TECHNICAL ASSISTANCE REPORT

REPUBLIC OF AZERBAIJAN

Report on National Accounts Mission, February 17 – 28, 2025

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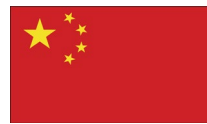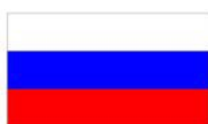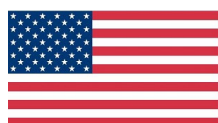
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Acronyms

2008 SNA	*System of National Accounts, 2008*
CCAMTAC	Caucasus, Central Asia, and Mongolia Regional Capacity Development Center
GDP-E	GDP by Expenditure
GDP-P	GDP by Production
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
NACE Rev.2	European Classification of Economic Activities
NAD	National Accounts and Macroeconomic Indicators Department of the State Statistical Committee of Azerbaijan
SDDS	The IMF Special Data Dissemination Standards
SSC	State Statistical Committee of Azerbaijan
TA	Technical Assistance
VAT	Value Added Tax

Summary Of Mission Outcomes and Priority Recommendations

1.   **A technical assistance (TA) mission on national accounts of the Caucasus, Central Asia, and Mongolia Regional Capacity Development Center (CCAMTAC) visited Baku during February 17 – 28, 2025.** This was a follow-up mission to the April 2024 CCAMTAC TA mission on national accounts. The mission assisted the State Statistical Committee of Azerbaijan (SSC) by reviewing the compilation of quarterly GDP by production (GDP-P) and expenditure (GDP-E) and provided recommendations for further improvement.

2.   **The SSC has been working for the past few years to implement discrete quarterly GDP in line with international best practice.** For this purpose, a chain-linked time series of quarterly GDP data was compiled using the benchmarking and annual overlap technique, as recommended in the 2017 IMF Manual on Quarterly National Accounts[1]. The compilation of discrete time series of quarterly GDP-P and GDP-E is almost complete.

3.   **The mission reviewed the time series of discrete quarterly GDP-P and provided recommendations for further improvement.** The chain-linked time series is compiled by using the European Classification of Economic Activities (NACE Rev.2) and starts from 2010. During the mission, the reference year was changed from 2010 to 2023. The re-referencing reduced non-additivity in most recent years.

4.   **During the mission, the chain-linked time series of quarterly GDP-E was also re-referenced to 2023**. The mission reviewed the chain-linked time series of quarterly gross fixed capital formation and provided recommendations for further improvement of the currently used commodity flow approach. These improvements will reduce quarterly statistical discrepancies between GDP-P and GDP-E, and both time series will be available for publication.

5.   **To support the development of quarterly national accounts, the mission recommended a detailed action plan with the following priority recommendations:**

TABLE 1. Priority Recommendations

Target Date	Priority Recommendation	Responsible Institutions
September 2025	*When compiling quarterly GDP, use the same methods (if possible) as used for the compilation of annual GDP.*	**SSC**
November 2025	*Improve the commodity flow method by excluding machinery and equipment intended for final consumption.*	**SSC**

6.   **Further details on the priority recommendations and the related actions/milestones can be found in the action plan under Detailed Technical Assessment and Recommendations.**

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[1] For more details, see Chapters 8 and 9 of the Quarterly National Accounts Manual – 2017 Edition

Detailed Technical Assessment and Recommendations

Priority	Action/Milestone	Target Completion Date
Outcome: Quarterly GDP by production is based on discrete source data		
H	When compiling quarterly GVA, use alternative indicators (compensation of employees or VAT turnover) in those types of activities where the coverage of monthly or quarterly surveys is insufficient (arts, entertainment, and other services).	April 2025
H	When compiling quarterly GDP, use the same methods (if possible) as used for the compilation of annual GDP.	September 2025
H	Publish chain-linked time series of quarterly GDP-P with the reference year 2023.	December 2025
Outcome: Quarterly GDP by expenditure is compiled and disseminated		
H	Finalizing the compilation of time series of collective and individual consumption at current and constant prices.	April 2025
H	Breakdown of gross fixed capital formation to the gross fixed capital formation of government and non-government sectors	September 2025
H	Compile the quarterly structure of construction according to the commodity flow of basic construction materials.	November 2025
H	Improve the commodity flow method by excluding machinery and equipment intended for final consumption.	November 2025
H	Publish chain-linked time series of quarterly GDP-E with the reference year 2023.	December 2025
M	Calculate the contributions of individual components to real GDP growth.	December 2025
M	Compile annual supply and use tables on a regular annual basis.	2026-2027

H – High; M – Medium

A. QUARTERLY GDP BY PRODUCTION

Current Situation

7. **The SSC compiles first estimates of monthly GDP-P on a cumulative basis.** The first estimates are published 15 days from the end of the reporting cumulative period. At the same time, the SSC compiles estimates of quarterly GDP-P, which are published on the official website and meet the requirements of the IMF Special Data Dissemination Standard (SDDS).

8. **The currently published time series of quarterly GDP-P requires the following improvements:**

- The European Classification of Economic Activities (NACE Rev. 1.1) should be replaced by the updated version NACE Rev. 2.

- The base year 2005 should be updated to a more recent year.

- The current method of benchmarking annual and quarterly data should be improved by implementing the Denton extrapolation method, which is integrated into the XLPBM function developed by the IMF Statistics Department.

9. **The SSC has been actively working on these improvements over the past few years.** The SSC National Accounts Department developed an improved time series of quarterly GDP-P. During the current mission, the time series was updated by re-referencing from 2010 year to 2023.

The mission made several recommendations on improving data sources and compilation methods, after which the new time series will be ready for publication.

Data Sources and Compilation Methods

10.   **Methods used for the compilation of new time series of quarterly GDP-P follow international best practice**. The annual and quarterly data are benchmarked by using the XLPBM function. Chained-linked time series are compiled using the annual overlap technique recommended in the 2017 IMF Manual on Quarterly National Accounts.

11.   **Some of the data sources required for compiling quarterly GDP are available for discrete periods**. The industrial production index is compiled for discrete months and published in a format that is consistent with the SDDS requirements. Discrete data are also available for agriculture, trade, transport, and other services.

12.   **In some services such as arts, culture and recreation, monthly and quarterly data are significantly smaller and very volatile compared to the annual data**. To resolve this issue, the mission recommended using alternative indicators such as compensation for employees or value added tax (VAT) turnover.

13.   **The methods used for the compilation of quarterly GDP should preferably be fully consistent with the methods used for the compilation of annual GDP**. During the annual compilation of real gross value added (GVA) for some types of activity, the volume extrapolation method is used, while the estimates of quarterly GDP are derived by applying the direct deflation method using appropriate price indices. The use of these two methods may result in significant differences between the annual and quarterly estimates at the previous year's prices, which may lead to sharp changes in the real GDP growth rate during the annual adjustment.

Recommended Actions:

▪ When compiling quarterly GVA, use alternative indicators (compensation of employees or VAT turnover) in those types of activities where the coverage of monthly or quarterly surveys is insufficient (arts, entertainment, and other services).

▪ When compiling quarterly GDP, use the same methods (if possible) as used for the compilation of annual GDP.

▪ Publish chain-linked time series of quarterly GDP-P with the reference year 2023.

B.   QUARTERLY GDP BY EXPENDITURE

14.   **The SSC has made significant progress in compiling chain-linked time series of quarterly GDP.** The series starts from 2015 and includes the following indicators: household consumption, government consumption, gross fixed capital formation (GFCF), changes in inventories, exports and imports of goods and services. Statistical discrepancy is entirely allocated to changes in inventories. Government consumption is compiled separately by collective and individual consumption but not disseminated in the same format. The same applies to exports and imports of goods and services, which should be disseminated separately for goods and for services.

15.   **Due to large statistical discrepancies quarterly changes in inventories are very volatile.** The mission discussed the issue of large statistical discrepancies and determined that the main reason lies in the unreliable quarterly structure of GFCF.

16.   **The structure of the GFCF is quite specific, as buildings and infrastructure account for more than 60 percent of the total GFCF**. Accordingly, the quarterly structure of GFCF is significantly dependent on the quarterly structure of construction services, which in turn depends significantly on

the government budget expenditures, which are recorded on a cash basis and the bulk of transactions occur at the end of the year, regardless of when the actual construction process was completed.

17.   **The mission noted that for improving the quarterly structure of construction services and GFCF, it would be better to measure the quarterly indicators based on the dynamics of construction material flows**. For this purpose, quarterly domestic production and net imports of main construction materials should be summed up. Then the annual GFCF for buildings and infrastructure should be divided by the quarterly structure of construction flows. On the next stage, the next quarter should be extrapolated by the quarterly growth of construction flows.

18.   **The SSC uses the commodity flow method for the quarterly compilation of GFCF for machinery and equipment**. This method could be extended to include main types of construction materials. However, in the case of machinery and equipment, it is necessary to exclude the part intended for final consumption. It is also important to compile GFCF by type of fixed assets in accordance with the format recommended in the *2008 SNA.*

19.   **The mission and SSC staff discussed the best international practice for publishing changes in inventories**. Considering that changes in inventories do not have volumes and can be expressed in both positive and negative values, it is not appropriate to publish them as a separate row in a chain-linked series. This indicator could be combined with GFCF and published in this form. Some countries publish changes in inventories as a separate item as a contribution to real GDP growth. The mission demonstrated how to compile the contribution by individual components to real GDP growth in a chain-linked time series. Contributions to growth are usually very important for many users of national accounts data.

20.   **Large statistical discrepancies occur partly due to the current practice of compiling annual supply and use tables once every five years**. The latest supply and use tables were compiled by the SSC for 2021. Performing this work on a regular annual basis will allow the SSC staff to conduct a more detailed analysis of statistical discrepancies and to set a plan for further improvement.

Recommended Actions:

- Finalizing the compilation of time series of collective and individual consumption at current and constant prices.

- Breakdown of gross fixed capital formation to the gross fixed capital formation of government and non-government sectors

- Compile the quarterly structure of construction according to the commodity flow of basic construction materials.

- Improve the commodity flow method by excluding machinery and equipment intended for final consumption.

- Publish chain-linked time series of quarterly GDP-E with the reference year 2023.

- Calculate the contributions of individual components to real GDP growth.

- Compile annual supply and use tables on a regular annual basis.

C. OFFICIALS MET DURING THE MISSION

Name	Institution	Position
Mr. Nuru Suleymanov	SSC	Head of NAD
Ms. Alida Alpashayeva	SSC	Deputy head of NAD
Ms. Parvin Huseynova	SSC	Chief advisor, NAD
Ms. Sevinj Huseynova	SSC	Chief advisor, NAD
Ms. Fidan Guluzade	SSC	Chief advisor, NAD