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SOME EXISTING PROBLEMS IN CALCULATING THE GROSS DOMESTIC PRODUCT AND ITS COMPONENTS USING THE FINAL CONSUMPTION METHOD AND RECOMMENDATIONS FOR ITS IMPROVEMENT

Berdakh Joldasbayevich Mirzanov
Assistant Professor, (PhD) in Economic Sciences, Karakalpak State University

Orinbaeva Maxinur Quatbaevna,
Eshbanbetov Elmurat Maxsetbay uli
3rd Year Students of the Faculty of Economics of Karakalpak State University

ABSTRACT

This article explores the challenges faced in calculating the Gross Domestic Product (GDP) and its components using the final consumption method. It highlights the importance of adhering to international standards and standardized methods to ensure accurate and comparable measurements across countries. The article discusses the limitations of current measurement practices, including data availability and the inclusion of the informal and shadow economy. It emphasizes the need for improved calculation methods and data collection techniques to provide more reliable GDP estimates. The findings of this study have implications for policy decisions and understanding global economic trends. The article concludes by providing recommendations for enhancing the accuracy and reliability of GDP calculations, which can contribute to better economic analysis and decision-making.

Keywords: Gross Domestic Product (GDP), system of national accounts, challenges, calculation, measurement practices, data availability, informal economy, shadow economy, standardized methods, final consumption, gross fixed capital formation, value added, gross national income.

INTRODUCTION

The Gross Domestic Product (GDP) is a crucial indicator of a country's economic performance and is widely used for policy-making and economic analysis. However, accurately calculating the GDP and its components using the final consumption method poses several challenges. This article explores these challenges and highlights the importance of adhering to international standards and standardized methods for accurate and comparable measurements across countries.

One of the main limitations of current measurement practices is data availability. Collecting reliable data on consumption patterns can be challenging, especially in developing countries where informal and cash-based transactions are prevalent. Additionally, accurately capturing the value of non-market activities, such as household production or the shadow economy, is another significant challenge.

These limitations in data collection and measurement practices result in inaccurate GDP estimates, which can lead to flawed policy decisions and a misinterpretation of global economic trends. Therefore, there is a need for improved calculation methods and data collection techniques to provide more reliable GDP estimates.

Enhancing the accuracy and reliability of GDP calculations requires several recommendations. Firstly, there should be a greater emphasis on adhering to international standards, such as the System of National Accounts (SNA), to ensure consistency and comparability across countries. Secondly, efforts should be made to improve data collection techniques, particularly in capturing informal and non-market activities. This could involve utilizing new technologies, such as mobile phone data or satellite imagery, to supplement traditional survey methods.
Furthermore, there is a need for increased collaboration between national statistical agencies and international organizations to share best practices and develop standardized methodologies. This can help address the challenges faced in calculating GDP and its components using the final consumption method.
Accurately calculating the GDP and its components using the final consumption method is essential for informed policy decisions and understanding global economic trends. However, there are several challenges that need to be addressed, including data availability and capturing the informal economy. By adhering to international standards, improving data collection techniques, and enhancing collaboration, it is possible to overcome these challenges and provide more accurate and reliable GDP estimates. This, in turn, can contribute to better economic analysis and decision-making.
Much work is being done at the international level to improve the statistical methodology, to expand the information base for the compilation of macroeconomic indicators and to make the resulting data comparable. In particular, the System of National Accounts (SNA 2008), developed in 2008 by a number of international organizations, occupies a particularly important place in comparative statistical analysis and assessment of the economies of United Nations Member countries. Accordingly, in many countries, special attention is now being paid to improving the methods of statistical compilation of macroeconomic indicators based on the methods of the System of National Accounts (SNA).
In a globalized world, a number of research studies are under way to improve the methodology for calculating macroeconomic indicators on the basis of international SNA standards and to conduct a statistical study of structural units in the calculation system. In particular, ways have been explored to improve the implementation of an integrated information system for macroeconomic indicators, a comparative assessment of the statistical information system, the introduction of a system of macroeconomic indicators and an automated information system, their comparative assessment as well as the creation of an open data portal. Currently, the main scientific areas are the introduction of integrated statistical information systems into modern management on the basis of international standards, and ensuring transparency and openness of the data of the macroeconomic indicators system, Improvement of the database of macroeconomic indicators and statistical methods through effective use of international standards and principles.

LITERATURE ANALYSIS AND RESEARCH METHODOLOGY

The theoretical and methodological issues of the methodology for calculating the macroeconomic indicators of the SNA have been studied in depth in the academic literature of foreign scholars. In particular, the problems are: ensuring sustainable GDP growth from market demand (J.Keynes) [1], calculating the gross national product by production method based on the table

«input-output» (P.Stone) [2], simulating the factors influencing GDP (J.Marshall, J.Hicks) [3,4]. Calculation of GDP by expenditure-income ratio (E.Hansen, R.Dorbnusch, S.Fischer) [5,6], calculation of GDP by inter-industry balance sheets (B.Leontiev) [7], relationship between the money supply and GDP in the country (M.Friedman, K.R.McConell, S.L.Bru) [8,9]. Research related to the scientific and practical aspects of calculating the volume and growth of GDP has been studied to some extent by scientists from CIS countries: analysis and estimation of the sectoral structure of GDP (B.I.Bashkatova, V.I.Viyapin, G.P.Zhuravleveva) [10,11] Calculation of the regional composition of GDP on the basis of the principles of the System of National Accounts (Y.N.Ivanov, О.И Образцова, O.V.Kopeikina) [12,13], quarterly calculation of GDP (G.S.Kulagina, M.G.Nazarov, A.I.Ponomorenko) [14, 15,16], calculation of the share of the informal sector in GDP (B.T.Ryaubuskin, V.N.Salin, С.И.Кудряшова) [17,18].

Scientists in Uzbekistan have studied general aspects of improving methods of calculating GDP. These studies are continuing. In particular, in the studies of S.S.Gulyamov, S.V.Chepel, A.V.Vakhabov, G.H.Razyakova [19,20,21], attention is drawn to the need to take into account value added in the analysis of the sectoral structure of GDP and the development of forecast indicators, R.A.Alimov, B.K.Gaibnazarov, E.Abdullayev H.N.Nabiyev, A.Nabikhodzhaev, B.M.Mahmudov [22,23,24] considered problems of GDP estimation based on principles of national accounts and taking into account problems in international comparison of GDP, General theoretical aspects of the improvement of the GDP calculus system were considered in the studies of B.Y.Xodiev, S.S.Shodmonov, H.Jalilov, N.Tukhliev, K.K. Mambetzhanov [25,26,27,28].

However, in the research studies of the above authors, improving the methods of statistical calculation of macroeconomic indicators on the basis of the new standard of the System of National Accounts 2008 is not widely studied. From this point of view, the statistical calculation of our country's macroeconomic indicators based on the basic principles and recommendations of the System of National Accounts, based on the standards of the 2008 SNA, is important analysis of factors affecting them by statistical methods, statistical forecasting of trends in future development. As well, the studies provide mainly general information on methods and standards recommended by international organizations for measuring the volume and rate of GDP growth. At the same time, the development of the theoretical and methodological aspects of its calculation has not been given due attention and the problem has remained on the back burner.

ANALYSIS AND RESULTS

The theoretical and conceptual foundations of the methodology for calculating the gross domestic product have a long history. Although the economists of the last century did not carry out research on the methodology of GDP estimation, they provided the basis for its formation. At the time, they had studied such issues as the national product, national income, and tangible and intangible production. In this context, various international SNA standards and methods of calculating GDP are being developed and refined worldwide in their economic practices.

The most important and basic SNA indicator is the gross domestic product. The analysis of various descriptions of the essence of GDP given in the studies shows that a number of issues

have been left out of the authors' attention. In particular, most of them, in describing the essence of GDP, were based on value, while it also has utility.

In our opinion, when describing the concept of GDP, it is advisable to take into account two peculiarities of the goods and services produced, that is, public utility and public value. Our work therefore describes GDP as follows: GDP is an indicator of the total value of goods and services of public utility and social value whose economic interest is directed to a specific territory and produced for final consumption by residents of a country in a given period (month, quarter, year).

The theoretical and conceptual foundations of the methodology for calculating the gross domestic product have a long history. Although economists at the time did not carry out studies on the methodology for calculating GDP, they provided the basis for its formation. At the time, they had studied such issues as the national product, national income, and tangible and intangible production. In this context, various international SNA standards and methods of calculating GDP are being developed and refined worldwide in their economic practices. Assuming that a country's economy is closed, GDP will be equal to the amount of primary production income received by all residents. But almost all countries in the world accept, in various forms, primary income from other countries and provide it to a certain extent. If we take this flow of primary income into account when calculating macroeconomic indicators, we will have gross national income (GNI).

In accordance with the international standard of the 1968 SNA, this indicator is called gross national product (GNP). International standards for the 1993 SNA and the 2008 SNA treat GNP as an incorrect expression of the real level of production. Instead, GNI calculations were introduced. As a result, GDP is now regarded as the main macroeconomic indicator in all countries of the world, based on the international standard of the 2008 SNA.

In Uzbekistan, in the first years of independence, one of the priorities was to move from the current system of accounts and records to the standard adopted in international practice; to develop a system adapted to local conditions; International comparison and analysis of macroeconomic indicators. As a result, in 1993 the Law «On State Statistics» was adopted, and in 1994 the State Programme for the transition to the SNA was elaborated and approved. Work is currently under way to introduce the Act and the Programme of Innovation and Improvement. The introduction of the State programme for the transition to the SNA in our Republic made it possible, during the initial period, to carry out a number of tasks related to the calculation of GDP. These include the following: 1. The methodology for calculating GDP and its sectoral structure has been developed on the basis of the requirements of the international standard SNA- 93. 2. In order to avoid double counting, work has been done on the cross-industry balance sheet. 3. It is now possible to calculate the GDP and other macroeconomic indicators that have been created in the Republic on a permanent basis. Together with the above-mentioned positive results in this area, there are still some shortcomings that need to be addressed in the process of accelerating economic development. In Uzbekistan, in particular, during the period of application of the national economic balance sheet system, a great deal of experience has been accumulated in the field of intersectoral balance, which is the basis for calculating the gross social product (GSP).

The cross-industry balance sheet is also central to the Cost-Result Table, which is the basis of the System of National Accounts and is widely used in the analysis and forecasting of socio-economic processes. Despite many years of experience in the field of intersectoral balance sheet, the «input - result» table, which is the basis of the intersectoral balance in the Republic's National Accounts, has not yet been sufficiently developed. This makes it impossible to reflect fully the changes taking place in social and economic life. As well as Presidential Decision PP-3165 of 31 July 2017 "On measures to improve the work of the State Committee on Statistics" noted: «...the forms and methods used in practice for the collection, compilation and analysis of statistical data do not yet fully correspond to modern requirements and international standards» [29]. These circumstances point to an objective need to improve the methods of calculating macroeconomic indicators on the basis of the new, i.e. the 2008 SNA international standard.

Currently, the processes of calculating GDP by value added method are carried out in the republic on the basis of the requirements of the international standard SNA 2008. Value added can be represented, as a source of labour, by the entrepreneur (the owner of capital) and the State in its shares. From value added, the labour force receives its share in wages, the entrepreneur in the form of profits (interest), and the State in the form of taxes.

The subtraction method and the addition method can be used to determine value added. In the first variant, value added is expressed as the difference between the gross product and the intermediate consumption cost of its production, and in the second variant as the sum of all costs. The main uses of value added are:

1. Staff benefits (salaries, compensation, various bonuses).
2. Interest payments, dividends to owners of capital and other payments.
3. Investments in acquisition of property, plant and equipment and intangible assets.
4. Research and development expenditure.
5. Capital amortization payments.

The part of the value added that remains after the realization of all these costs is called the retained value added. If it is not sufficient to cover all of the above costs, then a negative value-added indicator is generated. This value of the indicator may in some cases be considered a normal situation. For example, in the case of massive investment in the economy, the negative value added is considered a natural position.

This being the case, this should be distinguished from the retained earnings of an enterprise. The difference relates mainly to capital expenditures. Capital investments are made from retained earnings, and retained value added is calculated after realization of capital investments. Consequently, in aggregate terms, retained value added is less than retained profit.

Studies have shown that the National Accounts of the Republic have not yet developed a method for calculating depreciation, which is one of the components of value added, in the process of calculating GDP. This, in turn, makes it impossible to calculate the value of the capital stock consumed in the economy. As a result, because value added is not fully calculated, the amount of GDP created in a country is also reflected in a corresponding reduction.

In our view, it is necessary to use the methods used in international practice and in the national accounts of developed countries to calculate the consumption of fixed capital used in all spheres and branches of the national economy.

At present, Uzbekistan uses the final consumption method in accordance with the decision of the State Committee on Statistics of 1 April 2011 for 3 [30]. The ordinance sets out the methodological provisions for the calculation of gross domestic product by final consumption method. (Hereinafter Regulation).

In calculating GDP on the basis of the method of final consumption, the information on its composition makes it possible to determine the proportion of the value of goods and services consumed in order to satisfy the demand of economic agents and increase the national wealth of the country, Analyses the proportions of final consumption directions of GDP.

According to the System of National Accounts, the final consumption method of GDP is calculated as the sum of household expenditure, all expenditure of public authorities and non-profit (public) organizations providing services to households, Gross fixed capital formation and net exports of goods (goods and services), which in the form of a formula takes the form of:

$$\boldsymbol{GDP = CH + CG + CNPO + GFCF + N_{Ex}} \quad (1)$$

Here,

$\boldsymbol{CH}$ – household final consumption;

$\boldsymbol{CG}$ – final consumption expenditure of public administration institutions;

$\boldsymbol{CNPO}$– final consumption expenditure of non-profit organizations providing services to households;

$\boldsymbol{GFCF}$ – gross fixed capital formation;

$\boldsymbol{N_{Ex}}$ – net exports of goods and services.

In the calculation of GDP, the final consumption method sums up all final consumption expenditures of economic entities, that is, expenditures of households, non-profit organizations providing services to State and households. In addition, the balance of exports and imports of goods and services are accounted for.

The gross savings achieved in all sectors and branches of the economy are also taken into account in calculating GDP by the final consumption method. Gross savings are a source of socio-economic development, investment, modernization and diversification. That is why one of the most urgent tasks is to calculate gross savings and its constituent elements. Studies have shown that the methodological Regulation developed for calculating GDP by the method of final consumption does not fully take into account elements of gross savings. In our view, when calculating GDP on the basis of the final consumption method, it is advisable to include in gross savings, in addition to the elements specified in the Regulation, the value of purchased luxury goods. Such items include precious stones and metals, antiques, works and paintings, artistic works. But this does not mean that they should all be reflected as luxury goods on the balance sheet of the enterprise. Because there are situations where you can't get an income from them. Therefore, only luxury items purchased for profit should be included in this category as an alternative to investment.

Gross fixed capital formation is considered to be one of the factors that have a major impact on the country's GDP. In particular, the reinterpretation of research and defence expenditures in GDP plays an important role in the expression of a country's economic potential, the

international comparison of its macroeconomic indicators, and the enhancement of the prestige of the international community.

At present, research and defence expenditures are not included in the gross fixed capital formation when calculating GDP by the final consumption method on the basis «Manual for the calculation of gross domestic product by final consumption method» [30]. This in turn results in these expenditures not being included in the final consumption of GDP. As a result, GDP is not high. In our view, research and defence expenditures should be considered as gross fixed capital formation. So that the results of research can be used in the production process several times over many years. However, there are studies in some areas that are spiritually useful to their owner or to the whole of society, but do not yield economic benefits. It is advisable to continue to consider their costs as intermediate consumption. Moreover, in the Republic's system of national accounts, military expenditures and the means to deliver them are not currently recorded as capital formation but as intermediate consumption of the State administration.

CONCLUSION

In our opinion, if the armaments and consumables in the armed forces are intended for service for more than a year, it would be appropriate to take into account expenses incurred as gross fixed capital formation. The significance of these recommendations lies in the fact that in the process of calculating gross domestic product by final consumption, GDP also increases significantly due to the increase in gross savings. This will further enhance the country's economic potential. When analysing a country's economic and social development, it is important to calculate GDP by short-term indicators, i.e., quarterly indicators. Research has shown that the State Committee on Statistics is currently compiling monthly and quarterly statistical indicators on a cumulative basis. This makes it impossible to analyse in depth the net (discrete) monthly and quarterly indicators, to further improve the quality of the data by comparing them by month and quarter within the year, and to analyse in depth the country's economic situation.

In our view, improving the calculation and analysis of quarterly macroeconomic indicators should be one of the priorities in the current period of accelerating current economic development. On the basis of international experience, it may be concluded that it is advisable to introduce the collection and development of quarterly data at the sectoral level in order to improve the quality of quarterly macroeconomic indicators. As, macroeconomic indicators in discrete quarters have an analytical value, which has the following advantages: Discrete quarterly indicators can be compared with the previous quarter and the corresponding quarter of the previous year; detailed and highly analytical knowledge; quality and incremental indicators are improved; business cycle and short-term changes can be monitored; the possibility of macroeconomic forecasting and modelling is achieved, as well as the study of the dynamics of seasonality; timely forecasting of changes in the economy and implementation of economic policy measures are achieved; the number of errors in data submitted by enterprises and organizations is reduced.

In order to compile macroeconomic indicators for discrete quarters, it is advisable to develop a system of measures along the following lines: changes in the forms of State statistical surveys submitted to enterprises and organizations, to include discrete quarterly data; to ensure that

all statistical and administrative data are presented for individual quarters; to calculate discrete quarterly indicators in constant prices, that is, to introduce the practice of calculation in annual average prices of the base year; Establishment of methods for reconciling data from discrete quarters with annual data, in particular the introduction of specialized software in this field; development of analysis of data from discrete quarters; on the basis of time series and seasonal adjustment methods. This includes the introduction of time series analysis, dividing it into seasonal, cyclic and non-traditional components. In general, it should be noted, by way of conclusion, that the introduction of a discrete method of calculating GDP in a country will make it possible to analyse short-term changes in the socio-economic development of the country, Develop forward-looking projections and development scenarios.

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