

A Methodology for Constructing Time Series of Input-Output Accounts based on the uniform classification (Russian Experience)

Topic: Input-Output Accounts and Statistics

Author: Elena Alekseevna Staritsyna

Co-Authors: Dmitri Piontkovski, Eduard Filaretovich Baranov, Igor Alexandrovich Kim

Time series of Input-Output (IO) Accounts at current and constant prices are widely applied to economic studies of the dynamics and structure in many countries. For these purposes IO accounts have to adhere to a uniform nomenclature of products and economic activities in accordance with international standards.

After 2004 there was a break in the annual construction of Russian IO accounts. This was due to the transition of national statistics to the OKVED (All-Russian Classifier of Activities) and OKPD (All-Russian classifier of Products by Activity) classifications that are harmonized with the CPA and NACE rev. 1. Construction of benchmark IO accounts based on new classifications for 2011 will be completed at the end of 2015.

We have the opportunity to reconstruct a time series of comparable IO accounts based on the new classifications, because the development of national accounts and improvement of information, accumulation of methodological developments and experience in formulating expert assessments of IO Accounts.

Work on the reconstruction of the time series of IO Accounts has been underway in National Research University Higher School of Economics (NRU HSE) since 2010. The starting time point and the last year for which there is required information for this procedure was chosen as 2003.

Our methodology is based on international standards of SNA including IO accounts as well as mathematical modeling of inter-industry research. As part of work for 2010-2013, we developed a methodology for transformation of IO accounts for 2003 from the Soviet classifications into the new classifications. We also construct the Use table of domestic goods and services at basic prices, the Use table of imports at basic prices, table of transport margins, table of trade margins, table of net taxes on products, as well as the use table at purchasers' prices on the NACE/OKPD basis as the sum of all listed tables.

When constructing these accounts, we identified a lack of numerical values for the correspondence tables and matching between national accounts totals and column and row totals of transformed IO accounts for 2003. An iterative method of reconstruction of IO accounts from Soviet classifications to the OKVED and OKPD classifications has been developed and applied.

To date, we developed the algorithm of constructing time series of IO accounts based on the new classifications for 2004 and subsequent year on the basis of transformed IO accounts for 2003. A time series of IO accounts (consisting of listed above tables) at current prices as well as Use table of goods and services at basic prices at previous years prices have been developed.

This research provides the basis for refinement of the methodology for constructing IO accounts and retrospective restatement of these time series for more detailed nomenclature of economic activities and the types of goods and services after the official publication the benchmark IO accounts for 2011.