# Input-Output Tables: Russian Experience

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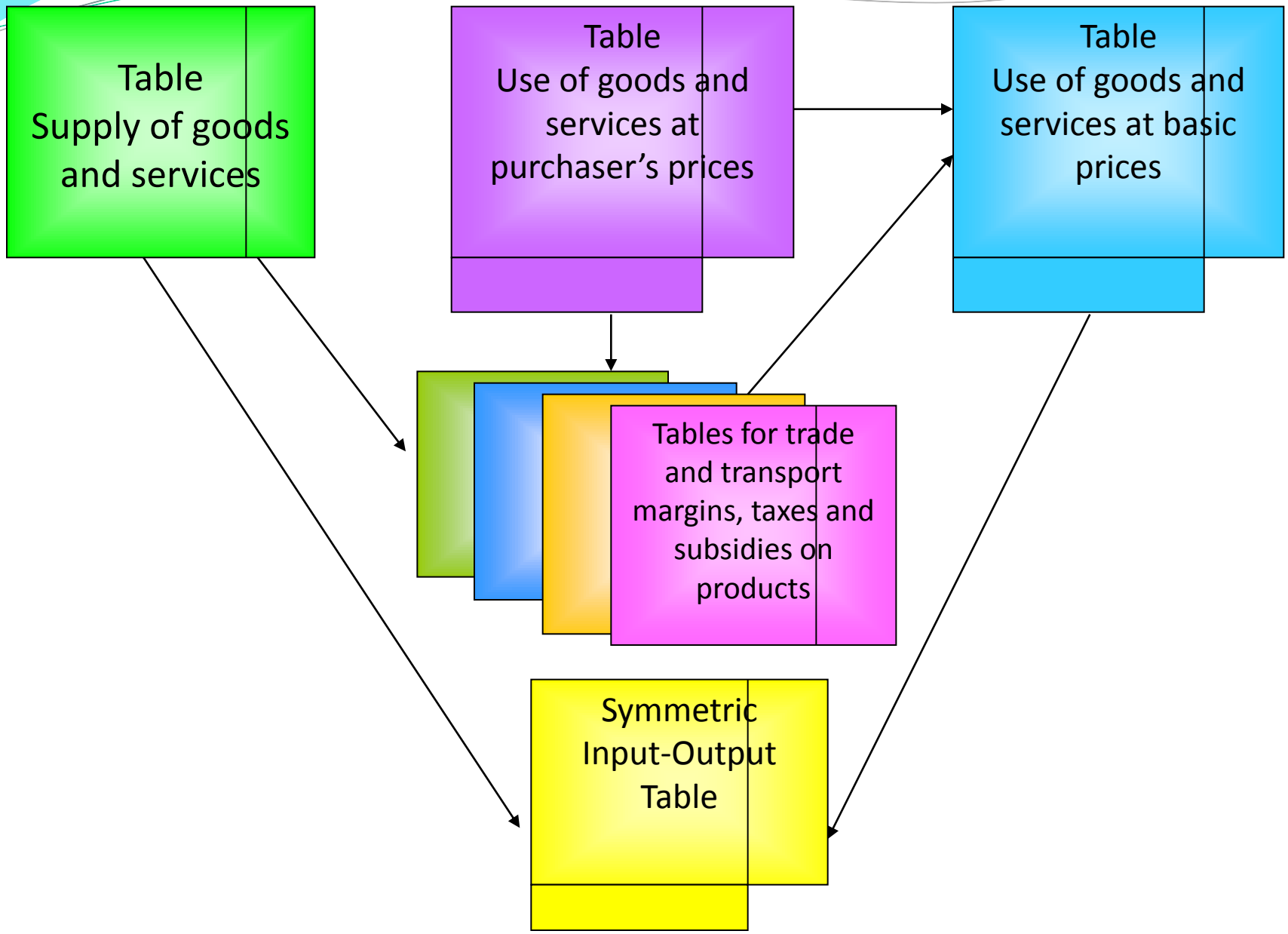
# Input-Output Framework



# Composition of Input-Output Tables and compilation frequency

Input-Output Tables framework 3 types of tables:

- Table Supply of goods and services (ST),
- Table Use of goods and services (UT)(with split for Domestic production use table and Import use table),
- Symmetric Input-Output Tables (SIOT)

In accordance with government directive of the Russian Federation of 14 February 2009 No 201-r, starting 2011 the Supply and Use tables are compiled on regular basis:

1) Benchmark tables, i.e. the full set of tables including symmetric IOT are compiled each 5 years for the years finishing on 1 and 6,
2) Supply and use tables at purchasers' and basic prices are compiled for all the other years (between benchmark)

# Supply and Use Tables – integral part of the System of National Accounts

- SUT provide further detail for the goods and services account, the production, generation and use of income, and capital accounts and allow more detailed analysis of the production and use of goods and services
- SUT applies the same definitions, concepts, classifications, data sources and compilation methods as in the SNA
- SUT are a reliable tool to increase the quality and consistency of the main SNA aggregates,  and, above all, of GDP estimated by the 3 methods: ТРИ являются надежным инструментом повышения качества и согласованности важнейших агрегатов СНС и, в первую очередь валового внутреннего продукта , рассчитанного 3 методами:
  - ✓ Production,
  - ✓ Final Use
  - ✓ Income

# Publication calendar of official statistical data

- Benchmark IOT are officially published 36 months after the reference period
- Annual SUT –24 months after the reference period
- The published SUT data are fully consistent with the corresponding SNA indicators
- All the methodological and data inconsistencies identified in the process of balancing SUT are reflected in the respective SNA accounts and the corresponding data series are revised

# Data sources for compilation of SUT

- The same data sources as for the compilation of SNA accounts (business statistics, Federal Custom Service, Federal Tax Service, Treasury and Bank of Russia) are used for compilation of annual SUT, together with structural coefficients from the latest benchmark SUTs
- In addition to the data available at Rosstat and other institutions, data from the specialized survey of production costs, carried out each 5 years are used for compilation of benchmark SUTs

# Methodological basis for IOT – the updated 2008 SNA

- Initially, the 2008 SNA recommendations concerning the extension of the asset boundary and the recording of transactions related to globalization following the change of ownership principle were implemented in the benchmark SUT for 2011. In particular:
  - expenditures on research and development were capitalized,
  - large weapon systems were capitalized,
  - goods sent for processing were recorded on “net” basis (processing fee),
  - merchanting was recorded on gross basis under export of goods, and not services.

- In addition, some 1993 SNA recommendations that were not yet implemented in national accounts were introduced in the compilation of the 2011 SUT, namely the estimate of imputed rent of owner occupied housing was revised and based on the user cost method.

- All changes related to implementation of the 2008 SNA as well as other revisions made during the compilation of the 2011 SUT were reflected in national accounts time series. The base year was changed and the 2011-2016 time series for GDP and its components were recalculated.

# Classification of industries and products

- The industrial classification for 2011-2016 SUT is based on the Russian classification of economic activities (ОКВЭД), harmonized with NACE Rev.1.1, of products – on the Russian classification of products by economic activity type (ОКПД), harmonized with CPA 2002.
- Size of benchmark 2016 SUT: 155 industries and 335 products, benchmark 2011 SUT :178 industries и 248 products.
- The classifications of economic activities and products harmonized with NACE Rev.2 и CPA 2008 were implemented in the Russian statistical practice starting 1 January 2018, and therefore the 2017 SUT will be based on the new classifications.

## Criteria for defining the number of industries and products in SUT

1. Significance of the output volume
2. Availability of information
3. Confidentiality rules
4. Homogeneity of the production technology
5. Homogeneity of the consumption
6. Differences in the tax rates on products (VAT, excises)
7. Available human, technological and financial resources

# Statistical Units in SUT and industry accounts

- For compilation of SUT and industry accounts the SNA recommends to us the establishment as the most homogeneous unit from the point of view of produced output and structure of intermediate consumption.

- To use the establishment as a statistical unit there should be a possibility to obtain (or estimate) data about the output, intermediate consumption, compensation of employees; taxes and subsidies on production, etc. The availability of such information depends on the adopted in the country systems of statistical and bookkeeping reporting

- Due to the lack of official statistical data on the intermediate consumption of establishments, the enterprise was chosen as the statistical unit for industry accounts in the Russian Federation

- The use of the enterprise as the statistical unit for compilation of SUT corresponds to the purpose of these tables to serve as coordinating framework for all macroeconomic statistics. It nevertheless leads to heterogeneity of the industries (in the output matrix the industries contain output from both principal and secondary activities, while the use table presents mixed expenditures of all output of the industry)

- For this reason, the compilation of the symmetric IOT is based on a specific, two-stage approach

# Conversion of SUT in Symmetric IOT

1) At the fist stage the most significant output of secondary products and the expenditures related to their production were redefined manually:

- for the largest enterprises on the basis of individual data, information from the official website of the company and expert estimates of national accounts specialists,

- for some types of secondary activities (renting, trade activities of non-trade enterprises, processing activities of trade enterprises, etc.) at the level of aggregate data for the industry

2) At the second stage the symmetric product-by-product IOT was constructed using mathematical methods and assumptions for the industrial production technology (method B).

3) The SUT received after the redefinition were not published, but used for the conversion into symmetric IOT

Thank you for the attention

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