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## WAYS TO IMPROVE THE METHODS OF CALCULATING TERRITORIAL INDICATORS OF THE NATIONAL ACCOUNTING SYSTEM

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**Annotation.** This article presents the essence of the calculation of GRP and its features, the main problems of its application in the statistical system of Uzbekistan and ways to eliminate these problems, as well as scientific proposals and practical recommendations for improving the computation of GRP.

**Keywords:** regions, resident, GRP, GRP deflator, physical volume of GRP.

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### Introduction

Gross regional product (GRP) should allow to determine the pace of economic development of the regions of the republic, their current economic situation, place and role in the economy, the effectiveness of local economic policy and the level of development of individual regions within the country. Currently, there are a number of problems in the process of accurate and complete calculation and analysis of the volume of goods and services produced in the regions of the country, as well as the development of future strategic goals on this basis. These problems are directly related to the methodology for calculating GRP. Therefore, the identification and elimination of methodological problems in the process of calculating GRP is one of the most pressing issues today.

The purpose of the study is to develop scientific proposals and practical recommendations aimed at improving the methodology for calculating the gross regional product (GRP) and its components in the context of rapid economic development.

In order to achieve this goal, the following tasks have been identified:

- In-depth study of the current methods of calculating GRP in the statistical system of Uzbekistan;
- Development of scientific proposals and practical recommendations to identify problems that arise in the calculation of GRP and their solution;
- Identify ways to improve the methods of calculating regional indicators based on the principles of SME.

### Literature review

Theoretical and methodological bases of calculation of GRP are studied in the works of foreign economists, J. Keynes, R. Stone, J. Marshall, J. Hicks, V. Leontev.

CIS scientists BIBashkatova, ALVeinstein, VKZaysev, SMZagladina, Yu.N.Ivanov, GSKulagina, MGNazarov, BTRyabushkin, VNSalin, AVSidenko, MREydelman with their scientific works presented regional indicators of the system of national accounts. made a worthy contribution to the development of computational methodology.

The scientific work of Y.Abdullaev, B.Goyibnazarov, H.Nabiev, A.Nabikhodjaev, B.Mahmudov, N.Soatov, A.Ishmukhamedov deserves special attention in the study of the methodology for calculating regional indicators in the system of national accounts in our country.

The analysis of our scientific work to date has shown that the above-mentioned scientists are mainly engaged in the study of the statistical aspects of the problem, the various accounting systems and accounting procedures available in it. 'processed. However, they explore the theoretical issues of the mechanisms of GRP formation and the theoretical aspects of its calculation, the specific principles and rules of its calculation in the context of modernization and diversification of the economy, its relationship to changes in economic events and processes not done.

## **RESEARCH METHODOLOGY**

Methods such as dialectical, scientific observation, systematic analysis, statistical grouping, monographic observation, comparison were used in this research process.

## **ANALYZE AND RESULTS**

After the independence of our country, the need of public authorities not only for macroeconomic indicators at the national level, but also at the regional level of production. As a result, one of the regional indicators of the SCO - GRP and its components - is used as a basis for determining the prospects for economic development in the region.

It should be noted that the ongoing economic reforms in various regions of the country (12 regions, the Republic of Karakalpakstan and the city of Tashkent) are bearing fruit. But the results in this area vary from region to region.

In recent years, the role of the regions in the structural transformation of the country has significantly increased. A number of measures have been taken to increase the economic potential and competitiveness of the regions.

As a result of the implementation of targeted regional programs in Tashkent (4.3 times compared to 2000), in the Republic of Karakalpakstan (3.5 times), Jizzakh (3.9 times), Samarkand (3.8 times), Namangan (3, 5 times), Andijan (3.3 times), Surkhandarya (3.3 times) regions. (Figure 1)

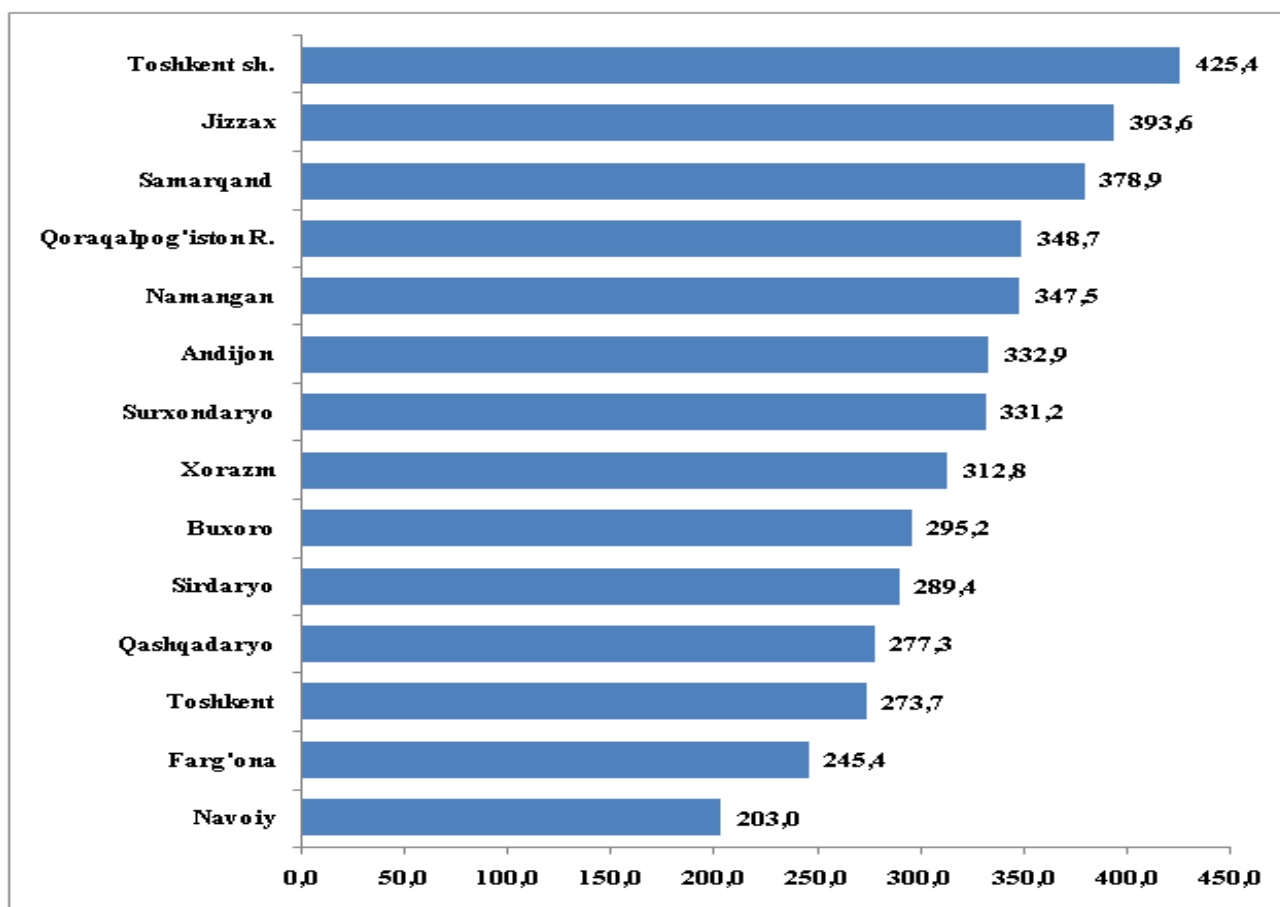


Figure 1. GRP growth rate in 2001-2016 (2000 = 100%)<sup>1</sup>

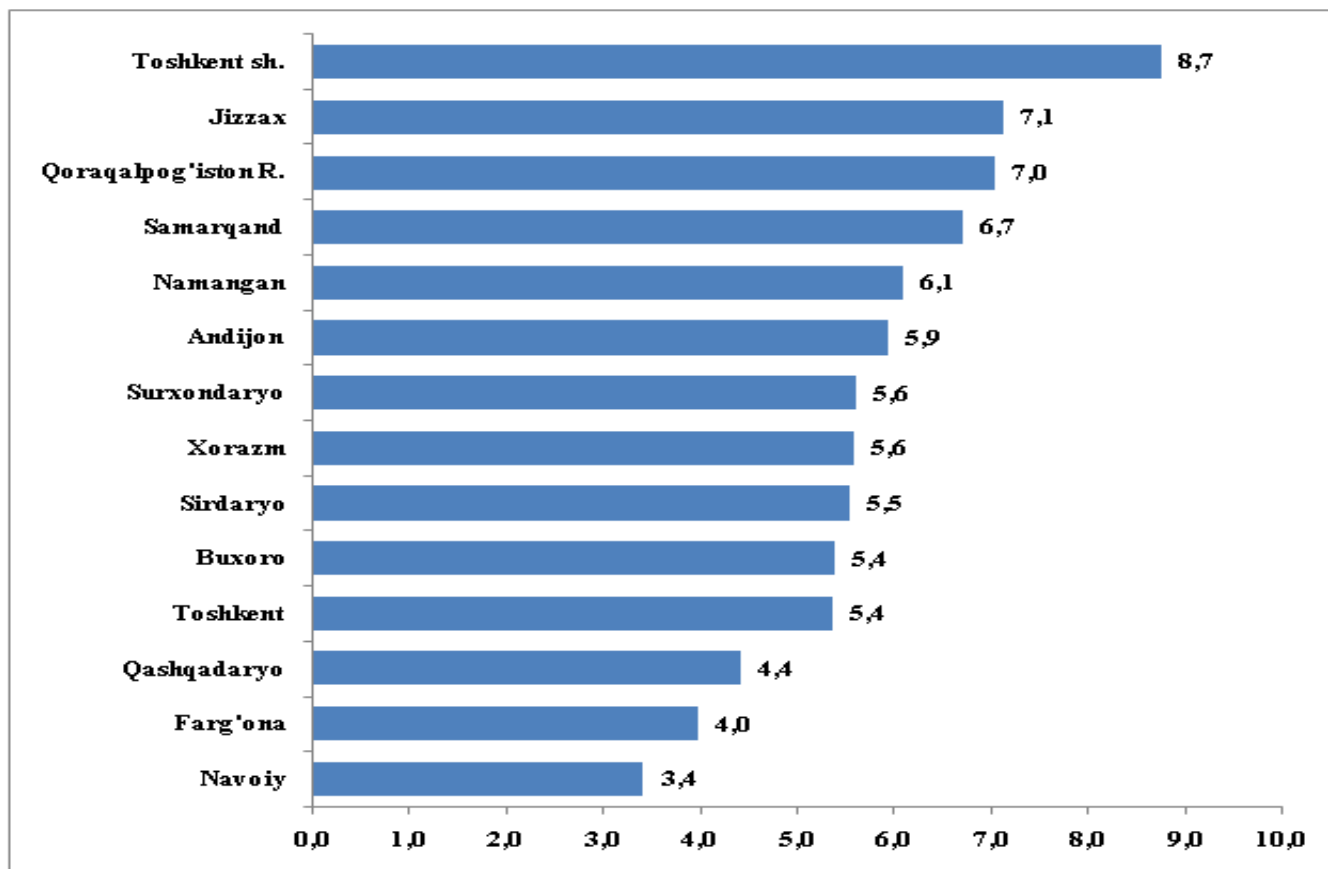
Inequalities in the socio-economic development and economic growth of the regions of Uzbekistan are due to a number of objective reasons - the level of regional development in the early stages of market reforms, investment attractiveness of the region, economic and geographical development, infrastructure development, innovation potential and others. It is explained by a number of factors.

As a result of our scientific research, we have witnessed an increase in the share of GDP per capita in the regions of our country. (Figure 2)

According to the average annual growth rate of GRP per capita for the observed period (2001-2016), Tashkent (8.7%), Jizzakh (7.1%), Samarkand (6.7%), Namangan (6.1%) regions, the Republic of Karakalpakstan (7.0%) recorded dynamic changes. This is mainly due to the rapid industrialization of industry and services.

The analysis of the regional differentiation of GRP per capita shows that in Tashkent this figure is 2.1 times higher than the national average. In Navoi region, this figure is 1.8 times, in Tashkent region - 1.2 times. The interregional gap in GDP per capita is 3.9 times.

<sup>1</sup> <http://stat.uz/press-sluzhba/novosti-gks/1451-makroiqtisodiy-ko-rsatkichlari-tahlili>



*Figure 2. Average annual GDP growth rates per capita in 2001-2016.<sup>2</sup>*

We know that there are three ways to calculate GDP (value added, income and expenses). GRP can be calculated in the same way. The same methodology and principles are used in the calculation of GDP (at the regional level only) as in the calculation of GDP by the three methods.

At present, the main method in the calculation of GRP in our country is the method of value added. It should be noted that the calculation of GDP by the method of value added and income is carried out at the level of individual sectors and industries of the whole economy, while the calculation of gross regional product by these methods is carried out only by sectors.

Our scientific observations show that in our country, the calculation of individual elements of GRP by the cost method is carried out only for the purpose of data collection and analysis. This is due to the fact that the current GRP expenditure indicators do not allow to make detailed calculations by regions. The main reason for this is the lack of necessary sources of information. For example, in order to calculate the final consumption expenditures of households in a given area, the value of goods and services purchased by them must be added to the value of goods and services purchased by residents of that area from outside (another area). The costs incurred by non-residents in this area to purchase goods and services purchased here should be deducted.

<sup>2</sup> <http://stat.uz/press-sluzhba/novosti-gks/1451-makroiqtisodiy-ko-rsatkichlari-tahlili>

Based on the above, we can conclude that in order to obtain indicators on the final consumption expenditures of households at the regional level, the following additional information will be required:

1. Distribution of the difference between the cost of goods and services purchased by residents of a particular area from outside and non-residents from that area;
2. Gather accurate information about purchases made by residents of a particular area in other areas.

It is very important to calculate the GDP deflator for individual regions of the country. The GDP deflator represents the extent to which the unit price of goods and services produced in the current period changes relative to the unit price of goods and services produced in the base period. It is determined by dividing the nominal GVA by the real GNP:

$$\text{YAHM deflators} = \text{Nominal YAHM} / \text{Real YAHM} \quad (4)$$

This indicator allows you to compare the average price of various products in the current period with the average price in the base period. Because the GCC contains thousands of types of material goods and services, the ability to calculate the average price for them is an extremely complex process. Therefore, the GDP deflator is calculated on the basis of the price of material goods included in the consumer basket.

If the deflator is larger than one, then the region is experiencing inflation, or vice versa. With the help of the deflator you can determine how the living standards of each person, family and the whole population are changing.

One of the conceptual problems in the process of calculating the gross regional product is the distribution of services of central government by regions. This is largely due to inconsistencies between national and regional indicators and their components.

Organizations belonging to the central government perform their functions in different parts of the country, that is, they provide various services to other sectors of the economy. But they are directly controlled and funded by the relevant ministry or department. As a result, these organizations often do not report to local authorities. They provide a wide range of social services to all economic entities across the country. These are defense, science, culture and similar services. Some of them offer individual services on a regional scale (for both residents and non-residents). These include the services of educational institutions, medical services, cultural services, etc., which belong to the central government.

CIS countries have different approaches to the regionalization of the results of the services provided by the central government:

1. In Russia, Turkmenistan and Ukraine, regardless of the location of the central government, the results of the services provided by their departments shall be determined by the economic analysis of the territory in which those departments operate. are included in the indicators;

2. The results of the services provided by their departments shall be included in the territory in which the departments of the central government of Azerbaijan are located;

3. Georgia, Kyrgyzstan, Tajikistan and Uzbekistan distribute national data (indicators) equally throughout the country. [13]

In our opinion, it is advisable to use the first approach to resolve this issue in our country. This approach expands the ability to compile national calculations on a regional scale and increases the accuracy and reliability of economic indicators by region. It also facilitates fair government economic and social policies for individual regions.

The organization of accounting is also important in the process of calculating the GNP at current and fixed prices in different ways. The following methods are used to organize the calculation of key production indicators by region:

1. Bottom-up calculation method;
2. Top-down calculation method;
3. Mixed method.

In the bottom-up method, the initial data on the performance indicators are collected over a specific area. These figures are then summarized. Aggregate figures for all regions should be equal to those for the country as a whole. The advantage of this method is that it allows direct access to information sources in a particular region. The difficulty in using this method is the lack of calculations that ensure the compatibility of regional and national indicators.

In the top-down method, preliminary data on key production indicators is collected nationwide. This information is then distributed by region using other indirect indicators. The advantage of this method is that national and regional indicators are coordinated from the beginning. On the downside, the fact that regional data collection is based on indirect indicators reduces the accuracy and reliability of the data collected.

The mixed method is a combination of the above two methods. It uses partial regional indicators. Country-only indicators are calculated using a top-down calculation. [8]

Currently, there are serious problems in the organization of the calculation of key production indicators in the regions of the country. The most important of these is the lack of information on the economic activities of some economic entities at the regional level. This is mainly due to transport (rail transport) services, services provided by non-profit organizations serving households, and some indicators that reflect the state of foreign trade. This problem applies not only to Uzbekistan, but also to other CIS countries. The solution to this problem varies in the CIS countries. For example, Azerbaijan and Turkmenistan use bottom-up calculations, Georgia, Kazakhstan, and Kyrgyzstan use top-down calculations, and Russia, Tajikistan, Uzbekistan, and Ukraine use a mixed method. This means that some of them distribute the indicators by regions using the "top-down" method of calculation, while

others use the mixed method and do not distribute the indicators by regions. rather it generalizes them.

In our opinion, in order to collect information on the economic activities of individual entities in the economy at the regional level, it is expedient to calculate the individual components of value added (wages and profits) using the method of "top-down" calculation. . The area in which workers and employees are paid should be included in the macroeconomic indicators of that area.

Uzbekistan, like most countries, has different levels of territory: relatively large (regions and the Republic of Karakalpakstan), smaller (different districts) and smaller (different settlements). [11]

It is not difficult to theoretically substantiate that regional calculations can be made for any level of territory, even for individual settlements. However, the lower the level of the region in the calculation of GDP, the more disproportionate the indicators in the calculation of its indicators.

In our opinion, it is advisable to develop regional calculations for relatively large and then smaller areas in the early stages of compilation.

The existence of a number of indicators that help to analyze the socio-economic development of the regions is very important for economic policy, not only for individual regions, but also for the government of the republic.

## **Conclusion and suggestions**

In general, from all the above information we can conclude that:

1. Data on the share of GRP in GDP are used to analyze the place and role of individual regions in the country's economy. The system of indicators, which represents the share of GDP per capita, allows you to compare the level of economic development of different regions or to determine the growth rates of those regions across the country.

2. Gross value added in current prices is used to analyze the importance of individual sectors in the region's economy. Data obtained at constant prices for a number of periods helps to determine changes in the network structure of production in a particular region, the creation of goods and services, and the relationship between market and non-market services.

3. Comparison of the rates of gross production with the structure of the network by regions, and gross value added with intermediate consumption at current and constant prices - production at growth (decrease) of production in industries helps to determine the extent to which changes in volume and price levels have been affected.

4. In the analysis of production efficiency by regions, the indicators that represent the product corresponding to each labor force engaged in the creation of GDP are important. Its productivity indicators, calculated in current prices, can be compared with similar indicators in other regions and other sectors. The calculation of the fixed part of the GDP, which corresponds to those involved in its creation, at constant prices, helps to analyze the level of labor productivity.

5. Analysis of income generation in the regions - based on data on the composition of GNP by type of income. This data reflects how the income generated by production in individual regions and industries is distributed among employees, enterprises and organizations, as well as the state. These figures can be compared between existing networks in a single region and between networks in multiple regions.

## References

1. Decree of the President of the Republic of Uzbekistan "On reorganization of the Ministry of Macroeconomics and Statistics of the Republic of Uzbekistan". People's Word newspaper, December 26, 2002.
2. Keynes J. General theory of employment, interest and money. Per. from English - M.: Statistics. 1978.-576 p.;
3. Stone R. Method "input-output" and national accounts. - M.: Statistics, 1964.212 p.;
4. Leontev V. Economic essays. - M.: Politizdat, 1990. -415 p.
5. Abdullaev Y. Macroeconomic statistics. 100 questions and answers. - T.: «Labor», 1998. -382 p.;
6. Goyibnazarov B.K. National Accounts System. - T.: Literary Foundation, 2004. -106 p.;
7. Ivanov Yu.N. "Questions of statistics", 2007. No. 12. page 9.