



FACTORS INFLUENCING GDP (GROSS DOMESTIC PRODUCT) GROWTH IN MACROECONOMICS

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Abstract:

The article analyzes the main factors influencing the growth of Gross Domestic Product (GDP) in macroeconomics. In particular, the theoretical foundations of economic growth, modern approaches, and the characteristics of regional development are examined. The study evaluates GDP dynamics and its influencing factors based on statistical and economic-mathematical methods. As a result, it is determined that human capital, innovation, investment, and the digital economy are key drivers of economic growth, and practical recommendations are developed.

Keywords: GDP, economic growth, macroeconomics, investment, human capital, innovation, digital economy, labor resources, capital, regional development.

Introduction

In recent years, accelerating economic reforms, ensuring macroeconomic stability, and maintaining high economic growth rates have become one of the key priorities of state policy in the Republic of Uzbekistan. In particular, new sources of economic growth are emerging through the liberalization of the national economy, improvement of the investment climate, and strengthening the role of the private sector. In recent years, stable economic growth rates have been achieved in the country, and the government continues to define new priority tasks to reinforce this trend. As emphasized by the President, “the main tasks are to ensure macroeconomic stability, curb inflation, demonopolize sectors, abolish state price regulation, and eliminate the shadow economy”.



Today, one of the priority tasks of socio-economic policy in implementing economic reforms in our republic is to enhance the competitiveness of manufacturing enterprises, ensure the timely delivery and sale of high-quality and competitive products in both domestic and foreign markets, and organize modern trade services while effectively utilizing their capabilities. One of the five priority areas of the Development Strategy of Uzbekistan focuses on “strengthening macroeconomic stability aimed at further developing and liberalizing the economy, maintaining high economic growth rates, increasing the competitiveness of the national economy, modernizing and rapidly developing agriculture, continuing institutional and structural reforms to reduce state participation in the economy, protecting private property rights and strengthening their priority position, stimulating the development of small business and private entrepreneurship, ensuring balanced socio-economic development of regions, districts, and cities, and actively attracting foreign investments into sectors and regions of the country through improving the investment climate.”

Global experience shows that one of the main indicators of a country’s economic development is Gross Domestic Product (GDP). GDP growth reflects an increase in production volume, growth in population income, and improvement in living standards. From this perspective, a comprehensive study of the factors influencing GDP growth is of significant scientific and practical importance.

In the context of globalization and the digital economy, the range of factors affecting GDP growth is expanding. Alongside traditional factors such as natural resources, labor resources, capital, and technology, factors such as innovation, digital transformation, the quality of human capital, the volume of investment, and export potential are gaining increasing importance. In particular, the development of human capital and the digital economy is emerging as one of the key drivers of GDP growth. In Uzbekistan, in recent years, a number of measures have been implemented to ensure GDP growth through industrial modernization, diversification of agriculture, expansion of the service sector, and development of foreign trade relations. At the same time, reducing regional economic disparities, ensuring the efficient allocation of investments, and the rational use of resources remain important issues.



Literature Review

The study of economic growth and the dynamics of Gross Domestic Product (GDP) in macroeconomics has been widely explored by many domestic and foreign economists. In these studies, the key focus is on identifying the factors influencing GDP growth, its sources, and evaluating its efficiency. Among local scholars, A. Ulmasov and A. Vakhobov define economic growth as the continuous increase in the volume of goods and services produced in the economy. According to them, economic growth is usually measured by GDP or GDP per capita indicators. At the same time, they emphasize the importance of the efficiency of economic growth, noting that it can be determined by the ratio of GDP growth to the growth of expenditures.

H. Abdulkasimov defines economic growth as the increase in the production volume of the national economy over a certain period and highlights that its growth relative to the population (per capita) is an important criterion. This approach makes it possible to evaluate GDP growth in relation to the welfare of the population. In the studies of A. Nabikhodjaev, Yu. Sherov, and P. Sultanov, it is noted that one of the main conditions for economic growth is that the GDP growth rate should exceed the population growth rate, and that GDP per capita should increase over time. This implies that economic growth should be assessed not only quantitatively but also qualitatively.

Economists of our republic, D.K. Akhmedov and A.E. Ishmukhamedov, define GDP as the total value of all final goods and services produced within a country. This definition aligns with international standards and corresponds to the System of National Accounts adopted by the United Nations in 1993. According to this system, GDP reflects the value created by residents of a country, where the concept of “resident” is determined by the place of economic activity.

In foreign economic literature, various theoretical models have been developed to explain GDP growth. For instance, the Keynesian model of economic growth emphasizes the role of aggregate demand as the main factor, while the neoclassical growth model (such as the Solow model) highlights the importance of capital accumulation, labor, and technology. Modern approaches, within the framework of endogenous growth theory, consider innovation, knowledge, and human capital as the main drivers of GDP growth. In recent years, scientific research has further expanded the range of factors influencing GDP growth.



Alongside traditional factors such as labor, capital, and natural resources, the role of innovation, the digital economy, investment climate, institutional quality, and foreign trade has been increasing. In particular, the introduction of digital technologies and the transition to a knowledge-based economy are considered new drivers of GDP growth.

Furthermore, in the context of Uzbekistan, many studies highlight that ensuring stable GDP growth requires structural transformation of the economy, support for the private sector, attraction of investments, modernization of production, and efficient use of labor resources.

According to D.K. Akhmedov and A.E. Ishmukhamedov, GDP is defined as “the total market value of final goods and services produced within the geographical territory of a country, regardless of the ownership of the resources used in production.” Based on the revised interpretation adopted in 1993 by the United Nations (UN) and international organizations, the concept of GDP was further clarified. According to this updated definition, GDP is the total market value of final goods and services produced by residents of a country over a certain period. The term “domestic” refers to the fact that GDP is created by residents of the country. The concept of “resident” includes not only legal entities and individuals of the country but also entities operating in the country’s territory for more than one year, who are then considered residents of that country.

Research Methodology

In this study, a comprehensive set of scientific approaches was employed to identify and evaluate the factors influencing Gross Domestic Product (GDP) growth in macroeconomics. The research process integrated both theoretical and empirical methods of analysis.

First, general scientific methods such as analysis and synthesis, induction and deduction, as well as comparison and grouping were widely used to study economic growth and GDP dynamics. These methods made it possible to determine the nature, interrelationships, and degree of influence of factors affecting economic growth.

In the empirical part of the study, statistical data served as the main source of information. In particular, national and international sources were analyzed, including data from the State Statistics Committee of the Republic of Uzbekistan,



as well as databases of international organizations such as the World Bank and the International Monetary Fund. Based on these data, GDP growth rates and the main macroeconomic indicators influencing them were examined. In addition, the use of economic-mathematical methods played an important role in the study. Specifically, correlation and regression analysis were applied to assess the relationship between GDP growth and factors such as investment, labor resources, capital investment, and technology. This made it possible to determine the extent of the impact of each factor.

Furthermore, based on a systematic and logical approach, the factors influencing economic growth were considered as an integrated system. In this context, alongside traditional factors (labor, capital, natural resources), modern factors such as innovation, the digital economy, human capital, and the institutional environment were also taken into account.

Analysis and Main Results

The main characteristics of macroeconomic stability in a country include the following:

- ✚ economic growth;
- ✚ full employment;
- ✚ price stability (inflation control);
- ✚ a strong balance of payments;
- ✚ stability of the foreign exchange rate;
- ✚ a state budget deficit not exceeding 3% of gdp;
- ✚ income distribution issues.

In modern economic theory, economic growth is understood not as a short-term increase in production, but as a long-term expansion of production capacity driven by the development of productive forces over time. In this sense, growth reflects the sustainable increase in the potential output level of the economy rather than temporary fluctuations.

Uzbekistan's regions have different natural, economic, and demographic potentials. It should be emphasized that regional development is not a simplified version of macroeconomic policy. Each region functions as a unique socio-economic system with its own natural resources and development trajectory, which differs from national-level macroeconomic patterns. Therefore, continuous



monitoring and, when necessary, adjustment of regional development policies are required. The main components of regional economic potential include mineral and raw material resources, land and water resources, population and labor resources, fixed production assets, circulating capital, and household assets. The distribution and utilization of these resources vary significantly across regions.

According to data from the Institute for Forecasting and Macroeconomic Research under the Ministry of Economy and Industry of the Republic of Uzbekistan, the highest economic potential is concentrated in Tashkent, Kashkadarya, Navoi, and Bukhara regions, which together account for nearly 60% of the country's total potential. In contrast, Syrdarya, Jizzakh, and Khorezm regions have the lowest share, accounting for only about 9%. In terms of fuel-energy and mineral resources, Kashkadarya, Tashkent, Navoi, and Bukhara regions are the most resource-rich. Kashkadarya and Bukhara are particularly strong in natural gas and oil-condensate reserves, while Tashkent region holds a major share of coal reserves (97.4%), with the remaining located in Surkhandarya (2.6%). Precious and non-ferrous metals are mainly concentrated in Tashkent and Navoi regions, where gold, silver, copper, and lead resources are significant.

Chemical raw material resources are also unevenly distributed: Kashkadarya region (77%) and Karakalpakstan (11%) dominate this sector. Kaolin, feldspar, quartz sand, talc, and other non-metallic resources are mainly located in Tashkent, Navoi, and Karakalpakstan. Cement and construction materials are also concentrated in Tashkent and Navoi regions, while marble and granite reserves are widely distributed across Samarkand, Bukhara, Kashkadarya, Jizzakh regions, and Karakalpakstan.

Uzbekistan's land fund totals 44.8 million hectares, of which more than 70% is used in agriculture. Irrigated land is the most productive category, generating significantly higher output compared to rainfed and pasture lands. Nearly 97% of total agricultural output is produced on irrigated land, highlighting its strategic importance. Another key indicator of economic potential is the level of fixed production assets. Tashkent city, Tashkent region, Fergana, Andijan, and Kashkadarya regions account for more than 60% of the country's total industrial and production assets. The growth of Kashkadarya and Andijan regions is largely attributed to the establishment of large industrial complexes in recent years. In

contrast, Jizzakh, Syrdarya, and Khorezm regions have relatively low levels of fixed capital development.

Overall, the analysis shows that Kashkadarya, Tashkent, Navoi, and Bukhara regions play a dominant role in Uzbekistan's natural and economic potential. At the same time, Karakalpakstan, Jizzakh, and Surkhandarya regions have significant future development opportunities through better utilization of natural resources. However, development prospects are more limited in the Fergana Valley regions due to relatively constrained resource bases.

Geographically, Uzbekistan is divided into several economic zones such as Fergana, Tashkent, Zarafshan, Southern, Mirzachul, and Lower Amudarya regions. These regions differ in terms of location, natural conditions, population size, production structure, labor skills, economic role, and resource availability. Such diversity directly influences regional economic growth patterns.

Table 1 Share of the Gross Domestic Product of the Regions of the Republic of Uzbekistan

№	Regions	Share of the total population, %	Share of GDP, %	Share of Gross Industrial Output, %	Share of Gross Agricultural Output, %
1.	Tashkent	17,8	29,4	29,6	14,3
2.	Fergana	28,6	21,1	26,5	24,3
3.	Zarafshan	20,2	19,2	19,1	26,4
4.	Southern	17,1	13,3	17,7	16,6
5.	Mirzachul	4,4	7,2	2,3	9,3
6.	Lower Amudarya	11,9	9,8	4,8	9,1
7.	In the Republic of Uzbekistan	100	100	100	100

As can be seen from the table, the above-mentioned characteristics of the regions have influenced their share in the Gross Domestic Product. In 2019, the GDP amounted to 424.1 trillion soums, while in the first quarter of 2020 it reached 110.5 trillion soums, which corresponds to 3.25 million soums (341 USD) per capita. In 2019, the population of the Republic of Uzbekistan was 33,375,800 people.

Analyzing the data for 2019, the Fergana region had the highest share in GDP, accounting for 21.1%, and also had a relatively high population size. The GDP



contribution of the Fergana region amounts to 89.5 trillion soums (424.1 trillion soums: 100×21.1). The population share of the Fergana region is 9,545,478 people (33,375,800: 100×28.6). Based on these indicators, the gross regional product per capita in the Fergana region equals 9,365,691 soums (89.5 trillion soums \div 9,545,478 people), which is approximately 983 USD (9,365,691 soums \div 9,530 soums, where 9,530 soums is the average exchange rate).

Considering the Zarafshan region, its GDP share is 81.4 trillion soums (424.1 trillion soums: 100×19.2), with a population of 6,741,911 people (33,375,800: 100×20.2). Based on these figures, the per capita regional product is 12,149,253 soums (81.4 trillion soums \div 6,741,911 people), which is equal to 1,275 USD. In the Tashkent region, the GDP share is 123.4 trillion soums (424.1 trillion soums: 100×29.4), with a population of 5,940,824 people (33,375,800: 100×17.8). The GDP per capita is 20,919,856 soums (123.4 trillion soums \div 5,940,824 people), which is approximately 2,197 USD (20,939,856 soums \div 9,530 soums).

Thus, it can be concluded that a region's contribution to GDP or gross regional product depends not only on production volume but also on population size. In our analysis, the Fergana region's GDP contribution is 89.5 trillion soums, the Zarafshan region's contribution is 81.4 trillion soums, while GDP per capita is 983 USD in Fergana, 1,275 USD in Zarafshan, and 2,197 USD in Tashkent. Considering that in 2018 the average GDP per capita in Uzbekistan was 1,533 USD, only the Tashkent region exceeded the national average, while other regions showed relatively lower indicators. However, compared to their own previous levels, most regions have still achieved economic growth.

Conclusion and Recommendations

The conducted research shows that the effective use of factors ensuring GDP growth plays a decisive role in achieving and strengthening macroeconomic stability. GDP growth determines the development of all sectors of the economy, the improvement of population welfare, and the country's competitiveness in the global economic system.

According to the research results, the factors influencing GDP growth are multidimensional and include not only traditional resources (labor, capital, natural resources) but also modern drivers such as human capital, innovation, the



digital economy, and the investment climate. The coordinated development of these factors ensures sustainable economic growth.

Furthermore, within the system of national accounts, in addition to GDP, indicators such as Gross National Income (GNI) and Gross Regional Product (GRP) are important for obtaining a complete picture of economic development. In particular, GRP helps to identify regional disparities and differences in economic development levels.

Based on the results of the study, the following recommendations are proposed:

- ✓ ensuring sustainable gdp growth through economic diversification and development of high value-added production;
- ✓ improving the investment climate and encouraging both foreign and domestic investment;
- ✓ developing human capital and increasing investment in education and healthcare;
- ✓ increasing labor productivity through modernization of production and wider adoption of digital technologies;
- ✓ supporting small business and private entrepreneurship to enhance economic activity;
- ✓ reducing regional economic disparities and efficiently utilizing the potential of each region;
- ✓ expanding export capacity and diversifying foreign economic relations.

A deep analysis of factors influencing GDP growth and their effective utilization can ensure sustainable economic development in the country. This, in turn, contributes to increasing the competitiveness of the national economy and improving the welfare of the population.

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