TECHNICAL ASSISTANCE REPORT

MONGOLIA

Report on National Accounts Mission
September 30 – October 11, 2024

DECEMBER 2024

PREPARED BY

Levan Gogoberishvili

Authoring Department :
IMF Statistics Department

CCAMTAC

MEMBERS

Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan, Uzbekistan

PARTNERS

Switzerland, Russia, China, Korea, United States, European Union, Asian Development Bank, Poland

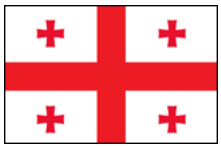
DISCLAIMER

The contents of this report constitute technical advice provided by the staff of the International Monetary Fund (IMF) to the authorities of Mongolia (the "CD recipient") in response to their request for technical assistance. This report (in whole or in part) or summaries thereof may be disclosed by the IMF to IMF Executive Directors, to other IMF Executive Directors and members of their staff, as well as to other agencies or instrumentalities of the CD recipient, and upon their request, to World Bank staff, and other technical assistance providers and donors with legitimate interest, including members of the Steering Committee of CCAMTAC, unless the CD recipient specifically objects to such disclosure (see Operational Guidelines for the Dissemination of Technical Assistance Information). Publication or Disclosure of this report (in whole or in part) or summaries thereof to parties outside the IMF other than agencies or instrumentalities of the CD recipient, World Bank staff, other technical assistance providers and donors with legitimate interest, including members of the Steering Committee of CCAMTAC, shall require the explicit consent of the CD recipient and the IMF's Statistics Department.

MEMBERS

Armenia

Azerbaijan



Georgia

Kazakhstan

Kyrgyz Republic

Mongolia

Tajikistan

Turkmenistan

Uzbekistan

DEVELOPMENT PARTNERS (DONORS)

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Economic Affairs SECO

Ministry of Economy and Finance

EUROPEAN UNION

ADB

Ministry
of Foreign Affairs
Republic of Poland

Table of Contents

Acronyms **2**

Summary of Mission Outcomes and Priority Recommendations **3**

Detailed Technical Assessment and Recommendations **4**

A. GDP by Production 4

- Current Situation 4
- Chain-linked Time Series of GDP 5
- Contributions to Real GDP Growth 5

B. GDP by Expenditure 6

C. Strategic Issues 6

D. Officials Met During The Mission 7

Acronyms

CCAMTAC	Caucasus, Central Asia, and Mongolia Regional Capacity Development Center
NSO	National Statistical Office of Mongolia
GDP-P	GDP by Production
GDP-E	GDP by Expenditure
GFCF	Gross Fixed Capital Formation
ISIC Rev.4	International Standard Industrial Classification of All Economic Activities, Revision 4
TA	Technical Assistance
VAT	Value Added Tax

Summary of Mission Outcomes and Priority Recommendations

1. A technical assistance (TA) mission of the Caucasus, Central Asia, and Mongolia Regional Capacity Development Center (CCAMTAC) visited Ulaanbaatar during September 30–October 11, 2024. The mission assisted the National Statistical Office of Mongolia (NSO) in improving methods for the compilation of national accounts. The main tasks of the mission were to: (i) assist the NSO with the development of chain-linked time series of national accounts; and (ii) review the compilation of gross fixed capital formation and provide recommendations for further improvements.

2. The NSO compiles GDP at constant prices with the fixed base year 2015, which is outdated and should be updated. However, the NSO is also considering the possibility of moving from fixed base to chain-linked time series. The mission reviewed existing data sources and compilation methods and developed recommendations for compiling chain-linked time series of GDP by production (GDP-P) and expenditure (GDP-E).

3. The results were compared with currently published data. Significant differences were revealed, which can be explained by changes in the structure of the economy in recent years. Currently, quarterly GDP-P is compiled by nine types of economic activity, which is not disaggregated enough to obtain reliable results. The mission noted that the chain-linked time series of GDP-P should be compiled according to the structure of the supply and use tables and should include as many types of economic activity as possible.

4. The NSO has access to the value-added tax (VAT) database from the Mongolian Tax Authority and conducts regular quarterly and annual surveys. Therefore, existing data sources are sufficient to implement chain-linked time series. However, the number of NSO staff is inadequate to implement chain-linked volume estimates.

5. The mission met with the NSO chairman and discussed the future strategy of national accounts compilation. The NSO chairman noted that there are two choices: (i) the NSO conducts rebasing with the new 2019 base year; and (ii) The NSO implements chain-linked volume estimation based on the most recent benchmark estimates. The mission noted that the 2019 fixed base year is no longer relevant at this stage and the results will not fully reflect the economic performance in recent years. Therefore, the mission recommended that the NSO directs all resources to the implementation of chain-linked time series by detailed types of economic activities. The NSO chairman agreed with this recommendation and requested the next TA mission in the first half of 2025.

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

Table 1. Priority Recommendations

Target Date	Priority Recommendation*	Responsible Institutions
January 2025	Increase staff resources in the national accounts division by adding new staff and improving qualification of existing staff via training courses and workshops.	**NSO**
March 2025	Compile GFCF by non-residential buildings and other structures as an aggregate.	**NSO**
March 2025	Compile quarterly GDP according to ISIC Rev. 4 sections.	**NSO**

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

Detailed Technical Assessment and Recommendations

Priority	Action/Milestone	Target Completion Date
Outcome: Annual and quarterly national accounts are compiled in accordance with best international practice		
H	Prioritize the compilation of chain-linked GDP series.	January 2025
H	Increase staff resources in the national accounts division by adding new staff and improving qualification of existing staff via training courses and workshops.	January 2025
H	Compile GFCF by non-residential buildings and other structures as an aggregate.	March 2025
M	Publish reconciled estimates of GDP-P and GDP-E and statistical discrepancies with the fixed base year 2015.	March 2025
H	Compile quarterly GDP according to ISIC Rev. 4 sections.	March 2025
H	Assess the level of detail of existing data sources to determine how many activities can be included in the compilation of chain-linked time series.	April 2025
H	Compile chained-linked GDP-P series by using the annual overlap technique.	June 2025
H	Compile chain-linked GDP-E series by using the annual overlap technique.	September 2025
H	Reconcile the chain-linked time series of GDP-P and GDP-E and analyze the overall level of statistical discrepancies.	October 2025
H	Publish chain-linked GDP series.	March 2026

H – High; M – Medium

A. GDP BY PRODUCTION

Current Situation

8. The compilation of GDP-P is based on higher-quality data sources and is considered central in the national account's framework of Mongolia. However, the NSO compiles independent estimates of GDP-E, which differ from the GDP-P estimates. Data compiled by both methods are published without considering statistical discrepancies, which creates a situation when users are provided with two different estimates of real GDP growth rate, and it depends on the users which one to give preference to. Nevertheless, the vast majority of users are oriented towards GDP-P estimates.

9. The NSO compiles GDP-P estimates by using regular monthly, quarterly and annual data sources. Also, in every five years, the NSO conducts benchmark surveys to compile estimates for the fixed base year. Currently, volume estimates of GDP are compiled in 2015 fixed base year prices. The NSO had planned to update the base year in 2020, which could not be implemented due to the delays caused by the global pandemic. Given that the NSO has access to monthly administrative data in the form of a VAT database, as well as conducting regular quarterly and annual surveys, the implementation of chain-linked time series of quarterly GDP, which would replace the current practice of using a fixed-base year, is on the agenda.

10. The NSO compiles monthly flash estimates of economic growth based on monthly VAT turnover database. These estimates are not currently published but are sent to government agencies upon request. In addition, the NSO conducts regular quarterly and annual surveys of structural business statistics. The mission noted that the NSO has sufficient data sources to compile chain-linked time series.

11. The NSO publishes quarterly GDP by nine aggregated groups of economic activities, while annual data are published at the International Standard Industrial Classification of All Economic Activities Revision 4 (ISIC Rev. 4) section level. The mission noted that the IMF special data dissemination standard (SDDS) envisages publishing quarterly data according to sections of ISIC 4. National accounts staff noted that starting from 2025 they will switch to compiling quarterly GDP according to 19 sections of ISIC Rev. 4. In general, the quality of compiling chain-linked time series depends on its detail - the more activities/products are compiled, the more reliable the results will be.

Chain-linked Time Series of GDP

12. The mission assisted the national accounts staff of NSO in compiling experimental chain-linked time series of quarterly GDP-P at the level of ISIC Rev. 4 sections. The reference year was 2015. As a result of aggregating the obtained series, a chain-linked volume estimates of total GDP were compiled. The results obtained were compared with the currently published data. The differences were significant for both annual and quarterly growth rates of real GDP. Particularly large differences were observed for more recent years.

13. When the base year is outdated, the structure of weights for the current period by each ISIC Rev. 4 section could be significantly different. This creates changes in chain-linked time series compared to the results calculated using fixed weights for 2015. These differences show how erroneous the use of the fixed 2015 base year could be. At the same time, it clearly demonstrates the advantages of using chain-linked time series, where weights are constantly changing, and the sectoral structure of the economy is constantly updated. The mission noted that to increase the reliability of chain-linked volume estimates, the chain-linked time series should be compiled at a much more detailed level than ISIC Rev. 4 sections. For example, chain-linked time series of agriculture and fishing (section A of ISIC Rev. 4) are best compiled at the level of individual products and then aggregated by the entire section. The compilation of chain-linked series at the detailed level of products requires improved data sources and increased number of staff.

Contributions to Real GDP Growth

14. Chained-linked time series undoubtedly have a great advantage over the use of a fixed base year, since they consider the updated structure of the economy and provide more reliable results. However, they also have a relative disadvantage, which is manifested in non-additivity. Due to the use of different weights in different years, the sum of individual sections does not aggregate to the total GDP. Only the reference year (t) and the following year (t+1) are additive.

15. The problem of non-additivity complicates the compilation of contributions of each ISIC Rev. 4 section to the real GDP growth. To solve this problem, some countries take the latest year as the reference year, which ensures the additivity of current estimates, and on the other hand reduces the impact of non-additivity in recent years.

Recommended Actions:

- Publish reconciled estimates of GDP-P and GDP-E and statistical discrepancies with the fixed base year 2015.
- Compile quarterly GDP according to ISIC Rev. 4 sections.
- Assess the level of detail of existing data sources to determine how many activities can be included in the compilation of chain-linked time series.
- Compile chained-linked GDP-P series by using the annual overlap technique.

B. GDP BY EXPENDITURE

16. The mission assisted NSO staff in compiling experimental chain-linked GDP-E. The experimental series were compiled for individual categories of GDP-E, such as household consumption including final consumption expenditure of private non-profit institutions serving households, government consumption, gross fixed capital formation (GFCF), changes in inventories, and exports and imports of goods and services.

17. The experimental chain-linked time series of GDP-E components were compiled by using the annual overlap technique. For this purpose, two quarterly series were compiled for each GDP-E component: (i) at the annual average prices of the current year; and (ii) at the annual average prices of the previous year. Then quarterly growth rates were compiled compared to the annual average prices of the previous year and the resulting indices were used to compile chain-linked series using the annual overlap technique. The relevant price indices were available on the NSO website.

18. During the mission, issues were identified with certain data sources that should be improved. For example, GFCF in the construction sector is divided into three main categories: (i) residential buildings; (ii) non-residential buildings; and (iii) other structures. However, the classification of non-residential buildings and other structures differs in the quarterly and annual data sources, which results in the quarterly sum of other structures significantly exceeding the number obtained from the annual sources. This difference is so significant that the benchmarking results in negative values in some quarters, which is theoretically impossible. To resolve this issue, it would be better if the NSO combines non-residential buildings and other structures and benchmark them together.

19. The mission also noted that it would be preferable not to publish the chain-linked series of changes in inventories separately and to indicate only its contribution to real GDP growth. This practice is often used because in some quarters changes in inventories may have a negative value.

Recommended Actions:

- Compile GFCF by non-residential buildings and other structures as an aggregate.
- Compile chain-linked GDP-E series by using the annual overlap technique.
- Reconcile the chain-linked time series of GDP-P and GDP-E and analyze the overall level of statistical discrepancies.

C. STRATEGIC ISSUES

20. At the end of the mission, a meeting was held with the NSO chairman, during which the experimental chain-linked GDP series as well as plans for future cooperation were discussed. During the meeting, NSO staff presented the differences between the experimental chain-linked GDP series and the published results with the fixed base year 2015. Significant differences in real GDP growth rates were highlighted. The mission noted that the chain-linked GDP series reflect updated weights and are much more reliable than the currently published real GDP growth rates**.**

21. The NSO chairman noted that at this stage they are considering two strategies: (i) the NSO updates the 2015 fixed base year with the 2019; and (ii) the NSO is implementing chain-linked GDP series and abandoning the use of a fixed base year. The NSO chairman also noted that it is possible to move in both directions simultaneously. However, the mission noted that the implementation of chain-linked GDP series is very important, which requires significant effort and staff resources. Therefore, the NSO should not waste staff resources on updating the fixed base year.

22. The mission and the NSO chairman agreed that the main goal in 2025 will be the implementation of chain-linked GDP series and for this purpose, they will use of existing staff

resources as well as the additional staff. In the best-case scenario, the chain-linked time series will be published by the end of 2025. However, it may be postponed to 2026. CCAMTAC's next mission on national accounts will take place in June 2025 and its objective will be to assist the NSO in implementing chain-linked GDP series.

Recommended Actions:

- Prioritize the compilation of chain-linked GDP series.
- Increase the number of staff in the NSO National Accounts Division.
- Publish chain-linked GDP series.

D. OFFICIALS MET DURING THE MISSION

Name	Institution	Position
Mr. Batdavaa Batmunkh	NSO	Chairman
Ms. Tegshjargal Tsagaan	NSO	Chief of the Integrated Statistics Department
Mr. Terbish Jambaldorj	NSO	Chief of National Accounts Division, Integrated Statistics Department
Ms. Tserenkhand Jagir	NSO	Senior statistician, National Accounts Division of Integrated Statistics Department
Ms. Tsevelmaa Burneebaatar	NSO	Statistician, National Accounts Division of Integrated Statistics Department
Ms. Myagmarkhatan Batsuuri	NSO	Statistician, National Accounts Division of Integrated Statistics Department
Mr. Gerelt-Od Enkhbaatar	NSO	Statistician, National Accounts Division of Integrated Statistics Department
Ms. Ankhzaya Byambaa	NSO	Statistician, National Accounts Division of Integrated Statistics Department