The Study of the Dynamics of Changes Affecting the Economic Growth Index of Georgia

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Abstract

Due to the rapid changes of global economic and political processes, classification of countries by different indicators becomes prominent. Such classification by certain criteria, simplifies to draw some picture of a particular country basing on its major characteristics. From the economic point of view, in general, the countries are classified considering their GDP, foreign debt, simplicity of business starting and other indicators. However, the economic growth rate in Georgia is directly related to GDP. Therefore, the research is aimed at analyzing the dynamics of GDP volatility in Georgia (directly impacting the economic growth) and the influence of various factors on the indicators of the economic growth. The research is based on the official information provided by the governmental organizations and analytical reports prepared by the international institutions.

Keywords: economic growth, GDP, research of dynamics, economic processes, classification of countries

1. Introduction

In the course of evaluation and analyzing the economy and the economic processes of the country, it's unavoidable to mention such term as "economic growth". In fact, the notion of the term "economic growth" is represented by certain figures. The indicator of the economic growth is a salient one in order to estimate the economic development and processes of the country. The government, as well as for the investors and international organizations, it's a kind of gauge to measure the economic processes of a given country and the adequacy of the direction of the economic policy. The appropriate calculation of the economic growth and the analysis of those factors influencing it should be the priority of each country, to have the ongoing economic processes under control. That's why the economic stimulation and stability of the economic growth, or ideally, planning the effective measures aiming at improving it, is the very goal of any government.

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2. Materials and Methods

When talking about the calculation of economic growth, R. Solow's [17] Model of Economic Growth Factor Analysis should be noted; when talking about the various approaches to the economic growth, the works of Schumpeter [15], Keynes [8], Fisher [6] and others should be mentioned, which discuss the issue fundamentally.

However, we carry out a multiple regression analysis applying the Wooldridge [18] Econometrics Approach, where every single GDP calculation method will be listed/represented, that will reveal those components, having an impact as well as the range of influence of such components on the indicators of the economic growth of the country.

Methodological basis for the National Accounts of Georgia is a standard methodology - National Accounts System 1993 (SNA 1993), provided by the United Nations (UN), Commission of the European Communities – Eurostat, the Organization for Economic Co-operation and Development (OECD), the World Bank and the International Monetary Fund (IMF). Gradual transition to the SNA 2008 methodology is planned in 2019. The SNA 2008 is very similar to the SNA 1993 regarding many aspects. One of the most important economic indicators of national accounts is Gross Domestic Product (GDP), which represents total market value of all final goods and services produced in a country in a given year. In other words, the GDP is the value of finished goods and services, made within a country during a specific period of time; GDP is the summary of added value made within the country economy during a specific period of time; GDP is the summary of incomes existing in economy in the current period of time. Therefore, GDP in current prices is calculated using three different internationally recognized approaches [12]:

1. Production Approach;
2. Expenditure Approach;
3. Income Approach.

3.Results

Since 2014, the GDP components are the essential elements of the economic growth calculation methodology and in line with the research aims set, we considered it reasonable to compare the indicators of the economic growth by years with the following components: 1. Economic Growth; 2. GDP deflator percent changes. 3. GDP per capita; 4. GDP real growth; 5. Gross output; 6. Total output of agricultural products; 7. Total output of production in Tourism related services;

Table N1. Comparison of the Components

Years	Economic Growth (%)	GDP Deflator, percent	GDP per capita (at current prices – GEL)	GDP Real Growth	Gross Output at current price, billion GEL	Total Output of Agricultural Products (share in the Gross output %)	Total Output of Production in Tourism related services
2014	4,6	3,8	7837.4	4,6	48	18,1	7,0
2015	2,9	5,9	8524.3	2,9	52,5	16,9	7,3
2016	2,8	4,2	9129.0	2,8	56,4	16,7	7,2
2017	4,8	6,1	10152.0	4,8	62,9	15,4	7,3
2018	4,7	3,6	11013.9	4,7	68,4	14,8	8,1

Source: National statistics office of Georgia [13]

It should be noted that according to the data of the National Statistics Office of Georgia (Table N1), the annual economic growth indicator coincides with the GDP real growth indicator, that absolutely proves Blanchard's

viewpoint, according to which, the real GDP is the very indicator of economy growth of a country. However, the economic growth does not mean the real growth of the GDP only. In general, the GDP is calculated by the formula:

$$R = N/D, \quad (1)$$

where R stands for real GDP, N for the nominal GDP and D – for the deflator.

Therefore, real GDP equals to nominal GDP divided by deflator. However, it's not appropriate to consider the results of GDP calculations only to be the economic growth indicator. As Schorfheide [14] argued, the macroeconomics concept was mainly connected to the structural equation models according to Cowles Commission in the years 1950 - 1970. Following Lucas [11], who revealed that the structural parameters are not inelastic with respect to changes in economic policy. That led to the first revolution through the introduction of VAR models, according to Sims [16].

One of the models of forecasting country economy is that of Dobrescu, known as "Dobrescumacromodel" [5]. As well as the dynamic stochastic general equilibrium approach, by means of which Caraiani [2] forecasted the dynamics of quarterly GDP.

According to the data of the Ministry of Finance of Georgia, GDP has been intensively and steadily increasing for the recent 14 years, in terms of sharp changes of the economic growth in the country that has been gradually decreasing for the last three years (Fig. 1; Fig. 2) [13]

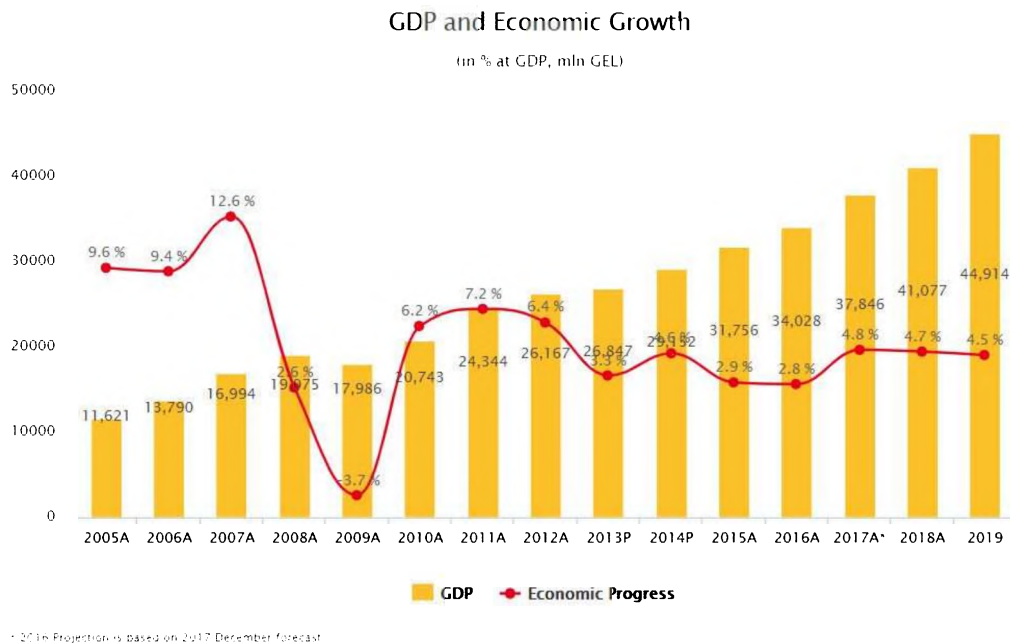Fig. 1. Source: Ministry of Finance of Georgia

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Fig. 2. Source: Ministry of Finance of Georgia [13]

Therefore, we think it to be of essential importance to perform the analysis on the basis of multifactor regression analysis, which is based on such works as Doan et al. [4], Litterman [9, 10], Ciccarelli and Rebucci [3], or Kenny et al. [7].

$$\gamma = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \cdots + \beta_n x_n + u \qquad (2)$$

Such analysis will enable us to see the changes of which components influences the GDP volume and the relevance of considering its indicator to be the indicator of the economic growth.

The Bayesian approach is useful since one cannot know whether some coefficients are zero or not. Thus one can associate probability distributions for the parameter vector. Then, the estimation results as the product of the prior distribution and the information in the data.

As we have already mentioned before, the GDP in current prices is calculated using three different internationally recognized approaches: 1) Production Approach; 2) Expenditure Approach; 3) Income Approach.

Since, the official data on GDP is calculated applying the second approach (Expenditure Approach), we have analyzed those components included into the official calculation, in particular: GDP by expenditure approach is based on expenditures incurred by institutional units in a given period, which is calculated according to the following scheme: Consumption expenditures of households + Expenditures incurred by non-profit institutions serving households (NPISH) + Expenditure on collective (public administration, defense, social security and safety) and personal services (education and healthcare) rendered by General Government + Gross capital formation + Changes in inventories = Total expenditure at market prices + Exports of goods and services - Imports of goods and services = Total GDP at market prices.
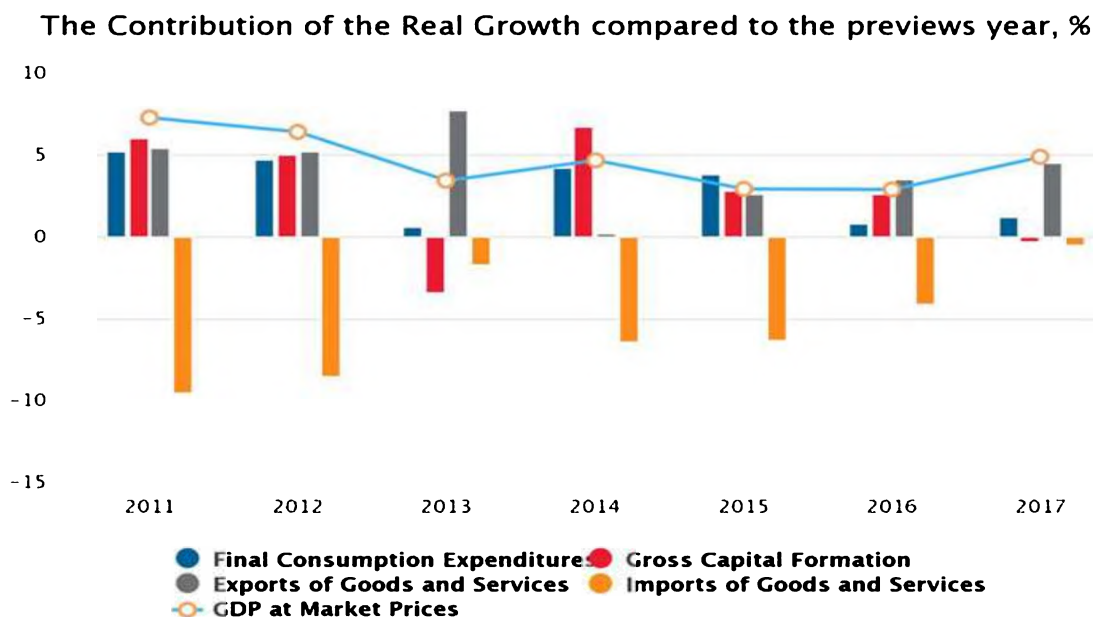
Fig. 3. Source: National statistics office of Georgia [13]

The analysis of the real GDP components using the Expenditure Approach enabled us to reveal that the export of goods and services play an important role in the volume of the real GDP. For sure, such small country with the open economy as Georgia should be focused on exporting goods and services as much as possible, that will guarantee the economic growth on one hand, and provides the inflow of foreign exchange (being an important factor for exchange rate stabilization) on the other hand. However, if we look into the statistical data of the given indicators [12], we'll see that the largest export group of goods is made up by copper ore and concentrates 15% (exhaustible resources), autos 12.2% (re-export of imported goods), ferroalloys 10.5% (exhaustible resources), other goods 35.6% (excluding mineral waters, alcoholic drinks, pharmaceuticals).

Having looked through the data/materials, it was revealed that the component having essential importance in calculations of the real GDP and influencing the indicators of the economic growth, is not the national product at all (in other words it is not the value created in the real sector). Therefore, we think that the economic growth must be far lower than generally recognized to be on basis of the actual calculation methodology. We believe, this creates a ground for reviewing the economic growth calculation methodology in future and exclude all the products not being produced in terms of real sector from the GDP component.

5. Conclusions

The research of dynamics of GDP changes and the analysis of the influence of various factors on economic growth indicators, enables us to conclude the following: In particular, it has been clearly demonstrated that the calculation of economic growth is inadequate since its components do not represent the value created within the country. The variability of the available data affects the final indicators which in turn causes the change of economic policy vectors. Considering the results of the present study, we believe it would be appropriate to exclude the re-export indicators of imported goods and exhaustible resources from the real GDP calculation methodology. We think that the practical implementation of these recommendations will enable us to actually see the amount of value created within the country and thus form an economic policy aimed at improving the country's development, public welfare, and human capital.

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