Box 4.1
Updated Short-Term Business Statistics: Harmony with National Accounts

As the GDP data are announced with a lag, this creates the need for a more timely data to interpret the recent course of economic activity. Accordingly, coincident indicators such as industrial production, sectoral turnover indices, retail sales volume, etc. covered by Short-Term Business Statistics (STBS) of TURKSTAT play a crucial role.

After the TURKSTAT'S methodological change in national accounts, GDP was revised significantly, which implied that the Turkish economy experienced a much stronger growth performance in the 2009-2016 period. Moreover, after this revision, 2010-based STBS could no longer be used as an indicator for GDP. TURKSTAT made methodological revisions to STBS in March 2018 and started to publish new series taking 2015 as the reference year. This box analyzes the correlation between the revised STBS and the current GDP series. Results indicate an improved link between STBS and GDP. This indicates that errors in GDP forecasts by using STBS have declined considerably.

Scope of the Revision

In addition to the planned base year changes for years ending with 0 and 5, the most important feature of revision in STBS is the use of administrative records instead of survey data in deriving the statistics. A similar revision was applied to national income accounts in 2016. The coverage of all firms instead of a sample provided a timely tracking of economic activity across the whole country.[1] Moreover, the use of administrative records facilitated access to monthly data (turnover, production) in sectors such as construction, services and trade, which were normally published quarterly. This enables the tracking of a more timely dataset on economic activity with an expanded sectoral range.

After this revision, all sectoral TURKSTAT statistics on economic activity were based on the same administrative record database. This is expected to restore the link between the GDP and STBS, which was detached after the GDP revision in 2016.

STBS-GDP Correlation

Industrial Production Index (IPI) is the primary series monitored closely among STBS as an indicator for the national income. In fact, historical evidence shows that the annual GDP growth is mostly correlated with the annual IPI growth. This relationship was clearly manifested between the 1998-based GDP series and 2010-based IPI series (Chart 1). However, following the release of 2009-based GDP series, this link weakened remarkably, which challenged the forecast of the current GDP series.[2]

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[1] The representation power of the sample used in the measurement of 2010-based turnover index declined over years due to new entry and exits. In 2017, the representation ratio was around 55, 14, 48 and 60 percent for manufacturing, construction, wholesale-retail trade and transport-storage services, respectively (TURKSTAT, 2018).
[2] For a detailed analysis on the **precision of 2010-based IPI in forecasting** the 2009-based GDP, see CBRT (2017).

The analysis of the new 2015-based IPI and 2009-based GDP shows that the detached link between these two series has been restored to a great extent (Chart 2). This proves that the main reason for the disconnection during the initial stages of the data revision is the use of different databases in deriving the series.

Chart 1: GDP and IPI (Y-o-Y % Change)
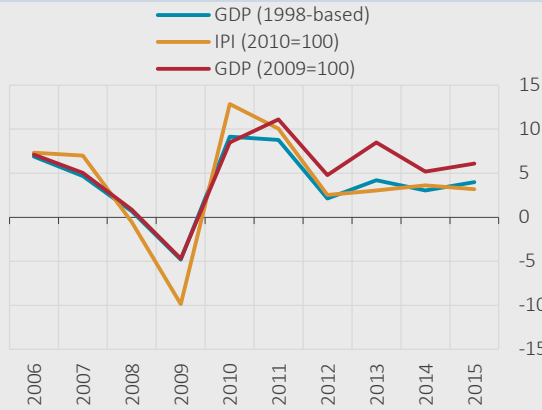
Source: TURKSTAT.

Chart 2: GDP and IPI (Y-o-Y % Change)
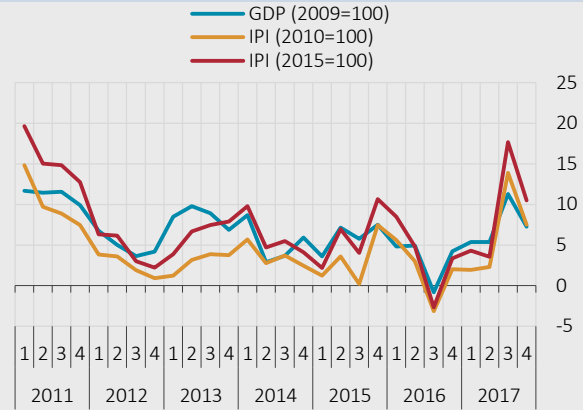
Source: TURKSTAT.

Among STBS, IPI is not the only indicator, which had an improved compliance with the current GDP data. With the use of administrative records, turnover data for construction, services and trade were also started to be published monthly in addition to already available monthly IPI data. Chart 3-6 show that sectoral turnover indices are also closely associated with value added of the respective sectors in current prices. One crucial point here is that the turnover data is not in real but in nominal terms. Therefore, among other STBS indicators, IPI continues to be the series that has the highest informative value for real GDP growth.

In sum, the use of administrative records, on which the national income accounts were also based, in STBS indicators such as industrial production and turnover indices improved the predictive power of these statistics in monitoring economic activity. Accordingly, the capacity to produce coincident indicators for GDP as well as its subcomponents from both production and expenditure sides has improved remarkably.
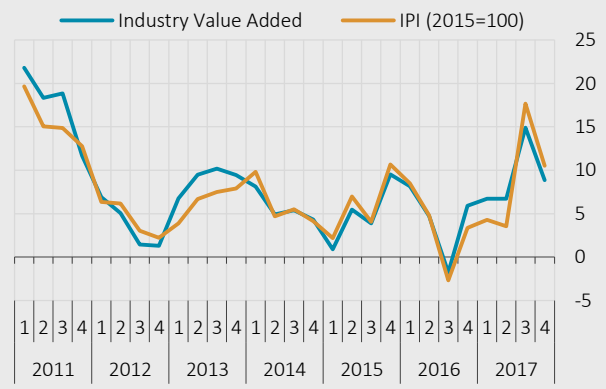
Chart 3: GDP and IPI in Current Prices (Y-o-Y % Change)
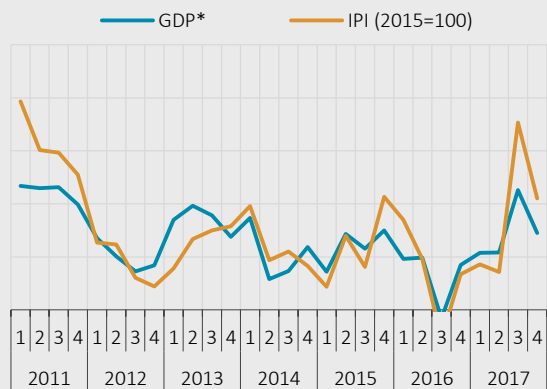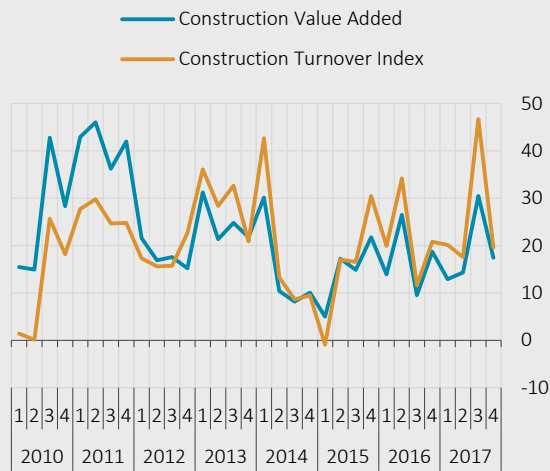

Source: TURKSTAT.
* Excludes agriculture, financial and insurance activities, public administration, education, human health and social services activities, other services activities and net tax as these items are not included in turnover indices.

**Chart 4: Industry Value Added and IPI in Current Prices** (Y-o-Y % Change)

Source: TURKSTAT.

Chart 5: Construction Value Added and Turnover Index in Current Prices (Y-o-Y % Change)

- Construction Value Added
- Construction Turnover Index

Source: TURKSTAT.

Chart 6: Services and Trade Value Added Value and Turnover Index in Current Prices (Y-o-Y % Change)

- Services and Trade Value Added*
- Services and Trade Turnover Index
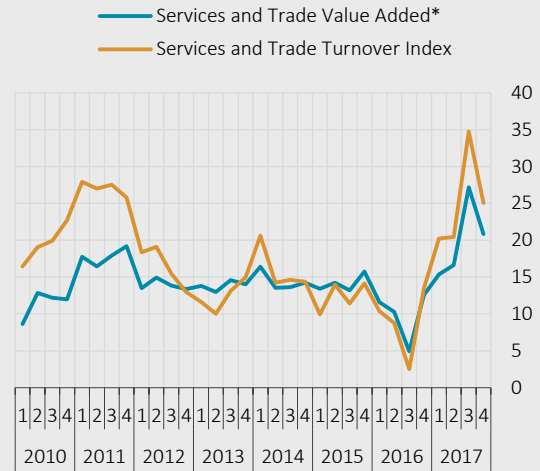
Source: TURKSTAT.

* Sum of items excluding financial and insurance activities, public administration, education, human health and social services activities, other services activities that are not included in turnover indices.

References

CBRT, 2017, GDP Forecasts with New National Income Series, Box 4.1 in Inflation Report 2017-III.

TURKSTAT, 2018, Extending the Use of Administrative Data in the Production of Business Statistics, TURKSTAT Irregular Report dated 9 March 2018, available at https://biruni.tuik.gov.tr/yayin/views/visitorPages/english/publicationView.zul?yayin_no=423.