Supply and Use Tables

Why?

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UNSD

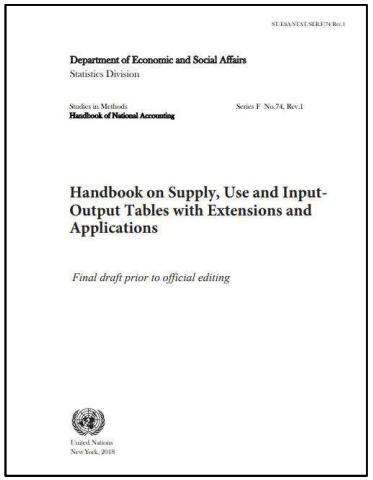
International Workshop on Supply and Use Tables
11-13 September 2018
Beijing, China

Handbook

- Handbook on Supply, Use and Input-Output Tables with Extensions and Applications

- Recently updated with more content and reflecting current statistical standards

- https://unstats.un.org/unsd/nationalaccount/pubs.asp



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Department of Economic and Social Affairs
Statistics Division

Studies in Methods
Handbook of National Accounting

Series F No.74, Rev.1

Handbook on Supply, Use and Input-Output Tables with Extensions and Applications

Final draft prior to official editing

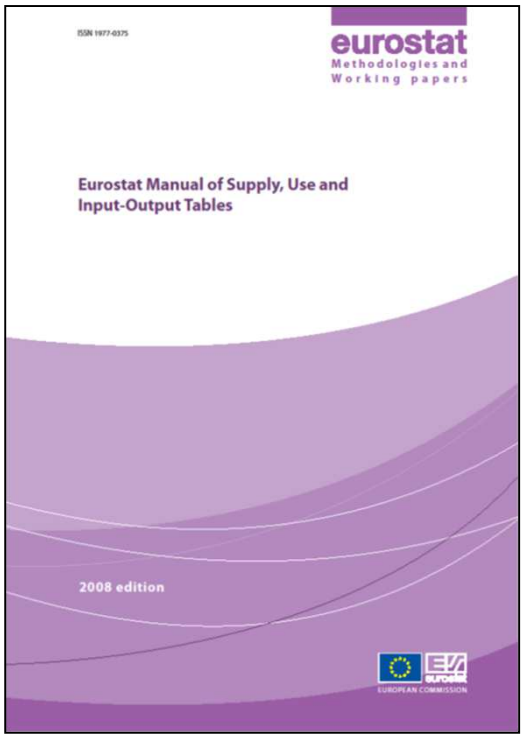
United Nations
New York, 2018

Major drivers for the revision

- Incorporate the recommendations of the new international standards for macro-economic accounting and classifications like the 2008 SNA, BPM-6, ISIC Rev. 4
- Focus on practical compilation guidance rather than a more theoretical elaboration of the methodology
- Adopt a compilation approach integrated with that of the National accounts
- Address issues related to the use of SUT for quarterly national accounts
- Extending the scope to include environmental dimension
- Address compilation issues of countries with a less developed statistical system

This revision is built on existing material

In particular, the *Eurostat Manual of Supply, Use and Input-Output Tables 2008* served as a starting point



Preparation process

In 2013 an **Editorial Board** – composed of experts in the field - was established by UNSD to guide the drafting of the revision of the UN Handbook

Editorial Board	
Sanjiv Mahajan (UK)	Soren Larsen (Denmark)
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Editor: Mr. Sanjiv Mahajan, Office of National Statistics UK

Preparation process

United Nations Statistics Division

2013 – 1st Editorial Board meeting

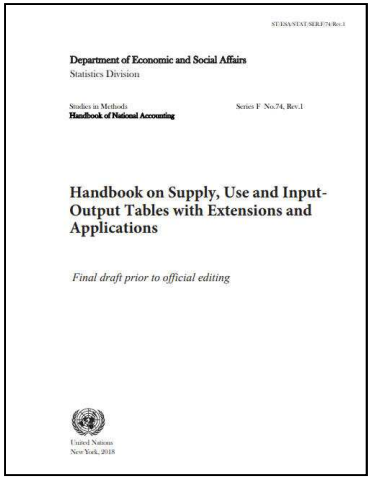
2014 – 2nd Editorial Board meeting

2016 – Editorial Board review

2017 – Global consultation with countries

– Editorial Board review

2018 – Finalization of the Handbook



What Are Supply-Use Tables?

- Part of the wider Input-Output Table 'family', Supply-Use Tables (SUTs) are designed to support the production of GDP through coherent and regular benchmarking of estimates

- Matrices by production and industry showing the production processes and transactions for particular products or industries

- Scalable to country circumstance and economy (using standard product and industry classifications)

What Are Supply-Use Tables?

- The supply table describes the supply of goods and services, which are either produced in the domestic industry or imported.

- The use table shows where and how goods and services are used in the economy. They can be used either in intermediate consumption or in final use; which in turn is divided into consumption, capital and exports.

- Furthermore the use table shows the income generated in the production process.

Statistical Benefits

- Supply and use tables serve primarily statistical purposes and provide an integrated framework for checking consistency and completeness of data

- In order to make GDP calculations more reliable, statisticians use three different methods: production, income and expenditure
  - GDP by production: GDP = Output – Intermediate consumption + Taxes/subsidies on products
  - GDP by income: GDP = Compensation of employees + Gross operating surplus (incl. mixed income) + Taxes less subsidies
  - GDP by expenditures: GDP = final consumption expenditure + Gross capital formation + Exports - Imports

- These three methods may generate different results. In order to eliminate those differences and to find the most accurate result, statisticians use supply-and-use tables as a balancing framework that reconciles the three methods of GDP

Statistical Benefits

- The balanced estimates produced are used to benchmark the National Accounts. Using the SUT to produce benchmarks provides rigor:
  - Exhaustive and complete coverage
  - Make the best use of all available data
  - Correct for coverage and other data source issues
  - Produce three coherent measures of GDP

Analytical Benefits

- SUTs are also useful in their own right as a data set

- They show the links between domestic industries, plus links to imports and exports, thus enabling important studies of economic policy

- They typically provide the first 'product' view of interactions within the economy. This is important for analysis focused on products rather than industries

Policy Benefits

- Economic analyses: Export shares, import penetration, concentration ratios, links between prices and costs, links between energy production, consumption and emissions, etc.
- Impact and policy analyses: Sensitivity analyses and impacts of taxation changes, price changes, introduction of a minimum wage, specific economic crisis, earthquakes, etc. as well as consumption/demand based accounting and analyses of air emissions, material flows, energy, water, etc.
- Industrial and sectoral analyses: Changes to specific sectors over time like information and communications technology (ICT), oil and gas, food, sport, creative sector, tourism, health, etc., and more recently, analyses covering the digital economy, sharing economy and collaborative economy as well as product-specific global value chains.
- Computable General Equilibrium (CGE) models, environmental analyses, supply-side based models, etc.

Set of tables recommended for compilation

- SUTs at purchasers' prices
- SUTs at basic prices
- Use table at basic price with the split of
  - Domestic Use table
  - Import Use table
- GVA by industry and by factor incomes and by institutional sector

Possible Extensions

- SUTs are a foundational piece of statistical infrastructure, in addition to ensuring National Accounts quality, they are typically the starting point for:
  - Input-Output Tables (particularly symmetrical product by product tables)

    e.g. study the links between final uses and levels of industrial output, impact analysis, productivity analysis, employment effects, analysis of the interdependence of structures and analysis of price change, etc.
  - Environmental Accounts and Extensions

    Water accounts, energy accounts, etc.
  - Global production studies – TiVA and GVCs
  - Satellite Accounts including Tourism and Non-Profit Institutions Satellite Accounts, etc.

Extensions of SUTs

- The SUTs can be extended to better analyze specific areas of interest. For example,

  - To better capture firm heterogeneity, the industry breakdown can be further disaggregated according to size of the firm (e.g. MNEs, SMEs…), ownership (foreign vs domestic owned), trade characteristics (e.g. exporter only, importer-exporter, etc.).
  - Including information on **jobs** (e.g. hour worked, e.g.)
  - information on Trade partners
  - Assets
  - Etc.

  - More on these extensions later in the workshop

Points to Consider

- Primarily SUTs are used to produce coherent, comprehensive and relevant National Accounts but they are also the starting point for many possible extensions

- The design of the SUT (size, structure, frequency etc) will be informed by the needs of policy makers:
  - Productivity
  - Employment
  - Industry Policy
  - Monetary Policy
  - Government Budget/Macroeconomic Policy
  - Etc

- What are the primary needs policy makers have for economic data in your country?

Points to Consider

- What are the implications of these policy needs on the compilation of SUTs:
- How frequently should the SUTs be produced?
- What size table do you need to produce (product x industry)?
- Will they produced as a time series? What is the revisions policy?
- Do they need to be in both current and constant price terms?