

# Issues of Adapting the Indicators of The National Accounting System to The International Methodology in Uzbekistan

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**Abstract-** The article analyzes the main concepts of the international methodology of SNA and their implementation stages into the practice of national statistics system of the Republic of Uzbekistan. Paper discusses the calculation of Financial Intermediation Services Indirectly Measured (FISIM) based on SNA-2008. Quarterly national accounts were improved by introducing the practice of calculating GDP on the basis of discrete quarters. Moreover, possibility of the assessment of living services produced by homeowners for their own consumption according to SNA-2008 was analyzed.

**Keywords:** System of National Accounts (SNA), Gross Domestic Product (GDP), quarterly national accounts, discrete national accounts, Input and output tables.

## 1. INTRODUCTION

A complete and correct reflection of the socio-economic processes taking place in the country in statistical indicators allows for an in-depth analysis of the results of large-scale reforms, as well as a correct assessment of the effectiveness of the given benefits and investments, as well as making impartial decisions based on them and developing effective plans and programs. This situation shows how important it is to align the indicators of national accounts with international methodologies.

The system of national accounts (SNA) is an international methodology that reflects a system of interrelated statistical indicators compiled in the form of a specific set of accounts and tables representing the results of economic activity, and serves to study all aspects of the country's socio-economic life.

## 2. LITERATURE REVIEW

The emergence and development of the theoretical foundations of SNA has a long history, and the first international SNA international standard recognized at the international level is "SNA-1953". This manual was updated and improved in 1968, 1993 and 2008.

The development of "SNA-1968" made a great contribution to the development of national accounting. Based on the principles of this standard, the UN launched the publication of an annual statistical collection of national accounts, and many countries implemented the "SNA-1968" in the national statistics practice.

In 1970, the European Community developed the European version of the SNA. In this regard, the international standard "SNA-1993" was developed and accepted by the UN as a result of the tireless research of international organizations and scientists. R. Stone, V. Leontev, P. Hilla, J. Hicks, Nancy Ruggles, Robert Eisner contributed immeasurably to the development of this standard. This standard also focuses on harmonization between different sectors of economic statistics. It is noted that the external world account in the national accounts should be consistent with the balance of payments. Also, in "SNA-1993" expenses for geological research, software, artistic and literary developments are interpreted as accumulation of fixed capital. In addition, this standard has developed a methodology for calculating net worth.

The international standard "SNA-2008" was adopted in 2009 at the 40th session of the United Nations (UN) Statistical Commission, and in this manual, the methodology of expressing a number of important economic processes in statistical indicators has been improved. In this standard, the main concepts of SNA have been preserved, and the tariffs and classifications for important components of GDP and national income, which reflect important aspects of the economy, have been updated. These changes include transactions with financial instruments, central banking activities, scientific research expenditures, armament expenditures, and classification of financial and non-financial assets. This standard was developed in accordance with the "Balance of Payments (Volume 6)", International Manual on Consumer and Producer Price Index, International Manual of Public Finance Statistics and other international standards and manuals in the field of statistics.

### 3. WORLDWIDE IMPLEMENTATION OF SNA

Today, most of the developed countries are forming their national accounts indicators in accordance with the provisions of the international standard "SNA-2008" of the UN and the International Monetary Fund (IMF). According to the information of the IMF, 1 of the 193 countries that are its members have been forming national accounts indicators based on the rules of the international standard "SNA-1968", 56 "SNA-1993", and 136 "SNA-2008" (Figure 1).

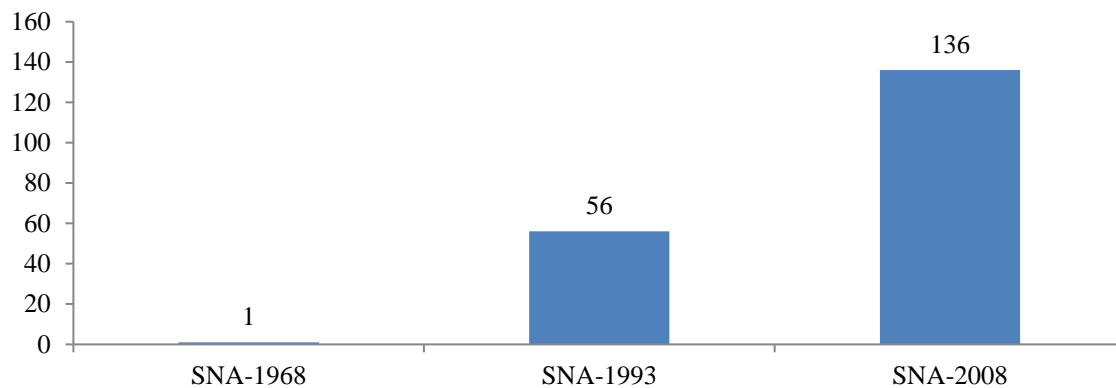


Figure 1. The number of countries that have implemented SNA [10]

In case of Commonwealth of Independent States (CIS) 5 member states form their national accounts indicators based on the rules of the international standard "SNA-1993", 6 of them based on the "SNA-2008" (Table 1).

Table 1: Implementation status of SNA in the CIS countries [10]

T.p.	CIS countries	SNA (1993-2008)
1.	Azerbaijan	1993
2.	Armenia	2008
3.	Belarus	2008
4.	Kazakhstan	1993
5.	Kyrgyzstan	1993
6.	Moldova	2008
7.	Russian Federation	2008
8.	Tajikistan	1993
9.	Uzbekistan	1993
10.	Ukraine	2008

11.	Turkmenistan	2008
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### IMPLEMENTATION PROCESSES OF THE SNA IN UZBEKISTAN

The implementation of the international methodology of SNA in the practice of national statistics of Uzbekistan was started based on the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 433 of 1994, Order of the President of the Republic of Uzbekistan No. PO-5635 of January 17, 2019 "Strategy of Actions in Five Priority Areas of Development of the Republic of Uzbekistan in 2017-2021 Decree "On the implementation of the state program in the year of active investments and social development", Decisions No. PD-4273 dated April 9, 2019 "On additional measures to ensure the openness and transparency of the state administration and increase the statistical potential of the country" [2] and PD-4796 of August 3, 2020 "On measures to further improve and develop the national statistical system of the Republic of Uzbekistan" served as a legal basis for further accelerating the wide introduction of SNA into the practice of statistics [3].

In 2017-2022, Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics) adjusted the methods of calculating the indicators of national accounts to the rules of the international methodology "SNA-2008" and based on them, the following works were carried out.

***SNA, public finance statistics and balance of payments indicators were coordinated.*** In this case, the implementation of GDP calculations in accordance with the statistics of state finances and the balance of payments data and publication on the official website of the Statistics Agency was started. Based on these calculations, dynamic series of GDP and related macroeconomic indicators from 2010 to 2010 annually and quarterly from 2017 were formed and published.

***Quarterly national accounts were improved by introducing the practice of calculating GDP on the basis of discrete quarters.*** Decision No. 2 of the Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics) dated February 8, 2021 "On the implementation of the experience of calculating economic statistics indicators for discrete periods in the section of networks" was adopted [4].

In order to improve quarterly national accounts by implementing GDP calculations based on discrete quarters, the "Procedure for the formation of economic statistics indicators based on discrete quarters" was developed and approved by the decision of the Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics) No. 9 of March 31, 2021 [5].

On the basis of this methodological regulation, GDP calculations were made for discrete quarters in the section of economic activities, dynamic series were formed from 2017 and published on the official website of the Statistics Agency.

***The experience of creating "Resources and use" tables has been improved.*** In order to study the composition of production and sales costs of enterprises, 23 types of questionnaires were developed and selective observations were made covered a total of 31,961 economic entities (non-financial enterprises, banks and insurance organizations, non-governmental non-profit organizations, etc.) in all regions of the republic in May-August 2020.

Based on the updated coefficients of "Expenditure-Production" determined according to the results of monitoring, "Resources and use" tables for 2019-2020 were formed and presented to users.

During 2020-2021, within the technical assistance missions of the IMF and the Asian Development Bank (ADB) on national accounts statistics, the experience of compiling "Resources and use" tables was improved, and as a result, the number of sectors and products included in these tables increased from 83 sectors and products to 143 sectors and 143 products.

In order to study the international experience and improve the practice of drawing up "Resources and use" tables, the "Methodological regulation on drawing up tables of resources and use of goods and services" was developed and approved by the decision of the Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics) No. 56 of December 16, 2021 [6].

***International classifiers were introduced to the calculations of statistical indicators.*** When calculating the GDP by the final consumption method, the final consumption expenses of the state administration bodies were formed according to the "Classification of the functions of the state administration bodies".

The indicator of final consumption expenses of households as part of GDP calculated by the method of final consumption was formed on the basis of "Individual consumption classification by objectives".

The account of transactions with capital has been improved by introducing the "Fixed assets classifier". Classification by types of assets has been established.

*The assessment of living services produced by homeowners for their own consumption was adapted based on the international methodology "SNA-2008".* The Procedural Regulation on the assessment of living services produced by homeowners for their own consumption was developed and approved by the decision of the Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics) No. 31 dated August 29, 2020 [7].

Assessment of conditional services for living in one's own house and reflection of these services in GDP calculations has been established.

GDP and related macroeconomic indicators have been recalculated, including contingent services for living in one's own home.

Table 2: The impact of the change in the evaluation methodology of conditional services for living in one's own home on the GDP of the Republic of Uzbekistan

	Nominal GDP, billion soum		
	Before revision	After revision	Change (%)
2016	242 495,5	255 421,9	5,3
2017	302 536,8	317 476,4	4,9
2018	406 648,5	424 728,7	4,4
2019	510 117,2	529 391,4	3,8
2020	580 203,2	602 551,4	3,9

From the data in Table 2, it can be seen that the change in the assessment methodology of conditional services for living in one's own home led to an increase in the GDP of the Republic of Uzbekistan from 3.8% to 5.3% in 2016-2020.

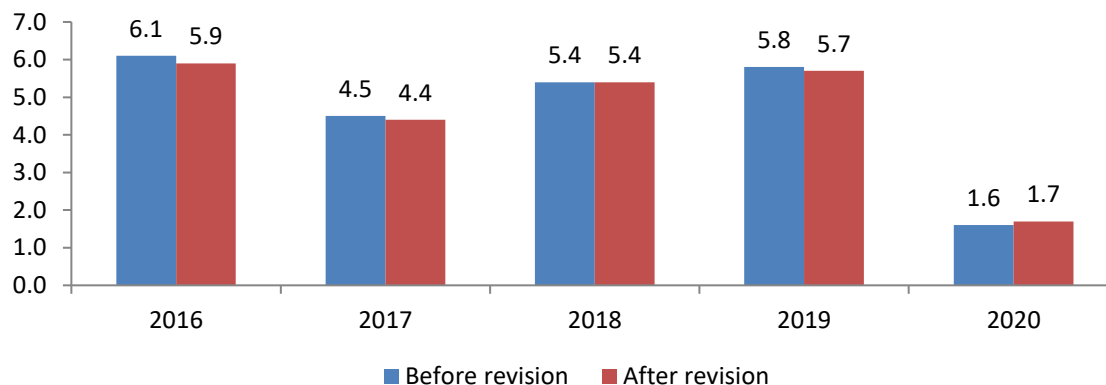


Figure 2. The impact of changes in the methodology of assessment of conditional services for living in one's own home on the GDP growth rate, in %

The data in Figure 2 show that the change in the methodology of assessment of conditional services for living in one's own house caused a decrease in the GDP growth rate by 0.1-0.2% in 2016-2020.

**A system of statistical indicators evaluating the development of the digital economy has been developed in Uzbekistan.** The joint decision of the Ministry of Information Technologies and Communications Development and Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics) “On the implementation of additional measures to maintain statistics of the digital

economy in the Republic of Uzbekistan and the introduction of the system of aggregate indicators of the information economy and e-commerce” was signed. With this decision, the aggregate indicator “Information economy and e-commerce” and the list of activities included in it were approved.

“The procedure for calculation of the volume of gross added value in the field of information economy and e-commerce” was developed, approved by the decision of the Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics) No. 16 dated May 31, 2021 and put into practice [8].

**Calculations of financial intermediation services in Uzbekistan were harmonized with the international methodology "SNA-2008".**

As the final stage of these processes, the calculations of financial intermediation services are done for 2017-2022 based on the requirements of the international methodology "SNA-2008" in accordance with the recommendations of the IMF and ADB experts, based on the “Methodological Regulation on the Calculation of Financial Intermediation Services Indirectly Measured (FISIM)” developed by the Statistics Agency under the President of the Republic of Uzbekistan (former State Committee of the Republic of Uzbekistan on Statistics).

The volume of financial intermediation services is calculated as the difference between the interest received by financial intermediaries and paid by them according to the "SNA-1993" methodology and added to other services as intermediate consumption of the conditional network, which it is reflected on the basis of the following formula, [8].

$$Q = l - D, \tag{1}$$

where,

L - income from loan interest;

D – interest payment for deposits.

According to the "SNA-2008" methodology, the volume of financial intermediation services is calculated by multiplying the difference between the interest rates of loans (deposits) and the base rate (average interest rate on loans and deposits) by the average balance of loans (deposits) in the reporting period based on the following formula [8].

$$Q = (rL - rr) \times yL + (rr - rD) \times yD, \tag{2}$$

where,

yL – average balance of loans for the reporting period;

yD – average balance of deposits for the reporting period;

pL – interest rate on loans;

rD – interest rate on deposits;

rr – base rate.

According to this methodology, the volume of financial intermediation services was divided into intermediate consumption of economic activities and final consumption of households.

Table 3: The effect of the change in the assessment of FISIM on the GDP of the Republic of Uzbekistan

	Nominal GDP, billion soum		
	Before revision	After revision	Change (%)
2018	424 728,7	426 641,0	0,5
2019	529 391,4	532 712,5	0,6
2020	602 193,0	605 514,9	0,6
2021	734 909,7	738 425,2	0,5

It can be seen from the data of Table 3 that as a result of the introduction of the improved methodology of the volume of financial intermediation services, the volume of GDP increased by 0.5-0.6% in 2018-2021. This situation is explained by the decrease of the volume of financial intermediation services evaluated on the basis of SNA-2008 compared to the volume of financial intermediation services evaluated on the basis of SNA-1993.

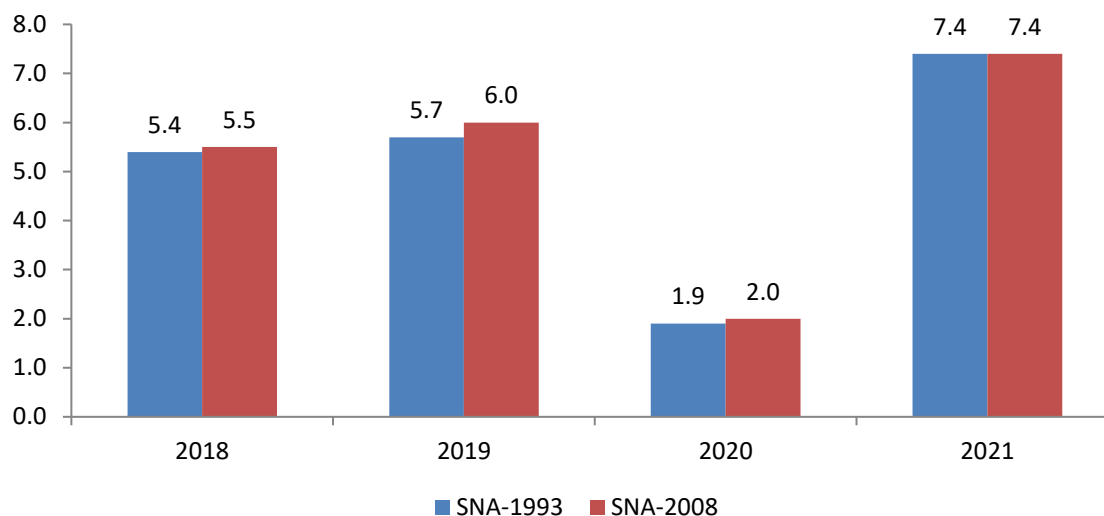


Figure 3. The impact of the change in the assessment of FISIM on the GDP growth rate of the Republic of Uzbekistan, in %

Figure 3 shows the impact of the volume of financial intermediation services, calculated based on improved methodology, on GDP growth rates. As a result of its introduction, the nominal GDP volume for 2021 increased from 734.9 trillion soums to 738.4 trillion soums (increase by 0.5%), and the real growth rate of GDP did not change (remained at 7.4%).

#### Priority Tasks for the Improvement of SNA in Uzbekistan

The followings are the priority areas and actions to be achieved to improve the SNA in the Uzbekistan in the near future:

- Further improvement of the methodology of calculation of GDP at constant prices (calculation at average prices of the base year and introduction of two-way deflation method);
- Implementation of the practice of evaluating ‘Input and Output’ tables at constant prices;
- Participation in the next global stage of the International Comparison Program (ICP);
- Improving the practice of assessing the unobservable economy based on international recommendations;
- To further increase the potential of personnel in the field of SNA.

#### 4. CONCLUSIONS

As a result of starting systematic work in the mentioned main areas, finding solutions to abovementioned issues, and fulfilling the assigned tasks, the quality of SNA indicators will be improved and transparency will be increased. This, in turn, will provide a more comprehensive description of the national economy of our country, increase the level of international comparison of statistical indicators by harmonizing the calculations of macroeconomic indicators with international methodology, expand the opportunities for performing macroeconomic analysis, and also make the indicators reflecting the economy of Uzbekistan more understandable for the foreign investors and these will allow to achieve positive results such in improving investment attractiveness and in international ratings.

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