Country Patterns of Labour Market Entry and Early Career

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Abstract

The paper intends to find similarities and differences among 18 countries of the REFLEX and HEGESCO projects with respect to the labour market entry and early career process. Based on how close to each other or how far from each other these countries are, they will be grouped into clusters and the country types will be characterized by the typical features of labour market entry and early career of the graduates. The following features are considered in the analysis in order to develop a general typology of the 18 countries: easiness and fastness of labour market entry; match between qualification and current occupation; mobility out of first employment and unemployment experiences.

Following the existing literature, two mechanisms for grouping the 18 countries can serve as basis for conceptual predictions: the connection between the educational system and the labour market as well the employment protection legislation. These approaches have been applied and tested earlier for broader circles of labour market entrants. The paper discusses these issues for the graduate labour market. Methodologically, the statistical procedure of cluster analysis will be used. The main challenge is to link the empirical findings to the conceptual predictions.

Choosing the best cluster solutions is affected by the number of cases (18 nations) and by consideration for interpretations. The paper provides confirmation to the OLM – ILM distinction as well as to the relevance of the stronger or weaker EPL for the specific graduate labour market. Based on the typology derived from indicators on labour market entry and early career, the analysis reveals graduates' situation to be the most flexible and vulnerable in Spain and Turkey, while labour market entry and early career seem to be the most favourable for graduates in Norway, Finland, the Netherlands and Estonia.

Keywords: Graduates, labour market, education – occupation mismatch, career mobility, unemployment, cluster analysis

Introduction: Conceptual basis of the study

The aim of this paper is to search for typical "combination" of countries in terms of graduates' labour market entry and early career experiences. To achieve this goal, the analysis will basically follow the next steps: 1) Dimensions are chosen that represent labour market entry and early career processes; 2) Indicators are selected or constructed that represent the given dimension; 3) A statistical procedure is performed to detect the typical combinations that express certain common patterns and place the countries in the same group on that ground. The research in this paper will be carried out on the data of a merged file from the REFLEX and HEGESCO projects including 18 countries. The country groups will be constructed by the method of cluster analysis. The paper follows some previously existing analytical examples (Gangl 2001, 2003a. Saar et al. 2008. Unt 2007) as well as projects (Smyth et al. 2001. Kogan et al. 2008).

Based on the existing literature, two mechanisms for grouping countries are discussed briefly in the next paragraphs: the connection between the educational system and the labour market as well as employment protection legislation.

Regarding the first approach of grouping countries, scholars have traditionally contrasted internal labour markets (ILM) with occupational labour markets (OLM) or production approach vs. training approach (Marsden 1999), based on differences in signalling functions of the schooling system (Spence 1974). Alternate terms for the same distinction are the organisational and qualificational mobility spaces (Maurice et al. 1986. Müller and Shavit 1998). Under the conditions of OLM, labour market entry is expected to be faster and the match between qualifications and jobs is expected to be better (Allmendinger 1989).

It is important to keep in mind that previous research on school to work transition quoted above referred to a broader population of school leavers and was not restricted to graduates. Nevertheless, the issue of the variation in the degree of vocational specificity or of educational signalling is not limited to secondary education only but it holds for the higher education to some extent as well. The tertiary level of schooling in the countries with OLM involves the features of the vocational vs. academic duality, while the linear type of higher education (the Bologna system) is traditionally more characteristic for the countries with ILM.

The second approach, the employment protection legislation (EPL) is expected to affect both labour market entry and further mobility of new entrants out of first job. The basic assumption is that stricter legislation is associated with more difficult entry and lower level of mobility. As employment protection favours the insiders who are employed, it decreases the vacancies and the availability of new jobs for new entrants. At the same time those who managed to enter the labour force will consider to move to another job to less extent; first employment will not become a stepping stone but young people tend to get trapped in their first jobs to larger extent. Thus, higher degree of EPL decreases the unfavourable risks for unemployment but the good chances for upward mobility, too.

Gangle (2003b) used selected countries from the EU LFS data in order to investigate the early career of labour market entrants. In this study, the Anglo-Saxon nations as well as the Scandinavian countries were considered as low EPL societies. Labour market is apparently weakly regulated in the liberal societies but the social democratic welfare states do not apply strong employment protection legislation either. Stricter EPL is more characteristic for the corporatist and the Southern European societies. Saar et al. (2008) and Unt (2007)

investigated the school to work transition process for the new EU-member states in comparisons to the EU-15. They state that Hungary and Slovakia have the most flexible labour legislation followed by the Czech Republic and Poland. Estonia and Latvia occupy middle positions, while Lithuania and Slovenia have the most restrictive labour regulation.

Based on the "crossings" of these two approaches, the 18 countries involved in the analysis may be grouped as follows.

Table 1. Country groups based on the two mechanisms considered (OLM / ILM and EPL)

	Strict EPL	Less strict EPL	Less weak EPL	Weak EPL
OLM (high educational signalling):	Austria, Germany, Slovenia	Netherlands	Czech Republic, Poland	
ILM (low educational signalling):	Lithuania	Belgium, France, Spain, Estonia	Finland, Norway	UK, Hungary
Southern Europe		Italy, Portugal, Turkey		

Dimensions and indicators for the country patterns

Following the overview above, particular dimensions were chosen for the empirical analysis, represented by concrete indicators that cover labour market entry; match between qualification and current job; mobility out of first employment and unemployment experience between labour market entry and survey time. The assumption is that OLM is more efficient for a fast and easy labour market entry and leads to stronger match between education and occupation. Weak EPL also makes labour market entry faster and generates more flexibility in the labour market resulting in higher job mobility and higher risks for unemployment.

One consequence of choosing these dimensions leads to the fact that this paper will focus only on those graduates who entered the labour force. Apparently, this limitation is important in the light of the existing literature where the rising unemployment risk among young labour market entrants is an important feature (Gangl 2002. Kogan et al. 2007). It also holds that the present analysis deals with a "selected" group of graduates. Thus, the comparative analysis of those who succeeded and did not succeed to enter the labour force is regarded as a different task.

Altogether five indicators are used as "input" measures for developing a general typology of country patterns.
(1) The easiness and fastness of labour market entry is approached by the indicator measuring the time graduates had to spend to find a job and enter the labour force. This variable is 0 by definition for those who started to work before graduation. For the rest, the variable takes the value of 1 if job search lasted longer than 6 months.
(2) For match between qualification and current job, indicators aim to cover over-education (Freeman 1976), underemployment (Livingstone 1998), performance gap or credential gap between education and jobs, based on both objective and subjective measurement approaches. The first indicator (2.1.) illustrates bad match by marking those graduates who work in ISCO

major group 3-9. It is assumed that graduates working in these jobs (and not in ISCO major group 1-2, labelled as Legislators, senior officials and managers and Professionals) are plausibly underemployed. In the case of the next indicator (2.2.) respondents were asked to characterize the type of education they felt most appropriate for the work in their current job. One answer category was lower than higher education. Proportion of this category is regarded as a sign of over-education. The third indicator (2.3.) is based on a 5-point scale ranging between "not at all (1)" and "to a very high extent (5)". The proportion of answer codes 1-3 is regarded as expressing underutilization of skills.
(3) For mobility out of the first employment job, data do not allow to make a proper distinction between cases when somebody left first employment and moved to another job or when somebody became unemployed. Thus the last indicator refers to unemployment experience and takes the form of dummy with a value of 1 for those graduates who experienced unemployment ever between labour market entry and survey time.
A longer version of this paper prepared for the HEGESCO report contains further indicators as well in each of the dimensions and investigates the country patterns for the dimensions separately as well. But this paper builds on these five indicators.

Results on the country patters

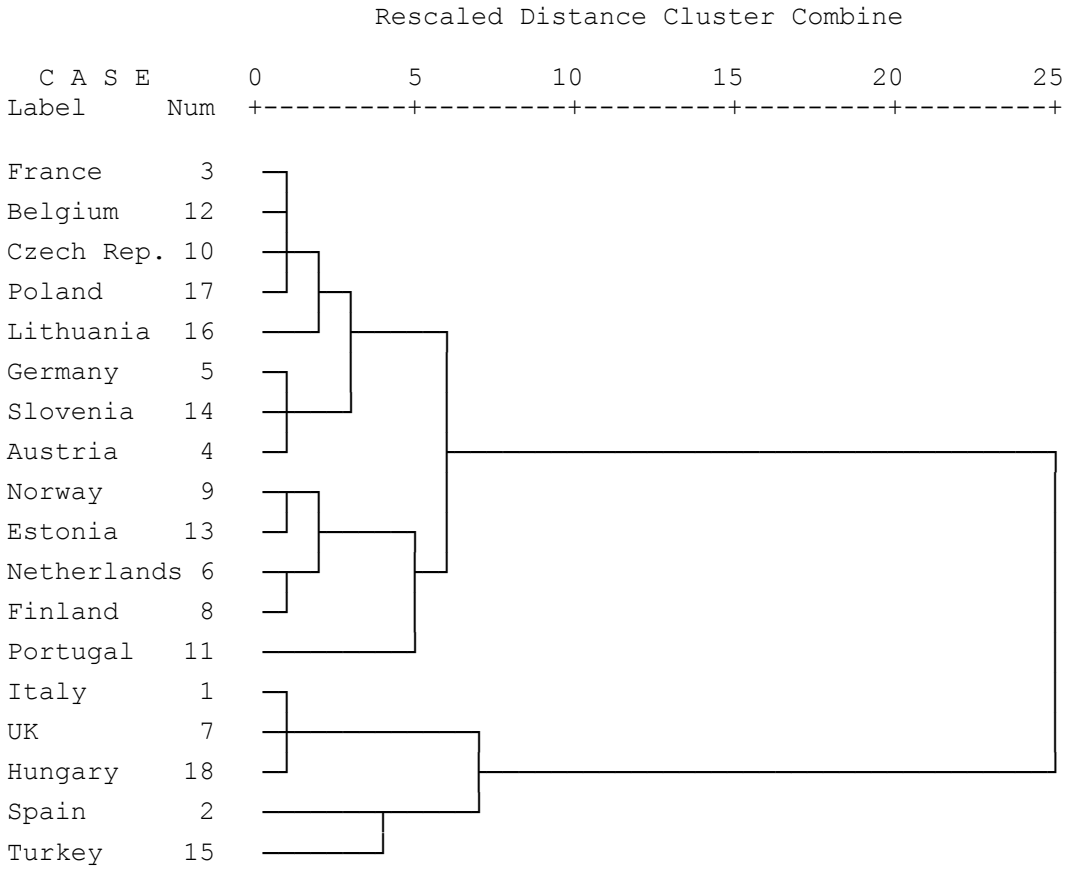
The findings of the analysis are presented by providing two outputs from the cluster analysis. The first one is the so-called dendogram which is a graphical representation of the clustering procedure. Cluster analysis starts from 18 cases (each country represents itself) and the dendogram displays how those countries that are more similar and are closer to each other, will be grouped together. This grouping process ends when all 18 countries are united. The second output is the selected cluster solution with a given number of the clusters. The name of the countries is listed for each cluster and the differences between the clusters are interpreted on the ground of differences by the given indicators. The results appear in Figure 1 and Table 2.

The "best" group of countries involve two pairs of Norway and Estonia as well as Netherlands and Finland as shown by Figure 1. In these societies, only a small proportion of graduates required more time than 6 months to find a first job. Unemployment experiences are also below the average. The same holds for the proportion of those who work currently in a job belonging to ISCO major group 3-9, though this is less the case for the Finnish and Dutch respondents. Apparently, graduates in this group feel themselves overeducated and think their skills to be underutilised to smaller extent as well (cluster 1). Netherlands is at the borderline in this latter regard. The next cluster involves only one country and this is Portugal, a case where interesting inconsistencies are present (cluster 2). On the one hand, the job search for the graduates was quite long, slightly above the average, and the occurrence of unemployment among the graduates is substantial, definitely above the average. On the other hand, the proportion of the Portuguese diploma holders in an occupation that may not require a degree is small and only a relative minority of them feels their skills to be underutilised.

The next large group includes as many as eight countries (cluster 3). Entry into the labour market seems to be fast for the majority of them, in particular in Czech Republic, Austria or Lithuania. Unemployment experiences are about the average though the situation is more favourable in Slovenia and less favourable in Poland. The mismatch between qualification and current occupation indicate a mixture. On the hand, underemployment is less characteristic for graduates in these societies either from an objective or from a subjective

perspective. But on the other hand, graduates feel their skills to be underutilised in some of the countries like Poland, Czech Republic or Lithuania. Thus even if the respondents work in "proper" job which require, indeed, tertiary education, they may think in some countries (and these are all new EU member states) that their skills are not utilised in an appropriate manner.

Figure 1. Dendogram of the hierarchical cluster analysis on LM entry and early career of young graduates in 18 countries*



* Indicators: Job search was longer than 6 months; Respondent has experienced unemployment during 5 years since graduation; Current job is in ISCO major group 3-9; Respondent feels that current job does not require any tertiary education; Respondent feels that skills are underutilized in current job. Standardization: z-score; Distance: squared Eucladian; Method: Ward

The next group consists of only three countries: Italy, United Kingdom and Hungary (cluster 4). Here entry into the labour force was slower and unemployment experiences also exceed the average (chiefly in Hungary). The mismatch between qualification and current job is more pronounced in every respect. The last group of the pair of Turkey and Spain can be characterized by even worse features for graduates (cluster 5). Entry into the labour market was particularly hard for them and more than half experienced unemployment at least once. There is also a marked mismatch between education and current job (primarily in Spain).

Table 2.
Country groups (4 clusters solution) for LM entry and early career of young graduates in 18 countries*

Clusters	Country	Spent more than 6 months with search for first job (%)	Unemployed ever (%)	Underemployed: Current job is ISCO 3-9 with diploma (%)	Feels that current job does not require a diploma (%)	Feels that skills are underutilised in current job (%)
Cluster 1	Norway	5	21	19	3	18
	Estonia	5	23	17	2	25
	Finland	6	33	28	5	22
	Netherlands	3	25	29	7	28
Cluster 2	Portugal	11	42	20	8	12
Cluster 3	Austria	6	38	6	10	24
	France	8	36	21	3	26
	Germany	9	35	15	7	27
	Belgium	7	35	27	2	28
	Czech Republic	5	36	21	4	32
	Poland	9	42	11	4	30
	Slovenia	12	29	23	8	28
	Lithuania	6	34	25	7	38
Cluster 4	Italy	12	35	30	12	30
	United Kingdom	11	34	40	14	32
	Hungary	17	41	39	15	29
Cluster 5	Turkey	30	54	30	11	29
	Spain	21	62	63	17	32
Total		10	36	26	8	27

* Graduates who have never entered the labour force are left out from the analysis.

Discussion of the results

Few remarks should be made regarding the results before summarizing them. Firstly, there is a selection effect in consequence of defining the dimensions and indicators for the analysis: those graduates who did not enter the labour force were not investigated. Secondly, the definition of the indicators may have an impact on the results. The length of the paper did not allow to present alternate solutions and the additional results for the various dimensions. Choosing between the possible cluster solutions was definitely affected by the number of cases (18 nations) and by consideration for interpretation.

Variables used in this paper were chosen by taking into account previous comparative analyses on transition from school to work. These earlier studies had two main features. On the one hand, they focused on the institutional variation in the educational system and the labour market of the European societies in terms of vocational specificity, educational signalling, tracking of the school system, employment protection legislation, insider or outsider character of the labour market. On the other hand, previous research focused on a broader circle of school leavers and was not restricted to graduates. This brings some limitations in the applicability of the prior results to the present study even if the main concepts outlined in the paper are thought to be relevant for higher education and for the specific labour market of graduates as well.

In line with the goals of providing an explorative view on the similarities and differences in these 18 countries, the cluster typology as such turned out to be well interpretable. At the same time, it seems to be uneasy to link the empirical findings to the conceptual predictions in the case of some countries, while theory works better for other cases. The next paragraphs will deal with this issue and attempts to connect the empirical finding to the predictions.

By theory, labour market entry ought to be easier and faster and the match between education and job ought to be better in those countries where vocational specificity and educational signalling is stronger, that operate under OLM and where employment protection legislation is weaker, supporting less the insider labour force against new labour market entrants. These societies are not the same even by theory. On the contrary, the classic examples for OLM like Germany or Austria are typically characterized by strict employment protection legislation.

Unlike as expected on the ground of the OLM hypothesis, graduates in Germany were not able to enter the labour market much faster than the average. But the German case would then be in line with the EPL concept where insiders are supported in the labour market making entry into labour force more difficult. In some other OLM countries like in Austria, the Netherlands or Czech Republic data show a quite fast entry for graduates. For part of the Slovenian graduates it took quite a long time to find the first job and this is in accordance with the strict EPL there. Graduates in some of the ILM countries like the UK or Spain and also in the Southern European states (Italy, Portugal, Turkey) needed really a longer time to get to the labour market. Finding a first job was rather quick in Norway and Finland where EPL is weak though vocational specificity and educational signalling is not high. This holds for Estonia and Lithuania as well but these cases contradict the predictions as both operate along ILM and EPL is strict.

Germany and Austria confirm the theory of OLM with the good match between education and current job. But this does not hold for other similar examples like France or Estonia: these societies operate under ILM and the qualifications and jobs seem to be still well harmonized.

Countries where graduates are strongly underemployed and feel that their skills are underutilized (Spain, United Kingdom, Hungary) belong to the ILM setting. One could expect a better match in the Netherlands or Slovenia as typical OLM countries by previous studies but underemployment or over-education is about the average in these countries.

As theory predicts, mobility out of first employment ought to be stronger in countries where EPL is weak and less frequent in societies, where the labour market is more regulated. Similarly chances for unemployment are probably higher in those societies where EPL is weak. The pattern represented by Spain and Turkey is rather straightforward in this regard. In both countries graduates' unemployment experiences are particularly high. In fact, labour market entry turned out to be also rather difficult in these two countries and graduates seemed to be underemployed as well. Graduates' circumstances seem to be the most flexible and unfavourable in these two societies and Spain and Turkey ended up in the "worst" cluster of the general typology in Table 2.

Countries in the "top" cluster represent a completely different story. Here graduates' labour market entry was quick, match between qualification and job was good (particularly for Norway and Estonia) and graduates experienced far less unemployment than the average (holding somewhat less to Finland). Thus, it seems that the labour market operates quite favourably for the graduates in these countries: Norway, Finland, the Netherlands and Estonia. Thus, these are the countries in the "best" cluster of the general typology in Table 2.

The overview about the link between the country patterns found in the analysis and the conceptual predictions based on the literature provided both good and bad examples for the concrete countries; part of the assumptions was confirmed to more extent and part of them was proven to less extent. It is apparent that even if the explorative picture seems to be believable in terms of the structure and of the existence of the various types presented, sometimes it is more difficult to explain why certain countries belong to certain types. The excuse has been mentioned above: the concepts and the predictions are not specific for higher education and graduates' labour market. Nevertheless, the paper can perhaps conclude with only few question marks even if, as always, unanswered and unexplained cases have remained. If nothing else, the analysis is hopefully convincing enough that the approach of a search for country patterns by applying a cluster methodology (as done already before) is not a dead end street but leads to relevant results. It is clear that the labour market in these countries does not provide homogeneous returns to the human capital investments of graduates. The institutional differences of OLM vs. ILM as well as of the degree of EPL create a variation from a theoretical perspective (see Table 1) and this appears empirically to a large extent. Both the "old" and the "new" EU member states were represented in the study in an appropriate manner and they turned out to differ from each other but not simply on this ground. It may be less surprising that the Western societies are not similar (there are more comparative studies on them) but the former socialist countries constitute a heterogeneous group as well. Apparently, as the general pattern of the countries shows, Estonia and Hungary are similarly far from each other like Norway or Spain. Further analysis of the same data with choosing other dimensions and/or defining other indicators will definitely bring further new insights and will hopefully clarify existing ambiguities.

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