The Effect of Education in Labour Market: Case Study of Kosovo

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Abstract

One of the major challenges of the post war Kosovo has been establishment and reform of education system and education institutions. Thus, this research aims to address effect of education in labour market outcomes for the period 2009 until 2013, through a theoretical discussion of four main points: the process of establishing the education system in Kosovo in post war period, the effect of education in labour market, participation of education in Kosovo's GDP and countries in the region, investments on education as the main opportunities for reduction of unemployment in Kosovo. In the methodology of this research paper are used secondary data and they are calculating by STATA program. The main analyses in this research paper are: descriptive statistics, regression method and correlation matrix. The results of analyses have shown that in one side education has positive impact on employment and youth employment rate, but it has shown negative impact on job seekers rate; then, on the other side vocational training has shown negative impact on employment but it has positive impact on youth employment rate and job seekers rate. In T-statistical analysis, all analyses have shown non-significance on both variables (education and vocational training) during the period 2009 - 2013. In this research paper is concluded that Kosovo has high unemployment rate 35.3% (KAS Report, 2015) and most of Kosovo population is constituted by young people, thus this remains one of the biggest challenge for Kosovo state. Education (including vocational trainings) is shown as the best opportunity to reduce unemployment, especially at younger people, and to integrate them in domestic and international labour markets. Thus, the authors conclude that in order to reduce the high level unemployment rate, Kosovo institutions should focus constantly in creating and improving the education policies.

Keywords: Education, vocational training, employment, unemployment, labour market, OLS method, STATA.

1. Introduction

In the recent years, many countries in the world are facing with economic and financial difficulties, especially after the financial global crisis of 2008, which effects have reduced level of investments in education and labour market in Kosovo and other developing countries, (Ukaj, M. & Dragusha, B., 2013). According to the RIInvest Institute Report (2004), the key element of transition countries is "human capital development", and based on the challenges and difficulties that Kosovo labour market has, creation of the perfect relationship between labour market and quality of education is of high importance, thus it can provide a qualified workforce for domestic and international labour markets and will help younger employees to develop and advance in their future career, through skills and knowledge for modern labour market and will orient the younger employees in the deficit labour markets, (MEF Report, 2008). According to the European Commission Report (2014), investments in education (such as: innovation and research) considered as public expenditure in the Kosovo Budget have been allocated as share of GDP and they vary are from 3.6 % in 2009 to 4.0 % in 2012. This is very low when compared with other countries in region. Thus, Kosovo institutions having into consideration that Kosovo has young population, properly the youngest in Europe, should realize that their main priority is education (including vocational skills training), regardless of the lack of quality that educational institutions have provided in Kosovo from 1999, when Kosovo political system and educational institutions started to get established. In this study the authors have analysed and found the impact of education in labour market in Kosovo, with focus on youth.

1.1 Objectives of the research

The main objective of this research is to measure the effect of education in labour market outcomes in Kosovo, for the period 2009 until 2013, respectively the outcome of employment, youth employment rate and job seekers rate.

This objective will be reached through addressing and answering to the following questions: Does education affect in labour market in Kosovo? Does Education participate in Kosovo's GDP? Is Investment on education an opportunity for reduction of unemployment in Kosovo?

The research is organized in five sections. Section 2. will provide a review of literature, structure and situation of education and labour market in Kosovo and compare them with the ones in South East Europe. Section 3. will continue with explanation of the methodology and data collection used during the research. Section 4. will present findings while the last section 5. will provide the conclusion of the research.

2. Literature Review

Immediately after the war in 1999, Kosovo got administered by the United Nation Mission in Kosovo (UNMIK) and in 2000 got established the administrative department of education and science, which then late in 2002 is transformed into the Ministry of Education, Science, and Technology, (EU Report, 2012). UNMIK has had its authority for reconstruction and development of education system in Kosovo and their authority was based on three main areas: physical reconstruction, legal reconstruction and academic reconstruction, (Pichl, E., 1999). In 1999, the education system in Kosovo adopted the Bologna reforms, which have introduced and provided structural changes and reforms in the overall educational system in Kosovo, (Kabashi - Hima, A., 2011). According to the World Bank Report (2012), the quality of education in Kosovo is lower than in EU countries and it has created difficulties for new employees in labour market, and the same has reflected negatively on economic growth of the country. If Kosovo gets compared with other countries in the region, it has the highest unemployment rate, then if it gets compared with the EU countries it is much lower, (UNDP Report, 2006). If we refer to the figure below, we can understand that most of the unemployed people (over 80 %) have low quality of education (here include: unskilled, semi skilled and basic skilled), and as a consequence it is a challenge for Kosovo's institution to integrate them in the labour market (MPMS, 2015).


Figure 1 Unemployment rate (with education) in Kosovo 2014
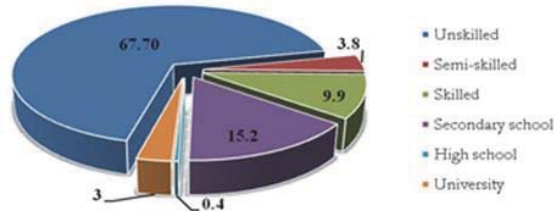
Source: MPMS 2015

Then, investment in education remains one of the key challenges faced by the transition countries such as Kosovo, in modern economy. In fact, family budgets have been very poor for many years in Kosovo and this has effected insufficient improvement (particularly for girls and rural people) and lack of the quality of the overall education system in Kosovo (UNESCO Report, 2004). Regardless of enormous efforts of Kosovo institutions and international donors to create employment policies and appropriate strategies for labour market through education and vocational trainings, Kosovo still continue to have high rate of unemployment, (Kita, 2008). According to KAS Report (2015), during 2014 unemployment rate has had an increase from 30 % in 2013 into 35.3%. The same report (KAS Report, 2015) has presented that "there are slight changes in the labour force participation rate between 2013 and 2014 from 40.5% to 41.6%. Female labour force remained virtually the same between 2013 and 2014, while youth employment increased in 2014 from 55.9% to 61%.

Meanwhile, the World Bank Report (2014) notes that investments in education have their effect in labour market, particularly in employment rate a higher level of investments in education would reduce unemployment rate in transition countries and vice versa. If we refer to the figure below, in 2011 most of the countries in the region have allocated approximately the same expenditure norm for education and Kosovo has allocated expenditures in education (including innovation and research) as GDP shares of 4.19 %, which is almost the average used even by the countries of the region.

Figure 1 Education expenditure as percent of GDP in SEE countries (2011)
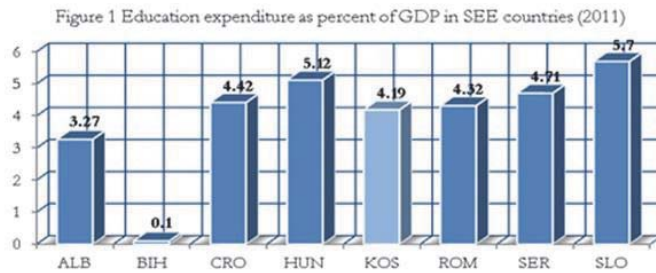
Source: World Bank 2014

Thus, it's important for policy makers to consider creation of appropriate policies in two angles: at first, they should improve education through increasing of the quality of skills and knowledge in workforce, which will effect meeting of the needs of employers in labour market; at second through reduction of structural and frictional unemployment, they can increase the job satisfaction of employees, less expenditures on unemployment benefits, and can increase efficiency in the overall economy, (Arandarenko & Bartlett, 2012). Development and reform in education system (including vocational training) should reflect in development of the labour market needs and identification of the labour market demands, and in this point Kosovo has a noticeable progress but still much remains to be done in the future, (Hoti, 2004). According to MPMS Report (2010), the main objective of the Ministry of Labour and Social Welfare of Kosovo is to adopt a Sectoral Strategy and Action Plan for increasing of employment and strengthening of vocational training, in accordance with the labour market demands. Through this strategy, Kosovo institutions aim to provide a climate of investments in education, skills and training system, then improvement of Kosovo's labour market regulations and policies (Alishani *et al*, 2014). The effects of the Sectoral Strategy were seen immediately in 2014, where the total number of participation in professional trainings in Kosovo has been increased over 2 % when compared with the figures of 2013, and also participation of women in professional training has scored positive results in 2014, (MPMS, 2015).

In the whole SEE countries, labour market has changed as of the beginning of transition processes and the main aim of these transition processes has been transformation of the labour market into modern labour market, (Cazes & Nesporova, 2004). Many researches argue that this transformation is characterised with job mobility that will be more intensified in the future and the opportunities for life-long jobs will be very rare, (Savić & Zubović, 2015). But, the processes of transition in Kosovo have had their consequences in increasing of unemployment rate and high level of informal economy, both of them in different evidence are defined as the biggest challenges for Kosovo in the last decade, (Vidovic, 2004) & (Shaipi, 2014). Kosovo is associated with large gender differences in the labour market, low participation rates of women in process of education and trainings, then employment rate for female has been low, and unemployment has been high. Therefore, in countries with transition processes, (like Kosovo) which are challenged by different problems in the labour market and low level of education, development of employability skills in SMEs and family businesses, through education and professional trainings, is very important, in order to create new opportunities for employment in these countries, (Beqiri, 2014).

3. Methodology and Data Collection

This part of research is going to describe the basic principles of the used methodology and the clear reflection over quality of data, data collection, data's use, methods of data analysis, etc. In order to estimate the effect of education (and vocational training) in labour market are used secondary data for analyses and these data are collected from annual reports of international institution such as European Commission and Kosovo's government institutions such as Ministry of Labour and Social Welfare (MPMS) and most of variables used have included period of time 2009 - 2013 (see Appendix 1/A). Then, the data are calculated through STATA program (an econometric - statistic program) and the main analyses are: descriptive statistics methods, multiple regression analysis and correlation method. The econometric models that are used in research paper aim to analyze the relationship between dependent variables (employment, youth employment and job seekers rate) and independent variables (education and vocational training) and the main analysis is based on the following equation, (Nuhiu, R. & Shala, A., 2001):

$$Ln(ED_t) + Ln(VT_t) = \beta_0 + \beta_1 ln(EM_t) + \beta_2 ln(YE_t) + \beta_3 ln(JSR_t) + \varepsilon_t \qquad (1)$$

where the main variables for analyses are as following:

- EM = Employment;
- YE = Youth Employment;
- JSR = Job Seekers Rate;
- ED = Education;
- VT = Vocational Training;
- ε_t = Standard Error;
- β_0, β_1, β_2, β_3, are included in the analysis parameters;

4. Empirical Results and Interpretations

Empirical evidence includes measurements of data collected and these data are analyzed by using statistical methods in STATA program. In table 1 is presented statistics descriptive method, which plays an important role in research and is the essential method to understanding the nature of research paper, (Knupfer & Mclellan, 1996). The result in Table 1 has shown that the minimum value of employment rate is 6.5 (which means, the lowest value of "employment rate" in the period of research) and maximum value is 10.9 (which means, the highest value of "employment rate" in the period of research), the value of mean is 8.1 (which means, average value of "employment rate" in period of research) and standard deviation values is 2.04 (it means, how many the "employment rate" variable are quite close between 6.5 to 10.9). The value of youth employment found is: the minimum equals 1.7, while the maximum is 2.6, then value of the mean and standard deviation is 2.3 respectively 0.40. Job seekers rate has values of minimum -20.3, maximum 3.4, mean -4.04 and standard deviation 9.40. The found values of education are: the minimum and maximum 3.6 and 4.1, then mean and standard deviations are 3.9 and 0.22. The findings of the values of vocational training are: minimum equals -6.8, maximum equals 11.1, and then the mean equals 3.3 and standard deviation equals 6.41.

Table 1. Statistics Descriptive Method.

Variables:	Observation	Std Deriv.	Min	Mean	Max
Employment Rate	4	2.04	6.5	8.1	10.9
Youth Employment	4	0.40	1.7	2.3	2.6
Job Seekers Rate	5	9.40	-20.3	-4.04	3.4
Education	4	0.22	3.6	3.9	4.1
Vocational Training	5	6.41	-6.8	3.3	11.1

Source: Authors estimations

In Table 2 is presented the multiple regression analysis (OLS method), and it is a statistical tool for development of a "model" to predict a wide variety of outcomes. Then, in OLS method have been made three regression analyses between dependent variables (employment rate, youth employment and job seekers rate) and independent variables (education and vocational training). The first regression analysis is between employment rate and education and vocational training; the results show that education has positive impact (β_1 = 2.20) on employment rate. Interpreting the found results the authors present that when other variable in analysis (vocational training) is fixed or constant and when education increases for a unit, it has a positive impact on employment rate with 0.47 per unit (so, it has positive impact). But, vocational training has negative impact (β_2 = -0.12) on employment rate when the other variable in analysis (education) is fixed or constant and when vocational training increases for a unit, it will have negative impact on employment rate with -0.12 per unit.

Table 2/A. Test of Ordinary Least Squares Method

	Coefficient	Std. Err.	T-Stat.	P > t	[95% Conf.	Interval]
Employment Rate						
Education	2.20	0.27	8.22	0.01	1.05	3.36
Vocational Training	-0.12	0.15	-0.85	0.48	-0.75	0.50
Youth Employment						
Education	0.58	0.05	11.10	0.01	0.35	0.80

Vocational Training	0.02	0.03	0.58	0.62	-0.10	0.14
Job Seekers Rate						
Education	-2.18	1.15	-1.91	0.18	-7.12	2.75
Vocational Training	1.03	0.63	1.65	0.24	-1.66	3.73

Source: Authors estimations

Table 2/B. Test of Ordinary Least Squares Method.

Equation	Observation	Parms	RMSE	"R-sq"	F	P
Employment Rate	4	2	1.90	0.97	37.45	0.06
Youth Employment	4	2	0.37	0.99	76.97	0.01
Job Seekers Rate	4	2	8.14	0.69	2.28	0.30

Source: Authors estimations.

In the second regression analysis, both variables (education $\beta 3$ = 0.58 and vocational training $\beta 4$ = 0.02) have shown positive impact on youth employment rate. In the third regression analysis education ($\beta 5$ = -2.18) is presented the negative impact on job seekers rate but vocational training ($\beta 6$ = 1.03) has shown positive impact on job seekers rate. Through T-statistics, we can understand the explanatory capability (or significance) that the variables have between them and the significance can be positive (T > 2) or negative (T < 2). In t-statistic analysis, three kinds of dependent variables (employment rate, youth employment and job seekers rate) have shown non - significance on independent variables (education and vocational training). In Table 2/B is calculated even the coefficient of determination and in the first regression method the coefficient of determination is R^2 = 0.97, it means that there exist a strong relation between employment rate and independent variables while 0.03% (100% - 97%) are other factors that are not included in this model of analysis. In the second regression method, the coefficient of determination is R^2 = 0.99, it is the highest coefficient of determination than two others and youth employment is quite strong. In the second regression method, the coefficient of determination is R^2 = 0.69 and it is lower than other two depend variables.

Table 3. Correlation Matrix.

Variables:	Employment Rate	Education	Vocational Training
Employment Rate	1.00		
Education	0.58	1.00	
Vocational Training	0.70	0.18	1.00
Variables:	Youth Employment	Education	Vocational Training
Youth Employment	1.00		
Education	0.70	1.00	
Vocational Training	0.11	-0.62	1.00
Variables:	Job Seekers Rate	Education	Vocational Training
Job Seekers Rate	1.00		
Education	-0.52	1.00	
Vocational Training	0.77	-0.63	1.00

Source: Author estimations.

In Table 3 is presented the Correlation Matrix, which shows the level of correlation between dependent variable and independent variables. In the first correlation matrix is presented the correlation between employment rate and independent variables (education and vocational training) and the results have shown that education (0.58) and vocational training (0.70) have positive correlation on employment rate. In the second correlation matrix is presented correlation between youth employment and independent variables (education and vocational training) and the results have shown that education (0.70) and vocational training (0.11) have positive correlation on youth employment. In the third correlation matrix education (-0.52) has shown negative correlation on job seekers rate variable but vocational training (0.77) has shown positive correlation on job seekers rate.

5. Conclusion

In this research paper is analyzed the effect of education in labour market outcomes, through the case study of Kosovo. The data used in the research are secondary data and they have been collected from international institutions and government institutions in Kosovo, then the data used in research paper include period of time 2009 - 2013. In regression analysis are made three kinds of analysis between depend variables (employment, youth employment rate and job seekers rate) and independent variables (education and vocational training). The results in the first regression analysis have shown that education has positive impact ($\beta1$ = 2.20) on employment rate but vocational training has negative impact ($\beta2$ = -0.12) on employment rate. In the second regression analysis both variables (education with $\beta3$ = 0.70 and vocational training with $\beta4$ = 0.11) have shown positive impact on youth employment. In the third regression analysis, education has shown negative impact ($\beta5$ = -2.18) on job seekers rate but vocational training has shown positive impact ($\beta6$ = 1.03) on job seekers rate. In T-Statistic analysis all variables that are included in research paper in three regression analysis have shown non - significant (T < 2) on both variables (education and vocational training). The highest value of the coefficient of determination have shown youth employment rate R^2 = 0.99, then is employment with R^2 = 0.97 and the lowest value has job seekers rate with R^2 = 0.69. Conclusion of the authors is based in improving the gap between education (the skills of the labour force) and labour market (the needs of employers). As most of the reports presented in the part two of this research Kosovo still has a high unemployment rate and a low quality of education system which doesn't correspond to the labour market needs. Thus, Kosovo as the country with the highest number of youth and as a new state having both public and private education systems remains to reinforce and improve the quality assurance policies and education system in general in order to meet the labour market needs and reduce unemployment and meet the standards of a modern economy.

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Appendixes

Appendix 1/A. Data descriptions for analysis.

Years	Employment Rate **ER**	Youth Employment Rate **YER**	Job Seekers Rate **JSR**	Education **ED**	Vocational Training **VT**
2013	6.5	2.6	3.4	4	3.7
2012	10.9	2.3	-20.3	4.1	-6.8
2011	8.5	2.5	-3.1	3.8	11.1
2010	6.7	1.7	-1.1	3.6	4.3
2009	n/a	n/a	0.9	n/a	4.15

Source: Employment rate - MLSW 2013; Youth Employment Rate - MLSW 2013; Job Seekers Rate - MLSW 2013; Education - European Commission Report, 2014; Vocational Training - MLSW 2013.

Appendix 1/B. Variable descriptions and sources for data analysis.

Variable	Description	Source
Employment rate (**ER**)	Employment rate represent persons in employment as a percentage of the population of working age (15- 64 years)	The Annual Report of Ministry of Labour and Social Welfare (MLSW), 2013
Youth Employment Rate (**YER**)	The unemployment rate is defined as the number of unemployed youth (typically 15-24 years) divided by the youth labour force (employment + unemployment)	The Annual Report of Ministry of Labour and Social Welfare (MLSW), 2013
Job Seekers Rate (**JSR**)	Job Seekers is unemployment person / group of people who is / are actively looking for employment on the labour market	The Annual Report of Ministry of Labour and Social Welfare (MLSW), 2013
Education (**ED**)	Educational attainment refers from the lowest level of schooling till the highest level of schooling that a person has reached.	European Commission Report, 2014
Vocational Training (**VT**)	Vocational training include education and training which aims to equip people with knowledge, know-how, skills and/or competencies required in particular occupations on the labour market.	The Annual Report of Ministry of Labour and Social Welfare (MLSW), 2013

Source: Authors