistent conclusions (EC 2012: 361). See also Quintini (2011: 14).

²² The studies reviewed by Quintini (2011), based on educational qualifications, estimate that in OECD countries one in four workers could be over-qualified and one in three could be under-qualified for their job.

With the recent economic downturn, skill mismatch has come to the forefront of the policy debate in Europe, as many analysts have argued that the phenomenon has been reinforced by the economic crisis. Skill mismatch among young workers should be of concern, both to scholars analysing the labour market performance and to policy makers. Understanding skill mismatch implies understanding of interactions between types of skill imbalances. This is far beyond the scope of our analysis (indeed it is the object of a specific work package of the STYLE project, WP5 – Mismatch: Skills and Education). Nevertheless, we explicitly consider skill mismatch (measured in terms of educational qualification) as one of the dimensions affecting the successful inclusion of young people in the labour market.

4.2 Career employment and employment trajectories: a descriptive analysis

Our analysis focuses on young individuals (aged 16-34) who left education three to five years before the first interview. In selecting the sample, we had to resort to data approximation/imputation as we do 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 completed²³, 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 6. We exclude those individuals who were inactive during the whole monthly sequence (less than 3% of our sample, mainly women). Because of data limitations, we were able to consider the following 16 European countries: AT, BE, CZ, DK, EE, EL, ES, FI, HU, IT, NL, PL, PT, SE, SI, SK²⁴.

In order to define the four dimensions by which we characterize 'career employment', we combine information about monthly employment sequences with annual information about employment status, occupational category, job changes, and earnings. More precisely, we define:

- 1) **employment security**: if a young person is employed (as employee or self-employed; on a full-time or part-time basis) in the first two interviews; declares not to have changed job²⁵ between the two interviews, or to have changed it in order to take up a better job, and the new job lasts for at least six months (i.e. it is within a relevant employment spell).
- 2) **economic security**: if *annual earnings* at the first interview are above the at-risk-of-poverty threshold²⁶, and are not decreasing through time.
- 3) **economic success**: if *monthly earnings*²⁷ at the first and second interview are larger than the country-year-education specific median earnings, and they increase through time.

²³ This official age is taken from European Commission (2014): The Structure of the European Education Systems 2014/15: Schematic Diagrams).

²⁴ IE and UK are excluded because the definition of the income reference period is different from that of the other countries, and income is an important dimension of our subsequent analysis. BG, CY, EE, LT, LV, MT, NO, RO are excluded because the policy variables that we use in the econometric analysis are not available for them.

²⁵ For an employee, a change of job means a change of employer or a change of contract with the same employer. For a self-employed, a change of job means a change of the activity performed or moving between employee and self-employed status.

²⁶ This threshold corresponds to 60% of the national median equivalised disposable income after social transfers. We are therefore evaluating the possibility that an individual labour income is large enough to avoid the risk of poverty.

- 4) **educational and occupational success:** if, in the first two interviews, a young person is not over-educated as defined by ILO (2014b)²⁸, and does not move from an occupation category to an inferior one.

In the empirical analysis we group the ‘security’ and ‘success’ dimensions and we focus on:

- 1) **security:** if an individual has both employment and economic security;
- 2) **success:** if an individual has both economic and educational/occupational success.
- 3) **career employment:** if an individual experiences both security and success (i.e., if he/she is in both the previous categories).

Besides identifying those young people who experienced security and/or success, we also distinguish the insecure or unsuccessful group according to the type of employment status trajectory (EST) that individuals are following. Indeed, there might be a high degree of heterogeneity among this group, and labour market policies and legislation may affect more the type of experience of unsuccessful individuals than the probability of being successful. We use monthly information about employment statuses to identify different types of employment status trajectories (ESTs). Since the aim of this clustering is to identify some features of unsuccessful individuals that could be relevant from a policy perspective, we group trajectories according to both the length and number of spells in the sequence. Indeed, individuals with frequent status changes require different interventions compared to individuals who remain for long periods in unemployment or inactivity. Returning to education for a relevant number of months might have important consequences for future prospects, and therefore it cannot be mixed with other types of trajectories. Given these criteria, we identified the following six EST-types.

- 1) **Almost always in employment:** it includes individuals who were either always employed during the 36 months, or they had a short spell of education (less than 6 consecutive months).
- 2) **Prevalently in employment:** it includes individuals who experienced long employment spells (more than 12 consecutive months), few spells of non-employment (unemployment, inactivity, or education), with a low number of changes from employment to non-employment (and vice-versa; three at most) and, overall, more months in employment than in unemployment and inactivity.
- 3) **Prevalently in unemployment:** it includes individuals who experienced a long spell of unemployment (more than 12 consecutive months), some periods of employment or inactivity/education, but the total number of months in unemployment/inactivity is larger than the total number of months in employment, and the number of employment/non-employment changes is low. This trajectory includes also young individuals who were always out of employment, but whose number of months in unemployment is larger than the number of months in inactivity.

²⁷ Monthly earnings are computed by dividing the declared annual labour income by the number of months worked during the income reference period.

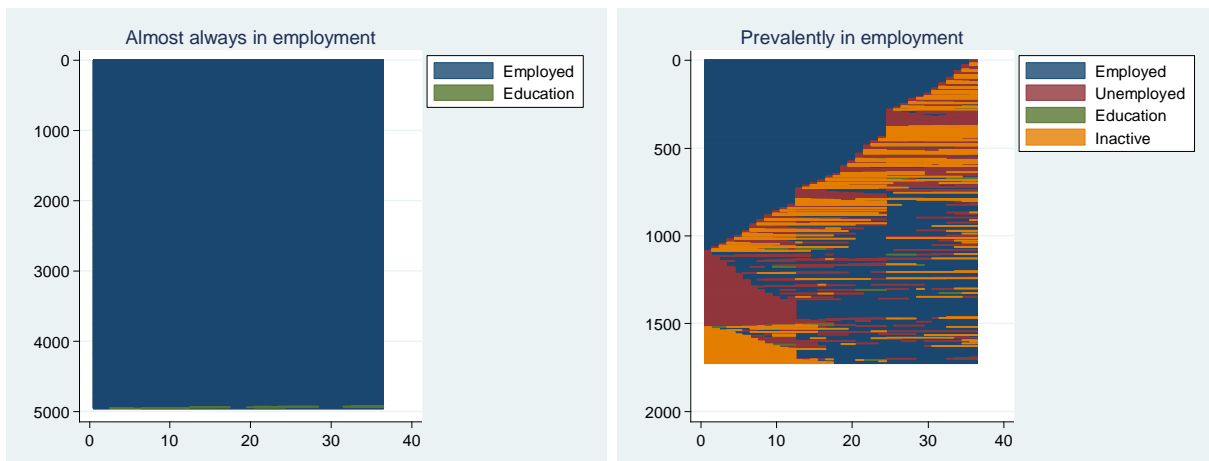
²⁸ Over-education or under-education means that workers have more or less education than required by their job. ILO's measure of education-occupation mismatch is based on a correspondence between the ISCED and ISCO classifications. In particular, high-skilled non-manual occupations (ISCO 1, 2 and 3) require tertiary education (ISCED 5 and 6); low-skilled non-manual (ISCO 4 and 5) and skilled manual occupations (ISCO 6, 7 and 8) require secondary education (ISCED 3 and 4); unskilled occupations (ISCO 9) do not require any education (ISCED 0, 1 and 2). Workers in a particular occupational group who have the assigned level of education are considered well matched. Those who have a higher (lower) level of education are considered overeducated (undereducated).

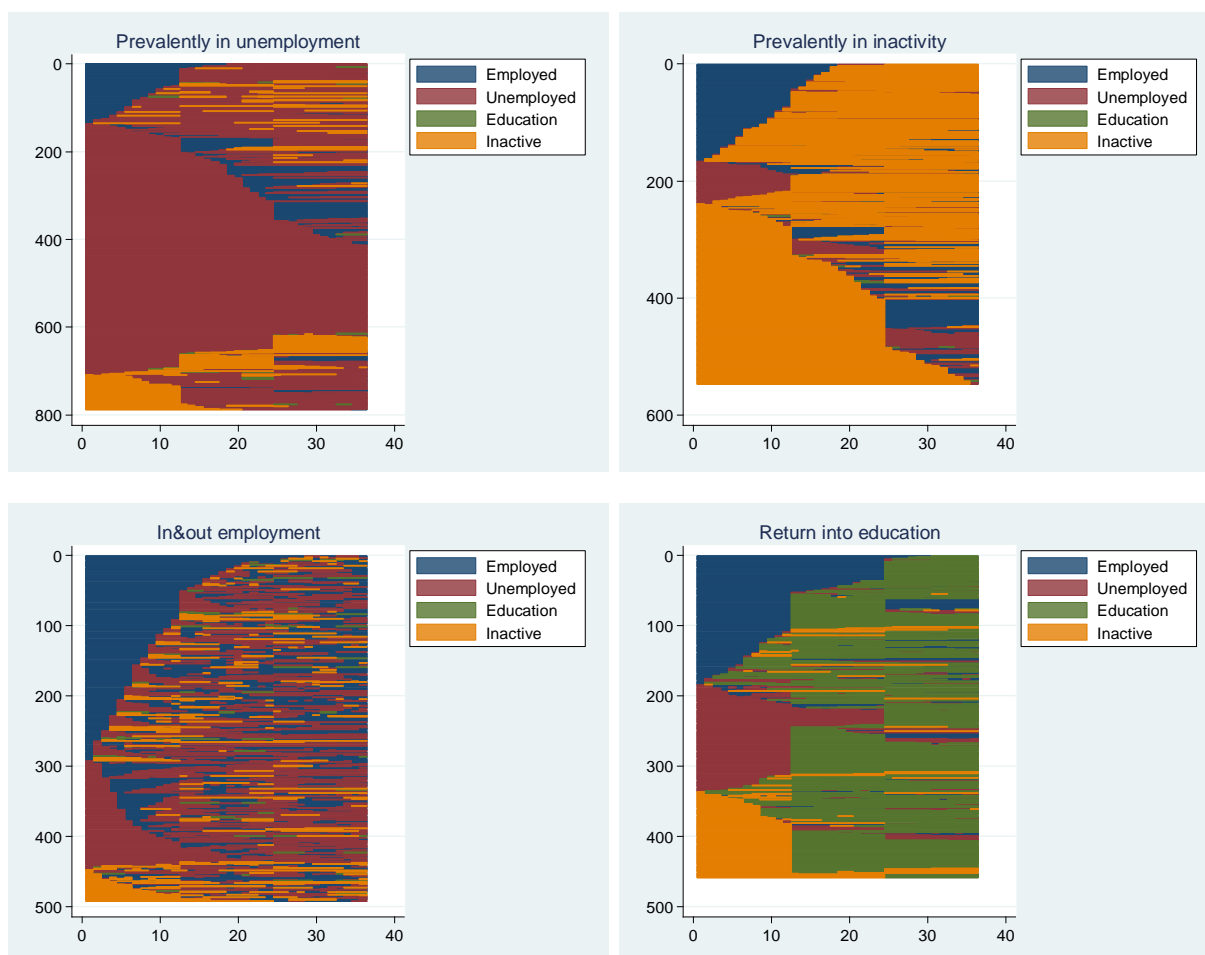
- 4) **Prevalently in inactivity:** it includes individuals who remained at the margin of the labour market for almost the entire period, with a number of months in inactivity larger than the number of months spent in unemployment. They could be also in education and employment but for few short periods (less than 6 months).
- 5) **In&out employment:** it includes individuals who changed their employment status several times. Specifically, they enter and exit paid employment for at least four times in 36 months.
- 6) **Return into education:** these individuals returned in education for at least 6 months during the observed period.

In Figure 4.1 we depict individual trajectories belonging to the different EST-types. Some descriptive statistics on the various dimensions of employment quality and on individual trajectories are presented in Table 4.1 and Table 4.2.

About 64% of young individuals of our sample experience employment security, but only half of them are also economically secure (37% overall). There is also a small group of individuals (about 5%) whose employment is not secure, but their earnings are secure. More than a half of our sample enjoys a good match between their educational attainments and their type of occupation, but only one out of five is economically successful. Overall, only 16% of young people are successful in both dimensions, and slightly less (15%) are in what we call a “career employment”.

Figure 4.1: Individual Employment Status Trajectories (ESTs) by trajectory type (aged 16-34, four to six years after leaving education)





Source: Author's computation based on EU-SILC longitudinal data (2006-2012).

Table 4.1: Descriptive statistics on employment quality

	All sample	Females	Males	At most lower secondary education	At most upper secondary education	Tertiary education	Living independently	Living with parents
Employment security	64.17	59.32	68.81	38.11	61.42	75.61	69.21	60.38
Economic security	41.93	37.35	46.30	18.65	40.31	50.95	44.76	39.79
Security	37.02	32.84	41.03	14.75	35.63	45.47	40.27	34.58
Economic success	21.33	14.65	27.72	12.60	20.80	24.63	24.08	19.26
Educ-Ocup success	53.59	49.34	57.67	31.97	55.78	56.94	56.17	51.66
Success	16.46	11.42	21.29	7.79	17.00	18.25	18.71	14.77
Career employment	15.23	10.78	19.50	5.94	15.77	17.21	17.56	13.49

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

Table 4.2: Descriptive statistics for ESTs

Trajectories	All sample	Females	Males	At most lower secondary education	At most upper secondary education	Tertiary education	Living independently	Living with parents
Almost always in employment	55.29	49.84	60.50	26.95	52.09	67.99	59.99	51.76
Prevalently in employment	19.24	20.37	18.15	21.82	20.35	16.89	18.29	19.95
Prevalently in unemployment	8.87	8.84	8.72	21.52	9.39	4.23	4.52	11.98
Prevalently in Inactivity	6.10	10.03	2.33	8.61	6.69	4.56	9.12	3.83
In&out employment	5.48	5.33	5.63	7.27	6.32	3.81	5.46	5.50
Return to education	5.12	5.58	4.67	13.83	5.16	2.53	2.62	6.99

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

There are clear gender differences in these attainments. Females appear disadvantaged in all dimensions. Only 33% of them enjoy security (vs. 41% of males), and only 11% (vs. 21%) are economically and occupationally successful. Overall, the share of men with a career employment is almost double that of women. These results clearly reflect the issues of occupational segregation and wage penalty for females. It is well known in the literature that, *coeteris paribus*, women earn less than their male colleagues and are segregated into low paid sectors and less valued occupations (Matteazzi, Pailhé and Solaz, 2013; Dalla Chiara, Matteazzi and Petrarca, 2014).

Education plays a crucial role in ensuring employment and economic security: three out of four university graduates have a secure employment, while only about one out of three individuals with lower secondary education are in the same position. Since economic success is defined with respect to the education-specific earnings distribution, differences between university and high-school graduates disappear when we look at the 'success' dimension. Overall, only 6% of young people with at most lower secondary education has a career employment, vs. 16%-17% of those with higher educational levels. Finally, young people who live independently perform slightly better than those who are living with their family of origin, with respect to all four dimensions.

Similar differences across gender, education and living arrangements emerge also when we consider employment trajectories (Table 4.2). About 55% of young people are almost always in employment, and another 19% is prevalently in employment. Roughly 15% of young individuals are at the margin of the labour market, either prevalently in unemployment (8.9%), or prevalently in inactivity (6.1%). 5.5%

of our sample move often in and out from employment, while the remaining 5.1% returns to education. Again, females, less educated and young people living with parents appear more disadvantaged.

Compared to men, women are much more likely to be prevalently in inactivity (10% vs. 2%) and less likely to be always in employment (50% vs. 60%), while no relevant differences emerge for the other EST-types. University and high-school graduates are much more likely to be continuously in employment than individuals with lower education (77% and 52%, respectively, vs. 27%), and much less likely to be prevalently in unemployment (4% and 9% vs. 21%). Overall, about 85% of university graduates are prevalently or continuously employed around 5 years after having left education. This percentage reduces to 70% for high-school graduates and to only 48% for low educated individuals. It is interesting to note, however, that about 14% of young with a low educational level choose to return to education. Finally, young people living with the family of origin are less likely to be always employed than those who live independently (52% vs. 60%), more likely to be prevalently unemployed (12% vs. 4.5%), and to return to education (7% vs. 2.6%). On the contrary, young people living independently are more likely to experience long periods of inactivity than those who are living with parents (9% vs. 4%). This may be due to females fulfilling domestic tasks and taking care of family responsibilities, given that, as we have seen, women are much more likely to be prevalently inactive.

In the last part of the analysis, we combine EST-types with the security and successful dimensions of employment quality. Indeed, we expect that the insecure and unsuccessful groups are heterogeneous, and the analysis of their trajectories should allow us to capture part of this heterogeneity. Thus, in Table 4.3 we present some descriptive statistics for individuals with a secure/insecure, successful/unsuccessful employment condition.

Table 4.3: ESTs and Security/Success dimensions

	Security		Success	
	Insecure	Secure	Unsuccessful	Successful
Trajectories (ESTs):				
Almost always in employment	37.66	85.28	49.07	86.87
Prevalently in employment	22.85	13.09	20.66	11.98
Prevalently in unemployment	13.94	0.00	10.51	0.00
Prevalently in inactivity	9.68	0.00	7.30	0.00
In&Out employment	7.89	1.38	6.38	0.95
Return into education	7.98	0.24	6.08	0.20

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

The first thing to note is that, within the insecure group, there is a high percentage of individuals who are almost always employed. This is mainly due to the economic security dimension, i.e. to those who, although they have been always in employment, didn't earn enough (and in a sufficiently stable way) to be safe from the risk of poverty. However, there is also a small group who are classified as employed, but are in the category 'employment insecurity'. This is due to the fact that they changed

job for reasons different from "seeking a better job". Finally, there exists also a really small group of young people with an in&out trajectory but secure. They are mainly seasonal workers or people whose type of job comprises regular short spells of unemployment. The second interesting thing is that insecure young people are much less likely to be always employed than unsuccessful individuals, and more likely to be in all the other EST-types.

4.3 The role of individual characteristics and labour market institutions

In this section we present an econometric analysis with two main aims. First, we want to examine how individual characteristics and labour market policies and legislation affect the probability of having a secure or successful employment condition. Second, we want to check whether the heterogeneity among insecure and unsuccessful individuals is also partly explained by these variables. Therefore, we estimate the following models:

- 1) three probit models for security, success and career employment
- 2) two multinomial logit models for EST-types interacted with security and success.

Results are reported in Tables 4.4 - 4.6. For labour market policies and legislation, we use the same variables considered in Section 3: lagged expenditures on active and passive labour market policies per unemployed, and the OECD indicator of the strictness of regulation on fixed-term and temporary contracts. We also control for the OECD indicator for regular contracts that measures the strictness of employment protection against individual dismissals. In order to see whether these policies have different effects by gender and education, we also interact them with educational and sex dummies. Lastly, we control for the real GDP growth rate, as provided by Eurostat, measured in terms of volume and percentage change on previous year.

Estimation results reveal that (Table 4.4), as suggested by the descriptive analysis, females are less likely than males to experience security and success, and to have a career employment. This is even more so if they live in a couple, whereas living in a couple has no significant effects for males. Young people living with the family of origin are less likely to experience security, success, and to have a career employment. Higher levels of education are associated with a higher probability of a good performance on the labour market, whatever the dimension of employment quality taken into consideration. Also potential experience increases the probability of being secure.

As for our policy variables, some interesting results emerge. First, as expected, these variables are more related to the security dimension, rather than to the successful one, which should depend more on individuals observed and unobserved characteristics. Second, their effects are different according to the gender and the educational level of the individual. Whatever the educational level, an increase in the strictness of the regulation on flexible contracts (EPL-T) is associated with a higher probability of being secure. However, the effect is larger for low-educated individuals. For women, a higher EPL-T index also increases the likelihood of achieving a secure and successful trajectory (i.e. career employment). These results may be related to the gender and educational segmentation in employment contracts, i.e. to the fact that women and low-educated individuals are overrepresented

in fixed-term contracts (Petrongolo, 2004; Muffels, 2008). Interestingly, the more stringent is the regulation for individual dismissals (i.e. the higher is EPL-P index), the lower is the female probability of being secure on the labour market. In other words, is the more difficult and costly is for employers to dismiss their employees, the higher is women's likelihood of being at the margin of the labour market. For males we do not find significant effects associated with EPL-P variable. Also, an increase in EPL-P index lowers the probability of achieving a successful and career employment for young people with tertiary education. ALMPs increase the probability of having a secure employment only for young individuals with medium and high educational levels. PLMPs have no significant effects. Finally, economic growth increases young people's chances of being secure and successful on the labour market and of achieving a career employment.

Table 4.4: Marginal effects from Probit Model of the probability to be in secure, successful or career employment

	Security		Success		Career employment	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Female	-0.073	0.171	-0.596	0.200 ***	-0.535	0.204 ***
Female in couple	-0.525	0.055 ***	-0.499	0.066 ***	-0.524	0.067 ***
Male in couple	-0.004	0.060	-0.022	0.065	-0.030	0.066
Living with parents	-0.138	0.049 ***	-0.384	0.056 ***	-0.393	0.057 ***
Medium education	0.891	0.333 ***	1.419	0.418 ***	1.486	0.432 ***
High education	1.386	0.352 ***	1.585	0.438 ***	1.725	0.454 ***
Age	0.037	0.012 ***	0.006	0.014	0.017	0.014
Potential experience	0.033	0.006 ***	0.011	0.007	0.010	0.007
EPL-T X low education	0.458	0.137 ***	0.255	0.163	0.238	0.169
EPL-T X medium education	0.225	0.118 *	0.115	0.138	0.074	0.141
EPL-T X high education	0.260	0.121 **	0.130	0.141	0.074	0.144
EPL-T X female	0.128	0.040 ***	0.148	0.047 ***	0.146	0.048 ***
EPL-P X low education	0.174	0.343	-0.330	0.352	-0.305	0.355
EPL-P X medium education	0.172	0.343	-0.536	0.357	-0.538	0.359
EPL-P X high education	0.001	0.347	-0.590	0.360 *	-0.634	0.363 *
EPL-P X female	-0.133	0.060 **	-0.008	0.069	-0.020	0.071
ALMPs X low education	0.038	0.044	0.019	0.053	0.046	0.057
ALMPs X medium education	0.068	0.031 **	0.023	0.036	0.027	0.037
ALMPs X high education	0.059	0.032 *	0.007	0.036	0.006	0.037
ALMPs X female	-0.011	0.021	-0.004	0.025	-0.010	0.025
PLMPs X low education	-0.022	0.027	0.025	0.033	-0.002	0.035
PLMPs X medium education	-0.032	0.022	0.003	0.026	-0.006	0.027

PLMPs X high education	-0.023	0.023	0.010	0.027	0.005	0.027
PLMPs X female	0.013	0.010	0.005	0.012	0.009	0.012
Real GDP growth rate	0.040	0.010 ***	0.033	0.012 ***	0.035	0.013 ***
Constant	-2.282	1.093 **	-0.902	1.163	-1.002	1.169

Notes: Potential experience is measured as the difference between age and the age at which the individual began her first regular job. Low education groups include ISCED levels from 0 to 2 (reference category); Medium education groups ISCED levels 3 and 4; High education groups ISCED levels 5 and 6. Country and year fixed effects are controlled for. Robust standard errors in italics. ***p<0.01, **p<0.05, *p<0.10.

The effects of these variables on EST-types of insecure/unsuccessful individuals are presented in Table 4.5 and Table 4.6, where we report predicted probability and marginal effects for selected variables from the estimation of two multinomial logit models. In line with previous estimates, females have a lower probability of achieving a secure and successful employment, especially if they live in couple. Within the insecure and unsuccessful groups they also have a lower probability of remaining always in employment and a higher probability to be prevalently inactive or in&out the labor market (or return to education). The magnitude of these effects increases for women living in couple. Young people living with parents display a similar pattern, with 2 main differences: no significant effects emerge for inactivity but the probability of being in&out from employment is lower for them.

Table 4.5: Marginal effects from Multinomial Logit Model of the probability to follow Secure/Insecure ESTs

	Security	X Almost E	X Prevalent E	X Prevalent U	X Prevalent I	X In&Out E	X ReturnEd
Predicted Probability	0.400 ***	0.273 ***	0.162 ***	0.061 ***	0.030 ***	0.050 ***	0.025 ***
Marginal effects:							
Female	0.002	-0.232 ***	0.048	0.038	0.043 **	0.055 *	0.045 ***
Female in couple	-0.186 ***	0.012	0.117 ***	0.020 *	0.058 ***	0.001	-0.022 ***
Male in couple	0.017	0.040 *	0.005	-0.031 *	-0.010	-0.012	-0.009
Living with thefamily	-0.059 ***	0.018	0.029 *	0.023 *	0.000	-0.014 *	0.004
Medium education	0.167	0.094	-0.027	-0.158 ***	-0.053 **	-0.028	0.006
High education	0.389 **	0.293 **	-0.110	-0.278 ***	-0.098 ***	-0.157 ***	-0.039
Age	0.016 ***	-0.006	-0.011 ***	0.003	0.000	-0.001	0.000
Potential experience	0.011 ***	0.010 ***	0.001	-0.014 ***	-0.001	0.001	-0.008 ***
EPL-T							
EPL-T X low educ.	0.178 ***	-0.004	-0.144 ***	-0.052 **	0.023	0.005	-0.005
EPL-T X medium educ.	0.102 **	0.028	-0.119 ***	-0.042 **	0.031 **	0.002	-0.002

EPL-T X high educ.	0.105 **	0.010	-0.134 ***	-0.030	0.031 **	0.018	0.000
EPL-T X female	0.039 **	0.026 *	-0.017	-0.014 **	-0.012 **	-0.008	-0.014 ***
EPL-P							
EPL-P X low educ.	0.076	-0.135	0.001	0.028	0.001	-0.025	0.053
EPL-P X medium educ.	0.091	-0.133	-0.014	0.046	-0.004	-0.028	0.042
EPL-P X high educ.	0.018	-0.160	0.028	0.065	0.003	-0.007	0.052
EPL-P X female	-0.047 **	0.055 **	0.003	0.003	0.002	-0.016	0.000
ALMPs							
ALMPs X low educ.	0.013	-0.046 ***	0.019	0.009	0.001	0.005	-0.001
ALMPs X medium educ.	0.025 *	-0.025 **	0.001	-0.004	0.005	0.000	-0.001
ALMPs X high educ.	0.020	-0.031 ***	0.002	0.004	0.003	0.004	-0.001
ALMPs X female	-0.001	0.010	0.013 *	-0.011 **	-0.010 ***	-0.004	0.004 **
PLMPs							
PLMPs X low educ.	-0.012	0.032 ***	-0.010	-0.003	-0.005	-0.002	0.000
PLMPs X medium educ.	-0.010	0.009	-0.004	0.007	-0.005 *	0.002	0.001
PLMPs X high educ.	-0.005	0.009	-0.005	0.004	-0.004	0.002	0.001
PLMPs X female	0.002	-0.004	-0.006 *	0.004 *	0.004 **	0.002	-0.002 **
Real GDP growth rate	0.017 ***	-0.012 ***	-0.004	-0.002	-0.001	0.002	0.000

Note: Base outcome = Secure career employment; E = Employment; U = Unemployment; I = Inactivity; LM = Labour Market; Ed = Education. Reference category for education: low education. Country and year fixed effects are controlled for. Robust standard errors in italics.***p<0.01,**p<0.05,*p<0.10.

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

Table 4.6: Marginal effects from Multinomial Logit Model of the probability to follow Success/Unsuccess ESTs

	Success	X Almost E	X Prevalent E	X Prevalent U	X Prevalent I	X In&Out E	X Return Ed
Predicted Probability	0.167 ***	0.465 ***	0.198 ***	0.061 ***	0.030 ***	0.055 ***	0.025 ***
Marginal effects:							
Female	-0.138 ***	-0.143 **	0.090 *	0.040	0.042 *	0.060 *	0.048 ***
Female in couple	-0.118 ***	-0.071 ***	0.132 ***	0.021 **	0.057 ***	0.001	-0.022 ***
Male in couple	0.000	0.032	0.029	-0.029 **	-0.009	-0.012	-0.010

Living with the family	-0.097 ***	0.033 *	0.051 ***	0.023 **	0.000	-0.014 *	0.003
Medium education	0.239 **	0.075	-0.076	-0.141 ***	-0.055 **	-0.051	0.010
High education	0.304 *	0.418 ***	-0.160	-0.263 ***	-0.101 ***	-0.158 ***	-0.039
Age	0.002	0.003	-0.007 *	0.003	0.000	-0.001	0.000
Potential experience	0.002	0.021 ***	0.000	-0.015 ***	-0.001	0.001	-0.008 ***
EPL-T							
EPL-T X low educ.	0.033	0.034	-0.091 ***	-0.011	0.011	0.023	0.001
EPL-T X medium educ.	0.009	0.022	-0.068 **	-0.002	0.018	0.016	0.004
EPL-T X high educ.	0.003	0.017	-0.087 ***	0.011	0.017	0.031 *	0.007
EPL-T X female	0.033 ***	0.028 *	-0.015	-0.013 *	-0.012 **	-0.007	-0.014 ***
EPL-P							
EPL-P X low educ.	-0.049	0.085	-0.024	0.009	0.002	-0.043	0.020
EPL-P X medium educ.	-0.090	0.130	-0.034	0.023	-0.002	-0.035	0.008
EPL-P X high educ.	-0.106	0.065	-0.002	0.041	0.005	-0.023	0.018
EPL-P X female	0.000	0.026	-0.012	0.002	0.003	-0.017	-0.001
ALMPs							
ALMPs X low educ.	0.011	-0.038 **	0.015	0.004	0.003	0.006	-0.001
ALMPs X medium educ.	0.007	0.007	-0.011	-0.010	0.006	0.002	-0.001
ALMPs X high educ.	-0.001	-0.001	-0.005	-0.002	0.004	0.005	-0.001
ALMPs X female	0.000	0.006	0.016 **	-0.011 *	-0.012 ***	-0.003	0.003 *
PLMPs							
PLMPs X low educ.	0.007	0.033 ***	-0.022 ***	-0.011 ***	-0.003	-0.003	-0.001
PLMPs X medium educ.	0.006	0.004	-0.009	-0.001	-0.002	0.001	0.000
PLMPs X high educ.	0.010 *	0.005	-0.010	-0.004	-0.002	0.001	0.000
PLMPs X female	0.000	-0.001	-0.007 **	0.004	0.005 **	0.001	-0.002 **
Real GDP growth rate	0.008 ***	-0.004	-0.004	-0.001	-0.001	0.002	0.000

Note: Base outcome = Successful career employment; E = Employment; U = Unemployment; I = Inactivity; LM = Labour Market; Ed = Education. Reference category for education: low education. Country and year fixed effects are controlled for. Robust standard errors in italics.***p<0.01,**p<0.05,*p<0.10

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

Education displays opposite effects. As previously seen, higher educational levels are associated with a higher remarkable probability of experiencing security and success but also with the insecure and unsuccessful groups, with a higher probability of being always employed and a lower probability of

being prevalently unemployed, inactive and, for the university graduates a lower probability of moving in&out from employment. Potential labour market experience has similar effects, but their magnitude is much smaller.

Whatever the educational level, a higher EPL-T index is associated with a higher probability of being secure and a lower probability of experiencing some spells of unemployment, if insecure. However, for young people with medium or high educational levels, a higher EPL-T index increases the likelihood of experiencing inactivity. Whatever the level of education, an increase in EPL-T lowers the likelihood of being unsuccessful and prevalently in employment. In line with the results of the probit models, a higher EPL-T index is associated with a higher probability for female to be secure and successful. Within the insecure/unsuccessful group, it also implies a higher female probability of being always in employment and a lower probability of being prevalently unemployed or inactive (and return into education). As for the employment protection legislation concerning regular contracts (EPL-P), we find that the more stringent the legislation on individual dismissals, the lower is the female probability of being secure and the higher is women's likelihood of being insecure but almost always in employment.

As regards active labor market expenditures, they are associated with a higher probability of being secure (although the effect on security is significant only for medium-educated individuals) and a lower probability of being always employed but insecure, whatever the educational level. For females, instead, ALMP expenditures have no effect on security and success, but they are associated with a higher probability of being prevalently in employment and to return to education, and a lower probability of being prevalently unemployed and inactive.

Expenditures on PLMPs have no effects on the probability of being secure, but they are associated with a higher a higher probability of being always employed for low educated individuals. Since PLMP expenditures refer to the year before the beginning of the sequence, these results may suggest that a more generous support may have helped young people to find (or pushed them to research better for) a more stable/continuous employment. For low-educated individuals, an increase in PLMP expenditure raises the probability of being almost always in employment but unsuccessful, while reducing the probability of being prevalently unsuccessfully employed or unemployed. The effects of PLMPs are instead quite different for females. Indeed, they are associated with a lower probability of being prevalently in employment for them, and a higher probability of being prevalently unemployed or inactive (although the magnitude of these effects is quite small).

Lastly, in line with the results of the probit models, we find that during a period of economic growth, people are more likely to experience security and success.

5. An Insecurity Index for Employment Trajectories

Gabriella Berloff and Eleonora Matteazzi

In this section we propose a synthetic indicator of the degree of insecurity associated with the school-to-work trajectories of young people entering the labour market. Various dimensions of labour-market related insecurity have been distinguished in the economic and sociological literature: job insecurity, contract insecurity, employment insecurity, wage/income insecurity, but also employability insecurity, representation insecurity, etc. (Wilthagen and Tros, 2004). Our focus is specifically on the **employment** security/insecurity domain, and we adopt the view of Wilthagen and Tros (2004) and Muffels and Luijkx (2008), who define employment security as “remaining in employment, but not necessarily in the same job with the same employer.” This definition is in line with the ILO’s definition (which views employment security as the protection against loss of income-earning *work*), but has the advantage of clearly distinguishing employment security from both job security (which is the focus of the Employment Protection Legislation), and economic security (which takes into account the possible losses in either total or labour income; see e.g. Hacker et al., 2014, for an index of economic insecurity, and the employment-risk component of the Osberg and Sharpe Index of Economic Well-Being; Osberg and Sharpe, 2002).

The Employment Committee (EMCO) Indicators Group, set up in 2006 to provide tools for monitoring the performance of the Member States with respect to the flexicurity domain, devised a **dynamic employment security indicator (ESD)** to assess the degree of security of working trajectories (EMCO, 2009). Using annual labour market transitions, this indicator represents the difference between the percentage of individuals having experienced an upward or neutral transition in terms of employment status or type of contract, and those having experienced a downward transition²⁹. This indicator is very interesting because it represents a first attempt to move from a static to a dynamic assessment of the labour market performance in terms of employment security, it has a very simple interpretation, and it is quite easy to compute. However, these benefits come at the expense of some costs. First, downward and upward movements within employment (from, say, a permanent to a temporary contract) are treated in the same way as movements from employment to unemployment. Second, by considering only year-to-year changes and not entire trajectories, it does not distinguish between transitory and more persistent conditions (countries with individuals moving in and out from employment may have the same value of the indicator as countries with segmented labour markets, in which some individuals are persistently in employment while others are persistently unemployed).

The European Commission, in describing flexicurity, refers to the security dimension as the “workers’ need for security – confidence that they will not face *long* periods of unemployment” [emphasis

²⁹More precisely, any transition from non-work (unemployment or inactivity) to any kind of employment is classified as upward, as well as transitions from self-employment or temporary contract to permanent contracts. Any transition from a permanent contract to a flexible contract, self-employment or non-work is classified as downward. For more details see Muffels and Luijkx (2008).

added]. We could address this concern by looking at the percentage of individuals in long-term unemployment. However, this would ignore those individuals who experience many short term changes in their employment status. There is therefore a need to develop an indicator that combines the information about long term unemployment with transitory movements in the labour market. Our aim is to construct a synthetic index of the overall level of employment insecurity, considering **entire trajectories** of employment statuses, with particular reference to young people entering the labour market. Furthermore, we want an index that incorporates explicitly the value judgements in terms of whether we think that insecurity is increased by the total number of periods in unemployment, the time at which they occur, and their consecutiveness³⁰.

For simplicity, consider the case in which there are only two possible states: Employment (E), and Unemployment (U). The number of different sequences over n periods is 2^n . For example, with two periods, we have four possible sequences: EE, EU, UE, UU. With three periods, we have eight possible sequences: EEE, EEU, EUE, EUU, UEE, UEU, UUE, and UUU. If we specify the level of insecurity as simply the probability of not being continuously employed (i.e. one minus the probability of experiencing the sequences EE or EEE), we would assign the same level of insecurity to a country in which half of the individuals are in the sequence UU and none in the sequences EU and UE (all unemployed in period 1 will remain unemployed also in period 2), and to a country in which half are in the sequence UE and none in UU or EU (all unemployed in period 1 find a job in period 2, and no-one is fired). This is clearly not satisfactory.

Therefore, we construct the insecurity index as a weighted sum of the probabilities of the different sequences, with weights representing our value judgements regarding the following aspects:

- the importance of the *total number* of periods in unemployment (comparing UU with EU or UE);
- the importance of experiencing unemployment *early or late* in the sequence (comparing UE with EU);
- for $n > 2$, the importance of experiencing unemployment *consecutively or not consecutively* (e.g., in the three period case, comparing EUU or UUE with UEU).

Let π_i denote the probability of experiencing a possible sequence (i.e., $i=1,2,\dots, 2^n$, with $i=1$ representing the sequence with all periods in employment). We define the Unemployment Sequence Insecurity (USI) index as a weighted sum of the probabilities associated with the possible sequences, excluding the first one:

$$USI = \sum_{i=2}^{2^n} w_i \pi_i \quad \text{with: } \sum_{i=2}^{2^n} w_i = 2^n - 1$$

If $w_i = 1 \forall i$, the index would be simply one minus the probability of being continuously employed. Instead, we define the weights as the sum of various components, in order to control for the points a) to c) specified above. Let \bar{w} denote a 'base weight' given to a sequence with *only* the *first* period in unemployment (i.e., the weight for the sequence UE in the two-period case, and for UEE in the three-period case). Now we introduce three parameters to express our value judgements.

- Additional unemployment periods (δ): each additional unemployment period increases the base weight by a parameter δ .

³⁰ The methodology and ideas behind this index are closely related to the literature on dynamic poverty indices (see e.g. Calvo and Dercon, 2009; Foster, 2009; Mendola and Busetta, 2012).

$$w_i = \bar{w} + \sum_k \delta$$

where k represents each period (after the first one) in which unemployment occurs.

- b.** Discounting (β): if unemployment occurs in period τ , the base-weight or the parameter δ are multiplied by a discount factor β , which can be either higher or lower than 1, according to whether we assign more or less weight to unemployment periods occurring towards the end of the sequence:

$$w_i = \bar{w}\beta^{\tau-1} + \sum_k \delta\beta^{k-1}$$

- c.** Consecutive unemployment periods (ϕ): if a period of unemployment is preceded by m consecutive periods of unemployment, the parameter δ is multiplied by ϕ^m , with $\phi^0=1$.

The general formula for the weights therefore becomes:

$$w_i = \bar{w}\beta^{\tau-1} + \sum_k \phi^m \delta\beta^{k-1}$$

where τ represents the first unemployment period in the sequence, k represents each additional period of unemployment, m represents the number of consecutive periods of unemployment preceding k , and β , δ , and ϕ are parameters to be chosen by the researcher.

In order to illustrate how the index works, we used the annual information about employment statuses in the longitudinal EU-SILC (all the waves up to 2012). We selected young people (aged 16-34) who had three complete interviews, and who left education in the year preceding the first interview. This selection criteria is quite restrictive, and it generates small samples at the country level. For this reason we need to leave out Ireland, Romania and the UK. For the other countries we can only present an overall index for all young people, without controlling for education and/or gender.

Table 5.1 reports the share of young people who experienced the various type of employment sequence in the first three years after leaving education (and who finished education between 2005 and 2011). Countries are grouped by their geographical location and, within each group, are ordered by the share of individuals who were always employed. In general, more than 60% of young people are continuously employed in Nordic and Continental countries, whereas less than 60% have this employment trajectory in Mediterranean and Eastern countries (with the exception of the Czech Republic and Slovakia). However, within groups, countries differ in the shares of young people experiencing the various types of non-employment trajectories. Our index aims at capturing these differences in one single indicator.

Figure 5.1 illustrates the USI index when all sequences have the same weight, i.e. when $\bar{w}=1, \beta=\phi=1$, and $\delta=0$ (in what follows we refer to this set of parameter as the 'baseline'). This corresponds to 100 minus the percentages shown in the first column of Table 5.1. Belgium and Austria have very similar values, but if we look at the way in which young people are distributed across the various trajectories, their situation is clearly very different, with a much larger proportion of individuals who remain unemployed for more than one period in Belgium and a much larger proportion of individuals who find a job in the second year in Austria. We therefore compare this baseline index with what we would

obtain by changing the weight of sequences with more than one period in unemployment (δ), and with consecutive periods in unemployment (ϕ). In Figure 5.2 we show how the USI would change if we set $\delta=0.5$ and $\phi=1.2$ (while keeping $\beta=1$; we refer to this set of parameters as ‘AC’, which stays for ‘Additional-Consecutive’), while in Figure 5.3 we illustrate the effect of giving more weight to unemployment periods occurring towards the end of the sequence (i.e. of using $\delta=0.5$ and $\beta=\phi=1.2$; labelled ‘Additional-Consecutive-Discounted’ case: ACD).

Table 5.1: Percentage of young people (age 16-34) who finished education between 2005 and 2011, by type of employment sequence in the first three years after leaving education.

	EEE	EEU	EUE	UEE	UEU	UUE	EUU	UUU
Nordic Countries								
DK	64,71	4,41	1,47	13,24	0,00	8,82	2,94	4,41
FI	66,83	3,90	6,83	9,76	1,95	2,93	4,39	3,41
SE	69,14	4,94	7,41	11,11	0,00	0,00	0,00	7,41
NO	81,48	3,70	1,85	3,70	0,00	1,85	5,56	1,85
NL	86,93	1,96	3,27	4,58	0,00	0,65	1,96	0,65
Continental countries								
FR	59,66	5,04	4,20	9,66	3,78	5,88	4,20	7,56
BE	70,43	5,38	2,15	5,91	0,54	4,84	1,61	9,14
AT	72,39	2,24	2,99	15,67	1,49	2,24	0,75	2,24
Mediterranean countries								
EL	32,62	6,38	4,96	14,89	2,84	10,64	6,38	21,28
IT	45,87	5,00	3,04	11,96	3,70	7,39	5,43	17,61
ES	51,85	7,69	5,13	8,26	3,42	4,27	6,27	13,11
PT	52,45	4,55	5,24	13,64	5,24	8,39	2,10	8,39
Eastern countries								
LV	42,33	8,59	3,68	15,34	4,91	3,68	7,98	13,50
BG	46,15	4,14	4,14	17,16	2,96	4,73	1,78	18,93
EE	47,58	8,83	3,99	11,40	2,85	6,55	6,55	12,25
SI	52,52	2,20	2,52	16,04	4,72	8,49	1,89	11,64

HU	57,03	3,65	2,86	16,67	2,34	6,25	3,13	8,07
PL	57,38	7,23	4,31	11,08	1,54	5,38	4,62	8,46
LT	59,39	4,85	4,24	9,09	1,82	6,67	3,03	10,91
SK	65,12	4,01	0,93	12,04	2,47	4,63	3,09	7,72
CZ	68,75	4,55	0,85	11,93	1,42	4,26	1,70	6,53

Figure 5.1: The probability of being unemployed for at least one period in the first three years after leaving education (young people aged 16-34): unemployment sequence insecurity index in the baseline scenario

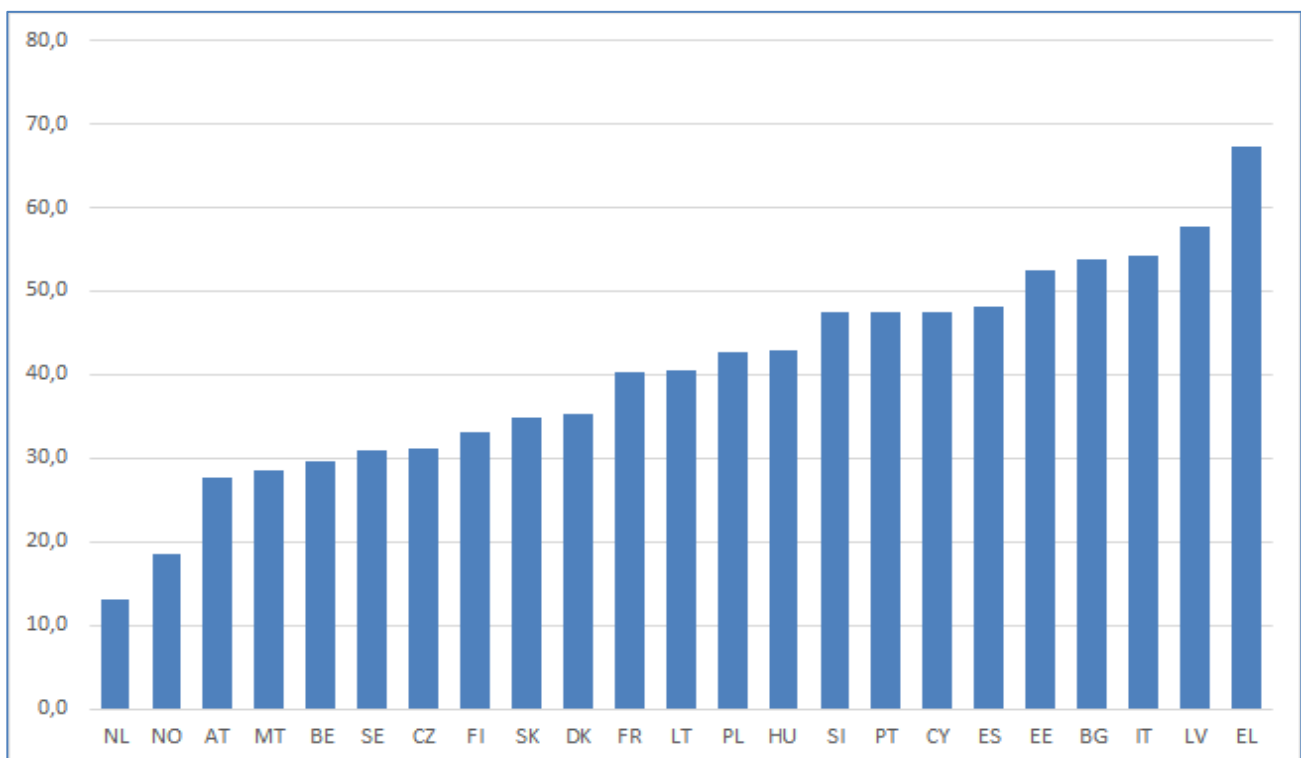


Figure 5.2: The unemployment sequence insecurity index in the baseline scenario, and with more weights to additional and consecutive unemployment periods (young people aged 16-34)

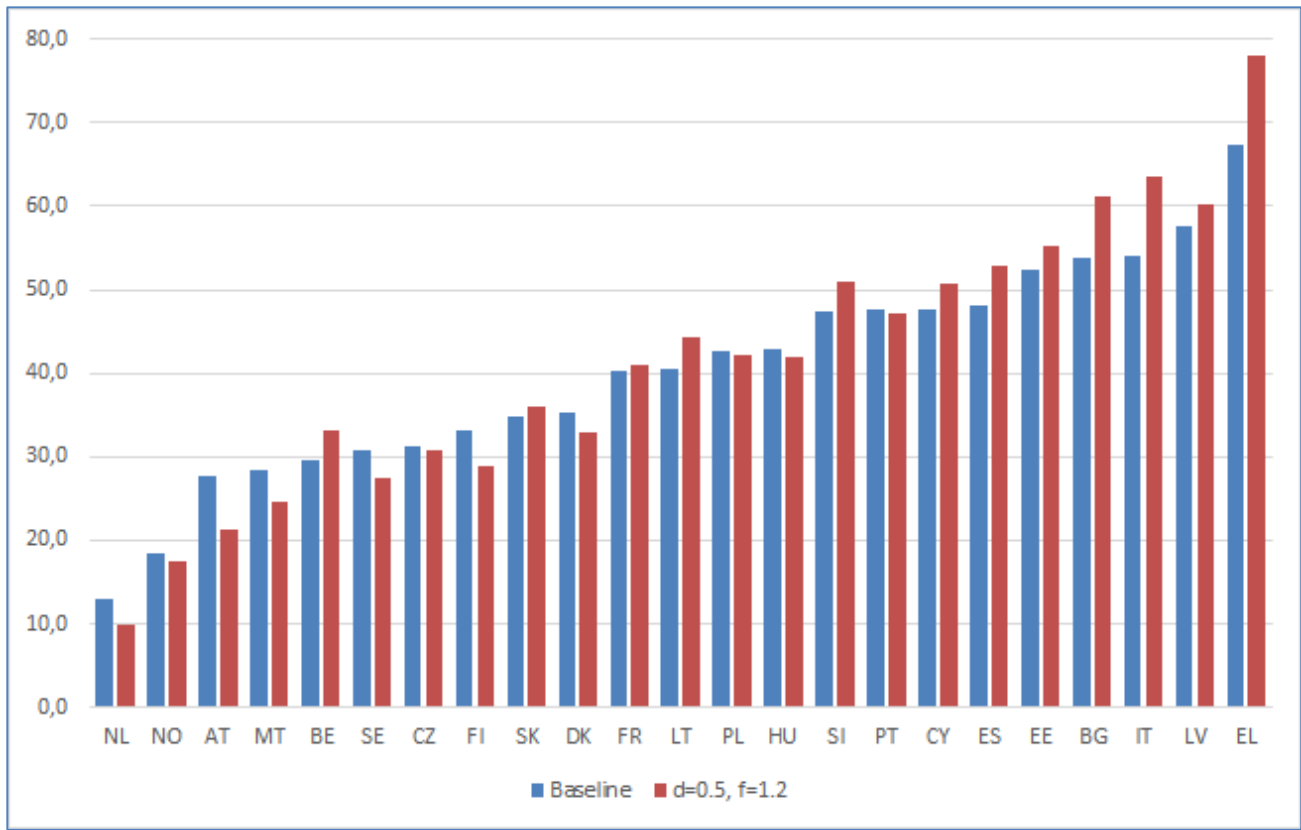
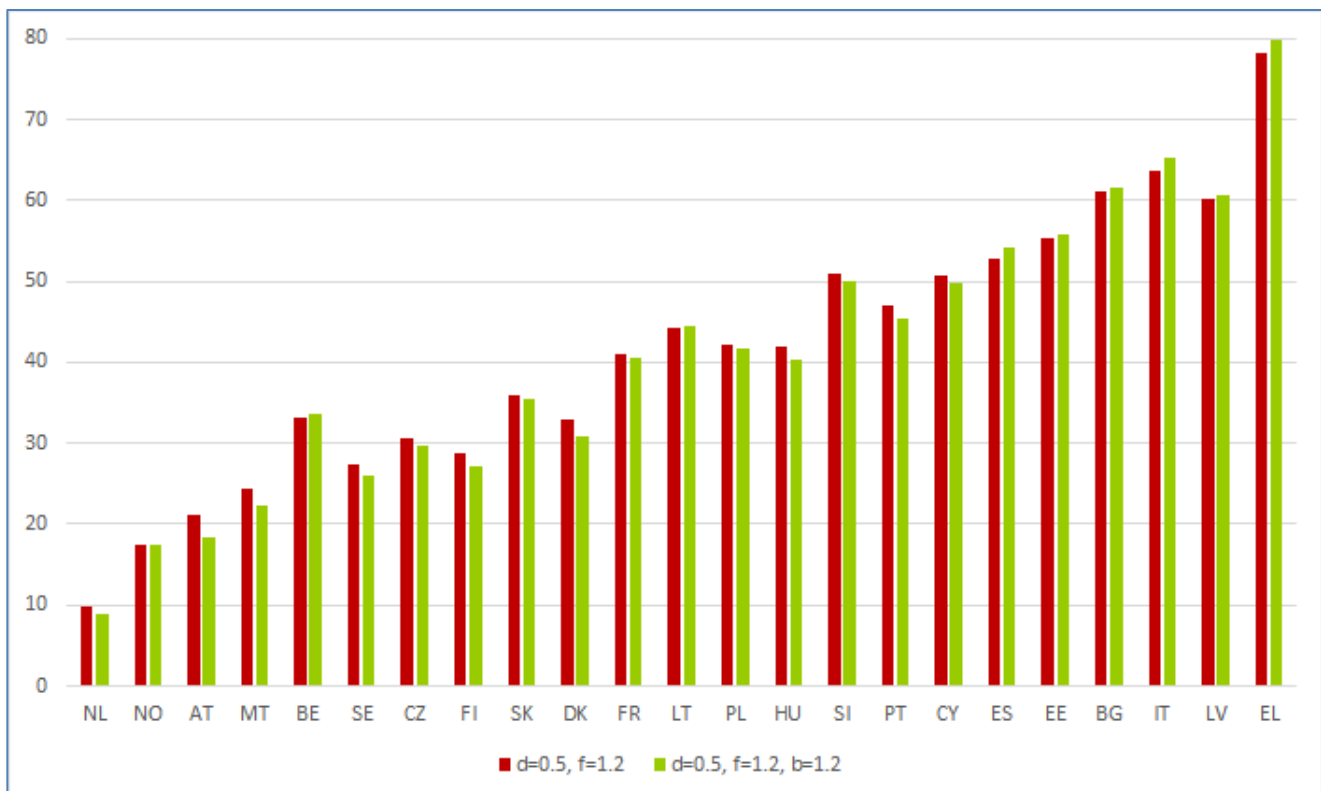


Figure 5.3: The unemployment sequence insecurity index with the AC and ACD set of parameters*



* See the text for details.

The first interesting piece of information is that, in general, for countries in the first half of Figure 5.2 (those with low levels of the baseline), the USI index decreases in the AC case, whereas for countries in the second half (with high levels of the baseline), the USI index increases. This means that, in those countries in which the probability of experiencing at least one period in unemployment is low, there is also a lower probability of being unemployed for more than one period, and an even lower probability of remaining unemployed for two or three consecutive periods. However, there are also some interesting exceptions. Belgium, for example, has a quite low value of the baseline USI, but its relatively high share of individuals with prolonged unemployment implies a higher index in the AC case. On the contrary, the degree of insecurity in Hungary, Poland and Portugal, while being relatively high in the baseline USI, is not affected by the use of the AC parameters.

The second piece of information is that, discounting has small effects on the index (Figure 5.3) and, in general, it slightly increases the overall level of insecurity of those countries where the index is already high while it reduces that of countries in the first half of Figure 5.3. The small size of these effects may be due to the fact that we are considering only three periods and for the majority of individuals who experienced unemployment towards the end of the sequence, the latter is preceded by other unemployment periods, and this type of sequence have already received a higher weight when we controlled for additional and consecutive unemployment periods.

To summarise, there are huge differences between countries in the degree of insecurity associated to the labour market entry. The probability of experiencing one or more unemployment periods in the first 3 years after leaving education goes from 13% in Netherlands to 67% in Greece. These differences are generally enlarged if we give higher weight to sequences with more than one period in unemployment, and to those in which unemployment lasts longer. This suggests that youth unemployment is more heterogeneous across European countries than a simple static representation of the labour market performance would show. In particular, not only the unemployment risk is much larger in some countries than in others, but it is also more likely that this higher risk is associated with a higher risk of a long period in unemployment. This has two important consequences. First, in terms of monitoring tools, it is absolutely necessary to use dynamic indicators and evaluate entire school-to-work trajectories to assess the degree of insecurity faced by young people. Second, in terms of policies, we need to move beyond a 'one-policy fits all' view, and think of which policies are most appropriate for countries where youth unemployment is a 'transitory' phenomenon, and for countries where instead it is a much deeper structural and persistent phenomenon.

6. Summary and conclusions

The objective of this report was to study youth school-to-work transitions, with special attention to employment trajectories from entry jobs to career employment. Our contribution is threefold. First, we examined the extent to which policies and institutional features of the so-called ‘flexicurity’ strategy, besides individual characteristics, influence the early labour market experience of young people in various European countries (section 3 of the report). Second, we analysed how the same individual characteristics and institutional settings affect the probability that, within about 5 years after leaving education, young people are in a secure and economically successful employment condition, and, if not, what are the features of their employment pathway (section 4). Third, we developed a new synthetic index that captures, at the country level, the degree of insecurity faced by young people entering the labour market (section 5). Throughout this report, we used the 2009 to 2012 longitudinal waves of EU-SILC, which cover the years from 2006 to 2012, and we focused on young people aged 16-34.

Young Europeans' employment status trajectories from education to the first relevant employment spell can be grouped into six SWT-types: three successful (*speedy*, *long search*, *in&out successful*), two unsuccessful (*in&out unsuccessful*, *continuously unemployed/inactive*), and one characterised by a return to education. There is a high degree of heterogeneity among European countries in the shares of young people experiencing these SWTs. About 80% of young people are in the *speedy* trajectory in Denmark and in the Netherlands, while only about 35% in Greece and Italy. On the contrary, only 4% are in *continuous unemployment/inactivity* in the Netherlands and Sweden, vs. 40% in Italy and Greece. Reaching a relevant employment after a long period of search is more common in Luxemburg and Eastern countries (in particular Hungary and Poland, about), whereas unstable trajectories are more widespread in Finland and Sweden. *Return to education* is more common in Mediterranean countries, Austria, Denmark, Slovenia and the UK.

As regards the effect of labour market institutions, if we look at unconditional correlations, PLMPs and ALMPs appear positively correlated with *speedy* and *return to education* pathways, and negatively with *long search* and *continuous unemployment*. The EPL-T index, instead, appears negatively correlated with the *speedy* pathway, and positively with the share of individuals who are *continuously in unemployment/inactivity*. However, once we control for individual characteristics, country and time dummies, LMP expenditures have either no significant effect, or a very limited one on young Europeans' SWTs, while the norms regulating temporary contracts display some influence on them. Stricter norms appear to limit the degree of instability of SWTs (reducing the probability of experiencing an *in&out unsuccessful* trajectory), and provide some incentives to improve individual employability through a return to education. Moreover, reducing the strictness of these norms just before or during a period of deep recession may even worsen youth employment outcomes.

These results have two main policy implications. First, the actual mix of active and passive labour market policies is not effective in helping young people entering the labour market for the first time. Policy makers should design and implement new policy tools in order to increase young people's chances of reaching a relevant employment spell within a reasonable period of time, especially for the

youngest and less educated individuals³¹. Second, encouraging the use of temporary contracts (by reducing the strictness of the rules regulating their use), is not an effective policy tool to improve employment outcomes, especially when labour demand is weak (i.e. the economy has entered a deep recession), and it may even have undesirable effects.

In section 4, we present a first ambitious attempt to define the concepts of 'employment quality' and 'career employment' within a dynamic perspective. By combining information about monthly and annual employment statuses, educational attainments, type of occupation, job changes, and earnings, we identified four dimensions of 'employment quality' (*employment and economic security, economic and education-occupational success*) and we label 'career employment' the situation in which all these dimensions are present simultaneously. Besides identifying those young people who, about five years after leaving education, experience security and/or success, we also distinguish the insecure or unsuccessful group according to the type of employment status trajectory that individuals are following.

About one out of three young individuals in our sample enjoys both employment and economic security and only 15% of them have a career employment. This happens despite more than half of young people are always employed, and another 20% prevalently employed, according to their monthly employment sequences. The main reason for this is that they do not earn enough (and in a sufficiently stable way) to be safe from the risk of poverty, or to have good earnings prospects. Females, less educated and young people living with parents appear more disadvantaged in terms of both employment quality and type of trajectory.

The econometric analysis confirmed the difficulties for these groups of young people, but it also revealed some interesting results in terms of the effects of ALMP and PLMP expenditure and the EPL-T and EPL-P indicators. As one would expect, all these variables are more related to the security dimension rather than to the success dimension, but their effects are different according to the gender and the educational level of the individual. ALMP expenditures are associated with a higher probability of security for high-school and university graduates, but not for low-educated and females. However, for these latter groups, ALMPs influences the experience of insecure individuals, in particular, they reduce their probability of experiencing some spells of unemployment (low-educated) or to be prevalently unemployed or inactive (females) and increase their probability to be always or prevalently in employment (females). PLMPs instead, appear to have opposite effects. They do not influence the probability of security for the various education groups, but they are associated with a higher probability of being always employed and a lower probability of experiencing some unemployment spells for all educational groups (and effects are larger for low-educated people). On the contrary, they seem to increase females' security but to be associated also with a higher probability of being inactive and a lower probability of being always or prevalent employed for insecure females (although the magnitude of these effects is very small). Finally, more stringent norms on the use of temporary contracts enhance security for both low-educated individuals and females. For the latter they are also associated with a higher probability of successful and career employment, and a lower probability, among insecure females, to be prevalently unemployed or

³¹ The 'Youth Employment Package', an EU policy initiative launched in 2012, made a recommendation for a European Youth Guarantee, a policy tool specifically planned to ease exit from youth unemployment (see O'Reilly et al. 2015).

inactive. More stringent norms on individual dismissals are associated with a lower probability of being secure for females, who are more likely to be insecure and almost always in employment.

These results have similar policy implications than those previously mentioned. First, since the effectiveness of ALMPs and PLMPs is different across education and gender (with ALMPs being less effective for low-educated and females, and PLMPs having small adverse effects for females), policy makers should design new policies that are specifically targeted to less educated individuals and females. Second, more stringent norms on the use of temporary contracts should be encouraged, because they have positive effects for the most disadvantaged groups (low-educated and females), in terms of preventing them from carrying the burden of the instability related to this type of contracts, and enhancing their possibilities to reach a secure and successful employment condition.

Finally, in section 5 we proposed a synthetic index of the overall level of employment insecurity associated with school-to-work trajectories of young people entering the labour market. The index is computed as a weighted sum of the probabilities of the different sequences, with weights representing our value judgements regarding i) the importance of the *total number* of periods in unemployment; ii) the importance of experiencing unemployment *early or late* in the sequence; and iii) the importance of experiencing unemployment *consecutively or not consecutively* for sequences with more than two periods. We provide an empirical application in order to show how the index works, considering the first three-year employment sequences for young people who leave education.

Our results show that there are huge differences between countries in the degree of insecurity associated to the labour market entry, and that these differences are generally enlarged if we give higher weight to sequences with more than one period in unemployment and to those in which unemployment lasts longer. This means that, in general, not only the unemployment risk is much larger in some countries than in others, but this higher risk is also more likely to be associated with a higher risk of a long period in unemployment, and our index captures these differences.

Besides supporting the case of using dynamic indicators for evaluating young people insecurity, this evidence suggests that, from a policy perspective, we need to move beyond a 'one-policy-fits-all' view. Policies fighting youth unemployment should take into account country specificities and be different according to whether youth unemployment is a 'transitory' phenomenon or a much deeper structural and persistent phenomenon.

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