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TRANSITION OF LABOR MARKETS IN SOUTH EAST EUROPEAN COUNTRIES DURING ECONOMIC CRISIS[1]

Abstract

Labor markets of South East Europe are going through deep and significant changes typical for transitional period of economy but prolonged and deepened by economic depression which started in 2008 and continues even today. In the SEE countries the key labor market indicators were much lower in comparison with West European economies. The general idea in this paper is to compare the labor markets of the countries in the region across different variables and to discover the main characteristics of the regional labor market during economic depression. Through implementation of multivariate analysis changes in the last three years were monitored and key features were identified. On the basis of situation in the last few years we can conclude that countries of SEE have the constant and even growing problems on the labor markets characterized by large unemployment, long term unemployment and structural mismatches.*

Key words: Labor Market, Southeast Europe, Dendogram

JEL Classification: J21, J64, J70

ТРАНЗИЦИЈА ТРЖИШТА РАДА ЗЕМАЉА ЈУГОИСТОЧНЕ ЕВРОПЕ У ПЕРИОДУ ЕКОНОМСКЕ КРИЗЕ[2]

Апстракт

Тржишта рада земаља југоисточне Европе пролазе кроз дубоке промене типичне за транзициони период, али су додатно продубљене и продужене економском кризом која је почела у 2008 која траје и данас. У земљама југоисточне Европе кључни показатељи тржишта рада били су знатно лошији у поређењу са западноевропским привредама. Основни циљ овог рада је да се упореде тржишта рада земаља у региону преко различитих променљивих и да се открију главне карактеристике регионалног тржишта рада током економске кризе. Применом мултиваријационе анализе прате се промене и идентификују се главне карактеристике у последње три године на појединачним тржиштима рада. Кључни налаз је да земље југоисточне Европе имају константне, па чак и растуће проблеме на тржишту рада које карактерише висока незапосленост, дугорочна незапосленост и структурне неусклађености.

Кључне речи: Тржиште рада, Југоисточна Европа, Дендограм

Introduction

Labor markets of South East Europe countries are going through deep and significant changes typical for transitional period of economy but prolonged and deepened by economic depression which started in 2008 and continues in 2012. It is important to monitor and analyze the main trends in the countries of the region and draw conclusion about their development, especially in the light of economic crisis which started in the second half of 2008.

During the last decade the structure of labor market has been changing significantly from the aspects of age, gender, occupation, sectors, education, etc. After the start of transitional reforms in the Eastern Europe, at the beginning of introduction of free market economy instead of state-run planned economy, the key labor market indicators were much lower in comparison with West European economies. Common phenomena were large unemployment with significant long-term unemployment, structural mismatches followed by gender and age gaps. If we consider weak educational system and strong negative demographic changes (intensive emigration of labor force, low fertility rates, ageing, etc.) the situation at the beginning of transition was even worse.

During this turbulent period of transition some East European countries succeeded to reduce the negative effects of transition (like Check Republic and Slovenia) but in the case of South East Europe many countries have the same problems as in the first years of transition end even more problems caused by 2008 economic crisis.

Process of transition in the most of the countries in the SEE region started approximately two decades ago and since then they have been trying to adapt to fast changes of market economy where opportunities for life-long jobs will be scarce and job mobility will be even more intensified in the future.

The general idea in this paper is to compare the labor markets of the countries in the region of South East Europe across different variables and to discover the main characteristics of the regional labor market since the beginning of economic crisis in 2008. Also we wish to discuss what are the main consequences and challenges of recent economic development on the labor markets in SEE.

Through implementation of methods of multivariate analysis changes of regional labor market in the last three years were monitored and key features were identified. Through cluster analysis on the basis of key labor market indicators we have discovered the most similar countries in the region and main changes caused by the recent development in the world economy.

The plan of this article is as follows. After the short introduction, the state of the art in the field of labor market analysis in East Europe and SEE countries is presented. In the section "Scientific Methods" analytical tools used for the research were described. In the next section the results of research were presented through graphical presentations followed by short description considering comparison of two periods: 2008 and 2010. In the last section the main findings were discussed and general conclusions were drawn about changes on the labor market of South East Europe. The last section in this paper also includes recommendation for further development of labor markets.

Literature Review

The transition of SEE economies and their labor markets has been different from the predictions of scientific literature two decades ago. After long period of changes, it is still characterized by stagnant unemployment pools, large flows to inactivity, enormous

informal sector, significantly low labor mobility, large gender and age gaps, and deep structural mismatches.

All the countries in the region are sharing the similar history of labor markets, and Kuddo correctly notices that "The labor market in the economies of the former Yugoslavia[3] was shaped by the particular legacy of the "self-management" system for enterprises, and the existence of the so-called social ownership, which led to a high level of job protection and overall rigidity, and to widespread labor hoarding (...) Despite major revisions in the 1990s and 2000s, the ideology of the current labor laws (labor codes) in many countries in the region still dates back to the 1970s, 1980s or early 1990s when the laws were first adopted." (Kuddo, 2009). The traces of this old ideology we can still find in SEE, and it is especially expressed in public and state owned enterprises.

Today, we can see that labor markets of SEE countries are mainly the function of Mediterranean social policy model which is typical of Greece, Italy, and Portugal. This model is characterized by high spending on pensions, employment protection, early retirement provisions and strong unions' influence (Rovelli & Bruno, 2008)[4]. Protection against undesirable risks of labor market is provided mainly by rigid employment protection legislation which is the main obstacle for entering and re-entering the labor markets. Rutkowski (2006) explains the accumulation of a large pool of workers and problems of entering and re-entering the labor market on the examples from Croatia and FYR Macedonia. Similar opinion about rigid employment protection legislation we can find in great part of contemporary literature (Boeri (1999), Burda (1993), Lehmann and Muravyev (2010), Tyrowitz (2009), World Bank (2003), etc).

Since 1990's the main goal for all the countries of the region was to become the members of European Union. Some of them have already succeeded (Slovenia, Bulgaria, Romania and Greece) and Croatia should become the member in the near future. One of the main challenges of EU accessions for candidate countries is to develop the labor market in such way to become competitive in every sense. "If we think about this competitiveness from the labor demand side, this implies that labor market institutions, regulations in general and the tax system all need to be shaped in such a way as to boost the willingness of firms to create jobs. When we focus on the supply side reforms need to have at least a two-fold thrust to ensure that the workforce in the new member state is competitive with workers elsewhere in the union." (Lehmann, 2010, p. 2). Lehmann also stresses that "Changing the behavior of workers and firms is a long-term process and most of the NMS have spent at least a decade before accession to improve the performance of their labor markets by reforming their institutions."

Through analysis of ALMP Kuddo discovered that the countries in the SEE region have different priorities in provision of ALMPs. While some of them are spending more on employment incentives (Croatia) and job creation programs (Bulgaria), the others are spending funds on start-up incentives (FYR Macedonia).

One of the main problems in SEE is inadequate educational systems because they are not producing qualified working force with competitive skills. When it comes to education, some researchers are arguing that orientation must be on the younger cohorts on the labor market in order to reduce the drop-outs and minimize bad educational outcomes (Lehmann, 2010). The SEE countries are making significant efforts to introduce life-long learning and improve the outcomes of vocational education.

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[3] Countries of former Yugoslavia: Serbia, Slovenia, Croatia, FYR Macedonia, Montenegro, Bosnia and Herzegovina, and Kosovo.

[4] Rovelli and Bruno are quoting Boeri and his four social policy models among EU members: Nordic, Anglo-Saxon, Continental and Mediterranean.

Scientific Methods

On the basis of labor market indicators and employment structure we have conducted a comparative analysis. In order to achieve relative perspective of SEE national labor markets in the analysis we have included also EU members from South East Europe (Greece, Slovenia, Bulgaria and Romania). These comparisons will be conducted for two periods: 2008 and 2010. The analysis will actually have two directions: relative comparison among countries and dynamic comparison of two periods.

Data were collected for 11 countries in the region of South East Europe: Croatia, Serbia, Bosnia and Herzegovina, FYR Macedonia, Albania, Montenegro, Slovenia, Bulgaria, Romania, Turkey and Greece. Kosovo is not included in the analysis because the data for 2010 were not available. Main data sources are Eurostat database and annual labor force surveys.

Data set consists of 140 labor market variables: employment, unemployment, activity, inactivity, and occupation across genders, age groups and two years. Additionally, labor market indicators from World Economic Forum for 2008 and 2010 were used for more comprehensive analysis.

After short descriptive part, in order to discover the similarities among countries we have used the cluster analysis. Cluster analysis was conducted in two steps. On the basis of joining (tree clustering) method the number of clusters was selected. The technique of joining was complete linkage amalgamation rule, based on squared Euclidean distances. Second step was to conduct K-means clustering method for selected number of clusters. We have obtained two dendograms for 2008 and 2010.

On the basis of dendograms we have discovered the relative position of each country and changes in the three years period. On the basis of analysis of variance we have discovered which labor market variables are making the most significant differences among countries of the region.

Results

On the basis of unemployment rates for the countries in the SEE region (Figure 1) we can conclude that situation on the labor markets is getting more unfavorable in 2010 than two years before because in all the countries (except FYR Macedonia) unemployment rates have increased significantly.

There is statistically significant difference between unemployment rates in 2008 and 2010 ($p=0.0097 < 0.05$). Variation of unemployment in 2010 is smaller than in 2008 (standard deviation in 2008 is 8.91 and in the 2010 it is 8.09). This shows that in the interval of two years labor markets of the SEE countries are changing significantly. This was the main reason for deeper and more comprehensive analysis of changes in the last few years through multivariate methods.

Figure 1 - Unemployment rates in the countries of South East Europe in 2008 and 2010 (age 15-64).
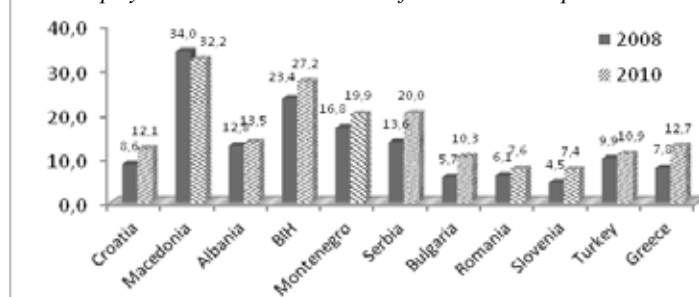
Source: Eurostat data and LFS data for BIH, Serbia, Montenegro and Albania.

If we look at the changes in unemployment on a different way, through relative changes (Figure 2) we can see that the most dramatic increase of unemployment is in Bulgaria where unemployment rate is 80% larger in 2010 than in 2008. All in all, the relative increase of unemployment is larger in EU members than non-EU members, with two exceptions: Serbia and Croatia.

Figure 2 - Relative increase of unemployment rates from 2008 to 2010.
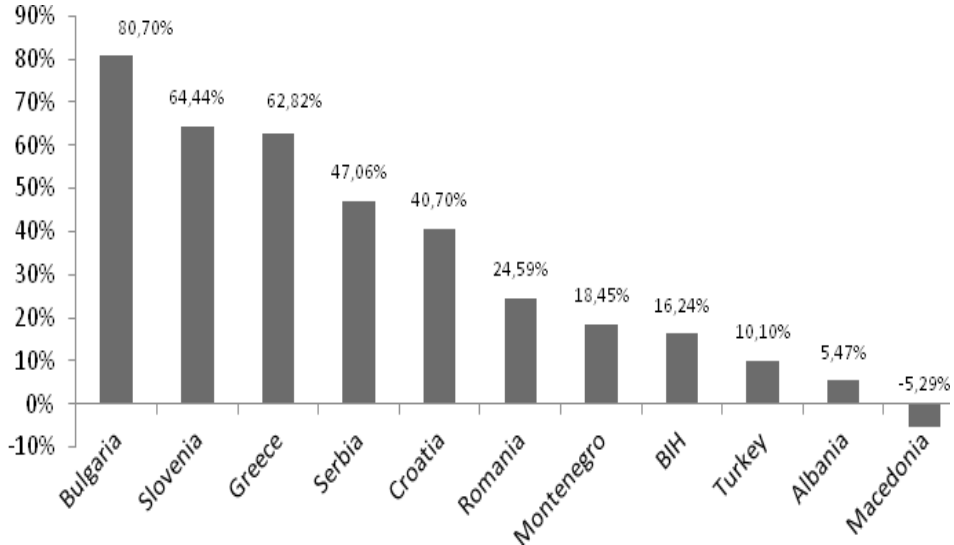

Source: Own calculations on the basis of Eurostat and LFS data

This could be partially explained through level of flexibility of labor markets. More market oriented labor markets are more flexible and in the time of depression they react more intensively on the negative changes in the economy. On the other hand, after the crisis we can expect that market oriented and flexible labor markets will have more dynamic growth of employment and decrease of unemployment rates.

Some labor markets, like Montenegro and BIH have more rigid labor legislation which actually helps in the time of depression to reduce the growth of unemployment rates. The problem will occur after economic depression because recovery of labor market will go to slow and rigid labor market will slow down the entering and re-entering of working force.

In order to get the full picture of labor markets in the region it is necessary to analyze the whole set of labor market indicators (employment rates, activity rates, inactivity rates, occupation, education level etc.) across genders and age groups. With use of multivariate statistical methods it is possible to obtain summarized results easier for qualitative analysis, especially in the case of comparative analysis of labor market performance across countries.

Figure 3- Tree diagram – Similarities of labor markets in 2008 on the basis of 70 indicators
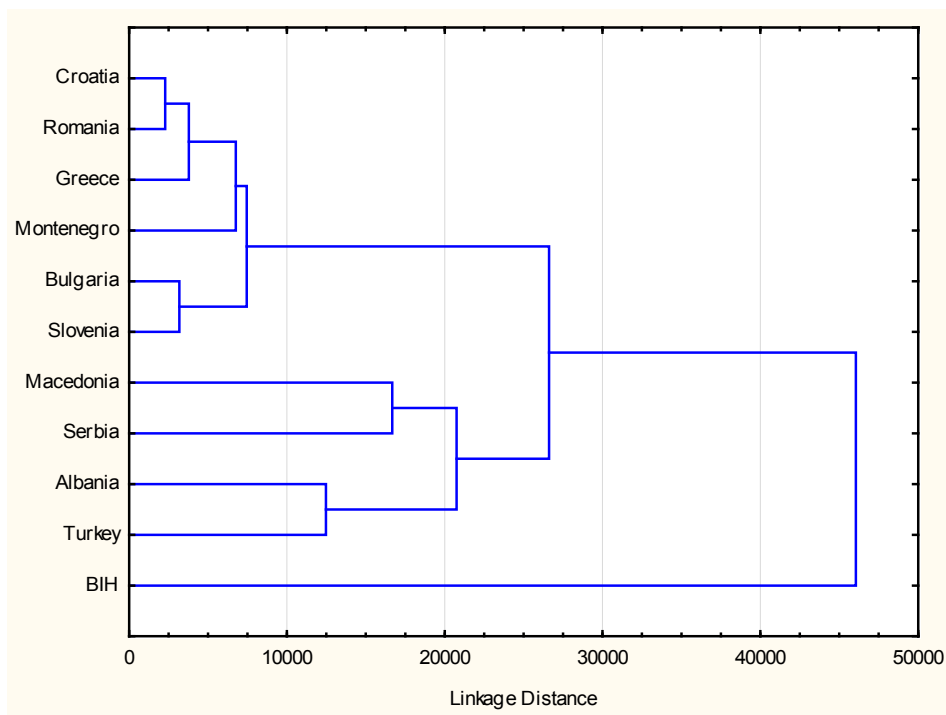
The first step was to conduct cluster analysis on the basis of labor market indicators. The outputs are presented on the Figures 3 and 4 where we can see dendograms and relative position of each country. In 2008 we can clearly see the difference among 3 clusters. The first cluster consists of 6 countries with the most developed labor markets: Croatia, Romania, Bulgaria, Slovenia, Montenegro, and Greece. These countries can be considered as the leaders in the region. Second cluster consists of 4 labor markets: Turkey, Serbia, Macedonia, and Albania. The third cluster is Bosnia and Herzegovina which is characterized with very unfavorable indicators and represents significantly different case. These results were obtained through complete linkage amalgamation rule, based on squared Euclidean distances. Almost identical results were obtained with other clusterization techniques.

Figure 4 - Tree diagram – Similarities of labor markets in 2010 on the basis of 70 indicators
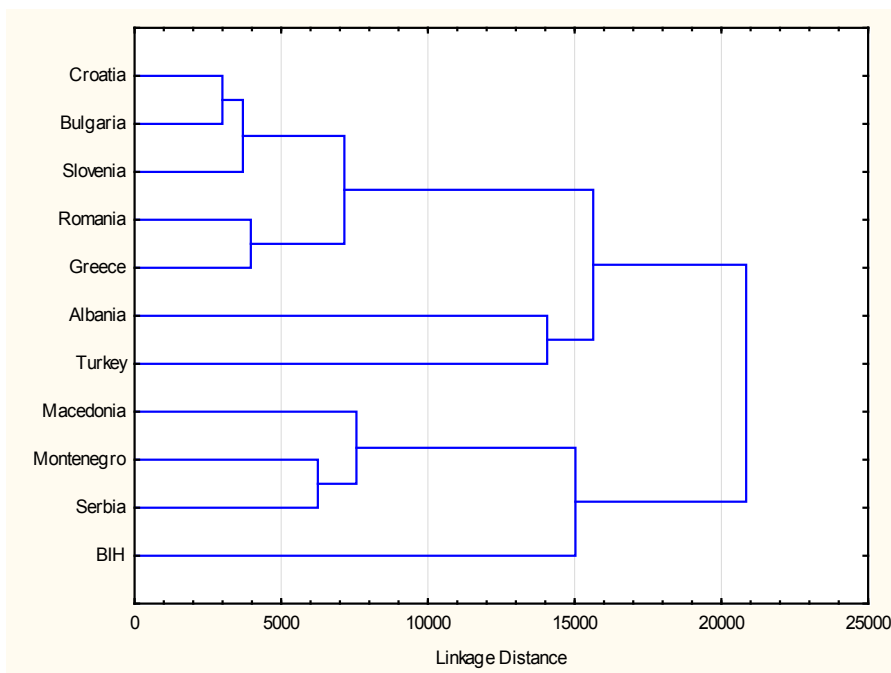
On the basis of three cluster solution the K-means clustering method was conducted. In Table 1 the members of each cluster are presented both with Euclidean distances from cluster centers. In Table 2 we can see distances among clusters in 2008 and these results will be compared to the cluster distances in 2010.

Table 1- Members of each cluster and distances from respective cluster center / year 2008

Cluster 1		Cluster 2		Cluster 3	
Country	Distance	Country	Distance	Country	Distance
BIH	0,00	Croatia	2,39	Macedonia	10,65
		Montenegro	6,40	Albania	9,63
		Bulgaria	5,34	Serbia	9,27
		Romania	5,01	Turkey	8,75
		Slovenia	5,83		
		Greece	5,95		

Table 2- Euclidean Distances between Clusters Distances below diagonal / Squared distances above diagonal / year 2008

-	Cluster 1	Cluster 2	Cluster 3
Cluster 1	0,00	452,53	455,93
Cluster 2	21,27	0,00	103,64
Cluster 3	21,35	10,18	0,00

Two years later, in 2010, we can see that situation has been changing (Figure 4). We can still see that exists three cluster solution but the memberships of the clusters are different. Table 3 is showing the membership of each cluster. Turkey now belongs to the group of countries with relatively better performing labor markets while Montenegro is in the group of countries with weaker labor markets, together with Macedonia, Albania, and Serbia. The leaders in the region from the aspect of labor market are Croatia, Slovenia, Bulgaria, Romania, Greece, and Turkey, while Bosnia and Herzegovina is in very problematic position.

Table 3- Members of each cluster and distances from respective cluster centre / year 2010

Cluster 1		Cluster 2		Cluster 3	
Country	Distance	Country	Distance	Country	Distance
Croatia	4,07	BIH	0,00	Macedonia	5,98
Bulgaria	6,48			Albania	8,64
Romania	4,23			Montenegro	7,11
Slovenia	5,84			Serbia	6,26
Turkey	8,84				
Greece	5,99				

If we now compare distances among clusters in 2008 (Table 2) and distances in 2010 (Table 4) we can see that distances are getting shorter which means that differences among labor markets are getting relatively smaller and similarities are growing. The explanation is that because of economic depression negative influence is larger on a labor markets of cluster 1 and their performances are getting relatively more similar to the labor markets of cluster 2 and cluster 3.

Table 4- Euclidean Distances between Clusters Distances below diagonal / Squared distances above diagonal / year 2010

-	Cluster 1	Cluster 2	Cluster 3
Cluster 1	0,00	193,77	84,09
Cluster 2	13,92	0,00	159,58
Cluster 3	9,17	12,63	0,00

The basic conclusion is that labor markets of EU members in SEE are relatively similar and belong to one cluster. There is one exception in the case of Croatia. The explanation for Croatia is simple: this country will become the EU member before all the others in the region and labor market reforms in last few years were relatively successful because of significant support from EU financial funds.

Where are the main differences among clusters? According to ANOVA results, in 2008 the statistically significant differences among countries are in distribution of employment and unemployment rates across different levels of education (pre and primary, secondary, and tertiary education) especially in the case of female labor force. In the case of pre and primary level of education for both genders we have found statistically significant differences among countries.

In 2010 the situation is different. ANOVA results are showing that we have still statistically significant differences in employment and unemployment rates across all three educational levels, but we have also significant differences in unemployment rates across all age groups and both genders. The long term unemployment rates are also statistically significant for both genders.

We can draw the conclusion that the countries of SEE have similar levels of activity and inactivity in labor force, followed by similar structure from the aspect age, gender, occupation, status in employment, etc. The main difference among labor markets in the countries of SEE region in the three year period of economic depression are educational levels of labor force and how they have been handling unemployment.

Conclusions

On the basis of situation in the last few years we can conclude that countries of SEE have the constant and even growing problems on the labor markets characterized by large unemployment, long term unemployment and structural mismatches. For the countries in the region we can repeat the statement from Lehmann about reforms conducted in the EU NMS: "However, according to many observers, the NMS have not pursued labor market reforms consistently enough, and more consistent and coherent reforms could have produced an even better performance of their economies after 2004." (Lehmann, 2010, p. 3). In other words, despite economic depression, the process of transition is too long and inefficient because of inconsistent labor market reforms. The conclusion is that many of the SEE countries are in the status of prolonged transition and without hope of finishing this process in near future: Serbia, Macedonia, Albania, Montenegro, and BIH.

The main challenge, especially for the Serbia, FYR Macedonia, and Montenegro is the status of EU candidate which brings new responsibilities and targets that must be achieved in much shorter period of time. "In order to find adequate answers to these challenges labor markets in the region should become more market-driven" (Savić, 2011). The countries in the region must develop more flexible labor markets in order to integrate into EU economy. They must continue to transfer workers from declining sectors and occupations into new, emerging sectors with help of reformed educational system and life-long learning.

On the basis of experience of NMS we can conclude that reforms of labor market institutions should lead to labor market structures that are more or less as flexible as structures in old EU members. On the basis of analysis it is clear that slow decrease of labor hoarding shows high level of employment protection of regular jobs which indicates rigid labor markets. That means that restructuring efforts in SEE economies are going slowly.

Policy Recommendations

There is a reach list of scientific papers analyzing labor markets of individual countries in the SEE region (Gligorov et al. (2011), Tiongson and Yemtsov (2008), Dobre et al. (2008), Koske (2009), Beleva (2011), Hoffman et al. (2011), etc). More or less we can notice similar recommendations for improvement of labor markets. On the basis of literature and similarities among countries of SEE it is possible to conceptualize list of general recommendations for the whole region:

- The most important measure is improvement of investment climate and reduction of business costs. Entry and growth of business needs to be encouraged through further incentives. This will contribute to job creation and faster inclusion of workers previously displaced by structural changes. The main challenge is how to do it in the period of economic depression.
- Further improvement of labor legislation in order to develop more flexible

labor markets. Labor laws must be more business friendly and allow to employers to modify their work force to market variations. This fact is especially important in the period after the economic depression because more flexible labor markets will react with faster growth of activity and employment.

- Reform of all levels of educational system is necessary in order to meet the needs of economy for certain skills and qualifications. It is necessary to monitor skills requirements on the regular basis through surveys and react on them through flexible educational and vocational system.
- It is necessary to increase employment of low skilled and unskilled people through reduction of tax wedge for the smallest wages. This is important especially for the FYR Macedonia and BIH.
- The incidence of part-time jobs must be significantly larger. Change of tax policy can make this type of work more attractive for the work force.
- Training unemployed and re-training of employed in order to increase the skill level has tremendous importance. Currently large part of unemployed working force, both older and young, has unnecessary skills and they are in the pool of long-term unemployed. During 2012 Serbia will adopt new strategy of education and accent is on the lifelong learning and orientation towards labor market demand.
- More effective and detail oriented monitoring and analysis of ALMP measures and their efficiency. Many countries do not have database that covers the ALMP participants and outcomes of implemented policies. Some countries that have databases are not performing analysis of ALMP outcomes on the micro level but only on the aggregate level. This problem is especially significant in Bosnia and Herzegovina, Serbia, Albania, Kosovo and Macedonia. It is impossible to analyze the behavior of labor force without proper data collection. Additional problem is availability of data collected through Labor Force Survey. In the case of Albania, for example, the only available data (and very limited) are from LFS in 2008 and 2009.
- Relatively successful ALMP in other Eastern European countries should be considered for implementation in the SEE labor markets. Countries of the region must rely more on the experiences of new member states in EU. Design and effectiveness of existing policies must be improved.
- Reform of PES must be continued. Special attention must be oriented towards monitoring of unemployment and long-term unemployed. Distribution of unemployment benefits must be strictly supervised.
- Reduction of informal sector. Traditionally informal sector has deep roots in the economies of SEE and each country must evaluate the size of it and implement the measures for effective transition into formal sector. Through enlargement of formal sector the government will have additional incomes and measures of labor market policies will be more successful. This measure is especially important for Croatia, FYR Macedonia and even Slovenia.

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