KEY MACROECONOMIC INDICATORS OF ECONOMIC GROWTH IN THE CASE OF DEVELOPING COUNTRIES

Nazmi Iballi *, Remzi Smajli **, Besime Ziberi *

* Faculty of Economics, AAB College, Pristina, the Republic of Kosovo
** Corresponding author, Faculty of Economics, AAB College, Pristina, the Republic of Kosovo
Contact details: AAB College, St. Elez Berisha, No. 56 Fushë Kosovë Industrial Zone, 10000 Prishtina, the Republic of Kosovo

Abstract

The neoclassical Solow-Swan economic growth theory of 1956, also known as the exogenous growth model, advocates for the accumulation of physical capital as an important driver of economic growth in the short run, while technological advancement is the key determinant of economic growth in the long run (Chirwa & Odhiambo, 2016). The main aim of this study is to measure the impact of some key macroeconomic factors, which influence the economic growth of a developing country, in our case, the Republic of Kosovo. This study uses secondary data from The World Bank Indicators for the time period 2010–2020. In this study, the ordinary least squares (OLS) econometric model is employed, the dependent variable used is the gross domestic product (GDP) growth, and the independent variables used are private consumption, remittances, export, and employment. Growth in an economy is measured by a change in the volume of its output or the real expenditure or income of its residents (The World Bank, n.d.-d). The study comes to the conclusion that the OLS model is important under the study circumstances thus the independent variables such as consumption, employment, exports, and remittances have a positive impact on Kosovo’s economic growth measured by GDP. The study comes with further recommendations such as increasing employment, using more effectively the remittances received from the diaspora, and increasing the exports for Kosovo to gain economic growth and sustainability.

Keywords: GDP, Consumption, Employment, Remittances, OLS Model, Regression

Authors’ individual contribution: Conceptualization — N.I., R.S., and B.Z.; Methodology — N.I., R.S., and B.Z.; Data Curation — N.I., R.S., and B.Z.; Writing — Original Draft — N.I., R.S., and B.Z.; Writing — Review & Editing — N.I., R.S., and B.Z.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

1. INTRODUCTION

The economies of all countries around the world claim sustainable economic growth and development, orienting in this direction in both fiscal and monetary policy. In principle, not every economy of every country is affected by the same factor of economic growth. If a foreign investment can be a determinant that affects economic growth in the economy of a country, this does not mean that this determinant or factor would have the same effect on the economies of other less developed countries. This is because today all the politics of the countries are oriented toward economic growth, as it is known that it has always been and continues the tradition of leadership by countries that have more developed and more stable economies (The World Bank, 2017a). That is why the countries of Southeast Europe (SEE) claim towards development...
and economic growth that would make its inhabitants have a better life with high well-being, affecting the general health both physically and psychologically and many other impacts that emerge as a result of economic growth.

The countries of Southeast Europe, which were part of the former Yugoslav system after the 1990s, were transitioning. Their transition in the political and economic aspects where some of the countries were accompanied by other wars only worsened their situation even more (Gjipali, Jorgji, & Liko, 2012). The transition of these countries into the market economy had resulted in reducing the level of poverty. This was achieved because of the increase in employment level through job creation in these countries which had continued to increase each time until 2008. However, although the standard of living in SEE countries had risen compared to their initial level, the standard of SEE countries was lower than in European countries.

The incomes of these SEE countries showed a decrease after the global financial crisis of 2007–2008, where their effect was seen in 2009 when you saw revenue stagnation (The World Bank, 2017b). Employment or unemployment is also one of the factors which has a general influence on countries’ economies (Ziberi & Avdul, 2020). According to the trends that have shown over the years, Kosovo today continues to face new challenges each time in different fields whether in terms of education, economy, or private businesses.

The crucial indicator for promoting the economic growth of a nation is the education of its people (Bexheti & Mustafi, 2015). We also know that not all countries have the same factors influencing their economic growth and therefore in this study we measure the key macroeconomic factors which influence the economic growth in the case of Kosovo.

This study is of great interest as it measures the impact of key macroeconomic indicators on the gross domestic product (GDP) growth in the case of Kosovo as a developing country.

The main objectives of this study are 1) to analyze private consumption and its impact on gross domestic product; 2) to reflect the importance of consumption on economic growth; 3) to measure the impact of remittances, employment, and exports in the case of GDP growth of Kosovo.

The research questions are as follows:

RQ1: Which macroeconomic factors influence the economic growth of Kosovo more?

RQ2: What is the importance of consumption in the case of economic growth?

RQ3: How remittances, employment, and export may influence GDP growth in the case of Kosovo?

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyzes the methodology that has been used to conduct empirical research. Section 4 presents the results. Section 5 presents the discussion of the study. Section 6 concludes the study.

2. LITERATURE REVIEW

Labor market consequences are perhaps the most visible and most debated economic concern due to their direct impact on employment and wages (Blau & Mackie, 2017).

The Keynesian macroeconomic model implies that household expenditures, investments, and savings have significant impacts on economic growth by affecting total expenditures (Alper, 2018). Also increases in personal consumption expenditure (both goods and services) and private domestic investment were the main drivers behind the upswing, as government spending stalled and imports outpaced exports, leading to a negative overall contribution from international trade (Richter, 2021).

The Organization for Economic Co-operation and Development (OECD) defines GDP as “a general indicator of output equal to the sum of gross value added of all resident and institutional individuals engaged in production and services”. The International Monetary Fund’s (IMF) publication states, “GDP measures the monetary value of final goods and services — that is, those that are bought by the final user — produced in a country in a given period of time (say a quarter or a year)” (Callen, 2020).

However, critics of the growth imperative often argue that GDP measures were not intended to measure progress and set aside other key externalities, such as resource extraction, environmental impact, and unpaid domestic work. Critics often propose alternative economic models that use other measures of success or alternative indicators such as the OECD Best Life Index as the best ways to measure the impact of the economy on human development and well-being (Bowers, 2017). Consumer spending accounts for between half and two-thirds of GDP in most countries. Therefore a 1% increase in consumer spending contributes to a 0.6% increase in total GDP, all others being equal, which is rarely the case. In particular, some of the additional consumer spendings will go to higher imports.

The main impacts on the level of consumption include the following (Bayar & McMorrow, 2017):

1) Income — Higher personal income generally allows for more expenses.

2) Price expectations — Experience shows that consumers tend to save more (and spend less) during periods of high inflation. However, they can drive costs forward if they expect a one-time rise in prices due to inflation or higher indirect (sales) taxes.

3) Interest rates — Higher interest rates increase the cost of existing loans and discourage borrowing and, possibly, encourage savings, all of which reduce costs. However, high-interest rates also redistribute income from new mortgage payers to their seniors whose deposits are larger than their borrowings and who may spend their extra interest income.

4) Consumer credit — Easier consumer credit can encourage borrowing, which translates directly into higher costs.

5) Wealth — An increase in asset values, such as stocks or house prices, can make consumers feel richer and more inclined to spend more.

6) Stable level and price of stable products — Consumers tend to consider durability such as cars and electrical appliances as assets. A sudden end to a period of a limited supply of sustainable products like in East Germany in 1990, or a drop in their prices, could encourage a temporary consumer
boom. This can set up replacement cycles with sustainability spending periods every few years.

7) Social factors — These factors can encourage savings to allow for trusts or retirement expenses.

The State Statistical Office of Kosovo from their surveys indicates that the consumption for long-term goods has slowed down. This is based on the component balances of the consumer survey, indicator continue to be above the historical average.

Private consumption growth was supported by employment growth, remittance income, and household credit in the second quarter. It has also been favored by the environment with low-interest rates. For two years, private consumption has remained the main contributor to aggregate demand growth. Judging by indirect indicators that provide more detailed information on consumption categories, its increase was supported by an increased contribution of expenditures on services and short-term consumer goods.

Remittances are a kind of financial phenomenon which emerged later and are considered as one of the main and very important sources of income for the country’s economy. According to The World Bank data, in 2011, they state that remittances in global terms were 430 billion dollars, while in 2009 the remittances accounted for 0.31% of GDP globally (Meyer & Shera, 2017). A new wave of this global crisis will hit developing countries this year. Not just through the COVID-19 virus itself, and not just through economic closure within those countries, but through the reduction of remittances. Also according to the latest report of the World Bank, in Kosovo, we have a continuous increase in remittances, where it had about 796.5 million euros an increase of 12.9% (The World Bank, n.d.-b).

Remittances are the largest source of international development finance. The World Bank forecasts that remittances to developing countries will fall by 23% this year — up to 445 billion dollars, up from 574 billion dollars it projected without the crisis in 2020. Remittances have been and continue to be accompanying extremely important immigration. The effects of remittances on the Albanian economy during the transition years are widely discussed in the literature.

Various authors in their works have found that remittances help stabilize the economy (Korovilas, 2015) reduce poverty (de Zwager, Gedeshi, Germenj, & Nikas, 2005), reduce unemployment and help economic development (Abazi & Mema, 2007), contribute to improving living standards, human health, etc. They are an important source of financial growth and economic development of the country, providing ongoing access to foreign currency in Albania as well as consolidating the basis for savings and investments.

Before discussing the characteristics of remittances, it is important to see how remittances are assessed (calculated) by the Central Bank of Albania, the institution responsible for their assessment. During the first two decades of transition, remittances have played a very important role in the recovery of the Albanian economy. Their contribution has been evident in supporting families to cope with living and in supporting the construction or reconstruction of residential buildings and their equipment. They have also played a special role in cases when emigration has been accompanied by internal migration of emigrant families, or in promoting and supporting free enterprise and the development of a market economy in general (Das, Mourmouras, & Rangazas, 2015).

The crisis will also affect the Western Balkans region, which is expected to enter an economic recession in 2020, where for the six countries in the region, The World Bank predicts that they will experience negative growth, as they continue to struggle with the effects of the COVID-19 pandemic economy. According to the latest regular economic report of the World Bank of 2019 (The World Bank, n.d.-a) which uses an initial scenario and a side scenario in the face of a high uncertainty brought about by the pandemic, economic growth in the region is projected to be between -3% to -5.6%. The initial scenario assumes that economic opening in Europe begins to materialize fairly quickly so that control measures can be lifted and the full opening takes place by the end of June and gradual recovery can begin in the second half of 2020.

On the other hand, the side scenario assumes the outbreak of extensions and control measures continue, whereas currently the first scenario is taking place and the economic recovery can only begin to fully rise only at the end of August, when full recovery of economic activity for the countries of the European Union, is expected to be only in the last quarter of 2020. Kosovo has a large number of citizens living in other countries in Europe, America, and beyond. Their diaspora has contributed to various stages of Kosovo’s history and has great merits for the well-being of Kosovo society as well as in the construction and development of Kosovo.

The role of the Kosovar diaspora in economic development is great, either through remittances or through direct investments in Kosovo. Remittances in Kosovo, in most cases, are used for consumption and directly affect the fulfillment of the daily needs of the population.

Regardless of how they are spent, remittances raise the level of income of recipients and at the same time the level of consumption, stimulating economic growth in a country, through multiplier effects. Kosovo’s economy experienced strong growth in the last decade driven by demand largely financed by diaspora remittances and aid. GDP growth averaged 3.4% from 2008 to 2015 (Cojocaru, 2018). There is extensive literature analyzing the theoretical links between exports and economic growth. According to this literature, the relationship between exports and economic growth is determined by various factors. Since exports are a component of GDP, export growth contributes directly to GDP growth. Exports also help poor, small-market countries benefit from economies of scale (Helpman & Krugman, 1985). In addition, exports lead to a measure of resource allocation and particularly improved capital utilization due to competition in world markets. Exports will influence a firm to invest in new technologies as a strategy to commit to increasing output (Grabowski, 2015). An export-oriented approach to economics that have a surplus of labor, enables rapid growth of employment and
increases wages real. Exports contribute to the relaxation of barriers to foreign exchange. The second view is the cause-and-effect relationship which ranges from economic growth to exports. Higher productivity means lower unit costs, and this results in facilitating export growth. Economic growth affects the growth of exports if domestic product grows faster than domestic demand.

The hypotheses raised in this study are as follows:

**H1:** The growth of private consumption has a positive impact on Kosovo's economic growth.

**H2:** Employment, remittances, and exports are in a positive correlation with the rate of private consumption.

### 3. METHODOLOGY

This study presents a very important topic including the analysis of GDP and private consumption in Kosovo. International and domestic literature was reviewed for this study and a wide range of sources and data were analyzed. The data used in this study is secondary data obtained from The World Bank Indicators for the period 2010-2020. This study is based on an analytical and comparative analysis. The OLS was designed to test the hypotheses using secondary data from The World Bank Indicators. The study covers the period from 2010 to 2020.

### 4. RESULTS

We emphasize that the data processing program used in this study is SPSS. This section presents the descriptive statistics, the Pearson correlation, and the OLS model including the coefficient of determination R and the p-value of the conceptual variables of the model.

#### Table 1. Descriptive statistics of conceptual variables included in the OLS econometric model

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>18</td>
<td>1.22</td>
<td>26.07</td>
<td>5.491</td>
<td>3.53375</td>
</tr>
<tr>
<td>Consumption</td>
<td>12</td>
<td>2.05</td>
<td>12.01</td>
<td>6.0067</td>
<td>3.01350</td>
</tr>
<tr>
<td>Employment</td>
<td>16</td>
<td>22.40</td>
<td>28.70</td>
<td>25.4644</td>
<td>2.02642</td>
</tr>
<tr>
<td>Export</td>
<td>9</td>
<td>4.90</td>
<td>26.38</td>
<td>9.7700</td>
<td>8.41189</td>
</tr>
<tr>
<td>Remittances</td>
<td>13</td>
<td>0.55</td>
<td>20.05</td>
<td>16.7173</td>
<td>2.04291</td>
</tr>
</tbody>
</table>

Valid N (listwise) 6

Source: Authors' calculations.

Table 1 above presents the descriptive statistics of the conceptual variables of the OLS econometric model. In the model, we emphasize that the GDP is defined as a dependent variable with which economic growth is measured, in our case the economic growth of Kosovo, and as independent variables in the model, we have defined: consumption, employment, export, and remittances.

The independent variables of the model were selected based on the purpose and were set up based on the review of the empirical literature elaborated in Section 2 of this study.

According to the findings of this study, the correlation between GDP and other conceptual variables is positive. GDP is positively correlated with consumption at the Pearson coefficient value of 0.33. Positively related to the employment variable in the Pearson coefficient value of 0.199.

The conceptual variables in the model are:

**Variable 1:** Real GDP growth with constant market prices (dependent variable) and independent variables:

**Variable 2:** Private consumption (household consumption) with a positive impact on economic growth;

**Variable 3:** Remittances — positive impact;

**Variable 4:** Total employment rate — positive impact;

**Variable 5:** Exports, goods, and services — positive impact.

Based on selected and scientifically based conceptual variables, it is expected that any increase in independent variables will have a positive impact on GDP growth. The model will be tested with the SPSS program. As an alternative method, the vector autoregressive (VAR) model may be used to measure the impulse of each variable monthly.

#### Table 2. Pearson correlation

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>Consumption</th>
<th>Employment</th>
<th>Export</th>
<th>Remittances</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1.0</td>
<td>0.33</td>
<td>0.199</td>
<td>0.259</td>
<td>0.632*</td>
</tr>
<tr>
<td>Consumption</td>
<td>0.33</td>
<td>1.0</td>
<td>0.060</td>
<td>0.349</td>
<td>1</td>
</tr>
<tr>
<td>Employment</td>
<td>0.199</td>
<td>0.060</td>
<td>1</td>
<td>0.530</td>
<td>1</td>
</tr>
<tr>
<td>Export</td>
<td>0.259</td>
<td>0.349</td>
<td>0.530</td>
<td>1.000</td>
<td>1</td>
</tr>
<tr>
<td>Remittances</td>
<td>0.632*</td>
<td>0.173</td>
<td>0.197</td>
<td>0.259</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: * Correlation is significant at the 0.05 level (2-tailed).

The Pearson correlation coefficient is a measure of the linear correlation between two data sets. The covariance of two variables, separated by the product of their standard deviations, is essentially a normalized measurement of covariance. The results always have a value between -1 and 1. As with covariance itself, mass can only reflect a linear correlation of variables.

Below we have a Pearson correlation with all econometric measurements.

GDP is also positively related to the export variable in the value of the Pearson coefficient of 0.325 and in the strongest relation GDP is to the variable trends in the value of the Pearson coefficient of 0.632.
OLS regression is a type of linear statistical measurement for estimating unknown parameters in a linear regression model. OLS selects the parameters of a linear function of a set of explanatory variables in a given set and those predicted by the linear function of the independent variable. The variables to be analyzed are remittances, employment, consumption, and exports as independent variables and GDP as a dependent variable.

Table 3. OLS regression

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Variables entered</th>
<th>Variables removed</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remittances, employment, consumption, exports</td>
<td>There are no variables removed from the model</td>
<td>Enter</td>
</tr>
</tbody>
</table>

Note: a. Dependent variable: GDP. b. All requested variables entered.

In statistics, the coefficient of determination denoted $R^2$ or $r^2$ and pronounced “R-squared”, is the proportion of variance in the dependent variable that is predictable by the independent variable(s). In our case, we have obtained the value of $R^2 = 0.999$, which speaks for a suitable model between the dependent variable (GDP) and the independent variables (remittances, employment, consumption, and exports).

Table 5. ANOVA

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Sum of squares</th>
<th>DF</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>11.769</td>
<td>4</td>
<td>2.942</td>
<td>494,348</td>
<td>0.034*</td>
</tr>
<tr>
<td>Residual</td>
<td>0.006</td>
<td>1</td>
<td>0.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11.775</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: a. Dependent variable: GDP. b. Predictors: (Constant), remittances, employment, consumption, exports.

6. CONCLUSION

This study aims to measure the impact of some key macroeconomic indicators on the economic growth of Kosovo using the OLS econometric model. In this model, GDP growth is used as the dependent variable, and on the other hand, the independent variables are employment, export, remittances, and private consumption. According to The World Bank (n.d.-b), Kosovo’s economy is based on its GDP, despite the variability of its level over the years, in recent years has shown an upward trend which has been influenced by its various economic factors such as consumption, government spending, investment, and others, not excluding the importance of the economic growth of consumption and employment (The World Bank, n.d.-a), which with the behavior of products or services, also bring human or human resources through training and professional growth of human capital without neglecting the behavior of advanced technology. Consumption is also another policy of states which has affected their economic growth (Organisation for Economic Co-operation and Development [OECD], 2017). The study employed the OLS model which is based on the coefficient of the determination and also includes in the analysis significant variables with the p-value which meet the alpha condition level less or equal 0.05. In this case, we conclude that a 1% increase in private consumption, remittances, export, and employment will cause an increase in GDP based on the value of 0.05.
parameter Beta. The study comes with further recommendations such as 1) Utilizing remittances in the most profitable way for economic development between official roads and channels; 2) Employment — the application of appropriate economic policies to boost employment growth. For example, increasing investment in factories and sectors that will increase employment, even at a low level of employment, especially in Kosovo, would be a very important factor important in increasing the welfare and economic growth of our country; 3) Consumption — Balkan countries, especially Kosovo with a young and vibrant population have a high rate of consumption. This can be exploited by Kosovo itself through increased productivity and consumption itself, but also through trade with neighboring countries; 4) Export — cooperation between countries is always a reasonable factor for their economic growth, especially with neighboring countries such as the countries taken in our research (Kosovo, Albania, and Northern Macedonia). This paper is of very importance for further research as the findings indicate that economic diversity is favorable for the export-import of products according to the comparative advantages between them, taking the imported products at a cheaper price than the price of their production, or even exporting from more distant countries. The main limitation of this study is the low number of observations included in the OLS model.

REFERENCES


