Parameters of Economic Growth in Kosovo

Sh. Misini, M. Badivuku

Shkumbin Misini
Faculty of Economics, University of Gjilan “Kadri Zeka”, Kosovo
Myrvete Badivuku
Faculty of Economics, University of Prishtina “Hasan Prishtina”, Kosovo

Abstract
This paper analysis the macroeconomic components that influenced macroeconomic growth in a country, more concretely, the focus will be on the measurement of components that affected economic growth under nominal GDP, in Kosovo. We intend to found out which component of nominal GDP has the biggest and the lowest influence on economic growth. Thus, in order to measure it, GDP components must be analysed: consumption measurement, investments measurement, government expenditures measurement and export measurement. These parameters will be measured by analysing their importance in relation to one another, and the major influence on the growth of nominal GDP. The paper includes a graphic analysis of nominal GDP in relation to consumption, investments, governmental expenses and export.

Keywords: nominal GDP, consumption, investments, government expenditures, export.
Introduction
According to the reports of World Bank and International Monetary Fund, since 1999, Kosovo is in the trend of economic growth. We do not possess any exact data when it comes to economic growth of Kosovo during the time period 1999-2003\(^1\). However, from 2004 until 2014 we possess dates from the World Bank and Kosovo Agency of Statistics.

During the last years, Kosovo had the biggest economic growth in the region, for as long as the regional economies are affected by the 2008 financial crisis, and later from the 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).

Currently Kosovo is facing many macroeconomic problems, regardless the fact that in the last years Kosovo had an economic growth. But, its economy keeps facing extraordinary challenges, poverty problem, unemployment and immigration (Baleci and Heeman, 2013). Huge influences on economic growth have Diaspora incomes. The Diaspora influence is meaningful, based on the survey of Riinvest Institute of 2007. Approximately 70\(\%\) of the immigrants send remittances in their families in Kosovo and the research shows that 70\(\%\) of the immigrants visit Kosovo, and influence the growth of general consumption through the expenses made during the visit (Instituti Riinvest, 2010).

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\(^1\) Note: Up to 1999 Kosovo was occupied. After 1999 it had a Resolution from Security Council of United Nations (UN), which has been established for an International Administration in Kosovo. This margin functioned until 2007, whereas since 2008 Kosovo has the Constitution of the Republic of Kosovo, as an independent and sovereign state.
Remittances play an important role in Kosovo’s economy. In 2006 remittances were in the amount of 184.7 million euro, whereas in 2012, 218.6 million euro (BQK, 2013). However, there is a larger amount of remittances coming from Diaspora through their friends and family. These remittances are not registered and it is very difficult to measure them. According to data obtained from Anadoly Agency (AA), Kosovo is the major beneficiary of immigrants’ remittances, where the yearly amount of these remittances is 700 million euro (Koha Ditore, 2016).

World trends of the most developed countries show that the financial crisis had a great impact on worldwide economic development, affecting economic decrease, decrease of foreign investments, of public investments, of export in a worldwide level, and of granting soft loans by the most developed countries. Therefore, it can be said that the crisis directly and indirectly affected and is affecting the Kosovo’s economy. In this paper we will analyse which indicators had the greatest and the lowest impact on economic growth, through measuring the nominal GDP components.

**Literature review**

The starting point of the conventional theory of economic growth is the neoclassic model. The basic assumptions of the model emphasize the Savings and Investments as GDP indicators, being very important determiners of economic growth for short-term and long-term periods. For long-term periods of economic growth, the technical process is to be mentioned; that is the reason why it was not analyzed in an adequate manner, going back to the issue of convergence and divergence, as a model that affects the rates of economic growth, and based on the fact that the economy of poor countries will increase faster compared to the economy of rich countries. The involvement of technological factors will directly influence the growth and economic development of a country (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 the 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 the economy through investments in human capital, legal infrastructure, the improvement of legal and political stability, and so forth. The stability of the 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. At the same time, there are some 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 scale of international openness was measured by the report on Export and Import. This scale is very sensitive towards the size of a country; the big countries have a tendency to relatively be supported in foreign trade (Barro, 2003). Foreign Direct Investments (FDI) has recently played a role in economic activities and they are the main source of technology transfer and economic growth on long-term periods (Patrakos et al., 2007). The investment in human resources can improve the quality of the living standard of that country, and can have a more positive effect in GDP (Todaro and Smith, 2012).

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 and so on (Kommendi and Meguire, 1985; Dowrick, 1994; Kelley and Schmidt, 1995; Barro, 1997; Bloom and Williamson, 1998; Kelley and Schmidt, 2000).

A range of theories and competing attitudes in the study of economic development have been reviewed, representing the method of strong and weak points. Therefore sometimes derive contradictory values from state to state (Todaro and Smith, 2012). Economic policies aim at fixing inequalities inside and outside a state, within International World Policies (Patrakos et al., 2007). The economy of Kosovo is increasing each year. In 2015, economic growth was 3.9%; in 2016 was 3.6% (World Bank, 2016). But, despite the fact that the economy of Kosovo is increasing each year, Kosovo still faces the problem of unemployment and poverty.
Kosovo has become a state in the last years (2008), 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 the region, with an unemployment rate of 45%, and with the rate of extreme poverty of 15% (Baleci and Heeman, 2013). It is estimated that unemployment rate is 45% (Bertelsmann Stiftung, 2012). Most of the firms do not have any income increase, but instead sometimes there is a decrease; the demand for employment 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 (Banka Qendrore e Kosovës – BQK, 2012).

**Data and context**

Determinants growth rate of many countries differ extremely in different periods. The reason for these changes lies in the economic policies of that country (Barro, 2003). The macroeconomic indicators in Kosovo have marked an economic growth in the last 11 years. The economic growth in 2015 was 3.9%; in 2016 was 3.6%, whereas it is predicted for 2017 to be 3.9%, and for 2018, 3.7% (World Bank, 2016). Although Kosovo has an increasing economy growth rate each year, it is again facing macroeconomic problems such as unemployment, poverty and immigration.

Therefore, we will analyse nominal GDP components as a measure of economic growth for a country, and as a measure of the living standard of the citizens. The data in the analysis belong to the time period 2004-2014, because only for this timeframe the data regarding consumption, investment, government expenditures and export could be obtained. The table below clearly shows the changes in consumption, investment, government expenditures, export, import and percentages of nominal GDP. In the table below we can see the connection between nominal GDP and its components that have affected and are affecting economic growth in Kosovo. Therefore, in order to analyse the nominal GDP components with the data, the method of multiple linear regression will be used, as one of the most suitable means for econometric analyses.
Table no. 1. The dynamics of the variables included in the model (2004-2014) (million €)

<table>
<thead>
<tr>
<th>Years</th>
<th>GDP nominal</th>
<th>cf</th>
<th>cg</th>
<th>i</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>2911.8</td>
<td>2487.6</td>
<td>725.1</td>
<td>701.2</td>
<td>310</td>
</tr>
<tr>
<td>2005</td>
<td>3002.8</td>
<td>2638.4</td>
<td>729.2</td>
<td>722.2</td>
<td>332.8</td>
</tr>
<tr>
<td>2006</td>
<td>3120.4</td>
<td>2770.8</td>
<td>695.4</td>
<td>798.3</td>
<td>441.4</td>
</tr>
<tr>
<td>2007</td>
<td>3460.8</td>
<td>3145.9</td>
<td>664.7</td>
<td>892.5</td>
<td>547.1</td>
</tr>
<tr>
<td>2008</td>
<td>3882.7</td>
<td>3488.9</td>
<td>683.3</td>
<td>1208.7</td>
<td>608.9</td>
</tr>
<tr>
<td>2009</td>
<td>4069.6</td>
<td>3528.5</td>
<td>693.1</td>
<td>1267.4</td>
<td>694.9</td>
</tr>
<tr>
<td>2010</td>
<td>4401.9</td>
<td>3768.2</td>
<td>748.3</td>
<td>1450.6</td>
<td>878.0</td>
</tr>
<tr>
<td>2011</td>
<td>4814.6</td>
<td>4142.3</td>
<td>833.2</td>
<td>1632.4</td>
<td>943.4</td>
</tr>
<tr>
<td>2012</td>
<td>5058.7</td>
<td>4458.1</td>
<td>862.3</td>
<td>1465.1</td>
<td>922.1</td>
</tr>
<tr>
<td>2013</td>
<td>5326.6</td>
<td>4652.4</td>
<td>886.9</td>
<td>1470.9</td>
<td>927.1</td>
</tr>
<tr>
<td>2014</td>
<td>5567.5</td>
<td>4926.2</td>
<td>929.1</td>
<td>1434.9</td>
<td>1091.5</td>
</tr>
</tbody>
</table>

Source: Kosovo Agency of Statistics (2016)

According to the structural theory, the key variables in economic growth are government indicators such as government expenditures and total investments (percentage of GDP). The structural theory suggests that both these variables have a positive effect on GDP, because they increase the influence of state intervention and stimulate the economy. These two variables show the manner in which governments can use fiscal policy to urge economic growth. The economists that support this theory believe that government expenditures and investments are necessary for economic growth (Stiglitz, E. J., 2009). The export of goods and services represent the demand of other countries for products.

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Note: Gross Domestic Product in expenditure approach (2004-2014), the values in the table are in million euro
and services, and is an independent variable that has connection with dependent variable under economic development. Many theories and practices of other countries have shown that the influence of export in economic growth is positive.

The numerical data for the selected variables which are presented in the table, in order to be used in the model, are obtained from the Kosovo Agency of Statistics and they are in nominal amount (million euro, €). Hence, through multiple linear regressions, it is necessary to have a longer series of the data. However, the data we have for the time period of 11 years are sufficient for such an analysis, in order to reach to conclusions. In our case, we are in possession of data only for the time period 2004-2014.

**Empirical analysis**

The main aim of this study is to get information on current development of economic growth in Kosovo, by presenting different analysis regarding this process. This study aims to analyze and study deeper the current situation in the country, regarding the process of economic growth in Kosovo under nominal GDP.

In this paper the analysis based on the data and the results obtained from international institutions and Kosovo Statistics Agencies will be conducted. At the same time, the analysis of secondary data will be conducted, taken from relevant institutions that deal with the issue of economic growth and the measurement of this increase through nominal GDP components. This analysis will be helpful to reach a perception of socio-economic analysis in the country, and to identify the parameters which influence economic growth, through nominal GDP. For nominal GDP we possess data for a longer time period compared to real GDP. That is the reason why in this analysis nominal GDP was included due to the available data for a longer time period. Nevertheless, both, nominal and real GDP are an economic mirror for a country.

The paper includes the analysis of the graphs through components such as consumption, investments, government expenditures and export, and their relation compared to nominal GDP. The variables used in the model are defined as follows: nominal GDP are a dependent variable, while independent variables are considered:
family consumption (cf), government consumption (cg)\(^3\), investments (the formation of gross capital)\(^4\) and export.\(^5\)

Thus, taking into account the presented variables, the equation for analysing these variables will be:

\[
\text{GDP}_n = \beta_0 + \beta_1 \text{cf} + \beta_2 \text{cg} + \beta_3 \text{i} + \beta_4 \text{e}
\]  \hspace{1cm} (1)

The symbols represent:
GDPn – Gross domestic product (nominal)
cf – Family Consumption
cg – Government Expenditure
i – Investment
e – Exports

Sequentially in this paper, the analysis of descriptive statistics will be presented.

**Descriptive Statistics**
Before the results of the regression model will be analysed, we will present and discuss the descriptive statistics of the variables that are used in the model.

**Table no. 2.** Descriptive statistics: Nominal GDP, Family Consumption, Government consumption, Investment and Export

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>gdp</td>
<td>11</td>
<td>4147.036</td>
<td>958.4714</td>
<td>2911.8</td>
<td>5567.5</td>
</tr>
<tr>
<td>cf</td>
<td>11</td>
<td>3637.027</td>
<td>835.6632</td>
<td>2487.6</td>
<td>4926.2</td>
</tr>
<tr>
<td>cg</td>
<td>11</td>
<td>768.2364</td>
<td>92.57053</td>
<td>664.7</td>
<td>929.1</td>
</tr>
<tr>
<td>i</td>
<td>11</td>
<td>1185.836</td>
<td>344.0986</td>
<td>701.2</td>
<td>1632.4</td>
</tr>
<tr>
<td>e</td>
<td>11</td>
<td>699.7455</td>
<td>270.299</td>
<td>310</td>
<td>1091.5</td>
</tr>
</tbody>
</table>

**Source:** Author’s calculation

\(^3\)The expenditures of final consumption of the Government - Kosovo Government, donators (salaries), foreign employers, local employers, the expenditures of final consumption of non-profit institutions serving households (NPISH)

\(^4\)Gross fixed capital formation and changes in inventory

\(^5\)Gross fixed capital formation and changes in inventory
From the descriptive statistics point of view, it can be noticed that the number of observations is 11, whereas the variables used are: Nominal GDP (gdp), family consumption (cf), government consumption (cg), investments (i) and export (e).

Average GDP within the years is 4,147 million €, with a standard deviation 958 million €.

The minimum value of GDP is 2,911 million €, whereas the maximum value is 5,567 million €.

The average family consumption for a year is 3,637 million €, with a standard deviation of 835 million €. The minimum value of family consumption is 2,487 million €, whereas the maximum value is 4,926 million €.

Regarding government consumption, the yearly average is 768 million €, with a standard deviation of 92 million €. The minimum value is 664 million €, whereas the maximum value is 929 million €.

Investments are in average 1,185 million €. The standard deviation is 344 million €, the minimum value is 701 million €, while the maximum value 1,632 million €.

In average, the export is 699 million €, with a standard deviation of 270 million €, the minimum value 310 million € and the maximum value 1,091 million €.

Sequentially, using graphics through scatter plot diagram, we will notice the connection between the dependent variable (GDP), in relation to each independent variable (cf, cg, i, e).

**Fig. no. 1.** The scatter plot diagrams of GDP in relation to CF, GDP in relation to CG, GDP in relation to i, and GDP in relation to e.
Taking into consideration the graphical representation of data which show that a positive linear connection between nominal GDP in relation to individual variables exists, after data processing with STATA software, the chosen model of linear regression will be as follows:

\[
\text{GDP} = -317 + 0.838c + 1.07c f + 0.384i + 0.196e \quad (2)
\]

From this formula it can be seen that \( \beta_0 \) has the negative sign of -3.17, that represents the regress estimated ordinate in origin (y – intercept), whereas the results of \( \beta_1 \) are 0.838 and represent family consumption; the result of \( \beta_3 \) is 1.16 and represents expenditures and government investments, \( \beta_3 \) in investments are 0.384; and the last independent variable is export with \( \beta_4 \) with the value of 0.196. Based on this formula, it can be notices that it exist a positive linear connection between dependent and independent variables.

**Results**

The results of linear regression for the studied variables as determiners of nominal GDP increase, and the coefficient and the level of significance are shown in the following chart:
Table no. 3. Regression analysis

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>Number of obs = 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>9172489.6</td>
<td>4</td>
<td>2293122.4</td>
<td>F( 4, 6) = 970.02</td>
</tr>
<tr>
<td>Residual</td>
<td>14183.9672</td>
<td>6</td>
<td>2363.9953</td>
<td>Prob &gt; F = 0.0000</td>
</tr>
<tr>
<td>Total</td>
<td>9186673.56</td>
<td>10</td>
<td>918667.356</td>
<td>R-squared = 0.9985</td>
</tr>
</tbody>
</table>

| gdp | Coef. | Std. Err. | t     | P>|t| | [95% Conf. Interval] |
|-----|-------|-----------|-------|-------|----------------------|
| cf  | .8383528 | .0942632 | 8.89  | 0.000 | .6076989 | 1.069007 |
| cg  | 1.070463 | .3488687 | 3.07  | 0.022 | .2168122 | 1.924114 |
| i   | .3840605 | .1530133 | 2.51  | 0.046 | .0096505 | .7584706 |
| e   | .1967286 | .3357236 | 0.59  | 0.579 | -.6247575 | 1.018215 |
| _cons | -317.537 | 204.0539 | -1.56 | 0.171 | -816.839 | 181.765 |

Source: Author’s calculation

If the results of linear regression are analysed, it will be seen that all the studied variables have a positive effect on GDP increase, which was also obvious even through graphical representation. But, the variables with the biggest statistical importance are the consumption of the families and the government consumption. Their influence appears to be the most important and the largest for the observed time period. This is understandable for the situation of the economy of Kosovo, as GDP mainly relies on family consumption and government expenditures.

In the regression analysis, the variable with the major influence and statistically importance are family consumption. The model suggests that if family consumption increases with 1 euro, the average GDP will increase with 0.838 euro, with the condition that other variables are unchangeable and constant. With other words, if family consumption increases with 1 million euro, the average of Kosovo’s GDP will increase with 838 000 euro, if other variables remain constant.

The other variable with statistical importance is government consumption in the level of significance 0.022. If government expenditures increase with 1 euro, the average GDP will increase with
1.07 euro, when other variables remain unchanged. Or, if the government invests 1 million euro, the GDP in average will increase with 1.07 million euro, when other variables are constant.

The other variable with statistical importance is investment (the formation of gross capital) with the level of significance 0.046. The model implies that if investments grow with 1 euro, the GDP will increase with 384,000 euro, if other variables remain constant.

Export has also a positive influence on GDP growth, but based on the results, the influence is insignificant for the studied time period in the level of significance 0.579. The model implies that if export increases with 1 million euro, GDP will increase with 196,000 euro, when other variables remain constant.

If the determination coefficient that has the value 99.8% is analysed, it can be concluded that the chosen model is very suitable due to the value 99.8%. In this case, GDP can be explained through the variations of independent variables.

In addition, if we study the analysis of the variation of the explainable and unexplainable variables and the total variation, it can be noticed that the statistically chosen model is significant because the calculated value $F$ is bigger than the chart value of $F$ test; this means that at least one of the linear regression coefficients is different than zero.

In our case we have two coefficients that are different from zero ($\beta_1$) and ($\beta_2$), in the sense that they are statistically important and have a larger influence in the explanation of the dependent variable. This can be verified even through probability criteria; in our case the value of $p$ is 0.000, smaller than the level of significance 0.05, or 0.025.

**Conclusions**

Based on the results gained through descriptive statistics analysis, graphics and multiple linear regressions, we concluded that the component that influenced the most and is still influencing the economic growth within the measurement of nominal GDP is family consumption. The influence of this component on GDP is the highest and has a level of significance of 0.0001.

The factor that is influencing the most the increase of family consumption in Kosovo is the remittances from Diaspora. It is also influenced by the increase in the family’s income.
The second component that has influenced and is influencing economic growth under nominal GDP is government expenditures, where capital investments and consumption expenditures are included. These expenditures and government investments were high and continuously growing, as the war in Kosovo ended in 1999 and in 2008 it became an independent state. Investments where made in new ministries establishments, government capital investments, constructions of schools and universities and so forth. All of the above-mentioned had and are influencing economic growth under nominal GDP measurement. By analysing the empirical findings in this study, it can be concluded that nominal GDP component results to have the significance 0.022.

The third component with the highest influence after the family consumption and government expenditures is investment. Based on the analysis and empirical findings using multiple linear regressions and also the most impeccable program STATA, it can be concluded that investments has influence on economic growth under nominal GDP. The influence is in the level of significance 0.046.

One of the factors that had and is still influencing this component is financial crisis, which affected the decrease of the aids and donations for the poor countries after 2008.

The fourth component with the lowest influence compared to family consumption, government expenditures and investments, is export. The trade balance in Kosovo is negative, and the difference between export and import is high. This is due to the fact that import is higher than export that is why in this analysis only export is included. Import was not included, as it is negative.

Based on empirical findings, it results that export has a positive influence on economic growth under nominal GDP for the observed time periods, and is insignificant in the level of significance 0.579. The results of this component are reasonable, because the trade balance of Kosovo is different from the other countries. Moreover, export shows that the Kosovo citizens are more consumers than producers. This negatively affects the improvement of the living standard of the citizens.

Therefore, if the average relation of import being 88% and of export 12% should change, economic growth would be more stable and have a larger influence on other macroeconomic parameters.

These economic growth components are not improving the economic situation in the country. The biggest beneficiaries of
economic growth in Kosovo are the importers, government contractors that are related with the government through political parties and family relations.

Kosovo’s economy mainly relies on the remittances from Diaspora, but in the long-term it will fade, taking into account the remittances’ decrease in other Balkan countries.

Economic growth in long-term run should be based on the reduction of trade deficit, by having an impact on stimulating businesses to export, because this is a more stable parameter. It can also keep economic growth constant and would have a macroeconomic impact on that country, by reducing unemployment and poverty.

Government should execute a radical change in the process of approaching the growth of economy, by not dealing only with budget collection, but should analyse which GDP component would influence economic growth and its stability, and thus improve the living standards for the citizens. With any other government perception, based on the rule of law, there would be an influence on increasing foreign investments, indirectly helping and stimulating the businesses, helping agriculture through subventions, changing the approach of public investments and so on. All these factors would positively influence economic growth and its stability that would contribute in unemployment and poverty alleviation. Moreover, it will influence the increase of living standards of Kosovo citizens, followed by immigration decrease.

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