

Youth transition trajectories across Europe: the role of institutional background

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Abstract

Standard measures of youth labour market performance are not appropriate to account for the dynamics of labour market entry. In this paper, rather than adopting optimal matching technique, we study school-to-work trajectories using a methodology that takes into account the achievement of a regular employment and employment status history during a 3-year period to classify clusters of school-to-work pathway. We use findings of this methodology to identify which are the determinants of school-to-work pathways and we test the heterogeneity of such trajectories across EU-countries, highlighting the role of welfare regimes and labour market policies. Preliminary results show the relevance of the recent economic crisis in worsening youth labour market performance. We also find more successful pathways in the Nordic countries and in flexible and low-regulated labour markets.

1. Introduction

Standard measures of youth labour market performance are not appropriate to account for the dynamics of labour market entry. A valid alternative consists in studying school-to-work trajectories, which is a long and lasting process with changes in employment status (between education, employment, unemployment and inactivity). This approach is relatively new in the analysis of youth labour market performance. Three studies (Brzinsky-Fay, 2007; Quintini and Manfredi, 2009; and Erhel et al., 2014) use the optimal matching technique to group young individuals according to differences in their transition trajectories. Brzinsky-Fay (2007) and Quintini and Manfredi (2009), using ECHP data, and Erhel et al. (2014), using EU-SILC panel data, present similar evidence, emphasising cross-country differences. They argue that a successful trajectory is 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.

The studies that use the optimal matching to analyse youth transition trajectories present a main weakness related to the impossibility of taking into account the direction of sequences over time and the order of states across sequences (Aisenbrey and Fasang, 2009). Indeed, no study considers that in analysing the labour market entry, more importance should be attributed to the achievement of a regular employment and employment status history before reaching such stable employment spell. Moreover, no study attempts to evaluate the role of the institutional background in terms of welfare regimes and labour market policies. The main aim of this paper is to fill these gaps. In details, we offer three main contributions to the literature on youth labour market performance. First, we identify the different types of individual trajectories, addressing the order and timing in sequences appropriately, using data on monthly status sequences. Second, we conduct an empirical analysis to identify which are the determinants of school-to-work pathways and we test the heterogeneity of such trajectories across EU-countries. We intend to highlight how much of the observed differences in such trajectories can be explained by dissimilarities in public policy, with respect to welfare

regimes and labour market policies. Finally, we investigate how changes in macro-economic circumstances, as a result of the recent economic downturn, affected school-to-work trajectories over time.

Socio-economic research on flexicurity is rather recent and mainly focused on the trade-off between employment protection legislation (EPL) and unemployment insurance (UI) in a macroeconomic perspective (Pissarides, 2001; Postel-Vinay and Saint Martin, 2005; Boeri et al., 2012) and on the effects of flexicurity on perceived job security (Clark and Postel-Vinay 2009). More direct evidence on the flexicurity mix at the individual level on job satisfaction has been provided by Origo and Pagani (2009 and 2012), who show that what matters for job satisfaction is mainly perceived job security, which may be independent of contract type. The most recent studies have looked at the macroeconomic resilience of the Danish flexicurity model during the economic crisis. Jørgensen (2011) has shown that, because of high unemployment benefits and relatively high social assistance benefits, domestic demand was more stable in Denmark than in other EU countries and the negative effects on income and unemployment were therefore significantly mitigated. But these positive results came at the expense of a rising public deficit, which led the Danish government to implement a fiscal recovery plan with a less generous unemployment benefit system (Madsen, 2013). This resulted in a significant reduction in workers' job and employment security, as compared to the Netherlands, the other "flexicurity country" (Mazzolini and Origo, 2014). In this paper we intend to investigate an unexplored topic, that is the relevance of policies inspired by flexicurity principles in favouring positive youth transition trajectories either before or during the recent economic crisis

In the next Section we present the dataset used for the analysis and the identification strategy to evaluate school-to-work pathways. In Section 3 we describe the school-to-work trajectories and we introduce some descriptive statistics to evaluate their distributions across countries and overtime. Section 4 shows the results of the empirical analysis conducted to identify the determinants of the school-to-work trajectories and in Section 5 we provide a discussion on these results. The last Section concludes.

2. Data and identification strategy

The empirical analysis is conducted using the EU-SILC panel data from years 2006 to 2012. In particular, we restrict the analysis to individuals that were interviewed for at least three consecutive years to identify trajectories using information on employment status for 36 consecutive months. Since the analysis is focused on school-to-work pathway, we also exclude all individuals that were not in education at the first of the thirty-six months of the period under inspection. We use for the empirical analysis only those individuals for who we could capture school-to-work transition, which is defined as the pathway after leaving education.

We use information on main activity conducted in each month of the previous year to construct the dependent variable. We group answers (nine or eleven, according to the year of the questionnaire¹) in four different employment output: employed, whether the individual self-declares to be currently employed or self-employed (full-time or part-time); unemployed, whether the individual self-declares to be currently unemployed; in education, whether the individual self-declares to be a pupil, student, further training, or in an unpaid work experience; and inactive, whether the individual self-declares not to be currently employed, not searching and not in education.

School-to-work pathways are defined taking into account different factors. The main factor is the achievement of a regular employment spell, which is a period of six consecutive months in employment. We could define a trajectory as successful whether the individual, during the months after leaving education, was been employed for a spell sufficiently long to be considered regular. Other factors that we use to define school-to-work trajectories are the number of months between leaving education and the achievement of a regular employment spell, the existence of non-regular employment spells before the regular one and the

¹ The old version of the question (used until the 2009 questionnaire) envisaged nine possible outcomes: Employee (full-time), Employee (part-time), Self-employed (full-time), Self-employed (part-time), Unemployed, Retired, Student, Other inactive, Compulsory military service. The most recent version of the question considers eleven possible outcomes: Employee working full-time, Employee working part-time, Self-employed working full-time (including family worker), Self-employed working part-time (including family worker), Unemployed, Pupil, student, further training, unpaid work experience, In retirement or in early retirement or has given up business, Permanently disabled or/and unfit to work, In compulsory military community or service, Fulfilling domestic tasks and care responsibilities, Other inactive person.

decision of returning in education after a sufficiently long period in the labour market or in inactivity. This methodology produces six different clusters, which will be presented in more details in the next section.

After having defined school-to-work clusters, we empirically estimate the determinants of the variable that defines school-to-work trajectories with the following model:

$$School_to_work_trajectory_{ict} = \mu_c + \tau_t + X_{ict}\beta + \psi_{ct}\delta + \varepsilon_{ict} \quad [1]$$

where $School_to_work_trajectory_{ict}$ is the variable that specifies school-to-work trajectories for individual i in country c at time t , μ_c is a fixed effect for country c , τ_t are time fixed effects, X_{ict} is a vector of individual control variables, ψ_{ct} the vector of variables that capture welfare regime of a country c at time t and ε_{ict} the usual error term. β and δ are parameters to be estimated.

We use information on gender, age, education and previously attained experience in the labour market as individual control variables. In order to explain the role of institutional background in determining such trajectories, we include in the empirical model both country fixed effects and information on flexicurity regimes, provided by Eurostat (expenditure on labour market policies) and OECD (EPL index).

We use country and year specific information on expenditures per unemployed in active and passive labour market policies (LMP). Information on active and passive LMP disentangles the relationship between security and school-to-work pathways. The data is provided by Eurostat and is measured both at the first year of the sample (from 2005 to 2009, according to the 3-years wave) and as variation with respect to the past year before the initial month of the 3-years period under inspection. The index of strictness of employment protection legislation (EPL) of temporary contracts, provided by OECD, captures the flexibility of the labour market and, similarly to active and passive LMP, is measured both at the first year of the sample and as variation with respect to the past five years.

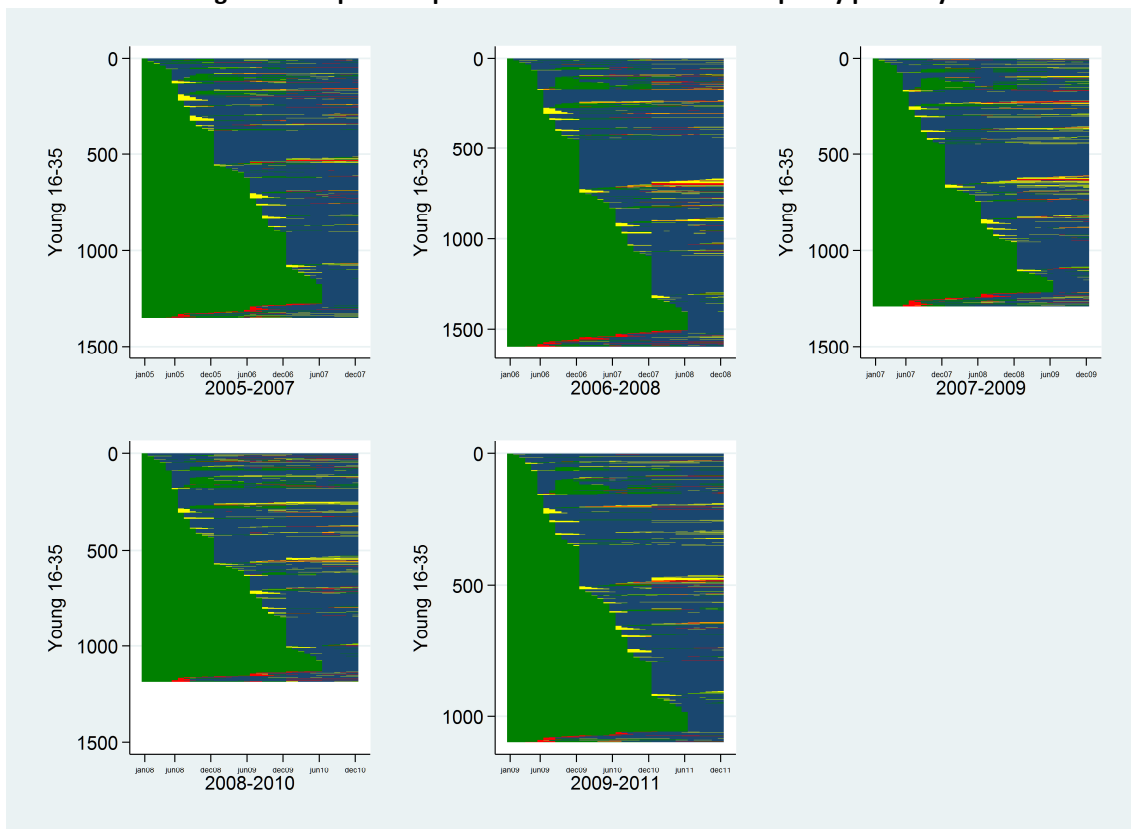
3. School-to-work trajectories

The first contribution of this paper consists in providing an innovative approach to evaluate school-to-work trajectories. This methodology produces six different clusters, which group individuals using employment

status over three years. We could define successful and unsuccessful pathways according to the achievement of a regular employment spell. The *speedy*, *long search* and *in&out successful* pathways are possible clusters of a successful trajectory, since all young individuals with these pathways had attained at least one regular employment spell.

- The *speedy* pathway includes all young individuals that were found a regular employment within the six months after leaving educational spell (Figure 1)

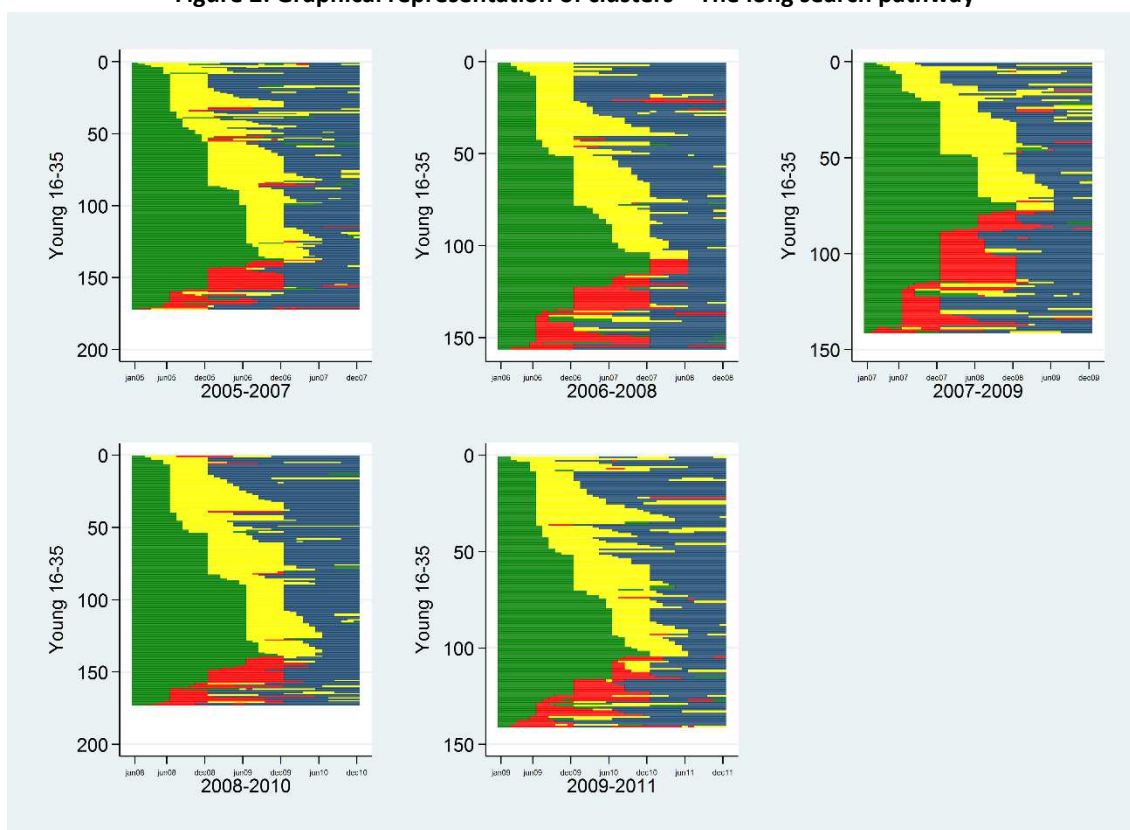
Figure 1: Graphical representation of clusters – The speedy pathway



Source: Our estimation on EU-SILC 2006-2012; Education: Green lines, Employment: Blue lines, Unemployment: Yellow lines; Inactivity: Red lines

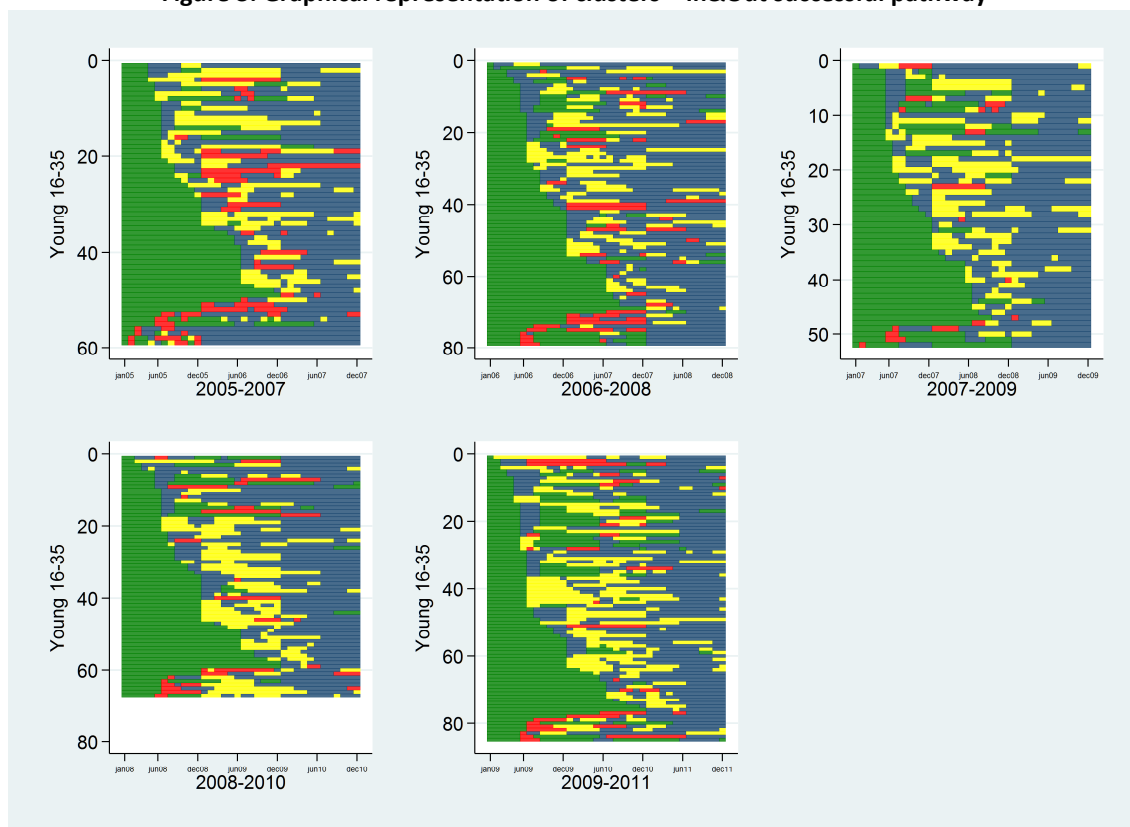
- The *long search* pathway includes young individuals who were inactive or who spent in unemployment at least six months before finding a regular employment (Figure 2).
- The *in&out successful* pathway includes young individuals who successfully find a regular employment only after one or more non-regular employment spells, followed by one or more periods in unemployment or inactivity (Figure 3).

Figure 2: Graphical representation of clusters – The long search pathway



Source: Our estimation on EU-SILC 2006-2012; Education: Green lines, Employment: Blue lines, Unemployment: Yellow lines; Inactivity: Red lines

Figure 3: Graphical representation of clusters – In&Out successful pathway

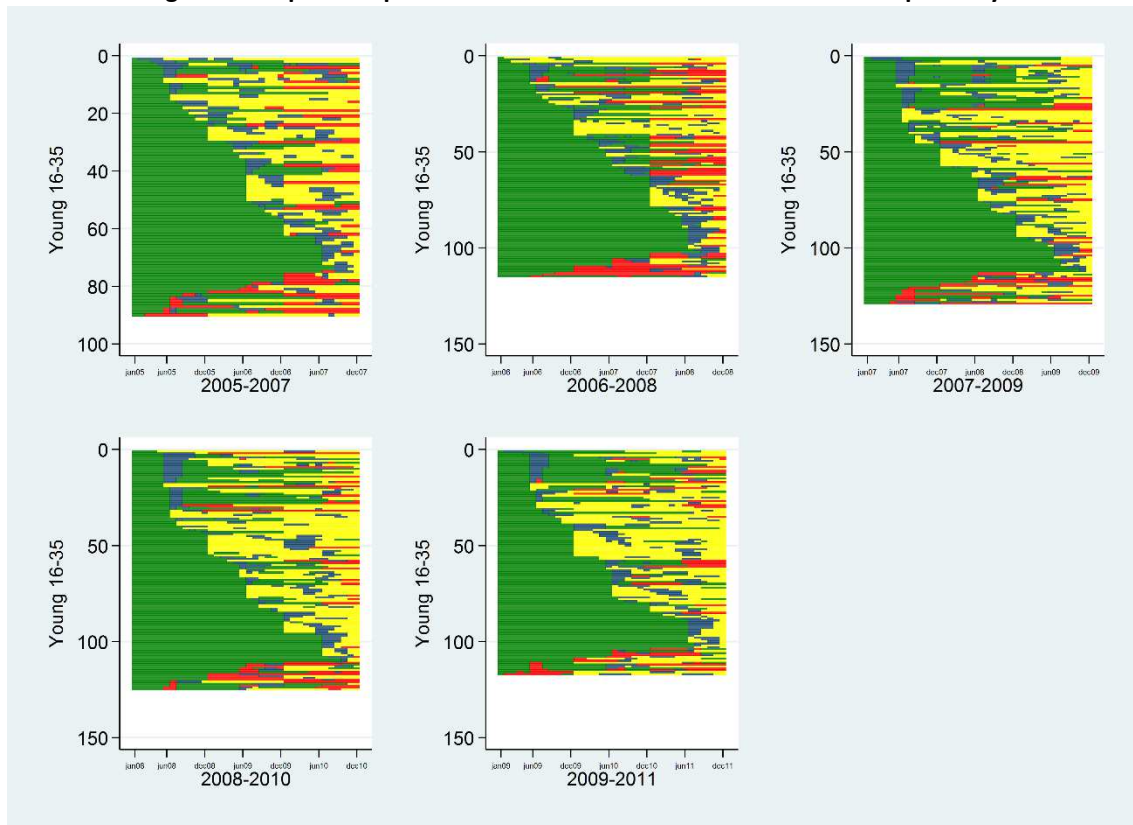


Source: Our estimation on EU-SILC 2006-2012; Education: Green lines, Employment: Blue lines, Unemployment: Yellow lines; Inactivity: Red lines

On the other hand, individuals with unsuccessful trajectories are those who did not keep even an employment for at least six consecutive months. According to the presence of one or more non-regular employment spells, we differentiate *in&out unsuccessful* from *continuous unemployment/inactivity* pathways.

- Individuals that are grouped in the *in&out unsuccessful* pathway are those who found one or more temporary employment spells followed by regular spells of unemployment/inactivity. This trajectory is thus unsuccessful because none of their employment spells could be considered stable and regular.

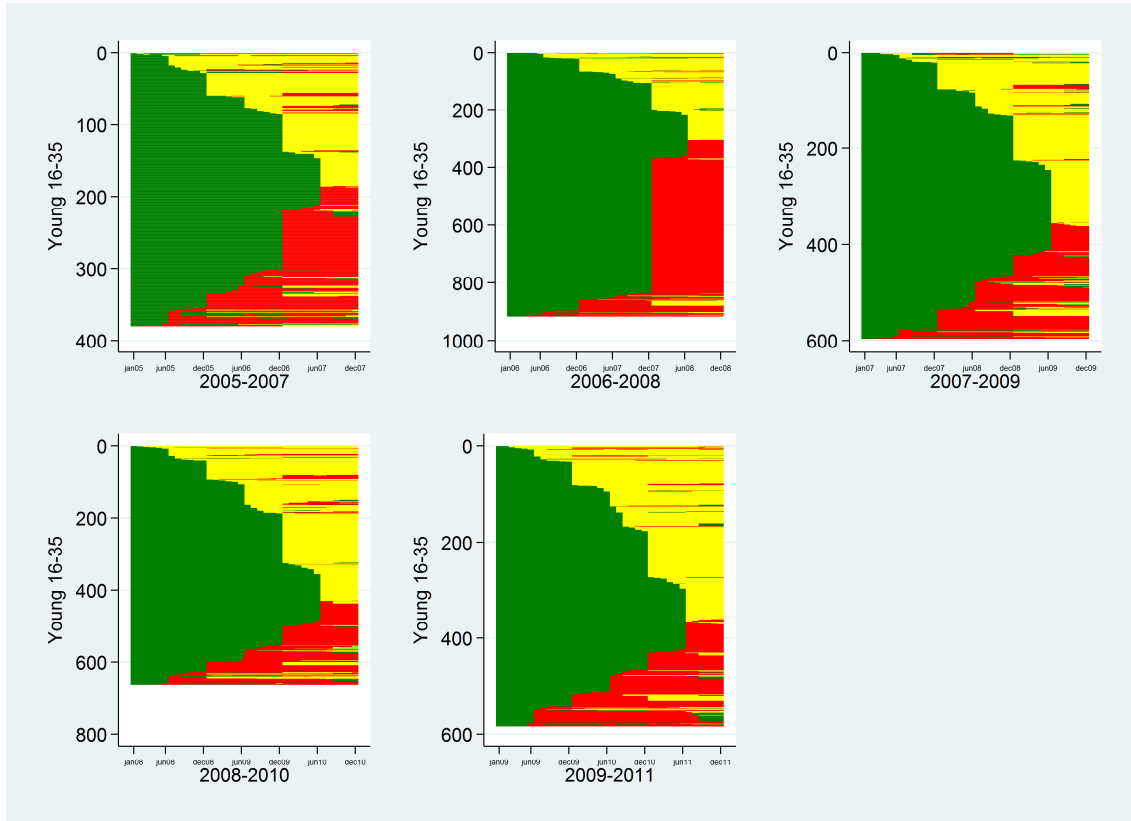
Figure 4: Graphical representation of clusters – In&Out unsuccessful pathway



Source: Our estimation on EU-SILC 2006-2012; Education: Green lines, Employment: Blue lines, Unemployment: Yellow lines; Inactivity: Red lines

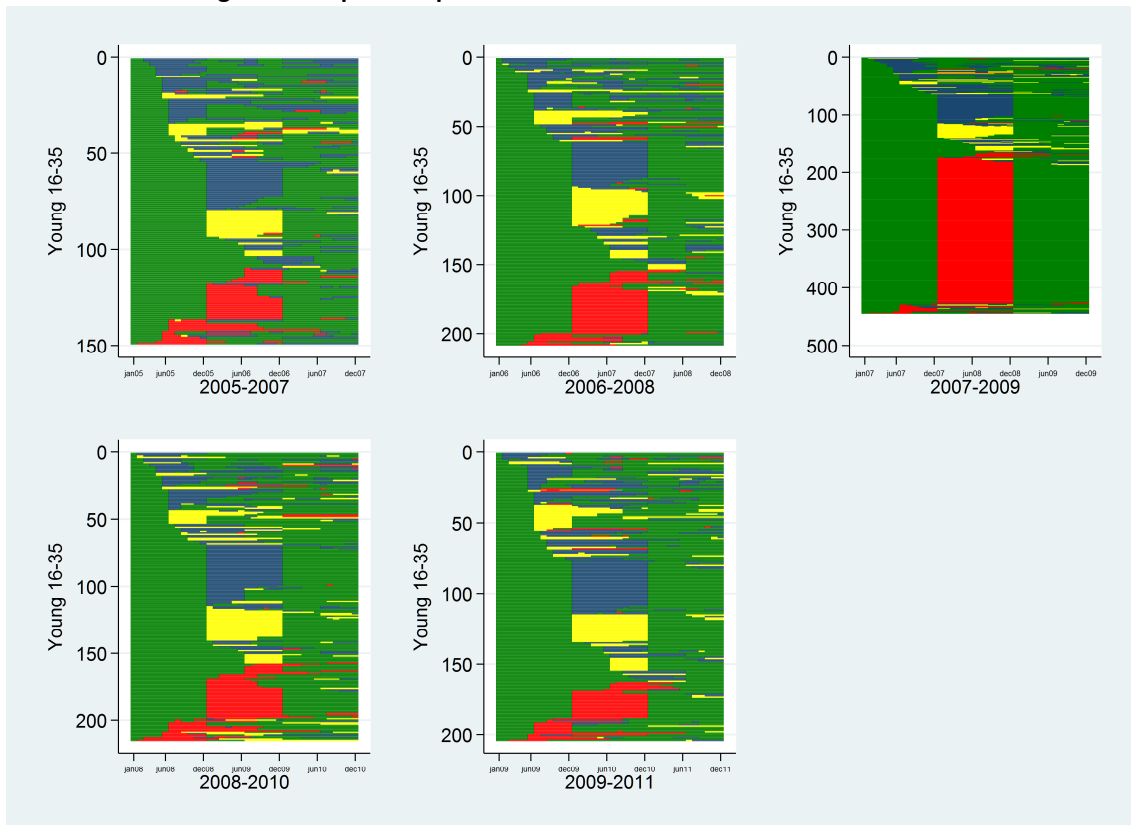
- The *continuous unemployment/inactivity* pathway includes those individuals that, after leaving educational, felt directly in unemployment or inactivity, without spending even a month in employment (Figure 5).
- Finally, we include individuals who decide to return to education in a group apart to underline their common decision of leaving the labour market or inactivity to return to education (Figure 6).

Figure 5: Graphical representation of clusters – completely unsuccessful pathway



Source: Our estimation on EU-SILC 2006-2012; Education: Green lines, Employment: Blue lines, Unemployment: Yellow lines; Inactivity: Red lines

Figure 5: Graphical representation of clusters – Return to education



Source: Our estimation on EU-SILC 2006-2012; Education: Green lines, Employment: Blue lines, Unemployment: Yellow lines; Inactivity: Red lines

In the next tables and figures, we present some descriptive statistics on distributions of school-to-work trajectories. Table 1 shows the distribution of the six pathways across countries, grouping them according to their prevailing mix of labour market and social policies. For the aggregation we use the classifications adopted by the European Commission (2006) using the results of the principal component analysis carried out on the basis of four variables measuring the flexicurity principles.² This study clusters the EU countries into five main groups, corresponding to different flexicurity models: English-speaking countries (UK and Ireland) with high flexibility (low EPL) and low security (low spending on labour market policies); continental countries (Germany³, Belgium, Austria and France and Luxemburg) with intermediate-to-low flexibility and intermediate-to-high security; Mediterranean countries (Italy, Spain, Portugal and Greece) combining low flexibility and low security; Nordic countries (Denmark, Sweden and Finland) and the Netherlands with intermediate-to-high flexibility and high security. The Eastern European countries (Czech Republic, Hungary, Poland and Slovenia and Slovakia) lie somewhere between the Mediterranean and the English-speaking countries, since they have very low levels of security combined with intermediate levels of flexibility.

Table 1 suggest that the successful trajectories are more frequent in the Nordic countries and, in particular, in Denmark and in Netherland, the so-called flexicurity countries, where the percentage of those who find a regular employment within the first six months after leaving education is higher than 80 percent. Sweden is the country where the percentage of *in&out successful* trajectories is the highest (12.35 percent); whereas, in Finland the proportion of young individuals with unsuccessful pathways is overall the highest among the Nordic countries (11.81 percent in *in&out unsuccessful* and 8.77 percent in *continuous unemployment/inactivity pathways*). In the Continental and in the eastern countries around 60 percent of young individuals is characterized by the *speedy* pathway; on the contrary, the proportion of those who remain in unemployment or inactive is around 10 percent in Austria and UK and around 20 percent in the other countries.

² These variables are: the OECD index of overall employment protection legislation (EPL) as a measure of numerical flexibility; expenditure on labour-market policies (LMP, both passive and active) as a percentage of GDP as a proxy for security; percentage of participants in lifelong training programmes as a measure of employability; and average tax-wedge as a measure of the distortions created by the tax system. For further details see European Commission (2006).

³ The EU-SILC panel data from years 2006 to 2012 does not include any information from Germany.

Table 1: Descriptive statistics – Distribution by countries

	Successful trajectories			Unuccessful trajectories		Return to education
	Speedy	Long search	In&out successful	In&out unsuccessful	Continuous unemployment/inactivity	
Nordic countries						
Denmark	80.06	0.64	0.60	0.57	7.71	10.41
Finland	60.24	3.62	7.31	11.81	8.77	8.25
Netherland	88.43	0.00	1.96	0.27	3.23	6.11
Sweden	66.38	0.85	12.35	8.84	3.59	7.99
Continental countries						
Austria	60.71	5.22	2.11	7.00	12.92	12.04
Belgium	59.61	6.22	1.58	4.94	21.15	6.50
France	59.01	6.54	2.45	6.60	23.18	2.22
Luxemburg	64.63	9.99	0.10	1.65	18.20	5.42
UK	63.68	4.72	6.26	3.66	10.53	11.16
Mediterranean countries						
Greece	34.38	6.88	1.53	4.75	41.04	11.43
Italy	33.20	6.49	1.95	5.88	40.76	11.73
Spain	53.74	4.05	4.29	6.01	19.22	12.69
Portugal	54.70	7.55	0.74	5.47	20.00	11.54
Eastern countries						
Czech repub.	65.72	8.50	2.58	3.53	15.41	4.26
Hungary	50.63	10.04	2.62	5.12	23.25	8.34
Poland	60.47	8.47	2.89	3.28	19.36	5.53
Slovenia	59.80	6.10	1.75	1.34	21.51	9.50
EU	56.46	5.86	3.25	5.17	21.30	7.95

Table 1 also shows that the Mediterranean countries are those with the worst youth labour market outcomes. In particular, young individuals who felt directly in unemployment or inactivity after leaving education, without spending even a month in employment during the 3-years periods inspected, are more than 40 percent in Greece and in Italy, where the recent economic downturn has deteriorated more intensely youth labour market outcomes.

Table 2 reports the distribution of the six pathways overtime during the 3-years periods under analysis. The effects of the economic crisis are stressed by the decrease of young individuals that find a regular employment within six months after leaving education (from 62.89 percent of young individuals with a *speedy* pathway in the period 2005-2007 to 50.29 percent in the most dramatic period of the economic crisis, i.e. 2008-2010). Furthermore, we notice a contextual increase of unsuccessful trajectories: from 16.48 to 25.53 percent of *continuous unemployment/inactivity* pathway and from 3.83 to 6.78 percent of *in&out unsuccessful* trajectories.

Figure 7 shows how the distribution of the six pathways varies overtime within the group of countries. All groups of countries were affected by a massive reduction of the *speedy* pathways. In the Nordic countries,

the share of young individuals with such trajectories decreased from 80.17 percent considering the period 2005-2007 to 65.84 to period 2007-2009, counterbalanced by an increase of trajectories characterized by an unstable employment status – *in&out successful* and *unsuccessful* pathways – or without any period in employment. In the Continental countries the worst period was 2008-2010, when the proportion of the *speedy* pathways felt to 50.88 percent (from 72.36 percent considering 2005-2007) and this decrease led to an increase of unsuccessful pathways.

Table 2: Descriptive statistics – Distribution by 3-years periods

Period of analysis	Successful trajectories			Unsuccessful trajectories		Return to education
	Speedy	Long search	In&out successful	In&out unsuccessful	Continuous unemployment/inactivity	
2005-2007	62.89	7.26	3.73	3.83	16.48	5.80
2006-2008	59.85	4.69	3.27	4.34	20.47	7.38
2007-2009	53.63	5.03	2.76	5.41	22.51	10.67
2008-2010	50.29	7.02	3.42	6.61	25.53	7.12
2009-2011	51.68	5.54	3.01	6.78	23.72	9.27

In the Mediterranean countries Figure 7c shows the proportion of young individuals with *speedy* trajectories felt to 32.11 percent in 2008-2010, with respect to 50.75 percent in 2006-2008. On the contrary, in 2008-2010 the share of unsuccessful pathways increased noticeably: *in&out unsuccessful* trajectories were equal to 8.32 percent and continuous unemployment/inactivity trajectories to 40.85 percent. The most serious worsening in youth labour market outcomes in the Eastern countries were reported in 2009-2011 when the proportion of the *speedy* pathways decreased to 46.62 percent (with respect to 63.72 percent in 2006-2008) and continuous unemployment/inactivity pathways increased to 28.35 percent (with respect to 16.75 percent in 2005-2007).

Particularly relevant for this paper is the role of the mix of labour market and social policies in influencing youth labour market outcomes. Figure 8 investigates the relationship between school-to-work pathways and welfare regime, identified by expenditures per unemployed in active and passive labour market policies and an index of strictness of employment protection legislation of temporary contract.

Figure 8 suggests that increasing expenditures in active and passive LMP per unemployed could increase the share of young individuals that find a regular employment within six months after the end of education, or, alternatively, may help them to return to education. LMP measures contributes to reduce youth

unemployment and inactivity, favouring training, job rotation and job sharing, employment incentives, supporting employment and rehabilitation, direct job creation, and start-up incentives. Countries could afford generous financial assistance to compensate individuals for loss of wage or salary (LMP supports) whether unemployment and inactivity are rare events. This leads to lower young individuals with *long search* and continuous unemployment/inactivity pathways in countries that ensure more security via high active and passive LMP.

Figure 7: Descriptive statistics – Distribution by group of countries and 3-years periods

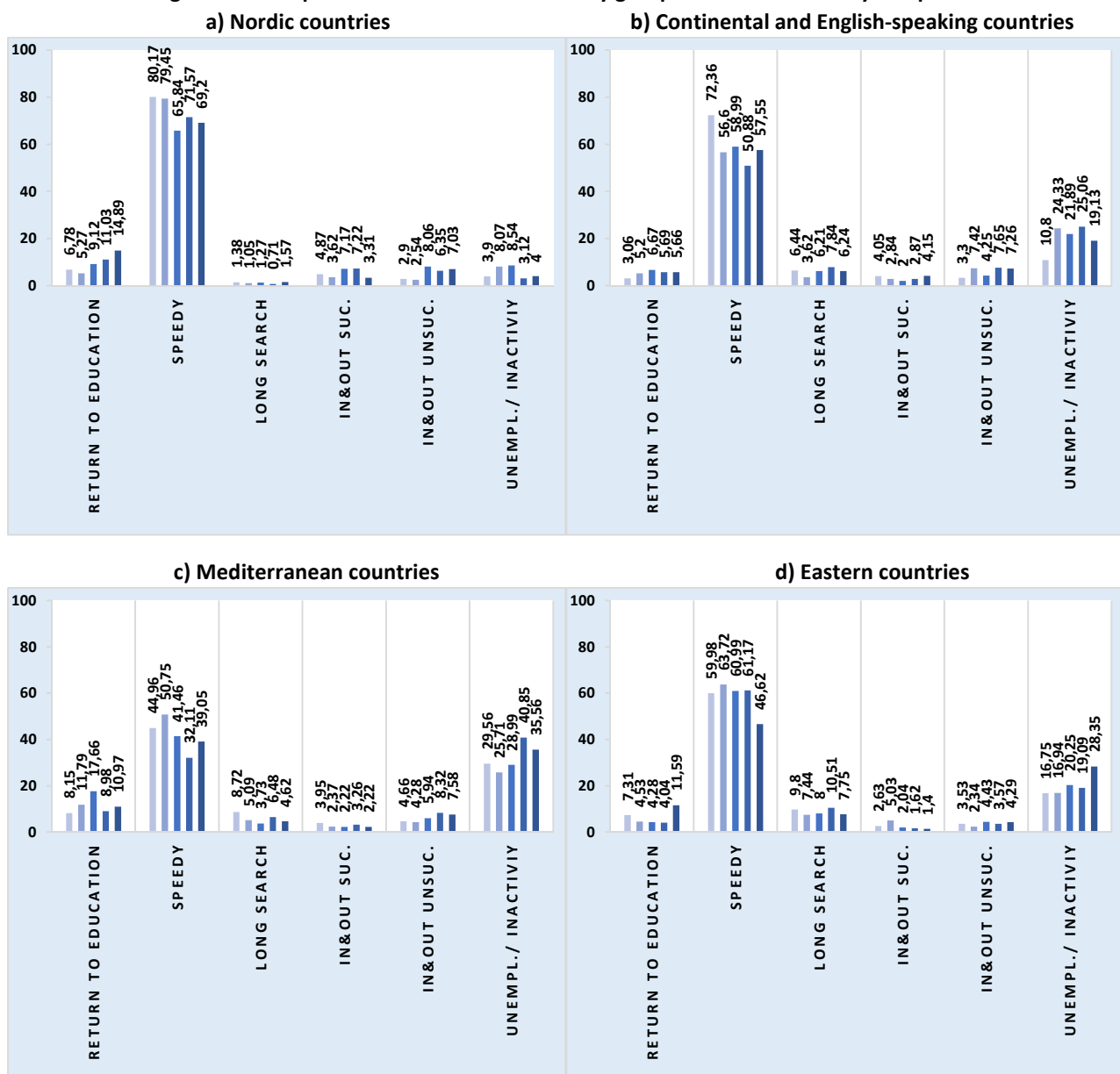
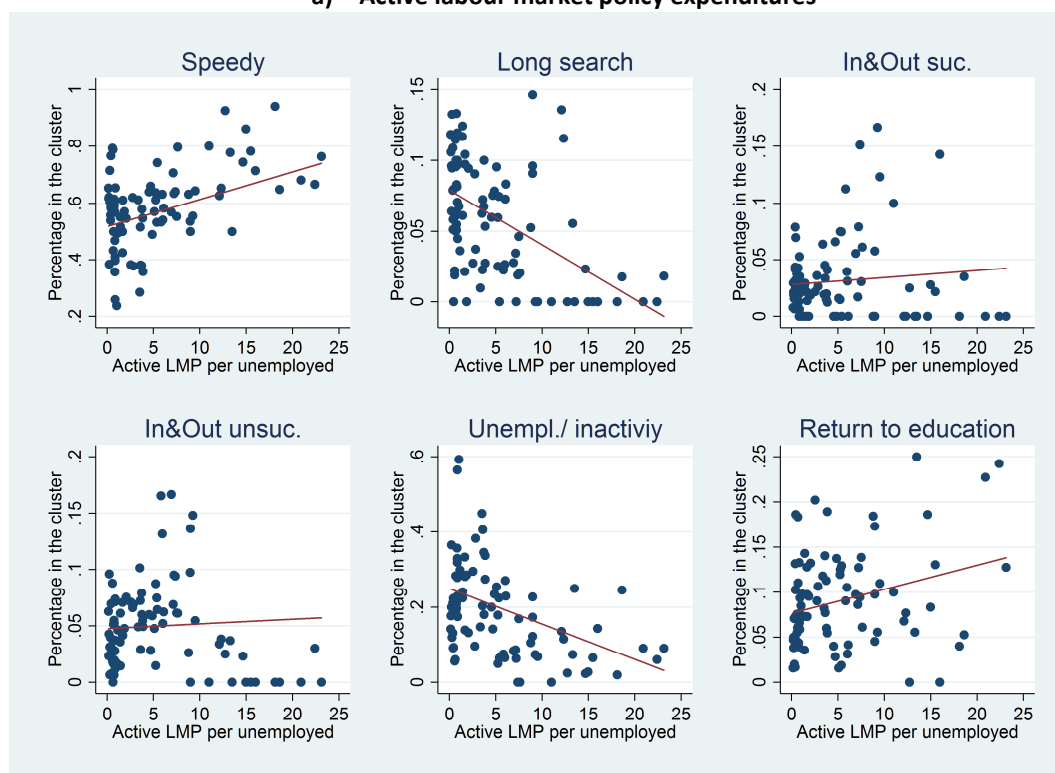


Figure 8 – Descriptive statistics – School-to-work trajectories and welfare regime

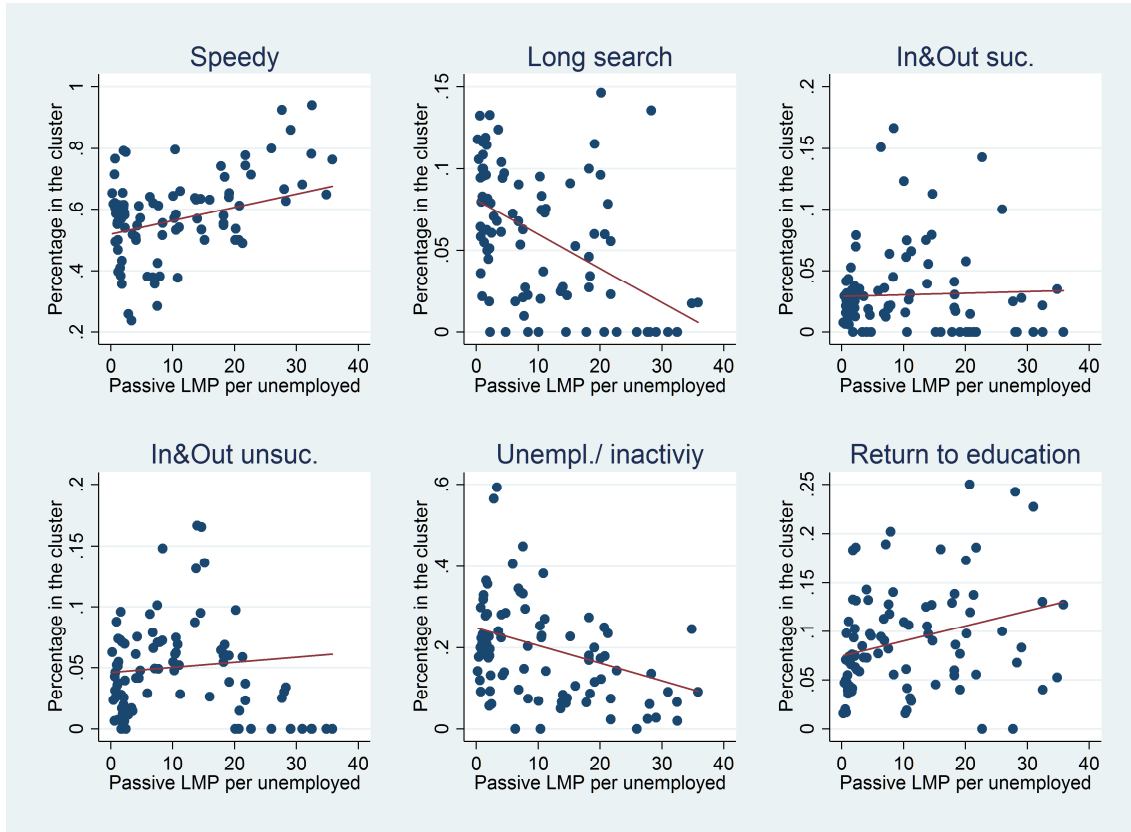
a) Active labour market policy expenditures



Source: EU-SILC, our elaborations. Note: each dot represents averages by waves (2005-2007; 2006-2008; 2007-2009; 2008-2010; 2009-2011) and by countries of active LMP per unemployed and the share of the six clusters of school-to-work pathways.

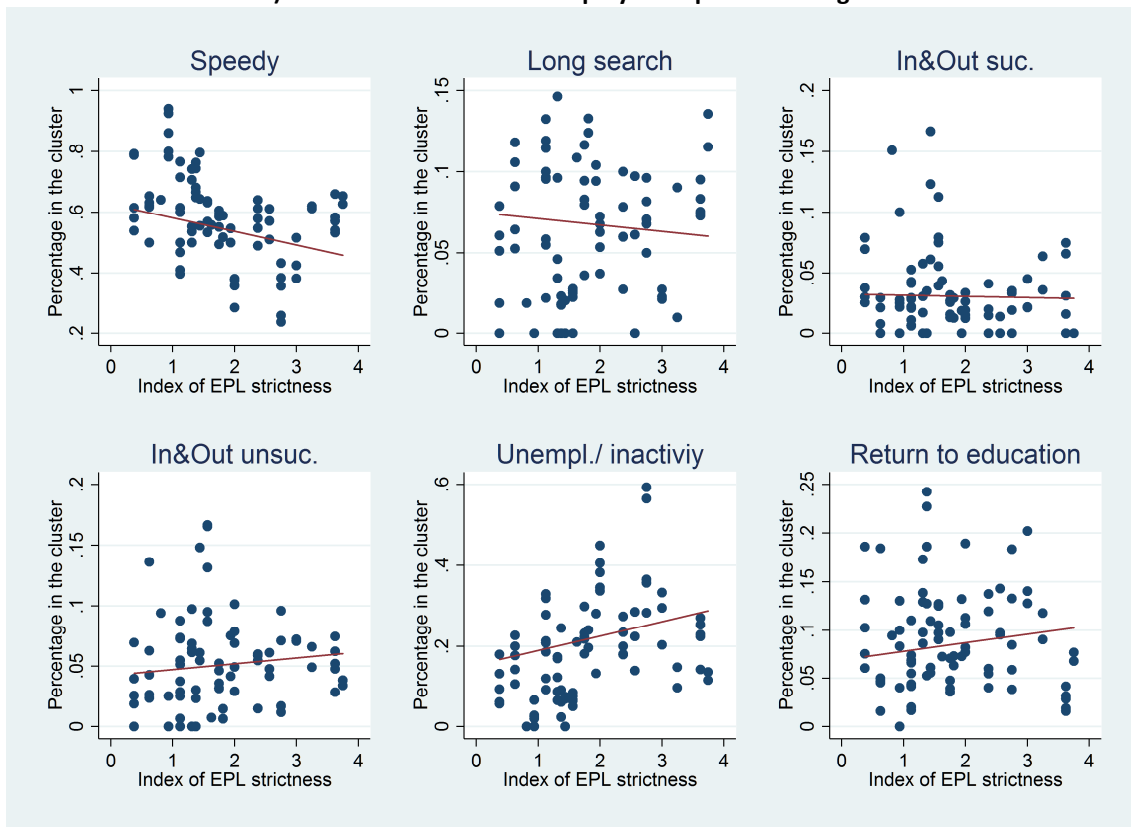
Where employment protection legislation is stricter the labour market is more rigid and the opportunity to find a regular employment for young individuals are lower. Figure 8c shows that successful trajectories, and in particular the *speedy* pathway, are more frequent in countries where the labour market is more flexible and the index of strictness of EPL is lower. Conversely, countries where EPL of temporary contracts is higher are characterized by a higher quota of young individuals without even one months of employment during the periods under investigation.

b) Passive labour market policy expenditures



Source: EU-SILC, our elaborations. Note: each dot represents averages by waves (2005-2007; 2006-2008; 2007-2009; 2008-2010; 2009-2011) and by countries of passive LMP per unemployed and the share of the six clusters of school-to-work pathways.

c) Index of strictness of employment protection legislation



Source: EU-SILC, our elaborations. Note: each dot represents averages by waves (2005-2007; 2006-2008; 2007-2009; 2008-2010; 2009-2011) and by countries of OECD index of strictness of EPL and the share of the six clusters of school-to-work pathways.

4. Results

Results of multinomial logit analysis used to estimate the equation [1] are presented in Table 3, where we report the marginal effect of the variables used to explain successful school-to-work pathways (Table 3a) and unsuccessful trajectories and return to education (Table 3b). Table 3a presents in the first column the results referred to the *speedy* pathway; in the second and in the third columns the marginal effects related to the *long search* and *in&out successful* trajectory, respectively. Table 3b reports in the first two columns results of unsuccessful trajectories (in&out unsuccessful and continuous unemployment/inactivity pathways) and in the third one the results referred to return to education pathway.

Our results suggest that male individuals are more frequently in successful pathways. In details, being male has a positive and statistically significant effect increasing the probability of having a *speedy* pathway of 3.44 percentage points, or, at least, an *in&out successful* trajectory (0.91 percentage points). On the contrary, there are negative and statistically effects in terms of continuous unemployment/inactivity and return to education pathways, suggesting more negative and instable trajectories among female individuals.

The *speedy* pathway is also more common among individuals that leaving more elderly education. Table 3a reports a positive and statically significant effect of the variable age and this effect is marginally decreasing – negative effect of the squared variable. Younger individuals are more frequently characterized by the *continuous unemployment/inactivity* pathway and they are willing to return to education with a higher probability.

A higher educational level attained leads to a better pathway in school-to-work transition. Secondary and tertiary education have positive and statistically significant effects in terms of positive trajectories – i.e. the *speedy* pathway (8.05 and 16.85 percentage points, respectively) – and negative effects in relation to continuous unemployment/inactivity trajectory (-7.57 and 11.90 percentage points, respectively). Finally, the existence of previous working experiences could contribute to decrease the duration of unemployment/inactivity before finding a regular employment. Indeed, Table 3a and 3b report a positive and statistically significant effect of the variable experience on the probability of having a *speedy* pathway

(3.89 percentage points for each additional year of experience) and a negative effect of being unemployed/inactive for the entire period under analysis (-3.66 percentage points for each additional year of experience). Results also show that, with more working experience, there are more probabilities of entering in an instable pathway, either with or without a regular employment spell, and less probabilities of returning in education.

Table 3a – Results - Successful pathways

	Speedy			Long search			In&out successful		
Baseline exp. Probability	0.5428			0.0672			0.0317		
Personal characteristics									
Male	0.0344	0.0123	***	-0.0018	0.0048		0.0091	0.0036	***
Age	0.1370	0.0217	***	0.0058	0.0141		0.0050	0.0063	
Age squared	-0.0028	0.0005	***	-0.0001	0.0003		-0.0001	0.0001	
Secondary education	0.0805	0.0157	***	-0.0078	0.0112		0.0006	0.0058	
Tertiary education	0.1686	0.0240	***	-0.0048	0.0155		0.0075	0.0061	
Experience	0.0389	0.0061	***	-0.0053	0.0044		0.0022	0.0012	**
Country fixed effect									
Finland	0.0692	0.0451		-0.0482	0.0196	***	0.0435	0.0223	**
Sweden	0.1183	0.0531	***	-0.0990	0.0404	***	0.0630	0.0114	***
Netherland	0.6360	0.0927	***	-0.7889	0.0402	***	0.0862	0.0478	**
Austria	0.0181	0.0661		0.0342	0.0324		0.0324	0.0317	
Belgium	0.0099	0.0989		0.0522	0.0543		0.0003	0.0454	
Luxemburg	0.3811	0.1131	***	0.1684	0.0436	***	-0.5477	0.0860	***
France	0.0747	0.0741		0.0570	0.0316	**	-0.0456	0.0354	
UK	0.0385	0.0593		-0.0356	0.0270		0.0532	0.0167	***
Greece	-0.1307	0.0612	**	0.0241	0.0250		-0.0635	0.0269	***
Spain	0.0203	0.0683		-0.0147	0.0405		-0.0437	0.0319	
Portugal	0.0639	0.0474		0.0286	0.0199		-0.0744	0.0286	***
Italy	-0.2910	0.0460	***	0.0301	0.0182	*	-0.0408	0.0232	*
Czech republic	0.0642	0.0261	***	-0.0125	0.0159		-0.0092	0.0103	
Hungary	-0.1276	0.0250	***	0.0009	0.0119		0.0066	0.0080	
Poland	-0.0011	0.0238		-0.0058	0.0114		-0.0233	0.0070	***
Slovenia	0.0204	0.0352		0.0192	0.0078	***	-0.0265	0.0081	***
Year fixed effect									
2006-2008	0.0027	0.0163		-0.0220	0.0100	**	0.0103	0.0049	**
2007-2009	-0.0387	0.0136	***	-0.0289	0.0100	***	-0.0046	0.0062	
2008-2010	-0.0886	0.0143	***	-0.0117	0.0101		-0.0024	0.0052	
2009-2011	-0.1101	0.0147	***	-0.0159	0.0111		0.0083	0.0059	
Welfare Regime									
LMP measures	0.0100	0.0100		0.0012	0.0068		0.0042	0.0031	
LMP supports	-0.0017	0.0070		-0.0042	0.0043		-0.0040	0.0027	
Index of EPL strictness	-0.0501	0.0306	*	-0.0122	0.0126		0.0335	0.0129	***
Variation of LMP measures	-0.0132	0.0105		0.0082	0.0074		-0.0100	0.0031	***
Variation of LMP supports	0.0044	0.0073		-0.0004	0.0044		0.0096	0.0035	***
Variation of EPL	-0.0497	0.0251	**	-0.0097	0.0147		0.0047	0.0104	

Robust clustered standard errors in italics. *** p<0.00, ** p<0.05, * p<0.10.

Table 3b: Results – Unsuccessful pathways and return to education

	In&out unsuccessful			unempl/inactivity			Return to education		
Baseline exp. probability	0.0519			0.2198			0.0866		
Personal characteristics									
Male	0.0048	0.0052		-0.0333	0.0106	***	-0.0131	0.0073	**
Age	-0.0134	0.0124		-0.1033	0.0183	***	-0.0311	0.0126	***
Age squared	0.0002	0.0003		0.0022	0.0004	***	0.0006	0.0003	**
Secondary education	-0.0020	0.0088		-0.0757	0.0131	***	0.0043	0.0114	
Tertiary education	-0.0067	0.0112		-0.1190	0.0207	***	-0.0455	0.0145	***
Experience	0.0062	0.0015	***	-0.0366	0.0042	***	-0.0054	0.0024	***
Country fixed effect									
Finland	0.1138	0.0169	***	-0.1984	0.0341	***	0.0201	0.0162	
Sweden	0.0919	0.0135	***	-0.1985	0.0831	***	0.0243	0.0196	
Netherland	-0.0147	0.0507		-0.0457	0.0751		0.1270	0.0301	***
Austria	0.0497	0.0253	**	-0.1412	0.0612	**	0.0068	0.0207	
Belgium	0.0955	0.0378	***	-0.1253	0.1003		-0.0326	0.0434	
Luxemburg	0.2146	0.0566	***	-0.0971	0.0976		-0.1193	0.0493	***
France	0.1742	0.0547	***	-0.0754	0.0746		-0.1849	0.0506	***
UK	-0.0525	0.0248	**	-0.0957	0.0459	**	0.0921	0.0275	***
Greece	0.1204	0.0458	***	0.0671	0.0757		-0.0174	0.0380	
Spain	0.1637	0.0474	***	-0.1002	0.0703		-0.0254	0.0417	
Portugal	0.0995	0.0333	***	-0.1062	0.0569	**	-0.0113	0.0293	
Italy	0.0947	0.0263	***	0.1786	0.0401	***	0.0282	0.0200	
Czech republic	-0.0040	0.0218		-0.0088	0.0228		-0.0296	0.0130	***
Hungary	0.0193	0.0158		0.0715	0.0199	***	0.0292	0.0171	*
Poland	0.0397	0.0203	***	0.0217	0.0238		-0.0313	0.0196	
Slovenia	-0.0076	0.0250		0.0028	0.0207		-0.0083	0.0169	
Year fixed effect									
2006-2008	0.0012	0.0082		-0.0125	0.0203		0.0202	0.0126	
2007-2009	0.0158	0.0089	*	0.0242	0.0201		0.0323	0.0134	***
2008-2010	0.0055	0.0088		0.0738	0.0187	***	0.0235	0.0124	**
2009-2011	0.0119	0.0088		0.0700	0.0209	***	0.0358	0.0139	***
Welfare Regime									
LMP measures	-0.0028	0.0032		-0.0175	0.0114		0.0049	0.0048	
LMP supports	0.0001	0.0021		0.0094	0.0073		0.0003	0.0031	
Index of EPL strictness	-0.0569	0.0212	***	0.0407	0.0305		0.0449	0.0205	**
Variation of LMP measures	0.0018	0.0036		0.0199	0.0130		-0.0068	0.0036	*
Variation of LMP supports	-0.0032	0.0026		-0.0091	0.0085		-0.0014	0.0033	
Variation of EPL	-0.0187	0.0095	***	0.0548	0.0263	***	0.0187	0.0100	**

Robust clustered standard errors in italics. *** p<0.00, ** p<0.05, * p<0.10.

Focusing on country fixed effects, we identify higher probabilities of having a successful trajectory, and in particular, a *speedy* pathway, in some Nordic countries (Sweden and Netherland), in Luxemburg and in Czech Republic. On the contrary, some Mediterranean countries (Greece and Italy) and Hungary report lower probabilities of a *speedy* pathway. Sweden and Netherland are also those countries where waiting more than six months to find a regular employment is less frequent, as well as Finland. Higher probabilities of being affected by a *long search* trajectory are identified in France, Italy, Slovenia and Luxemburg.

Table 3b shows that unsuccessful trajectories, and, in particular, continuous unemployment and inactivity pathways, are less common in Finland, Sweden, Austria and UK. On the contrary, in Italy and Hungary these trajectories are more frequent. Finally, we identify more return to education in Netherland, UK and Hungary.

The negative effects of dummies introduced to capture time trends confirm the negative consequences of the recent economic crisis in terms of lower probabilities of finding a stable and successful employment immediately after leaving education. Our findings on year fixed effects suggest that in the last 3-year periods (2007-2009, 2008-2010 and 2009-2011) individuals with a *speedy* trajectory are lower with respect to the previous 3-year periods (-3.87, -8.86 and -11.01 percentage points, respectively). In the year of the economic crisis, we report higher distribution of individuals in unsuccessful pathways, in particular *continuous unemployment/inactivity* trajectories (7.38 and 7 percentage points, respectively in 2008-2010 and 2009-2011), and higher probabilities of returning to education (3.23, 2.35 and 3.58 percentage points, respectively in 2007-2009, 2008-2010 and 2009-2011).

Table 3a and 3b also highlight the role of labour market and social policies in influencing school-to-work trajectories. In details, we identify a relevant impact of flexibility in favouring successful pathways. In countries where EPL strictness is lower young individuals have more probabilities of finding a regular employment – a *speedy* pathway – or, a least, several temporary and instable employment spell – in&out unsuccessful trajectory – rather than falling in a continuous unsuccessful pathway, characterized only by spells of unemployment and/or inactivity after leaving education. These effects are underlined by the negative and statistically significant effects of the variables that identify either the level of EPL or a variation with respect to 5-years before the initial month under investigation.⁴

On the contrary, the lack of any robust effect across school-to-work clusters of active and passive LMP suggests that increasing security does not affect the pathway of young individuals after leaving education. Such findings could be interpreted considering the role of LMP measures and LMP supports that are generally aimed to sustain workers who lost their jobs during their unemployment spell and to supporting employment and rehabilitation helping them with training, job rotation and job sharing and start-up incentives. We could

⁴ We identify that the countries that had reduced EPL strictness of temporary contracts in the last decade are the Mediterranean countries that are generally characterized by highly segmented labour markets and the great use of atypical contracts.

thus hypothesize that this explains why these expenditures do not have significant effects on individuals' school-to-work pathway.

5. Discussion

TBD

6. Conclusion and policy implications

TBD

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