Labour market attachment in the Western Balkans: some evidence using sequence analysis

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Preliminary version (should emphasize more the role of education)

Abstract

The functioning of the labour market has changed dramatically for a majority of people in the Western Balkanes since the beginning of the 1990s. Basing on the concept of the *transitional labour markets* (Schmid, 2006), we enlarge a list of the ILO recommended labour market statuses to describe a "typical statuses" which have appeared in Albania, Bosnia and Herzegovina, and Serbia during the years of transition. Basing on the set of "typical statuses" we define a list of typical 'career paths' with help of the Optimal Matching Algorithm. We describe the 'successfulness' of the groups' 'careers' in terms of the *labour market attachment* (a degree of integration into the regular labour market). We show how the categorization of the 'career paths' helps to assess the direction of changes happened through the period of labour market restructure, and gives directions for further employment policies.

Jel Classification numbers: J24, J60
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1. Introduction

Since the yearly 1990s, the Western Balkans have gone through a period of significant transformation. Serious differences exist between the countries in the region, but in general, the functioning of the labour market has changed dramatically for a majority of people. Employment policy response has so far been weak and non-inclusive. And the economic development was not accompanied by improvement of labour market conditions. The labour markets in Albania, Bosnia and Herzegovina, and Serbia are rather *"disorganized"*. A huge part of the population is balancing on the edge of out/in labour market. Yet the standard labour market indicators on employment and unemployment can reflect the complexity of the situation.

Labour Force Surveys and other household surveys in the region indicate that only a small proportion of the working-age population (less than 20-30%) has a stable, permanent and formal job. Information about the other strata of the population is scarce. The labour market in the region shares both, features of *labour markets in transition* and *transitional labour markets* (e.g. Schmid, 2006). Basing on the latter concept, we enlarge a list of the possible (ILO recommended) labour market statuses to describe a "new typical statuses" which have appeared in the region during the years of transition. Thus, two sets of labour market statuses are defined.
1. *Standard labour market statuses*: (i) employed, (ii) unemployed, (iii) out of labour force;

2. *Broad labour market statuses*: (i) informal non-agricultural wage-employment, (ii) informal non-agricultural self-employment (iii) agricultural employment (regardless of formal or informal), (iv) formally non-agricultural employment, (v) unemployment (following the standard ILO definition), (vi) in education, (vii) retirement, (viii) taking care of household, (ix) others.

Then we define a list of typical 'career paths' grouping the individual paths with the help of the Optimal Matching Algorithm. We describe the 'successfulness' of the groups' 'careers' in terms of the *labour market attachment*, interpreting the latter as the degree of integration into the regular labour market. Six levels of the labour market attachment degree are portrayed. We stress that this that the labour market attachment category to understand the functioning of the labour markets in the Western Balkanes. We show how the categorization of the 'career paths' helps to assess the direction of changes happened through the period of labour market restructure, and gives directions for further employment policies. Shares of the groups with different strength of the labour market attachment differ between the three countries, emphasizing the heterogeneity of the transition process outcomes. The registered unemployed have very diverse labour market attachments and may not be the most suitable for policy interventions. Policy measures for those with strong labour market attachment need to be targeted to the specific needs of the individuals. The relevance of a new influential concept in developing employment policy called *transitional labour markets* for the Western Balkans is demonstrated.

Three detailed micro-level datasets based on the World Bank Living Standard Measurement Survey methodology are used: Albania (2002 – 2004), Bosnia and Herzegovina (2001 – 2004), and Serbia (2002 – 2003). They contain detailed longitudinal information on 5500, 7300 and 6000 individuals aged 15 or older, respectively.

The paper is organized as following. Section 2 gives a short description of the data used. Section 3 starts with a description of the standard labour market statuses. Afterwards, the concept of transitional labour markets is envisaged and a broad set of labour market statuses is defined and investigated. In Section 4 we address the notion of labour market attachment and categorize the individual 'career' paths into several homogeneous groups. The discussion section concludes.

2. Data

Three detailed micro-level datasets based on the World Bank Living Standard Measurement Survey (LSMS) methodology are used: Albania (2002 – 2004), Bosnia and Herzegovina (2001 – 2004), and Serbia (2002, – 2003). The data collected enables welfare measurement and analysis covering such topics as demographic information, consumption, education, housing, migration, credit, social assistance, health, non-agricultural and agricultural activities and a rather extensive labour market module that helps to assess employment status, multiple job holdings and formality/informality of the job.

The Albanian Panel Survey (APS) has been carried out annually 2002-2004. The BiH Household Survey Panel Series (HSPS), called Living in BiH was carried out annually in the years 2001-2004. In Serbia, a LSMS with some panel features were carried out in the years 2002, 2003 and 2007. A short description of some major details of these three surveys can be found below.

Albania[1]

The Albanian Panel Survey (APS) is collected by the Albanian Institute of Statistics (INSTAT), with technical assistance of the World Bank. It is one of the three household surveys conducted in the country for getting the information on living conditions and poverty situation in the country. The first wave of the APS is based on the World Bank Living Standard Measurement Survey methodology and was conducted in April – July of 2002. It consists of a representative sample of 3600 Albanian households and individuals at national and regional level. Subsequent waves of the Albanian Panel Survey were created by re-interviewing approximately half of the original households in 2003 (wave 2), and in 2004 (wave 3). Finally, the longitudinal APS dataset available for investigation includes information on about 1780 interviewed households (about 7500 individuals). Waves 2 and 3 are representative on the national level and by urban and rural, but not for some particular region.
Panel questionnaire contains only those variables/measures of the LSMS, that are comparable over time[2].

Bosnia and Herzegovina[3]

'Living in Bosnia and Herzegovina' (LiBiH) Household Survey Panel Series (HSPS) is based on the LSMS that was carried out in 2001 by the World Bank, UNDP and the different statistical institutes of BiH. This first wave of the survey contains a sample of about 5,400 households (2,400 in Republika Srpska and 3,000 in the Federation of BiH). Interviews were carried out in September - November of 2001. In the second wave, about one half of the LSMS respondents was re-interviewed in September – October 2002. The same households (individuals) were interviewed again in September - October 2003 (wave 3) and November - December 2004 (wave 4). The longitudinal dataset contains a bit less than 2900 households (about 1,300 for Republika Srpska and about 1,600 for Federation of BiH). The sample created is representative on the country and entity level.

Serbia[4]

The LSMS started in May–June 2002 with the participation of the Serbian Ministry for Social Affairs and a group of statistical and research institutions. The questionnaire design combines basic principles of the World Bank's LSMS and some elements of standard Household Budget Survey. The survey covers a sample of permanent residents of Serbia, without the population of Kosovo. The first wave covers around 6,500 households (plus 500 households participating in government social programmes), around 20,000 individuals in total. Slightly less than half the households were re-interviewed in 2003, giving around 7,600 individuals in the final panel dataset. The survey was designed to be representative for six macro regions, and for urban and rural areas within each region. In May - June 2007 the LSMS was repeated on a sample of about 5500 households. Although the data were gathered in the same towns and cities as in 2002 to enhance the possibility of intra-wave comparisons, another set of households was used. Thus we drop this wave out of the consideration.

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[1] Data are public and can be downloaded from the LSMS site (after filling in the Data Agreement Form): http://www.worldbank.org/lsms. See the web-site for detailed information about the survey.

[2] Worth noting that some of the data/variables collected after the wave 1 (for OSM) contain information only in case of a 'status' changes (for example, updating level of education).

[3] The data can be downloaded from the websites of the respective statistics institutes in BiH: Agency of Statistics of Bosnia and Herzegovina (www.bhas.ba), Federal Office of Statistics of Federation of Bosnia-Herzegovina (http://www.fzs.ba/download_eng.htm), Institute of Statistics of Republika Srpska (www.rzs.rs.ba).

[4] Statistical office of teh Republic of Serbia: Living Standards measurement Study (http://webrzs.statserb.sr.gov.yu/axd/en/azs.htm). Or see the World Bank website: http://www.worldbank.org/lsms

In this paper we restrict our analysis to the individuals aged 15 - 64 (5500 individuals in Albania, 7300 in BiH and 6000 in Serbia).

3. Standard and broad labour market statuses

In this section we define two sets of labour market statuse, three standard labour market statuses following the ILO recommendations: (i) employed, (ii) unemployed, (iii) out of labour force; and broad labour market statuses: (i) informal non-agricultural wage-employment, (ii) informal non-agricultural self-employment (iii) agricultural employment (regardless of formal or informal), (iv) formally non-agricultural employment, (v) unemployment (following the standard ILO definition), (vi) in education, (vii) retirement, (viii) taking care of household, (ix) others.

3.1. Standard labour market statuses

The *standard labour market statuses* are defined following standard ILO recommendations.

(i) employed,

Individuals aged 15-64, if they answer that they carried out some form of work during the past seven days, or if they have a job to go back to (even if they did not work during the past seven days).

(ii) unemployed,

Those not classified as 'employed' and answered 'yes' to both of the following questions: 'During the past four weeks, have you tried in any way to find a job or start your own business?' and 'If you were offered a job, are you ready to start working withing the next two weeks?'.

Unfortunately, it is impossible to to define individuals as unemployed in wave 3 of Bosnia and Herzegovina survey, because the answers for the necessary questions are missing.

(iii) out of labour force.

All other individuals not included in the categories (i) and (ii).

We want to note here, that when the intra-country comparisons are done, it is possible that the differences would be partially caused by the slight differences in the form of questionnaires related to definition of the labour market statuses. Secondly, in a volatile labour market with many occasional jobs, information based on a reference week (as used in the labour force surveys) is failing to take into account the dynamics that is taken place outside of the reference week. Thirdly, the time of the year when the survey was carried out have often varied between countries and between different years in the same country. This makes the survey results sensitive to seasonality effects. In particular, this is a problem in countries with a large agricultural sector.

Leaving apart a detailed description of the composition of three standard statuses groups, let us just highlight the most pronounces intra-country differences and similarities. Albania, due to the importance of agriculture for employment, has the highest employment rate among the three countries in consideration, while in the other two the employment rate is lower than 50% with the unemployment exceeding 20 percentage points. Employment rate for men is approximately from 15 to 20 percentage points higher than for women, with the greater difference in Albania. The total employment rate is very low (less than 10%) for the population aged 15-24. At the same time, employment rate differs significantly between the educational categories in all countries. Only in Albania does the employment rate for individuals with primary education equal that for individuals with seconday education, reflecting the role of agriculture in providing employment for people with lower levels of education. The gap between the employment rates for men and women is much higher for individuals with only primary education. For individuals with higher education the gender difference is small. The differences by educational level are less significant for the unemployment rate. In particular, unemployment is as frequent for individuals with, primary education as for individuals with secondary education.

3.2. Broad labour market statuses

The basic labour market statuses (employment, unemployment, and inactivity) are important for an international comparison of labour market performance. However, they do not provide a very clear picture of the labour market situation within the countries of the Western Balkans and they are difficult to use for policy-making.

The labour market in the region shares both, features of *labour markets in transition* and *transitional labour markets*. The latter concept should not be confused with the transition that has taken place in Central and Eastern Europe, and it is related to the end of standard employment relationships[5]. So Schmid (2002) notes that jobs in the future "are likely to involve more self-determination and competition, to be more fluid in terms of the nature and the scope of the employment relationship and more project or team-oriented to be increasingly integrated into networks and less into

[5] See See Schmid (2002) and (2006), and Schmid and Schoemann (2003) and (2004) for a discussion on the concept of transitional labour markets

forms and to entail a variety of different tasks whose very diversity over the course of the working life will encourage lifelong learning". This new employment model implies the presence of a broader set of employment and labour market statuses such as temporary employment, part-time employment, periods of further education and training during the working life, and periods of non-participation in the labour force for other reasons (in contrast to the traditional labour market statuses: initial education, employment, unemployment, and permanent non-participation in the labour force). Furthermore, transitions between different labour market statuses become more common. As a result, the interfaces between the labour market, education and training, private households and social security needs to be reshaped.

In the labour market context of Western Balkans, unemployment, regardless of whether is is defined following the ILO using labour force survey or by local definitions of registered unemployment, is not likely to be a distinct, welldefined labour market status (and it is not very relevant as a concept, at least not for targeting labour market policy measures). A number of people unemployed according to the LFSs is likely to include a large number of people that were unemployed in the week of survey, but not in the weeks (or months) before or after survey. Furthermore, in most countries, many individuals not formally employed have strong incentives to register as unemployed in order to gain access to health insurance and other benefits linked to registration. This heavily inflates the number of people registered as unemployed, and as a result, this groups may be very heterogeneous and may not consist primarily of jobless jobseekers.

Labour market statuses vary between countries, but the most frequent labour market statuses may include permanent formal employment, permanent informal employment, occasional employment (formal or informal), open unemployment, various forms of inactivity, and commonly also multi-status. Many people have developed lifestyles and/or survival strategies with multiple employment status, and readily switch between employment and unemployment and between formal and informal activities as opportunities become available. As the result, spells in different labour market statuses are often short, which makes it difficult to assess the functioning of the labour market using standard labour market indicators as employment and unemployment rates.

We define a set of *broad labour market statuses* to represent more accurately the various forms of labour market status that exist in the Western Balkans.

(i) *informal*[6] *non-agricultural wage-employment:*

The enterprises at which they work are informal (non-registration of the enterprises or its employees), and so there is no entitlement of workers to health and/or pension insurance benefits. Thus the informal wage employment is defined as a lack of access to social security benefits in Albania, and no access to health or/and pension insurance in Bosnia and Herzegovina.

The Serbian dataset does not allow for a distinction to be made between these two categories of informal employment, and results are presented for overall informal employment.

(ii) *informal non-agricultural self-employment:*

Workers are self employed and units engaged in the production of goods or services are not separated legally from the households or household members owning them (productive activities are hardly distinguished from other activities of their owners).

Informal self-employment is defined as those with a major occupational group larger than four, and at the same time, as self-employed or unpaid workers in Albania, or owner/co-owner of a 'small business', entrepreneur in a free profession, unpaid supporting family member or activity related to the sale of agricultural products or providing services in Bosnia and Herzegovina.

(iii) *agricultural employment (regardless of formal or informal),*

Defined using the economic activity code (NACE) for agriculture. As the economic activity codes are missing for the first wave of the Albanian Panel Survey, we used the occupational codes (ISCO-1988) for this wave (611 market gardeners and crop growers; 612 market-oriented animal producers and related workers; 613 market-oriented crop and animal producers; 621 subsistent agricultural and fishery workers; and 921 agricultural, fishery and related labourers).

(iv) *formally non-agricultural employment,*

All other employed individuals not entering the groups (i)-(iii).

[6] As the frontiers between formality and informality are not rigidly fixed, and the definition of informality can/should be modified according to national circumstances, such as tax and social sequrity lawa, and professional groups' regulatory acts.,. See the ILO resolution concerning statistics of informal employment (ILO, 2000). extended definitions of informal employment, using the information on whether the job is carried out, whether the firm is registered, and whether a person is self-employed or unpaid, can be found in ETF (2006c and 2006b) and the World Bank (2002 and 2004c).

(v) *unemployment:*

Following the standard ILO definition. Due to the above mentioned problems with the data in the third wave of the Bosnia and Herzegovina survey, no distinction can be drawn between 'unemployed' and 'others'.

(vi) *in education,*

(vii) *retirement,*

(viii) *taking care of household,*

The categories (vi) – (vii) are defined on the self-reporting of inactive individuals on the reason of inactivity, and on the basis that the individual under consideration is not classified as 'unemployed' or 'employed'

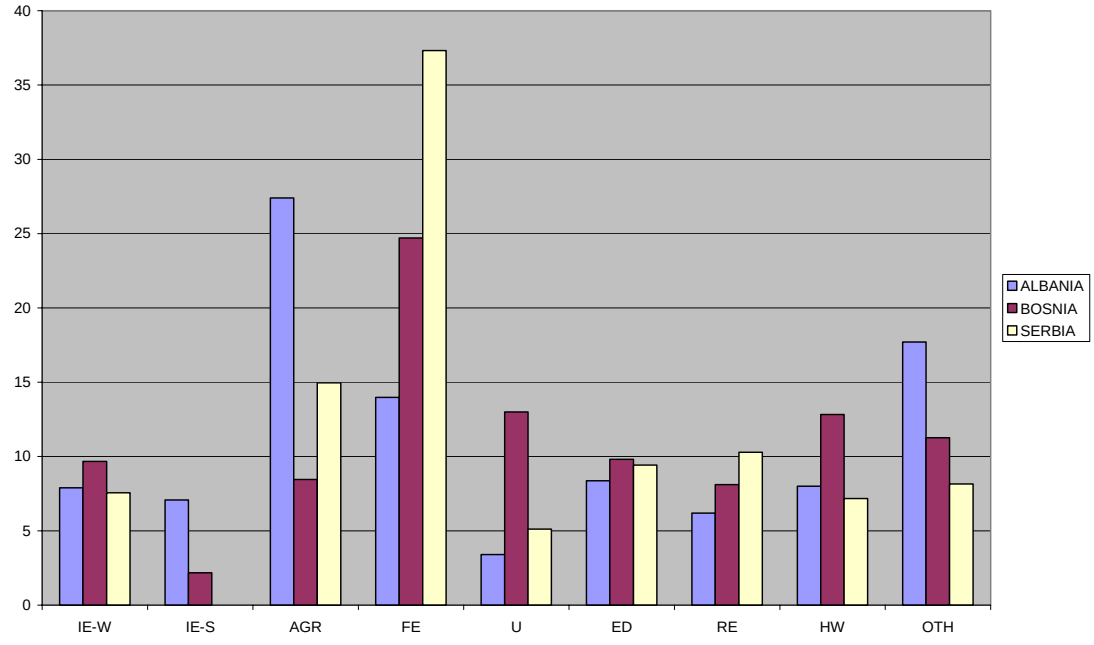
(ix) *others.*

All other individuals not classified in any of these eight categories described. This group that could to a large extent include discouraged workers non fulfilling the job search criterion to be defined as unemployed (as well as invalids, criminals and other marginal groups)

Distribution of broad labour market statuses

The distribution of the extended list of labour market statuses is presented in the Figure3.1. In comparison with the basic labour market indicators, the difference between the three countries is much larger. Formal employment is more common in Serbia, followed by Bosnia and Herzegovina. In Albania, formal employment makes up less than 15 percent of the working-age population. Unemployment is higher in Bosnia and Herzegovina. Agriculture and informal employment are more important in Albania. Household work is more significant in Bosnia and Herzegovina and others is a significant group in all three countries, in particular in Albania.

Figure 3.1 Distribution of labour market statuses in Albania, Bosnia and Herzegovina and Serbia, %



Source: Own calculations from the Albanian Panel Survey, BiH Household Series Panel Survey, and the Serbian LSMS.

Notes: Albania and Bosnia and Herzegovina 2004, Serbia 2003. The different labour market statuses are abbreviated as IE-W (non-agricultural informal wage employment), IE-S (non-agricultural informal self-employment), AGR (agricultural employment), FE (non-agricultural formal employment), U (unemployment), ED (participation in education), RET (retirement), HW (household work), and OTH (others). For Serbia IE-W refers to all informal employment.

Using the data from the last available wave of the surveys, let us compare the share of the population in each labour market status by sex, educational attainment and age using data from the last available wave of the survey in Albania, BiH and Serbia (See Appendix 1 for details).

Albania. In Albania, we note a large difference between the labour market statuses for men and women. A smaller share of women is formally and informally employed. Instead, they are to a large extent occupied with work in agriculture, in the household and in the group 'others'. It is likely that these statuses are fairly similar and that the distinction is vague. Men on the other hand are to a large extent working in the formal and informal non-agricultural sectors (and also in agriculture). Informal employment (both wage- and self-employment) is more common for prime-aged men and women and therefore does not seem to be a way of entering the labour market. Unemployment using the ILO definition is small and declining by age. On the other hand, the category "others" is much larger and resembles what you might expect for unemployment, being very high for young persons and declining by age.

Bosnia and Herzegovina. In Bosnia and Herzegovina, a large share of women is outside of the labour market. Both formal and informal employment is much more frequent for men. However, the share of formal employment in total employment is similar at about 40 percent for both men and women. Unemployment is high for both men and women and declining by age. On the other hand and in contrast to Albania, in Bosnia and Herzegovina, the share of the group others are similar for men and women and for different age groups. Also, the share of informal employment is fairly stable over age groups at around 15 percent. The two (major) entities in BiH have a fairly similar distribution of labour market statuses.

Serbia. In Serbia, formal non-agricultural employment is almost as important for women as for men. On the other hand, informal employment and agriculture is more common for men, while some women are involved in household work. Serbia differs from Albania and BiH in that informal employment is higher for young age groups and may be a way of entering the labour market. Note that we only have eight categories in Serbia as the data did not allow a division between informal non-agricultural wage-employment and self-employment. Unemployment and others follow similar patterns and are higher for young age groups.

In Figures 3.4, 3.7, and 3.10, the distribution of labour market statuses is displayed by three broad educational categories[7]. The distributional patterns are similar in Albania, BiH, and Serbia. The share of formal non-agricultural employment is very different for the three educational categories, being very low for primary education and also to some extent for secondary education in all three countries. However, the share of informal employment does not differ much between the different categories. Instead, agriculture and the different labour market statuses outside of the labour force are more significant for people with lower educational attainment. Open unemployment does not exhibit a clear trend for the different educational categories (while being somewhat more important for individuals with secondary education). The large share of young people with less than tertiary education in the category others is striking and indicates strongly that joblessness for young people goes far beyond unemployment as defined in the labour force survey.

Transitions between the broad statuses

The panel data for Albania, Bosnia and Herzegovina and Serbia provide information about the labour market status for individuals in several consecutive years. Unfortunately, as the data in consideration are collected on the yearly basis, no within-year movements are known and some statuses could over/under-represent. Moreover, we assume that 'employed'-'employed' sequence in two consecutive years mean constant employment at the same place. No 'job-to-job' or 'job-any_other_status(es)-job' movements are considered (we just don't have this information). Moreover, we use only the information about the supply side of the labour market, so no attention is paid to the job creation/job destruction mechanisms.

Transitional matrices (see Appendix 2) show us a simple picture of the labour market flows, displaying the information on how the shares of the individuals in different labour market states are changing from year to year.

[7] Information on educational attainment has been aggregated into three main categories to resemble closer the ISCED 1997: primary education, secondary education and higher education. For most parts of the analysis, we are using the highest attained educational level over the different waves.

(i) primary education
(Albania: "8 year school"; BiH: "primary"; Serbia: "no schooling" and "elementary school"),

(ii) secondary education
(Albania: "Secondary general", "vocational 2 years", "vocational 4/5 years"; BiH: "Secondary general", "Secondary technical, 4 years", "Secondary Vocational, 3 years"; Serbia: "Vocational, 1-2 years", "Secondary, 3 years", "Seconday, 4 years", "Secondary general, gymnasium"),

(iii) Higher education
(which pools together Tertiary and Post-Secondary levels: "University", "Post-grade", and for Albania: 5th year of vocational training if respondent is young; B&H: "Junior college"; Serbia: "Post-secondary").

Note that educational attainment is changing over the different age groups and that the total size of the different age groups can vary significantly. For example, the share of primary education is much lower for young age groups than for old age groups.

The total number of recorded flows between labour market statuses is similar in Albania, Bosnia and Herzegovina and Serbia. In Albania, 33 percent of the working-age population changed labour market status between 2003 and 2004. In BiH, 43 percent changed status between 2001 and 2002 and in Serbia 37 percent between 2002 and 2003. This indicates relatively high mobility in the labour market in all three countries. However, the type of flows differs significantly in the three countries. In Albania, most labour market flows takes place between agriculture, others and housewives. These recorded flows are not likely to indicate a large change in labour market activity. Flows more significant for the functioning of the labour market are small. Also in Bosnia and Herzegovina, most large flows takes place outside of employment, with the exception of flows between informal and formal non-agricultural employment. In Serbia on the other hand, most recorded labour market flows takes place between different forms of employment, unemployment and others.
World Bank (2006) using labour force survey data from 2004 and 2005 in Serbia and a much broader definition of informal employment[8] reports significantly smaller flows between informal and formal employment. They report that 65.7 percent of the informally employed in 2004 is still informally employed in 2005, compared to 34.3 between 2002 and 2003 as reported in this study. This indicates that large differences may exist between different groups and individuals involved in informal employment.

The most stable labour market statuses are retirement, formal non-agricultural employment (for all the three countries) and in Albania agricultural employment. Informal non-agricultural employment, unemployment and the category others are much less stable (in BiH this also include agricultural employment). Around half of the informally employed change status between the different years and unemployment and the category others (except in Albania) are even more of transient nature. These unstable labour market statuses represent about 40 percent of the working-age population in BiH, one-fourth in Albania, and one-fifth in Serbia. Thus, the high labour mobility is not an indication of a functioning labour market. Instead, the main reason for the high labour mobility is likely to be the scale and pervasiveness of precarious labour markets.

Fairly large flows (of approximately equal absolute size in both directions) are recorded between informal and formal employment[9]. More than one-fourth of all informally employed has a formal job one year later in BiH and Serbia, while this number is lower in Albania where the formal labour market is smaller. The transition from education to work seems to be very difficult. Only about seven percent in Albania and in BiH of the school-leavers[10] have found a formal job in the first year after graduation. In Serbia, the situation is significantly better and almost 30 percent of the school-leavers have a job one year after graduation. However, this is still a low number. Instead, most of the school-leavers are either unemployed or belong to the group others, or in Albania working in agriculture. In Serbia and BiH, informal employment also seems to be an important labour market status in the first year after graduation. As noted above, the categories unemployed and others exhibit remarkably similar patterns in all three countries.

4. 'Labour market attachment'

In this section, labour market attachment is introduced as an alternative concept to describe the situation in the labour markets in the Western Balkanes. The main hypothesis and the line of thinking is that broadly, there are at least three distinct groups of individuals (or different forms of attachment to the labour market) in the Western Balkans:

1. strong attachment: individuals with stable, regular and formal employment;
2. no attachment: individuals permanently inactive (participating in education, retired, or taking care of a household);
3. weaker attachment: all other individuals who can be considered to have various forms of weak(er) attachment to the labour market.

This last group of individuals may typically be engaged in short-term employment activities (often informal), interrupted by periods of unemployment or inactivity. Some of these individuals are carrying out activities that are irregular in nature, in terms of different activities, working hours and income. Some others are involved in seasonal activities. Others have regular long-term jobs in the informal economy, but the reasons that the jobs are not formalized may differ. Many informal jobs may not be productive enough to become formalized. Many people are discouraged from looking for regular and formal jobs, and remain for long periods without a job that has any further prospects. In addition, not all the individuals with permanent formal jobs have a secure job with prospects. Sometimes they cling on to jobs in old enterprises that will not last as economic reform moves forward. And it is this group, which should receive a particular attention from the point of view of policy makers.

[8] Including all workers in enterprises with less than 10 employees and including agricultural employment.
[9] This might indicate some problems with misclassifications given the definition on informal employment.
[10] Defined as persons in education in 2003, but not in education in 2004.

4.1. 'Career' paths categorization: methodology

Let us exploit the panel features of the dataset in the analysis and address the sequences of the above mentioned nine labour market statuses (three year long for Albania, and four year long for Bosnia and Herzegovina)[11]. Unfortunately, as data are gathered at the yearly basis and intra-year monthly changes of statuses are unavailable for consideration, we will get only a simplified picture of reality. Possibly, some 'most popular' statuses will be over-represented. Nevertheless, such analysis allows us to categorize the 'career' paths obtained and to receive aa additional information on the direction of changes happened through the period of labour market restructure in two countries. Moreover, it will allow us to make an inference for educational level/training influence on the strength of 'labour market attachment'.

There are several possible methods that could be used for the 'career' paths classification, but application of widely used hierarchical or partition clustering methods can be misleading in this case (for example, because of the influence of the categories' numeration order on the clusterization result). Thus we use some Sequential Analysis methods, the Optimal Matching Algorithm (OMA) which considers a sequence of events as a whole taking into consideration an order of events happened[12].
Main idea of the algorithm is to calculate 'distances' either (1) between each sequence and a benchmark sequence, or (2) between all the sequences pairwise. These distances which are further used for classification of paths, represent a measure of dissimilarity between each two sequences in consideration and are estimated as a minimum 'cost' of transformation of one sequence into another using on of the element-wise transformation procedures ('*substitution*', or '*insertion/deletion*')[13]. These cost assignment partially depends on a researcher and we use the substitution costs based on inverses of transitional probabilities[14], that ssumes that the most frequent transitions will be less costly.

When the dissimilarity costs are obtained, homogeneous groups of the paths are to be formed (for example, applying some clustering technique) as an output of analysis (for mainly descriptive purposes) or as input for further modeling, for example, predicting of the cluster membership with help of multinomial logit models.

4.2. 'Labour market attachment' groups

Balanced panels of data have been constructed for Albania and Bosnia and Herzegovina to ensure that there are no gaps in labour market statuses for each individual in consideration[15]. The panel for Bosnia and Herzegovina consist of 4,824 individual four-year sequences of labour market statuses and the Albanian one includes 4,323 three-year sequences. Note however, that the yearly nature of the data and the short time periods covered do only constitute a proxy for labour market careers and do not allow us to discuss labour market behaviour of individuals in detail. Instead, we are suggesting that a short sequence of labour market statuses may illustrate the level of attachment that an individual has to the labour market.

Based on the nine categories of labour statuses defined and discussed in section 3.2[16] and using the optimal matching technique described above, six groups consisting of different patterns of sequences of labour statuses with different degree of labour market attachment have been identified (see Table 4.1).

Table 4.1 Groups of labour market attachment for Albania and Bosnia and Herzegovina

N	Degree of attachment	Definition of the group	Bosnia and Herzegovina		Albania	
			Frequency	%	Frequency	%
1	strong attachment	Stable sequences including primarily employment (formal or informal).	1242	26.13	873	20.28

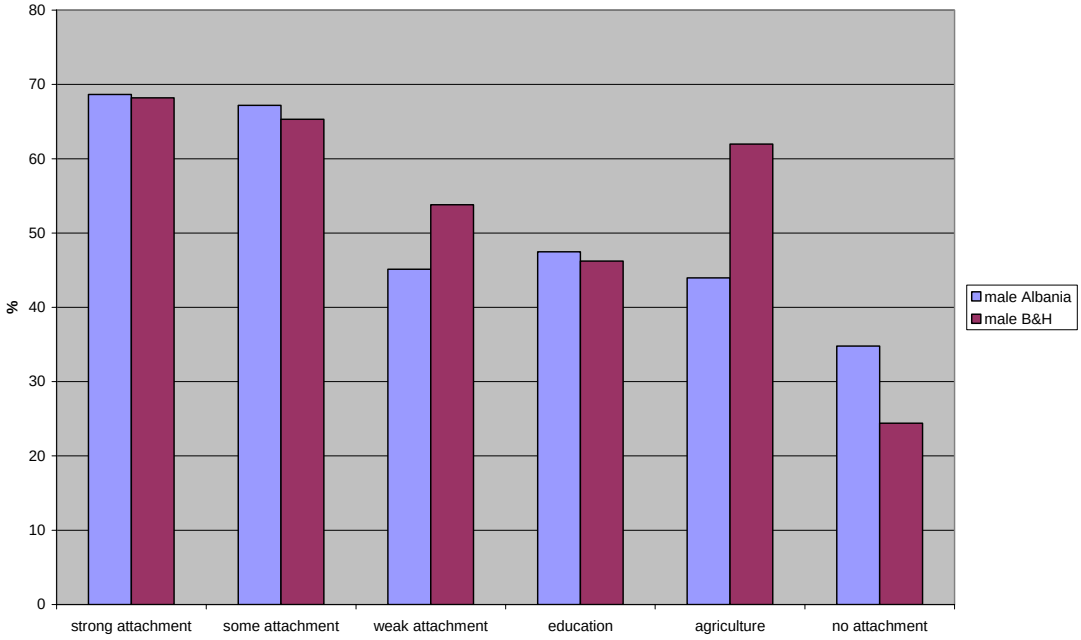
[11] We restrict the sample to those who are not younger than 15 and not older than 65 in each of the year considered.
[12] The Sequential Analysis techniques was promoted to social sciences by Andrew Abbott at the beginning of the 1980s, and now has became a methodology used for careers analysis (for example, Abbott, A. and A. Hrycak , 1990; Abbott, 1995;Anyadike-Danes and McVicar, 2005; Brzinsky-Fay 2006; Kogan, 2003; Scherer, 2001, 2005 etc), although the method has its points of criticism (see e.g. Halpin, 2003).
There exist several software programmes for the OMA application: 'OPTIMIZE', TDA, recently developed 'sq'-module for Stata (Brzinsky-Fay, Kohler and Luniak, 2006) and so on.
[13] For example, "ABBB" sequence can be transformed into the "BBBC" by *substituting* the first and the fourth statuses, or by *deleting* the 1st status "A" and *inserting* "C" on the fourth place.
[14] For example, Piccarretta and Billari (2005), basing on the suggestion of Rohwer and Pötter (2002).
[15] We drop Serbia at this stage of the analysis, as it has only two consecutive years of the data available.
[16] (i) formally non-agricultural employment, FE, (ii) informal non-agricultural wage-employment IW, (iii) informal non-agricultural self-employment (iv) agricultural employment (regardless of formal or informal), (v) unemployment (following the standard ILO definition), (vi) in education, (vi) retirement, (viii) taking care of household, and (ix) others. Note that in the third wave of BiH Household Series Panel Survey, the module of the questions defining unemployment is missing and as a result we cannot distinguish between the categories unemployed and others. In these cases, individuals have been classified as either unemployed or others using information from neighbouring years.

2	some attachment	Unstable sequences including primarily employment (formal or informal).	789	16.61	340	7.90
3	weak attachment	Unstable sequences not including any or only insignificant employment.	697	14.66	275	6.38
4	education	Mainly in education	369	7.77	284	6.59
5	agriculture	Stable sequences including primarily agricultural work.	182	3.82	1,226	28.46
6	no attachment	Stable sequences not including any or only insignificant employment	1474	31.00	1,309	30.39

The share of individuals in the group with strong labour market attachment, that is individuals with stable sequences of non-agricultural employment (formal or informal), is small in both Albania and Bosnia and Herzegovina, 20.2 and 26.1 percent respectively. In Albania, stable sequences of agriculture are important including almost 30 percent of the working-age population. The groups of individuals with unstable sequences (with many changes in labour market status), including primarily employment (some attachment) or not (weak attachment) are high. In Bosnia and Herzegovina more than 30 percent of the working-age population is classified in one of these two categories. The group of individuals with no attachment to labour market is very large reaching more than 30 percent of the working-age population in both countries.

Figure 4.1 illustrates the gender composition of the groups of labour market attachment in Albania and Bosnia and Herzegovina. Women are prevalent in the group "no attachment" while men are in the majority in the groups "strong attachment" and "some attachment".

Figure 4.1 Percentage of males in labour market attachment groups



Below follow a description of the different groups of labour market attachment. In Annex 3, more detail of the different groups is presented.

The group *Strong attachment* includes individuals with stable sequences including primarily employment, both formal and informal (which can be in its turn, wage- or self-employment)[17]. We assume it being the standard or desired labour market situation for individuals that want to participate in the labour market. However, in the countries of the Western Balkans, it will also include a group of individuals that has a formal job in the old sector, but where the job does not have a future perspective.

[17] The group is more homogenous in the case of Albania. In the case of Bosnia and Herzegovina, some very short and occasional spells of 'non employment'-options are also recorded.

The group *Some attachment* consists of individuals that have sequences including employment (formal or informal) in some of the years, without having a stable labour market position. They have some attachment to the labour market, but this it is revealed only either through short-term formal employment or through employment activities outside of the formal economy, with mobility often into and out of the 'unemployed' or 'others' categories. The individuals in this group are younger than individuals with 'strong attachment', which indicate the difficulties of entering the labour market. Individuals of this group are very mobile and have on average 2.4 different episodes of labour market statuses in Albania (over the three yearly observations) and 2.8 in Bosnia and Herzegovina (over four yearly observations). That is, a large part of individuals in this group are moving between different labour market statuses in every year.

The group *Weak attachment* consists of individuals who may have some very short spells of formal or informal employment, or sometimes, agriculture, but mainly balance on the edge of the labour market (recording transitions between household work, unemployment and others). In addition, this group include individuals leaving the labour market into retirement. Also in this group, a large part of individuals in this group are moving between different labour market statuses in every year. In Bosnia and Herzegovina the individuals in this group is young and indicates that for many the entry into the labour market includes little employment.

The *Education* group consists of individuals that have yet not or only recently left the education system. In general, little or nothing is known about their individual labour market outcome. The group *Agriculture* consists mainly of individuals with stable sequences of agricultural work. In case of Albania, as shown in section 5, the mobility between agricultural and household work is fairly high and the distinction between these two categories might not be so sharp. As one could assume, this is the least educated group. Inter-country differences in gender composition can be also observed (prevalence of males in this group for Bosnia and Herzegovina, and the opposite situation for Albania).

The group *No attachment* consists of individuals that are long-term outside of the labour market being retired, performing household work or making a part of the 'others' group. Some of them only occasionally perform some employment or are searching for a job. The individuals in this group are also having some mobility with an average of 1.86 different episodes of labour market statuses in Albania and 1.93 in Bosnia and Herzegovina. However, this is to some extent mobility between similar labour market statuses (from the perspective of the individual) such as unemployment, household work and others.

4.3. Effects of education on individual labour market outcome

In Figure 4.2-4.3, the distribution among the groups for the different education levels is presented. For both countries, the importance of education for the successful labour market integration is clearly visible. However, higher educational attainment is not a guarantee for a strong labour market attachment. 17.5 percent of the individuals with higher education in Albania and 22.2 percent in Bosnia and Herzegovina has only some or weak attachment to the labour market. On the other hand, a very low level of individuals with only primary education has strong attachment to the labour market in both countries (just a bit more than 10 percent). Individuals with secondary education have very diverse labour market outcomes. This indicates that policy interventions could have a large impact particularly on this group.

Figure 4.2 Distribution among the groups of labour market attachment for different educational levels, Albania

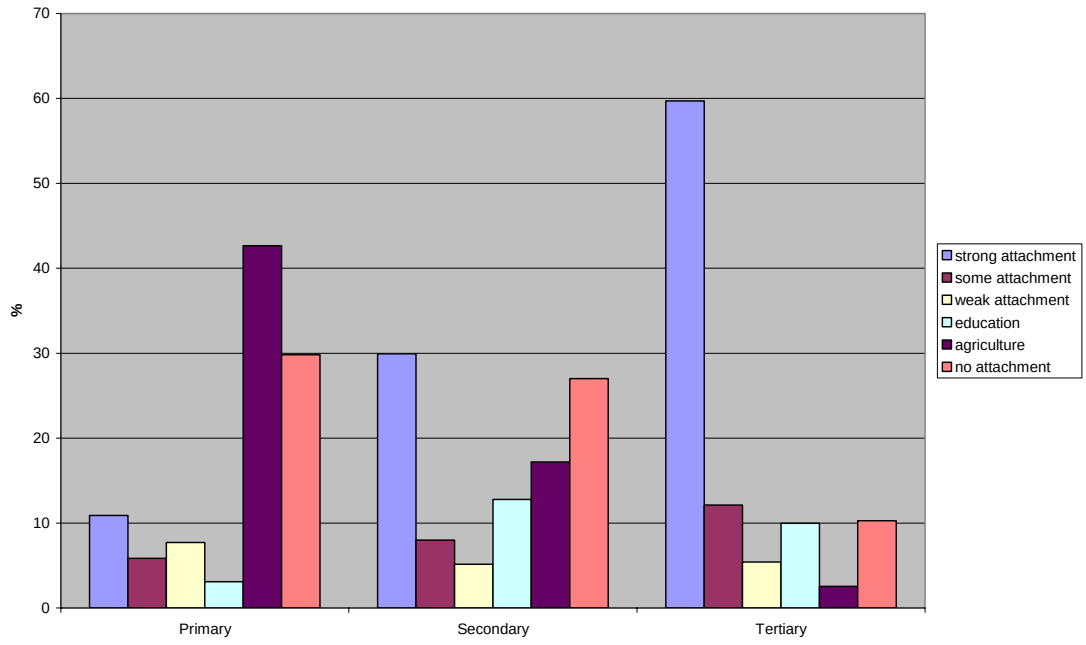
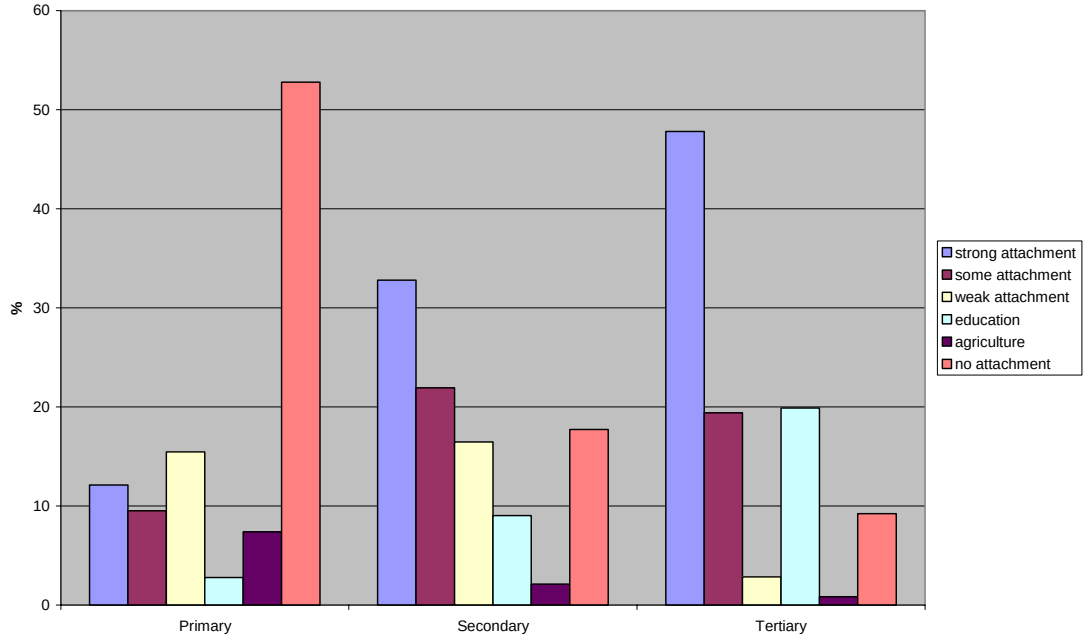


Figure 4.3 Distribution among the groups of labour market attachment for different educational levels, Bosnia and Herzegovina



The results presented in this paper show that education is an important factor for individual labour market outcome in the Western Balkans, in particular on the chances of having a (good) job or a strong labour market attachment. However, this is not evident from data on unemployment as presented in this study and elsewhere. For example, World Bank (2006), using individual data from the labour force surveys in Serbia 2005 and 2006, is reporting that the probability of leaving unemployment do not differ significantly between groups of individuals with different educational attainment. This illustrates the importance of a more detailed labour market analysis.

Econometric analysis looking at the effects of different categories of educational attainment on individual labour market outcome support this conclusion. We have estimated three different basic multinomial equations analysing the effect of main individual demographic variables on labour market outcome using (i) employment, unemployment, and inactivity, (ii) the nine broad labour market statuses defined, and (iii) the six groups of labour market attachment as defined above.

Two main findings arise from this analysis. First, that the positive role of education is more accentuated when labor market activity is divided into nine labor market statuses and in particular when using the labor market attachment groups. This supports the hypothesis that the degree of labor market attachment may provide a good description of the labor market performance of individuals in the Western Balkans (even if the causality is not entirely clear). Secondly, participation in 4-years secondary vocational education seems to improve labor market outcome compared shorter secondary vocational education and secondary general education.

5. Discussion and concluding remarks

The results discussed in this paper show that basic indicators on employment and unemployment do not give a full picture of the labour market situation in the countries in Western Balkans. Recorded employment rates in the region are low but not very much lower than what is recorded in the European Union, in particular in the new member states. However, the extent of regular employment (in form good or decent jobs) seems much lower in the Western Balkans countries. Formal employment rates as reported in this paper range from 14 percent of working-age population in Albania, 24 percent in Bosnia and Herzegovina, to 37 percent in Serbia. In addition, many formal jobs are of temporary nature and do not provide good working conditions (while some informal jobs could be of fairly good quality).

To better account for individual labour market performance, *labour market attachment* was introduced as concept covering the degree of integration into the regular labour market. That is, how often an individual has a regular job and what the quality of the jobs is. An individual with strong labour market attachment is regularly employed (formally or informally), while individuals classified as having some or weak labour market attachment is less integrated into the regular labour market. In Albania and Bosnia and Herzegovina (for which data are available), only 20 and 26 percent respectively of the working-age population has strong labour market attachment. This indicates major labour market distress in these two countries, which is not evident from standard labour market analysis.

In addition, results presented in this paper show some significant differences between Serbia on one hand and Albania and Bosnia and Herzegovina on the other hand further and confirms conclusions drawn by Bartlett (2006) in that two different paths (or outcomes) of the transition process can be observed in the Western Balkans. One more organised following the reform path of earlier reformers in Central Europe (albeit slower), and one less organised with a stronger emphasis on low productive and low skilled jobs.

The economic changes and reforms have fundamentally changed the labour market situation for most people in the Western Balkans. A large part of the populations have lost their attachment to the regular labour market. Instead, many workers with weaker attachment to the labour market are involved in different forms of short-term employment activities to make ends meet, while waiting for better employment opportunities. A major labour market challenge is to create more jobs of good quality to increase the share of the population that have a strong labour market attachment.

A second major challenge is to identify and target suitable policy interventions for the diverse and large group of the population that are out of regular employment.
A comparison with the individuals registered at the public employment services in Bosnia and Herzegovina, which is the group currently primarily targeted for policy measures indicates that they are spread over the different groups of labour market attachment. 37 percent of the individuals registered at the employment services has weak attachment to the labour market, 24 percent some attachment, 23 percent no attachment and seven percent of the registered unemployed has even strong attachment to the labour market (primarily in form of long-term informal employment). Policy measures for individuals with strong labour market attachment (but in employment of lower quality), for individuals with some labour market attachment (often performing some kind of employment but of irregular nature and often of low quality), and for individuals with weak labour market attachment (rarely having any employment) need to be targeted to the specific needs of the individuals and include a broad range of measures.

In particular, a comprehensive employment policy in the Western Balkans needs to include measures that could facilitate transitions into better employment for the large group that have weaker attachment to the regular labour market. One major objective would be to increase the employability for all. A crucial issue is to broaden access to employment policy measures and to revise policy measures that contribute to social exclusion. This also includes a strengthening of social safety nets for individuals with weak attachment to the labour market. Given tight public budgets, the financing employment policy measures create large difficulties. Prioritisation and innovation are important to find effective and efficient ways to support employment. Employment policy measures such as income support schemes and active labour market measures need to be carefully targeted and monitored.

The results in this paper show that education is an important factor for individual labour market outcome and stronger labour market attachment. A priority is to develop employment policy measures that address and contribute to the development of skills for all (including workers in the informal economy). In particular, a concerted effort for access to better training opportunities for young and mature adults is of large importance.

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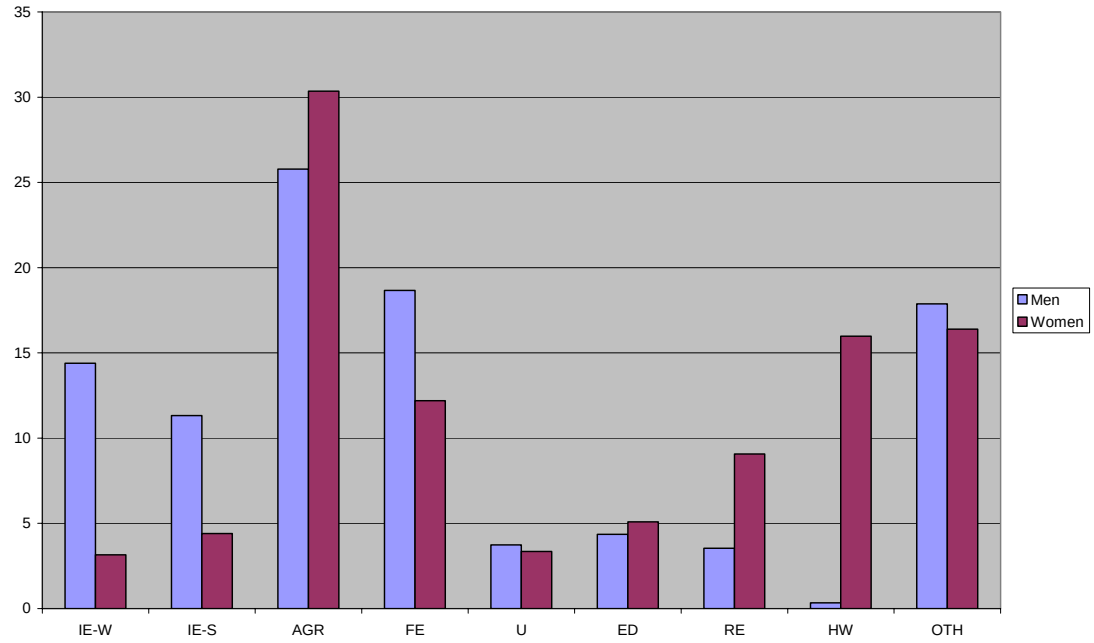
Appendix

Appendix 1: Distribution of the broad labour market statuses in Albania, Bosnia and Herzegovina, and Serbia

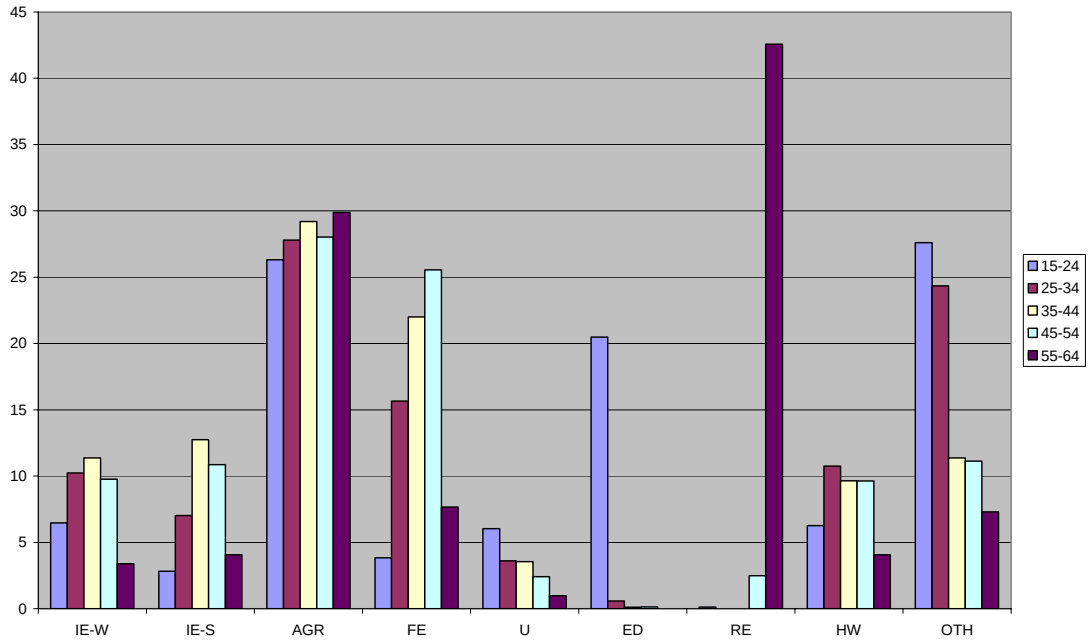
Notes: The different labour market statuses are abbreviated as IE-W (non-agricultural informal wage employment), IE-S (non-agricultural informal self-employment), AGR (agricultural employment), FE (non-agricultural formal employment), U (unemployment), ED (participation in education), RET (retirement), HW (household work), and OTH (others). Share refers to the share of the labour market status in total working-age population (15-64 years).

Figure A1.1 Distribution of labour market statuses in Albania by sex



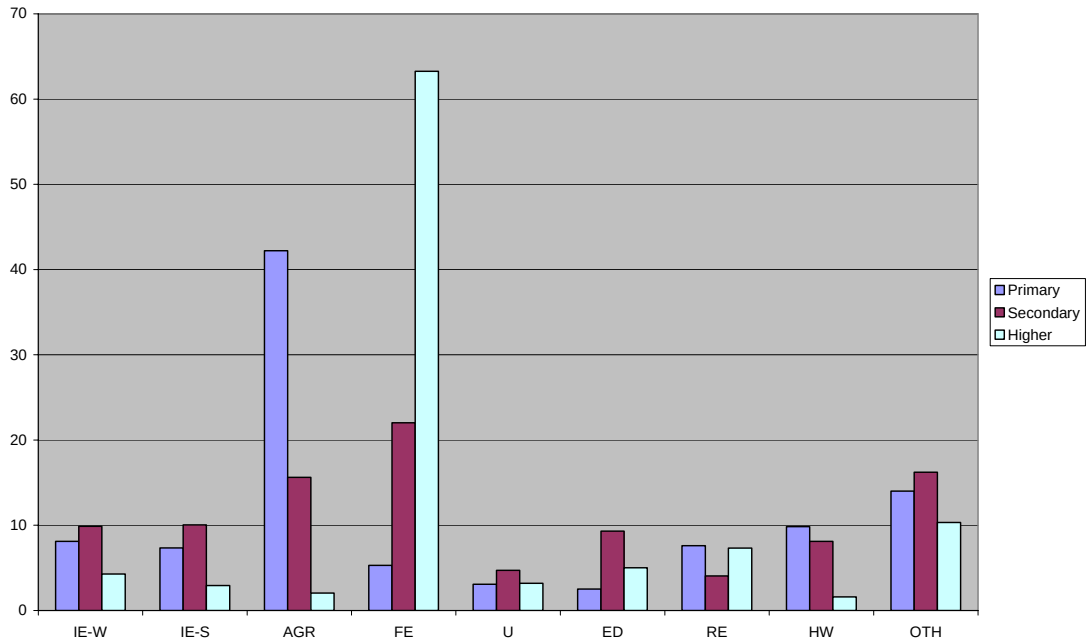
Source: Own calculation from the Albania Panel Survey.
Note: The number displayed indicate the percentage of men and women in a labour market status to the total working-age population.

Figure A1.2 Distribution of labour market statuses in Albania by age



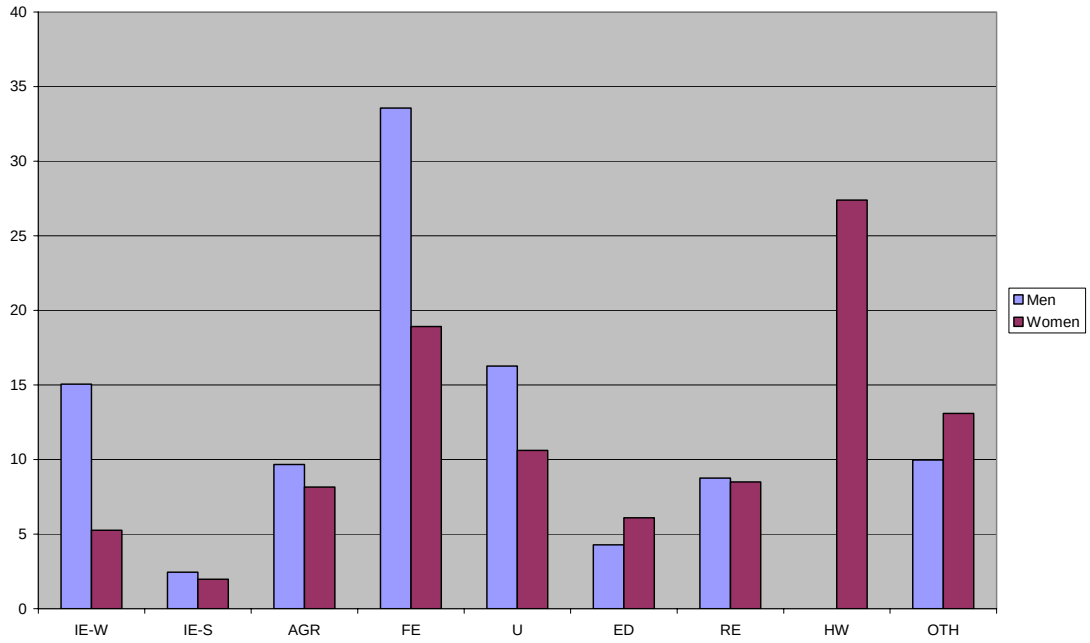
Source: Own calculation from the Albania Panel Survey.
Note: The number displayed indicate the percentage of individuals in different age groups in a labour market status to the total working-age population.

Figure A1.3 Distribution of labour market statuses in Albania by educational attainment



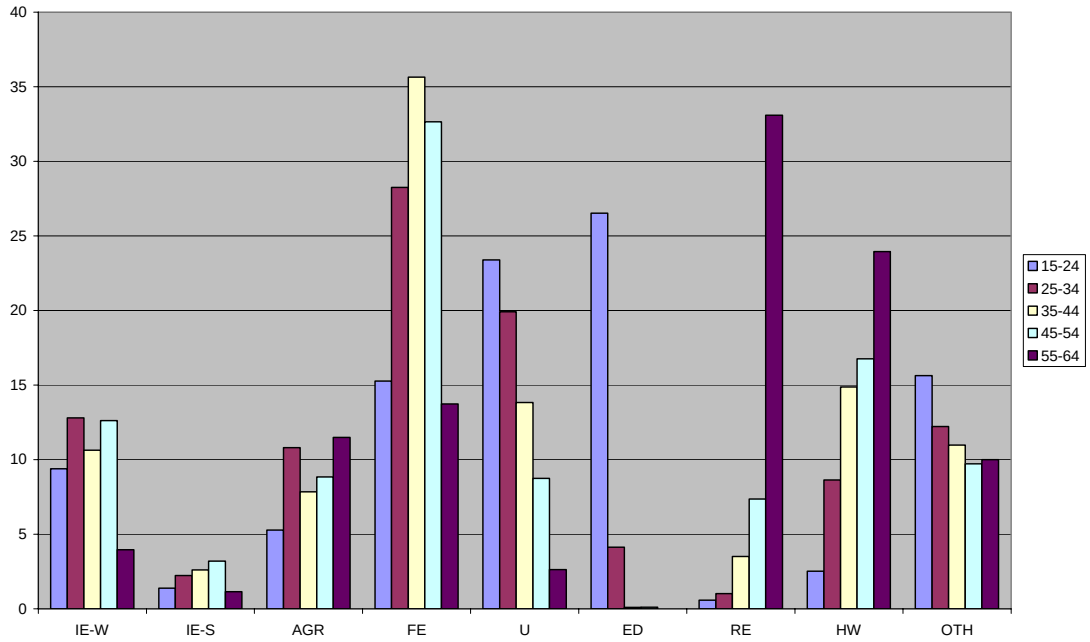
Source: Own calculation from the Albania Panel Survey.
Note: The number displayed indicate the percentage of individuals with different educational attainment in a labour market status to the total working-age population.

Figure A1.4 Distribution of labour market statuses in Bosnia and Herzegovina by sex



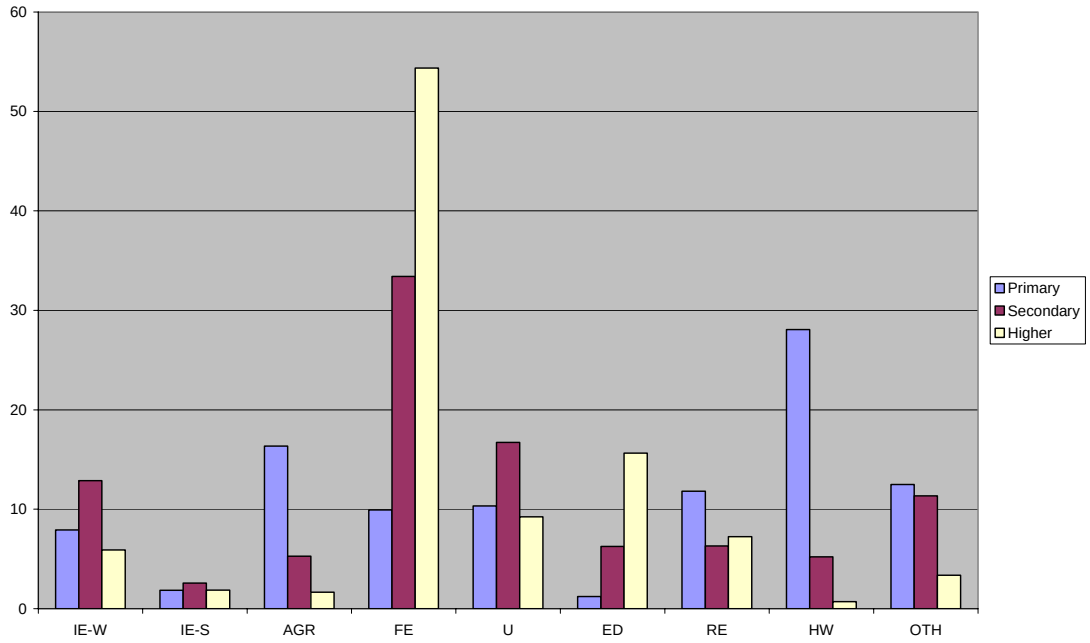
Source: Own calculations from the BiH Household Series Panel Survey.
Note: The number displayed indicate the percentage of men and women in a labour market status to the total working-age population.

Figure A1.5 Distribution of labour market statuses in Bosnia and Herzegovina by age



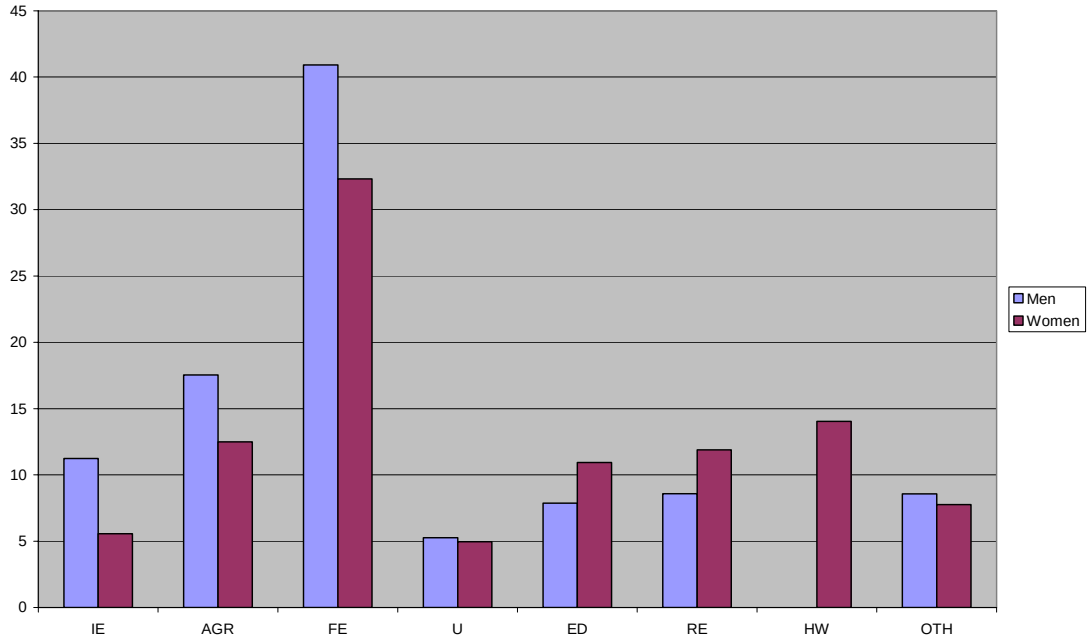
Source: Own calculations from the BiH Household Series Panel Survey.
Note: The number displayed indicate the percentage of individuals in different age groups in a labour market status to the total working-age population.

Figure A1.6 Distribution of labour market statuses in Bosnia and Herzegovina by educational attainment



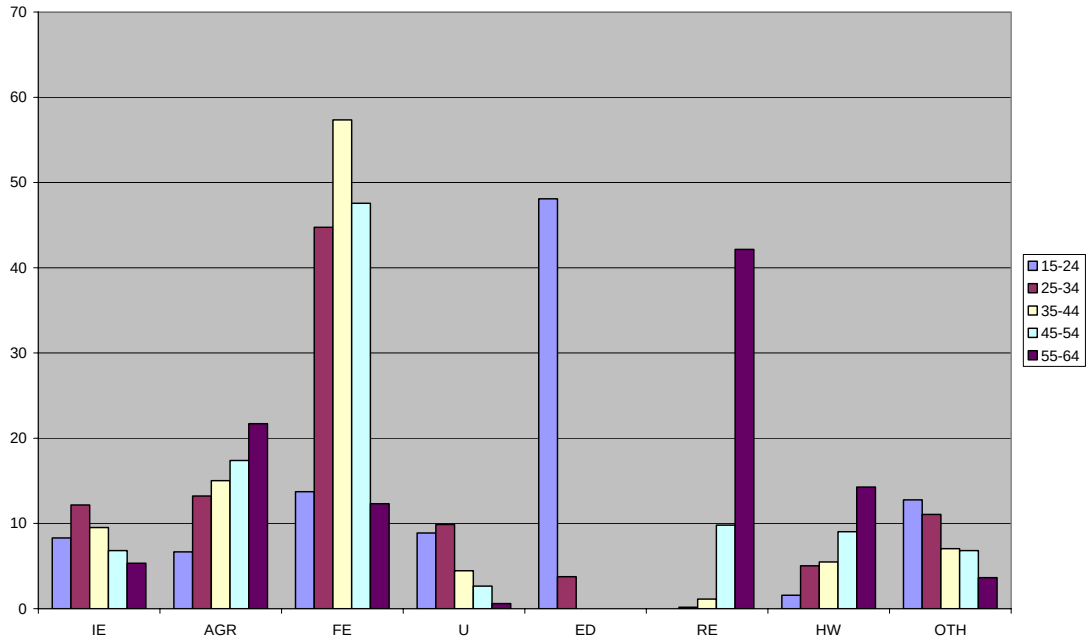
Source: Own calculations from the BiH Household Series Panel Survey.
Note: The number displayed indicate the percentage of individuals with different educational attainment in a labour market status to the total working-age population.

Figure A1.7 Distribution of labour market statuses in Serbia by sex



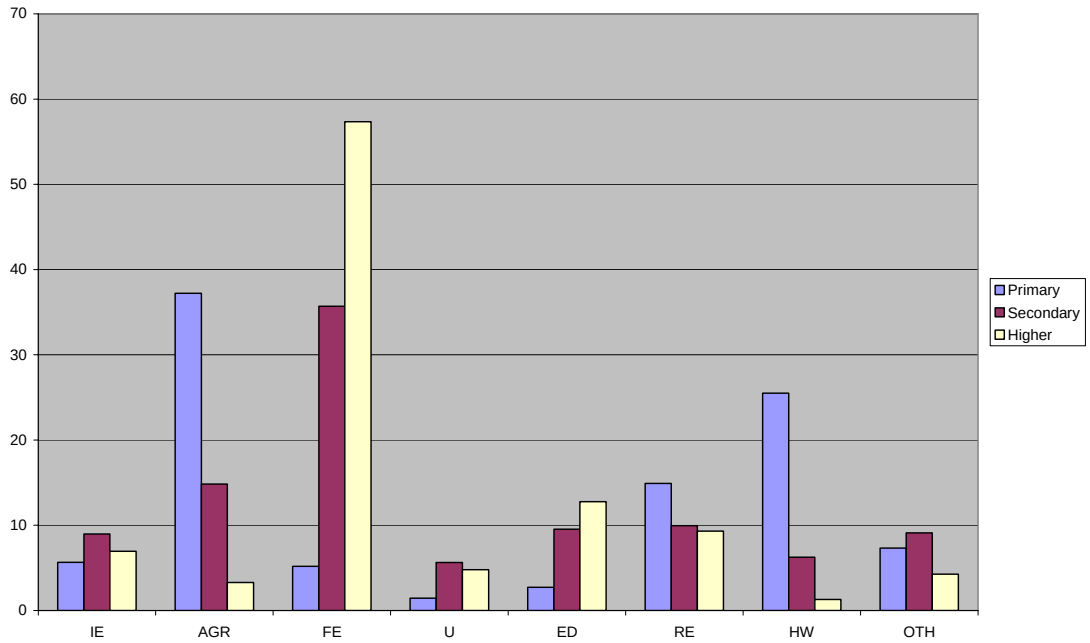
Source: Own calculations from the Serbian LSMS.
Note: The number displayed indicate the percentage of men and women in a labour market status to the total working-age population.

Figure A1.8 Distribution of labour market statuses in Serbia by age



Source: Own calculations from the Serbian LSMS.
Note: The number displayed indicate the percentage of individuals in different age groups in a labour market status to the total working-age population.

Figure A1.9 Distribution of labour market statuses in Serbia by educational attainment



Source: Own calculations from the Serbian LSMS.
Note: The number displayed indicate the percentage of individuals with different educational attainment in a labour market status to the total working-age population.

Appendix 2:Labour market transitions in Albania, Bosnia and Herzegovina, and Serbia

Notes: The different labour market statuses are abbreviated as IE-W (non-agricultural informal wage employment), IE-S (non-agricultural informal self-employment), AGR (agricultural employment), FE (non-agricultural formal employment), U (unemployment), ED (participation in education), RET (retirement), HW (household work), and OTH (others). Share refers to the share of the labour market status in total working-age population (15-64 years). The numbers in the boxes display the labour market status in 2004 by labour market status in 2003 for the working-age population 15-64. That is for example how large share of the formally employed in 2003 that is formally employed, informally employed et cetera in 2004.

Table A2.1 Labour market transitions in Albania between 2003 and 2004

	2004									
2003	**IE-W**	**IE-S**	**AGR**	**FE**	**U**	**ED**	**RET**	**HW**	**OTH**	**Total**
IE-W	**54.1**	9.1	4.2	16.4	4.2	1.5	0.5	0.8	9.2	**100**
IE-S	11.0	**65.2**	5.9	7.8	1.1	0.6	1.5	0.5	6.3	**100**
AGR	2.4	1.1	**77.1**	0.9	0.5	1.4	2.0	5.9	8.8	**100**
FE	7.1	2.8	2.0	**77.4**	0.9	0.7	0.8	0.6	7.8	**100**
U	13.5	5.5	5.9	6.1	**33.1**	0.9	0.4	7.0	27.5	**100**
ED	1.7	0.0	6.7	2.4	2.4	**68.5**	0.0	1.5	16.9	**100**
RET	1.1	1.3	6.4	0.3	0.0	0.0	**83.9**	3.5	3.4	**100**
HW	2.2	2.2	12.0	3.0	3.9	1.0	5.0	**48.2**	22.5	**100**
OTH	5.6	2.7	11.5	2.7	5.8	2.1	1.7	10.7	**57.3**	**100**
Share	**8.1**	**7.3**	**27.5**	**14.4**	**3.5**	**6.9**	**6.4**	**8.3**	**17.6**	**100**

Source: Own calculations from the Albanian Panel Survey

Table A2.2 Labour market transitions in Bosnia and Herzegovina between 2001 and 2002

	2002									
2001	**IE-W**	**IE-S**	**AGR**	**FE**	**U**	**ED**	**RET**	**HW**	**OTH**	**Total**
IE-W	**40.9**	4.1	4.6	27.4	11.7	1.1	0.6	1.0	8.7	**100**
IE-S	20.6	**23.6**	4.2	23.4	6.4	0.0	4.3	2.9	14.7	**100**
AGR	6.0	1.8	**48.0**	5.2	8.6	1.2	4.2	17.1	8.0	**100**
FE	8.1	1.1	1.2	**80.9**	2.8	0.8	1.6	0.3	3.3	**100**
U	11.9	6.0	6.9	9.0	**33.6**	3.5	2.1	7.0	20.0	**100**
ED	2.9	1.1	0.2	2.1	8.8	**70.3**	0.2	0.2	14.3	**100**
RET	3.0	1.6	1.6	0.8	2.3	0.0	**75.7**	8.0	6.9	**100**
HW	1.9	2.6	4.3	1.3	6.0	0.2	2.5	**69.1**	12.2	**100**
OTH	9.9	4.6	5.7	8.4	26.9	1.4	3.2	10.2	**29.7**	**100**
Share	**11.1**	**3.2**	**6.4**	**24.2**	**12.0**	**8.0**	**6.2**	**15.9**	**13.1**	**100**

Source: Own calculations from the BiH Household Series Panel Survey.

Table A2.3 Labour market transitions in Serbia between 2002 and 2003

	2003								
2002	**IE**	**AGR**	**FE**	**U**	**ED**	**RET**	**HW**	**OTH**	**Total**
IE	**34.3**	5.9	32.9	8.7	2.9	2.6	2.3	10.5	**100**
AGR	4.8	**61.6**	12.0	3.2	0.5	5.7	6.7	5.7	**100**
FE	5.9	5.4	**75.0**	3.1	1.3	2.9	0.9	5.4	**100**
U	13.4	7.8	24.4	**24.8**	2.3	0.5	4.2	22.6	**100**
ED	3.3	2.9	7.3	4.3	**74.7**	0.2	0.0	7.3	**100**
RET	3.2	6.2	5.6	0.0	0.1	**76.1**	6.6	2.3	**100**
HW	4.8	15.7	5.1	5.0	1.5	5.6	**60.2**	2.1	**100**
OTH	10.4	12.7	16.9	12.8	4.0	2.2	10.3	**30.7**	**100**
Share	**7.6**	**14.8**	**37.7**	**5.2**	**9.3**	**10.4**	**7.0**	**8.1**	**100**

Source: Own calculations from the Serbian LSMS.

Appendix 3: Basic characteristics of labour market attachment groups

Table A3.1 Basic characteristics for Group 1: Strong attachment

Albania				**Bosnia and Herzegovina**			
Sequence pattern*	Frequency	% in group	% of total in sample	Sequence pattern*	Frequency	% in group	% of total in sample
444	461	49.2	10.7%	4444	755	59.12	15.7%
222	97	10.35	2.3%	1444	79	6.19	1.6%
111	90	9.61	2.1%	1111	53	4.15	1.1%
122	54	5.76	1.3%	1144	34	2.66	0.7%
144	35	3.74	0.8%	4144	27	2.11	0.6%
422	22	2.35	0.5%	4441	25	1.96	0.5%
121	21	2.24	0.5%	1114	18	1.41	0.4%
114	20	2.13	0.5%	4414	18	1.41	0.4%
141	15	1.6	0.3%	5444	16	1.25	0.3%
414	15	1.6	10.7%	4111	15	1.17	0.3%
Total	937		21.67	--	1277	--	26.47

	Albania	**Bosnia and Herzegovina**
Gender composition		
% males	68.66	68.18
% females	31.34	31.82
Educational level		
% primary	27.63	16.06
% secondary	48.87	67.73
% higher	23.49	16.20
Age		
Mean age	41.3	40.8
Mobility		
Average number of episodes of labor market statuses in each sequence (Alb.: max=3; B&H: max=4)	1.40	1.59

* The code used refers to: 1 - informal non-agricultural wage-employment, 2 - informal non-agricultural self-employment, 3 - agricultural employment (regardless of formal or informal), 4 - formal non-agricultural employment, 5 - unemployment (following the standard ILO definition), 6 - in education, 7 - retirement, 8 - taking care of household, 9 – others, and 0 is the combination of unemployed and others for wave 3 in Bosnia and Herzegovina.

Table A3.2 Basic characteristics for Group 2: Some attachment

Albania				**Bosnia and Herzegovina**			
Sequence pattern*	Frequency	% in group	% of total in sample	Sequence pattern*	Frequency	% in group	% of total in sample
449	32	9.67	0.7%	9444	31	3.71	0.6%
511	24	7.25	0.6%	6655	22	2.63	0.5%
911	22	6.65	0.5%	1555	20	2.39	0.4%
522	17	5.14	0.4%	1999	18	2.15	0.4%
922	17	5.14	0.4%	4445	15	1.79	0.3%
944	17	5.14	0.4%	6995	14	1.67	0.3%
544	16	4.83	0.4%	1155	13	1.56	0.3%
919	14	4.23	0.3%	5544	12	1.44	0.2%
119	9	2.72	0.2%	1121	11	1.32	0.2%
949	9	2.72	0.2%	1995	11	1.32	0.2%
Total	331	--	7.66	--	836	--	17.33

	Albania	**Bosnia and Herzegovina**
Gender composition of the group		
% males	67.18	65.31

% females	32.82	34.69
Educational level		
% primary	45.50	19.57
% secondary	39.91	70.22
% higher	14.59	10.20
Age		
Mean age	36.5	33.5
Mobility		
Average number of episodes of labor market statuses in each sequence (Alb.: max=3; B&H: max=4)	2.39	2.84

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Table A3.3 Basic characteristics for Group 3: Weak attachment

Albania				**Bosnia and Herzegovina**			
Sequence pattern*	Frequency	% in group	% of total in sample	Sequence pattern*	Frequency	% in group	% of total in sample
433	22	7.69	0.5%	9555	74	10.54	1.5%
377	17	5.94	0.4%	5555	52	7.41	1.1%
337	16	5.59	0.4%	9559	43	6.13	0.9%
133	14	4.9	0.3%	9995	37	5.27	0.8%
977	12	4.2	0.3%	8999	17	2.42	0.4%
299	11	3.85	0.3%	8858	16	2.28	0.3%
877	10	3.5	0.2%	8899	16	2.28	0.3%
499	9	3.15	0.2%	5995	15	2.14	0.3%
188	7	2.45	0.2%	5559	14	1.99	0.3%
233	7	2.45	0.2%	9991	13	1.85	0.3%
Total	286	--	6.62	--	702	--	14.55

	Albania	**Bosnia and Herzegovina**
Gender composition of the group		
% males	45.13	53.82
% females	54.87	46.18
Educational level		
% primary	65.05	36.94
% secondary	27.88	61.32
% higher	7.07	1.74
Age		
Mean age	44.8	34.4
Mobility		
Average number of episodes of labor market statuses in each sequence (Alb.: max=3; B&H: max=4)	2.41	2.61

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Table A3.4 Basic characteristics for Group 4: Education

Albania				**Bosnia and Herzegovina**			
Sequence pattern*	Frequency	% in group	% of total in sample	Sequence pattern*	Frequency	% in group	% of total in sample
666	136	49.64	0.5%	6666	185	51.25	3.8%
669	33	12.04	0.4%	6665	33	9.14	0.7%

663	8	2.92	0.4%	6669	18	4.99	0.4%
366	7	2.55	0.3%	6699	15	4.16	0.3%
664	7	2.55	0.3%	6664	13	3.6	0.3%
966	7	2.55	0.3%	6966	9	2.49	0.2%
336	5	1.82	0.2%	5666	6	1.66	0.1%
661	5	1.82	0.2%	6661	6	1.66	0.1%
665	5	1.82	0.2%	6656	5	1.39	0.1%
696	5	1.82	0.2%	6969	5	1.39	0.1%
Total	274	--	6.34	--	361	--	7.48

	Albania	**Bosnia and Herzegovina**
Gender composition of the group		
% males	47.48	46.23
% females	52.52	53.77
Educational level		
% primary	24.00	12.63
% secondary	63.98	64.16
% higher	12.02	23.21
Age		
Mean age	19.2	19.8
Mobility		
Average number of episodes of labor market statuses in each sequence (Alb.: max=3; B&H: max=4)	1.66	1.74

* The code used refers to: 1 - informal non-agricultural wage-employment, 2 - informal non-agricultural self-employment, 3 - agricultural employment (regardless of formal or informal), 4 - formal non-agricultural employment, 5 - unemployment (following the standard ILO definition), 6 - in education, 7 - retirement, 8 - taking care of household, 9 – others, and 0 is the combination of unemployed and others for wave 3 in Bosnia and Herzegovina.

Table A3.5 Basic characteristics for Group 5: Agriculture

Albania				**Bosnia and Herzegovina**			
Sequence pattern*	Frequency	% in group	% of total in sample	Sequence pattern*	Frequency	% in group	% of total in sample
333	796	65.84	18.5%	3333	103	54.21	3.8%
339	67	5.54	1.6%	9333	16	8.42	0.7%
338	41	3.39	1.0%	8333	15	7.89	0.4%
388	38	3.14	0.9%	5333	10	5.26	0.3%
383	34	2.81	0.8%	5133	6	3.16	0.3%
399	32	2.65	0.7%	1933	3	1.58	0.2%
393	30	2.48	0.7%	5338	3	1.58	0.1%
322	23	1.9	0.5%	1531	2	1.05	0.1%
311	16	1.32	0.4%	2233	2	1.05	0.1%
331	15	1.24	0.3%	2333	2	1.05	0.1%
Total	1209	--	27.97	--	190	--	3.94

	Albania	**Bosnia and Herzegovina**
Gender composition of the group		
% males	43.96	61.98
% females	56.04	38.02
Educational level		
% primary	78.86	67.86
% secondary	20.41	30.14
% higher	0.73	2.00
Age		
Mean age	37.0	41.0
Mobility		
Average number of episodes of labor market statuses in each sequence	1.47	1.73

(Alb.: max=3; B&H: max=4)		

* The code used refers to: 1 - informal non-agricultural wage-employment, 2 - informal non-agricultural self-employment, 3 - agricultural employment (regardless of formal or informal), 4 - formal non-agricultural employment, 5 - unemployment (following the standard ILO definition), 6 - in education, 7 - retirement, 8 - taking care of household, 9 – others, and 0 is the combination of unemployed and others for wave 3 in Bosnia and Herzegovina.

Table A3.6 Basic characteristics for Group 6: No attachment

Albania				**Bosnia and Herzegovina**			
Sequence pattern*	Frequency	% in group	% of total in sample	Sequence pattern*	Frequency	% in group	% of total in sample
777	175	13.61	4.1%	8888	343	23.53	7.1%
999	175	13.61	4.1%	7777	188	12.89	3.9%
888	91	7.08	2.1%	9999	92	6.31	1.9%
933	63	4.9	1.5%	8883	35	2.4	0.7%
833	45	3.5	1.0%	9888	34	2.33	0.7%
988	43	3.34	1.0%	8833	29	1.99	0.6%
555	35	2.72	0.8%	5999	28	1.92	0.6%
889	35	2.72	0.8%	8889	27	1.85	0.6%
989	34	2.64	0.8%	8988	22	1.51	0.5%
899	25	1.94	0.6%	3888	20	1.37	0.4%
Total	1286	--	29.75	--	1458	--	30.22

	Albania	**Bosnia and Herzegovina**
Gender composition of the group		
% males	34.79	24.41
% females	65.21	75.59
Educational level		
% primary	61.17	63.79
% secondary	35.58	33.36
% higher	3.26	2.85
Age		
Mean age	37.3	46.4
Mobility		
Average number of episodes of labor market statuses in each sequence (Alb.: max=3; B&H: max=4)	1.86	1.93

* The code used refers to: 1 - informal non-agricultural wage-employment, 2 - informal non-agricultural self-employment, 3 - agricultural employment (regardless of formal or informal), 4 - formal non-agricultural employment, 5 - unemployment (following the standard ILO definition), 6 - in education, 7 - retirement, 8 - taking care of household, 9 – others, and 0 is the combination of unemployed and others for wave 3 in Bosnia and Herzegovina.