

THE EFFECT OF ECONOMIC GROWTH IN RELATION TO UNEMPLOYMENT

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ABSTRACT

The paper will include the macroeconomic analysis regarding economic growth under nominal GDP, in relation to the most important macroeconomic parameter, unemployment. The paper will also include the analysis of Gross Domestic Product, as an important measure of the economic growth, and that measures the living standard of the citizens of that country or state. Gross Domestic Product (GDP) is a more impeccable method for the analysis of all the transactions that are performed within a country, in order to display a macroeconomic analysis. The key point of this paper is the economic growth under nominal GDP, in relation to unemployment. The paper includes the analysis of the scatter plot graphs of nominal GDP in relation to unemployment, and also the analysis of descriptive statistic. The method of simple linear regression will be used when analysing the relation of nominal GDP in relation to unemployment.

Keywords: Economic growth, Nominal GDP, Unemployment.

JEL Classification: O₄, E₁, E₂₄

INTRODUCTION

During the last years, Kosovo had the biggest economic growth in region, for as long as the regional economies are affected by financial crisis of 2008, and later on from Eurozone debt crisis, which has touched especially some of the main commercial and investing partners in Kosovo. While Croatia and Serbia faced recession, Macedonia and Albania had a small economic growth, whereas in 2012 Kosovo had an economic growth of 3.9% of Gross Domestic Product (Pula, 2013). And, since the beginning of the financial crisis that gripped Eurozone during 2008-2012, the average economic growth of Kosovo was 4.5% (World Bank, 2012). The economic growth of Kosovo for 2016 was predicted to be 3.6%, a bit lower than in 2015 when it was 3.9%, whereas it is predicted that in 2018 the economic growth of Kosovo will reach to 3.7% (World Bank, 2016).

Due to the reason of unemployment and poverty in the country, Kosovans are necessarily obliged to accept any job offer, despite poor working conditions. The Kosovan youth are disappointed when it comes to finding a job. This has a negative effect in the future success of Kosovan youth (Baleci & Heeman, 2013). A very small percentage of young people of Kosovo are engaged in self-employment (World Bank, 2010).

The labour market in Kosovo is characterized with an increase in the unemployment rate, as new jobs have not been created in order to reduce unemployment and poverty in this country; this came due to the high market pressure of the labour force, regardless the fact that

the country has an economic growth. This economic growth is stimulated by donors' aid, remittances and so on, which recently have significantly declined. That is why we fear that Kosovo has no foundation for a sustainable economic strategy (Baleci & Heeman, 2013). It is estimated that unemployment rate is 45% (Bertelsmann Stiftung, 2012). Nowadays, Kosovo remains one of the poorest countries in the region, with an unemployment rate of 45%, and with the rate of extreme poverty of 15% (Baleci & Heeman, 2013).

At present, it can be seen that immigration keeps the youth away from their land, their social life, family, environment and friends. Illegal immigration remains a challenge for the country. Immigration of Kosovan youth is decreasing the risk of unemployment in Kosovo, since they earn the living for themselves and their families living in Kosovo. Immigration has played a crucial role in the economy of Kosovo. Most probably this will be the case even for the future (Vathi & Black, 2007; Baleci & Heeman, 2013). Kosovo, within the Western Balkan countries, is the country with the highest immigration in Europe. The immigration is encouraged mainly by the economic situation. Around 43% of the immigrants left Kosovo because of economic reasons. Their main destination was Germany and Switzerland (World Bank, 2011).

So, despite continuous economic growth, its effect on unemployment reduction and poverty is little. Therefore, the following analysis will elaborate the relation between economic growth under nominal GDP, in relation to unemployment in Kosovo.

THEORY AND EXISTING LITERATURE

A range of theories and competing attitudes in the study of economic development were reviewed, representing the method of strong and weak points. Therefore sometimes derive contradictory values from state to state. In this regard, the practice of China can be considered. The empirical results show that Chinese economy has undergone a structural change, so to change and identify the main economic parameters involved in this process of economic growth (Todaro & Smith, 2012). The results of the accumulation of the capital are when in the majority of the cases the current incomes are saved and invested, in order to increase the production in the future. The investment in human resources can improve the quality of the living standard of that country, and could have a more positive effect in GDP (Todaro & Smith, 2012). The main intention of the economic policies is to fix inequalities inside and outside a state, within International World Policies (Patrakos et al., 2007).

Since the end of the 1980s, macroeconomists' attention has been shifted to Governmental Policies on long-term rate of economic growth. This change reflected partially on recognition that the difference between prosperity and poverty in a country depends on how fast the economy of that country grows in different time periods. Except fiscal and monetary policies which play an essential role in economic development, there are other factors in addition that characterize a state; that has to do with the character of a nation, under Basic Politics, Law and Economic Institutions (Barro, 1999). Economic policies can affect some aspects of economy through investments in human capital, legal infrastructure, in the improvement of legal and political stability and so forth. The stability of macroeconomic environment can be in favour of the increase of economic development of a country, by being focused on inflation, fiscal policy, budget deficit and tax load. These parameters influence the growth and development of that country. Being open towards the trade with other countries, has been mentioned widely in literature of economic growth, as a determiner of the economic

performance increase of that country. There are sane theoretical reasons to believe that there exists a strong and positive connection between opening the trade doors to other countries, influencing growth and economic development. This can be done in several ways such as: using comparative advantage, transfer of technology and knowledge-sharing (Patrakos et al., 2007).

The relationship between demographic tendencies and economic growth has attracted a lot of attention especially in the last years. It appears that also some other factors played a key role in economic growth such as: population growth, density of the population, age and so on (Kormendi & Meguire, 1985; Dowrick, 1994; Kelley & Schmidt, 1995; Barro, 1997; Bloom & Williamson, 1998; Kelley & Schimdt, 2000).

The well-know economist Arthur Okun, was the first who started the tackling of discussion in the 1960s. His research and his research on the subject has since become known as Okun's law. Okun's law investigates the statistical relationship between a country's unemployment rate in relation to the growth rate of its economy. Okun's law aims to tell us or to reflect the statistical data regarding the increase of percentage of unemployment rate and economic growth. More specifically, according to the version of Okun's law, "to achieve a decline for one percent (1%) in the unemployment rate, then real GDP must grow approximately 2%. If the unemployment rate decreases for 1%, then GNP will increase to 3% (Fuhrmann, 2012).¹ Another version of Okun's Law displays the relationship between unemployment and GDP, whereby the percentage increase of 1% in unemployment, causes a 2% fall in GDP. The Okun's Law is not a very exact determinor, however the empirical evidence still holds on its benefits (Fuhrmann C., 2012).

Kosovo has become a state in the last years, so the consumption for different products and for capital investments in the recent years, was rising. But, nowadays Kosovo remains one of the poorest countries in region, whereas Kosovans aged between 15-24 years old, are the most affected ones from unemployment (ASK, 2009). The fact that Kosovo has the youngest population in Europe and considering the number of the youngsters who finish secondary school every year and enter the labour market, this will only continue to put pressure on the labour market and in social services in Kosovo (Baleci & Heeman, 2013). Most of the firms do not have any income increase, but instead sometimes there is a decrease; the demand for new workforce has not changed for the better, there are also a considerable number of the firms that operate informally and in this way negatively affect the labour productivity of other businesses (World Bank, 2010). EU countries keep representing the main source of Foreign Direct Investments (FDI) in Kosovo (Central Bank of the Republic of Kosovo (BQK), 2012).

DATA AND CONTEXT

We have economic growth trend when in a long run there is continuous production. The measure of the trend requires series of macroeconomic data for a long time period, in order to identify different phases of the cycle and to extract average range of growth year after year. Economic growth trends of the most developed countries in the world, have resulted in theoretical and also in empirical aspect, that the economic growth under GDP has affected the improvement of citizens' welfare for that country. This had an impact on poverty alleviation through increase in investments and employment. Thus, the data of unemployment in Kosovo and the data of nominal GDP will be presented in a chart below.

Years	Nominal GDP (million)	Percentage of nominal GDP %	Unemployment %
2004	2911.8	-	39,7 %
2005	3002.8	3.12 %	41,4 %
2006	3120.4	3.91 %	44,9 %
2007	3460.8	10.90 %	43,6 %
2008	3882.7	12.19 %	47,5 %
2009	4069.6	4.81 %	45,4 %
2010	4401.9	8.16 %	38,1 %
2011	4814.6	9.37 %	38,1 %
2012	5058.7	5.06 %	30,9 %
2013	5326.6	5.29 %	30 %
2014	5567.5	4.52 %	35,3 %

Source: Author's calculation (data by the Statistical Office of Kosovo, 2016).²

The highest percentage of nominal GDP for these years was in 2008, with an increase of 12.19%. One of the factors that affected this highest increase of nominal GDP in the recent years is after Kosovo was self-declared as an independent country. After that, many new ministries were established, new inventory was bought for them, a great number of people were employed in these ministries, the construction of schools, universities and roads began. Another factor that had an effect in the increase of nominal GDP is the increment of the loans taken by the Government from international institutions, to be used for capital investments. So, after the independence of Kosovo, all of these factors have positively influenced economic growth throughout these years. The lowest increment of nominal GDP was in 2005, with a decrease of 3.12%. This percentage is the lowest in these years, due to the changes in elections, in the frame of government formation after elections. Moreover, Kosovo was under international administration.

From this chart (Chart 1) it can be seen that every year, in average the poverty range has declined, but these changes are small. The year with the highest poverty rate during these years, is 2008 where the unemployment was 47.5%; whereas the lowest general poverty rate in these years is in 2013, where the unemployment rate was 30%.

In the sequence of this paper, the results and the analysis of the data from chart 1 will be presented by analysing them through the means of scatter diagram, descriptive statistics and through the analysis of simple linear regression.

EMPIRICAL ANALYSIS

In this paper the analysis of secondary data will be conducted, taken from relevant institutions that deal with the issue of economic growth under nominal GDP in relation to Unemployment. This analysis will be helpful to reach a perception of socio-economic analysis in the country, and to be able to identify analysing parameters about nominal GDP compared to unemployment, based on the data of Kosovo Agency of Statistics. Regarding nominal GDP, we have data from 2004-2014, whereas for real GDP we have data only for the time period 2006-2014. Given that for nominal GDP we have data for two years more, compared to the real GDP, the paper will only include nominal GDP.

The paper includes scatter plot graph analysis between nominal GDP in relation to unemployment. Then, the analysis of descriptive statistics will be included, and in the end the method of simple linear regression will be used comparing unemployment and nominal GDP, as a more suitable and sophisticated model for such analyses. The formula of this analysis will be:

$$U = \beta_0 + \beta_1 \text{GDP}_n + \varepsilon \quad (1)$$

These symbols represent: U – Unemployment, GDP n - Gross Domestic Product (nominal).

In this paper, the data of 2004-2014 will be used, as there are no records before 2004, this due to the fact that Kosovo was occupied until 1999. Therefore, these data for the 11 years period are sufficient for such analysis in order to reach a conclusion.

Sequentially, in this paper, the results and the analysis of the data from chart 1 will be presented by analysing them through the means of scatter diagram, descriptive statistics and through the analysis of simple linear regression.

Descriptive Statistics

Before analysing the model of simple linear regression under unemployment in relation to nominal GDP, the descriptive statistics of these two variables will be presented.

Variable	Obs	Mean	Std. Dev.	Min	Max
u	11	39.53636	5.780878	30	47.5
gdp	11	4147.036	958.4714	2911.8	5567.5

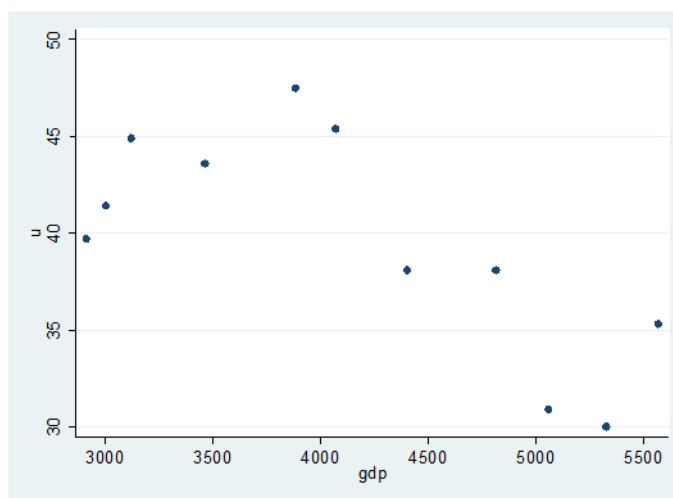
Source: Author's calculation

In this chart (chart 2) two variables are included: unemployment and nominal GDP.

The number of observations is 11, where general unemployment in average is 39%, with standard deviation of 5.7 %, whereas the minimum value of unemployment is 30%, and the maximum is 47%.

Nominal GDP with average of the value is 4 147 million €, with standard deviation 958 million €, whereas the minimum of the value of nominal GDP is 2 911 million €, with maximum being 5 567 million €.

In the sequence, we will present graphically through scatter plot graph, the relation between these two variables.



Graphic 1

SCATTER PLOT GRAPH BETWEEN UNEMPLOYMENT IN RELATION TO NOMINAL GDP

Source: Author's calculation

In this graphic (graphic 1) it can be noticed that these two variables have a negative relationship between them.

Results

For this analysis, the method of simple linear regression model between two variables will be used. One variable will be dependent, whereas the other independent. As a dependent variable in this analysis will be general unemployment in Kosovo (P), and as independent variable will be the nominal GDP. GDP is a measurement parameter of economic growth within a country or a state. The model of simple linear equation is:

$$y = \beta_0 + \beta_1 x + \varepsilon \quad (2)$$

Therefore, by applying this formula one can also use simple linear regression model, by using the dependent variable – Unemployment (U) and the independent one – nominal GDP as a measure of economic growth. The model will be:

$$U = \beta_0 + B1 \text{ GDPn} + \varepsilon \quad (3)$$

These symbols represent: U – Unemployment, GDPn –nominal GDP

In this formula are included parameters β_0 and β_1 , as parameters of the model of simple linear regression, whereas ε represents error terms.

The results of simple linear regression analysis can be seen in the following chart. In this chart two variables are included, one of them is dependent and the other is independent.

Source	SS	df	MS		Number of obs= 11	
Model	171.1617	1	171.161701		F(1, 9) =	9.45
Residual	163.0238	9	18.1137559		Prob > F =	0.0133
					R- squared =	0.5122
					Adj R-squared =	0.4580
Total	334.1855	10	33.4185504		Root MSE =	4.256
u	Coef	Std. Err.	t	p> t 	{ 95% Conf. Interval }	
gdp	-0.00432	0.001404	-3.07	0.013	-0.00749	-0.00114
_cons	57.43673	5.962932	9.63	0	43.94764	70.92582

Source: Author's calculation

In this chart (chart 3) it can be seen that these two variables have a negative relationship, meaning general poverty as a dependent variable compared to nominal GDP as an independent variable. Within its parameters, GDP measures the economic growth of a country or state.

In the frame of this analysis and this model of simple linear regression, the following form is obtained:

$$U = 57 + (- 0.0043) \text{GDP}_n \quad (4)$$

From this result, the ordinate in origin (y – intercept) of the assessed regression line is 57, whereas GDP is - 0.0043. From this derives that these two variables have a negative relationship between them.

In that chart it can also be seen that between these two variables the level of significance is 0.013, which is lesser than the test $F = 0.05$. The model suggests that if nominal GDP increases for 1%, then it will have a negative effect in general poverty alleviation in average of - 0.43%.

CONCLUSIONS

The increment of nominal GDP has had a very low influence in general poverty reduction, as the unemployed people are poor, and the influence of this economical growth has not affected satisfactorily their living standard, taking into consideration the difficulties of finding a job in Kosovo. That shows better the proportion of economic growth and unemployment and poverty in Kosovo. The life of citizens of Kosovo is continuously being hampered, and as their only choice they see emigration in different countries of Europe, taking into account the abovementioned numerical data. Kosovo had an economic growth in the last years, but unemployment and general poverty had a small decrease. This growth is not contributing in welfare improvement of the citizens, taking into account that emigration is increasing; this growth is not improving the living standard as still there are difficulties in employment; and is not reducing the extreme poverty in the country, because citizens keep trying to emigrate in different countries of Europe, so to they have a better life. The recent reports of the world media such as: BBS, The New York Times, The Guardian, imply that the majority of the youth want to move in different European countries. The latest case is that many people from Kosovo are applying for asylum in European countries, and Kosovo

outperforms other countries of Western Balkans when it comes to the highest number of asylum seekers.

In this paper we have elaborated and analysed the simple linear regression, and nominal GDP compared to unemployment. The empirical findings of these two variables are meaningful and have a negative effect. The level of significance is 0.013, which is less than level of the test $F = 0.05$ or 0.025 , and the model suggests that if the nominal GDP is increased for 1%, then it will have a negative effect on unemployment reduction in average of -0.43% . Therefore, we conclude that the economic growth under nominal GDP has influenced in general unemployment alleviation, based on the processed results and the analysis conducted through simple linear regression.

It could be concluded that the Government should make a radical change in the process of the approach towards economic growth, based on rule of law. This would affect the increment of foreign investments in the country, indirectly helping and stimulating businesses that employ more employees, helping the agriculture business, by changing the approach of public investments. All these factors would influence unemployment reduction and this reduction would influence general poverty alleviation and the decrease of emigration.

END NOTES

1. Article, "Rational Analyst", Ryan C. Furhmann, CFA, Okun's Law: Economic Growth and Unemployment, published with date: 13.12.2012, pp. 1-6.
2. The data were obtained by yearbook report of Kosovo Agency of Statistics for the years 2014, 2015, 2016. We have no statistical data for unemployment in Kosovo for the years 2010 and 2011, but it was calculated by finding the average from 2009 until 2012, and for these two years (2010 and 2011) on the average is 38.1%.

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