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Russian supply, use and input-output tables: experience, problems and prospects

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Introduction

- The first Russian IOT were compiled for 1966. They were based on the concepts of material production dominant in macroeconomic statistics in countries with planned economies.
- The first Russian SUT and IOT based on SNA were compiled for 1995.
- In subsequent years, the development of SUT was aimed at improving the methodology and practices used in their compilation, in accordance with international SNA standards.
- Currently, from the point of view of methodology, composition, format and classifications used, the SUT are basically in line with the 2008 SNA recommendations and the requirements of the OECD.



Current practice in the compilation of Russian SUT and IOT

- The compilation of SUT is being improved as the national accounts of the Russian Federation are developed in line with the plans adopted by the Rosstat and agreed with the government agencies concerned.

2011: The national accounts development plan 2011-2017

2014: The plan of implementation the OECD recommendations on developing the country's system of national accounts.

- Russian SUT are an integral part of SNA. They use common concepts, definitions and classifications.
- Currently Rosstat compiles a complete set of tables, as recommended by international standards, including:
 - Supply table at basic prices with transformation into purchasers' prices (annual);
 - Use table (both in basic and purchaser's prices) with separate tables for domestic and import td products(annual),
 - Symmetric input-output tables, including separate tables for domestic and imported products (once in 5 years).



Current practice in the compilation of Russian SUT and IOT (cont.)

- All the tables are compiled at current prices .
- As a rule, more detailed (benchmark) tables are compiled every five years, based on data from special input-output surveys.
- In accordance with a government decree of 14 February 2009, benchmark tables have been produced regularly since 2011 for all years ending in 1 and 6.
- The most recent benchmark SUT and IOT were produced for 2011.
- In the intervals between the benchmark years, annual tables are compiled on the basis of current statistics and the data of the benchmark tables.
- Rosstat is currently working on SUT for 2014, which are scheduled for publication in December 2016.



Implementation of the 2008 SNA recommendations

- 1) The SNA 2008 recommendations were taken into account for the first time in the benchmark SUT for 2011:
 - new treatment of outlays on R&D,
 - new treatment of military weapon systems,
 - “net” recording of goods sent abroad for processing,
 - recording of merchanting of goods.
- 2) In addition some methodological principles of the 1993 SNA which had not been adopted earlier in the Russian national accounts (e.g. imputed rent) were incorporated in the SUT for 2011.
- 3) All changes associated with implementation of the 2008 SNA and other adjustments of SUT for 2011 were taken into account in the SNA. The benchmark year was changed and the time series of GDP and its elements was recalculated for 2011-2015.



Classifications

- The classification of industries is based on the national classification, harmonized with the NACE Rev. 1.1, and that of products - on the national classification, harmonized with the CPA 2002.
- The national versions of NACE Rev.2 and the national version of CPA 2008 will be introduced in the Russian statistics from January 1, 2017.
- The benchmark SUT for 2011 were developed using dimensions of **188 industries and 338 products**.
- The annual SUT for 2012-2014 **used 124 industries and 263 products**.



Statistical units

- The enterprise is the statistical unit used in the Russian Federation for production and generation of income accounts and SUT.
- Using the enterprise as the statistical unit in SUT leads to heterogeneity between industries. In the industry output matrix, in addition to primary output, there is also **secondary output of products**. That is expressed in the use table as **mixed costs** for the entire output of the industry.
- The compilation of symmetric tables is quite challenging, and special approaches are used.



Conversion of SUT into IOT

The two-step approach was used for the compilation of the SIOT for 2016:

- 1) increasing the degree of homogeneity of industries in the SUT by minimizing secondary outputs. *(This process is done manually by redefining the most important secondary products and their production costs to the industries of which they were the principal products) .*
- 2) compiling product-by-product IOT based on the assumption about the industry technology (model B).

As a result of the redefinition procedure, the degree of uniformity of industries in the SUT increased by 3.2 points from 92.9 to 96.1% (table 1).



Table 1. Results of redefinition

	The share of principal type of activity		Difference
	before redefining	after redefining	
Total	92.9	96.1	3.2
including:			
agriculture	91.5	98.3	6.8
forestry	87.3	94.4	7.0
oil and gas extraction	91.7	98.5	6.8
petroleum products	78.7	95.3	16.6
wholesale	85.8	93.6	7.9
retail trade	92.4	95.9	3.4
rental of machinery and equipment	97.4	98.6	1.2



Table 2. Matrix of output before and after redefinition

	Output matrix							
	before redefinition				after redefinition			
	Oil extraction	Petroleum production	Wholesale trade	Total	Oil extraction	Petroleum production	Wholesale trade	Total
Oil		200		200	200			
Petroleum products		300		300		300		
Wholesale trade		100		100			100	
Other goods and services								
Output		600		600	200	300	100	600



Table 3. Fragment of Use table before and after redefinition

	Detail of use table							
	before redefinition				after redefinition			
	Oil extraction	Petroleum production	Wholesale trade	Total	Oil extraction	Petroleum production	Wholesale trade	Total
Oil including:		180		180	50	130		180
Goods		130		130		130		130
Mining services		50		50	50			50
Petroleum products including:		30		30		30		30
Goods								
Processing services		30		30		30		30
Wholesale trade								
Other goods and services		20		20		20		20
Intermediate consumption	0	230	0	230	50	180	0	230
Value added	0	370	0	370	150	120	100	370
Output	0	600	0	600	200	300	100	12600



Further work

- Since the beginning of 2015 Rosstat is preparing for the federal statistical input-output survey required to develop the benchmark SUT for 2016.
- As the introduction of the new classifications of industries and products has been postponed to January 1, 2017, the benchmark SUT for 2016 will be developed on the basis NACE Rev. 1.1 and CPA 2002. In order to ensure international comparability and the creation of an information database for the compilation of subsequent annual SUT, it is planned to recalculate the benchmark tables for 2016 in line with the NACE Rev. 2 and CPA 2008 classifications.
- In 2016 it is planned to carry out the experimental estimate of the SUT in constant prices. From 2016 SUT will be compiled at current and constant prices on a regular basis.



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Thank you for your attention!

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