

No : 25

Date : 09/12/2016

MAJOR REVISION ON THE SYSTEM OF NATIONAL ACCOUNTS OF TURKEY AND IMPLEMENTATION OF SNA-2008 AND ESA-2010

One of the main tasks of the Turkish Statistical Institute is to measure the volume of the country's economy by providing the international comparability.

In the last two decades, particularly the role of the information and technology in the production process and the effect of substantial changes such as globalisation of national economic systems have necessitated the adjustments on the estimation methods of macro-economic statistics. National accounting system, which is at the very centre of the macro-economic statistics and enables the analysis of the economies, has to adapt itself to the mentioned changes as well in order to sustain the link with the structural economic changes.

The need for the revision of estimations arises depending on the adjustments made on estimation methods and data sources. All countries regularly revise statistics that they produce for two main reasons:

1. **Routine revision;** this revision is realised by reflecting the subsequent or subsequently finalised data to the accounts. In all countries, gross domestic product in quarterly estimates are regularly updated in the later period, as a result of the finalisation of some previously used temporary data or new data,
2. **Major revision;** this revision signifies the updates resulting from the base year changes, changes of classifications, definitions and coverage as well as change in the source data and in consequence of the legal amendments.

Major revisions, conducted at National Accounting System once in 5-7 years worldwide, are carried out by amending coverage and methods on the estimations in line with newly emerging conditions in economic and social areas. Latest standards on the subjects are System of National Accounts (SNA-2008) and European System of Accounts (ESA-2010). All countries has evaluated these major revision studies an opportunity to ensure statistical improvement by providing the integration of new and updated data sources as well as integrating methodological changes into the system. "Supply and Use Table Survey" was conducted in 2013 for reference year 2012 with a large scaled field application and intensive studies were carried out regarding the transition process to the new system in this context.

In addition to the alignment with these international standards, following studies have been carried out due to the need of reflections of the structural changes, realised from the 1998 base year to nowadays to macroeconomic aggregates, and improvements realised to produce faster and more detailed macroeconomic indicators in line with the developments and emerging needs in the information technology.

Changes in international standards

Leading reasons of fundamental changes in all countries regarding transition from ESA-95 to ESA-2010 (and SNA-2008) are as follows:

- Expenditures of "R&D" and "weapon systems" which were previously identified as an input now they are investment,
- Changing on estimation method of insurance sector,
- Output estimation of Central Bank,
- Harmonisation of "processing of goods send abroad" with Balance of Payments elaboration.

Improvements in the estimation methods

Supply-Use and Input-Output Tables which are the basis of the major revision studies have been prepared by 2012 Supply and Use Table Survey. The preparation of these tables enabled the economy to be monitored with more current and more detailed indicators. Particularly, in parallel with increasing the level of the use of administrative registers, many sub-accounts used in calculation of gross domestic product have been recalculated and detailed with new data.

In this context, the following studies have been carried out:

- Changing the calculation method of indirectly measured financial intermediation services,
- Integrating own account software into the system,
- Updating the general classification of government,
- Developing the non-observed economy estimates,
- Changing the estimation method of the imputed rent,
- Changing in the estimation method of the fixed capital consumption,
- Developing the accounts of the agricultural sector,
- Improving the accounts of non-profit organisations,
- Implementing a new method in constant price estimations.

Improvement of Information Infrastructure

a. Administrative records and new research results

The integration of administrative records into the system was the most important phase of revision work with the aim of measuring the economic growth promptly and adequately as well as facilitating the estimation of some of the indicators for measuring economic development and welfare. In this context the following administrative records and new resources have been integrated into the National Accounting System with the aim of producing quarterly and annual indicators:

- ✓ Regarding enterprises; the declarations provided by the Revenue Administration and the Social Security Institution,
- ✓ For Financial Sector; information provided by the Central Bank of the Republic of Turkey, the Banking Regulation and Supervision Agency, the Undersecretariat of Treasury etc.,
- ✓ Regarding the General Government Sectors; government finance statistics provided by the Ministry of Finance,
- ✓ Regarding associations and foundations; related tables from the Ministry of Interior and the General Directorate of Foundations,
- ✓ Administrative register information such as Population and Housing Survey, Addressed Based Population Registration System

b. Classification

Regarding the classifications forming the basis of the statistical information infrastructure; the harmonisation among registers was ensured, corporate sector codes were assigned and integrated into the system through examination of proclamations of approximately 3 Million enterprises within the Business Registers of TurkStat kept by Revenue Administration and Social Security Institution. As a part of financial corporation sector, the integration of administrative records of banking and insurance activities into the national accounting system was ensured. General government classification was updated and analytical budget revenue and expenditure codes constituting the basis for the sectoral accounts were re-classified according to ESA-2010 standards. The associations and foundations are classified in accordance with their aims and taking into account the category they are serving for.

Completed Studies within the Framework of Major Revision

Within the framework of the major revision studies, detailed programmes and national implementation strategies were developed and international projects were carried out. Studies on classification frameworks, business registers and its framework, surveys and administrative registers, harmonisation of infrastructure of information technologies were conducted.

In this context, the studies regarding our National Accounting System which will be released with the 3rd Quarter GDP Bulletin on 12 December 2016 are stated below:

1. *2012 Supply/Use and Input/Output Tables*

Supply-Use Survey for 2012 has been realized with approximately 20.000 establishments. 2012 Supply-Use and Input-Output tables have been prepared at A-64 level, using these survey results and new data sources derived from administrative registers which have been improved.

2. *Independent Annual GDP Estimates*

The Annual GDP which had been calculated as the sum of four quarterly GDP estimates thus far now has been directly calculated from the administrative registers of public institutions like Revenue Administration, Social Security Institution, Ministry of Finance and Banking Regulation and Supervision Agency as well as using the balance sheets and income statements of enterprises and institutions. The studies concerning independent annual GDP estimations of income, expenditure and production approaches have been completed at current and constant prices, at A-21 level and according to NACE Rev2.

3. *Quarterly GDP Estimates*

Quarterly GDP estimations by production and expenditure approaches have been revised according to above mentioned studies, the administrative registers have been integrated into accounts and the base year has been changed. The previous years' data has been revised accordingly. The calculations have been done according to NACE Rev2 classification and at A-10 level. The revision provided consistency between quarterly and annual GDP estimates. Thus, a system which ensures consistency between the GDP value derived from the sum of last four quarters' and GDP estimate derived from independent annual estimations have been developed. This system is based on more significant data sets, indicators and methodology.

4. *Gross Domestic Product (GDP) by Income Approach*

With the usage of administrative registers of Social Security Institution and Revenue Administration, estimated GDP studies, with the income method estimated on a quarterly basis, have been completed according to NACE Rev.2 classification at the A-10 level.

5. *Regional Accounts*

For Regional GDP, calculations have been updated by adding the data of SSI and RA to the existing data sets. Studies for developing regional details have been conducted and GDP estimations at the provincial level have been completed at A-3 level for the years 2004-2014.

6. *Institutional Sector Accounts*

One of the most important outputs of the major revision studies has been Institutional Sector Accounts determining the position of main actors of economy in the system. In the detail of Institutional Sector consisting of non-financial corporations, financial corporations, general government, households and non-profit institutions serving households, studies for calculation of domestic production, operating surplus, mixed income, national income, entrepreneurial income, disposable income, saving and net lending/borrowing items have been completed.

Respectfully announced to the public.