

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

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Group of Experts on National Accounts**

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Overview of the state of play

- Background
- Way of working
- Summary of aims
- Structure of Handbook
- Way forward

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UN Handbook

- **Way of working**
 - Team effort
 - Joint author for each chapter plus editor.
 - Numerous iterations of each chapter.
 - All tables, boxes and figures formatted by Joerg Beutel.
 - Feedback from all EB Members.
 - Communication
 - Teleconferences and emails.
 - 2-day meeting in New York.
 - Regular progress reports.
 - Title
 - UN Handbook on Supply, Use and Input-Output Tables with Extensions and Applications

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UN Handbook

- **Background**
 - Need to update present version of UN Handbook on Input-Output Compilation and Analysis (1999).
 - Process initially started by UNSD in 2010 but deferred.
 - Formally started by UNSD in January 2013.
 - Editorial Board in place (April 2013)
 - Led by UNSD.
 - 12 members plus UNSD.
 - Nine members of IIOA – including IIOA Council Members.
 - Leading international experts with decades of experience.
 - Mix of members from different continents, academia, NSOs, etc.
 - Chief Editor – Sanjiv Mahajan (Office for National Statistics, UK)

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UN Handbook

- **Summary of aims**

- Consistency with SNA 2008, BPM 6, SEEA and ISIC Revision 4.
 - Minimal overlap with other Handbooks / Manuals, e.g. Globalisation.
- Recommend best practice and acceptable alternatives.
- Integration theme using the “H-Approach”
 - SUTs, IOTs, physical and monetary tables.
- Focus on the evolution and driving role of SUTs:
 - SUTs at the heart of the National Accounts
 - SUTs produced in basic prices and purchasers' prices
 - SUTs produced in current prices and in volume terms
 - SUTs should be produced before IOTs
- Terminology and presentation changes / improvements
 - No use of term “symmetric”, reduced use of “homogeneity”, etc.
 - Correct use of terminology for IOTs, removal of misrepresentations



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UN Handbook

- **Structure of Handbook**

- Part A 2 chapters Overview
- Part B 13 chapters Designing, building, compiling and disseminating supply and use and input-output tables
(including monetary and physical tables)
- Part C 6 chapters Extensions and Applications
- Focus on the principles and use of GSBPM and IES
 - Business processes and stages of production.
- Package:
 - Printed copy and electronic PDF;
 - Primer (50 page elementary version); and
 - Excel Workbook containing all tables and figures.

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- **Way forward**
 - 20 of the 21 chapters written.
 - Global consultation – around September / October 2015.
 - Incorporation of feedback.
 - Submission to UN Statistical Commission in Feb/Mar 2016.
 - Publication early - 2016.

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Any questions?

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UN HANDBOOK ON SUPPLY, USE AND INPUT-OUTPUT TABLES

WITH EXTENSIONS AND APPLICATIONS

State of play of the structure of the UN Handbook (17th May 2015 by Sanjiv Mahajan)

Beginning phase

Foreword
Preface / acknowledgements
Contents
Key to Symbols and Abbreviations used in the tables, figures and boxes

PART A: Overview

Chapter 1: Introduction
Chapter 2: Overview of the Supply and Use Tables and the Input-Output Tables framework

PART B: Designing, building, compiling and disseminating supply and use and input-output tables

Chapter 3: Business Processes and Stages of Production
Chapter 4: Design and build issues - Compilation of SUTs as an integral part of the National Accounts
Chapter 5: Compiling the Supply Table
Chapter 6: Compiling the Use Table
Chapter 7: Compiling the Valuation Matrices
Chapter 8: Compiling the Imports Use Table and Domestic Use Table
Chapter 9: Compiling Supply and Use Tables in volume terms
Chapter 10: Linking the Institutional Sector Accounts to the Supply and Use Tables
Chapter 11: Balancing Supply and Use Tables
Chapter 12: Transforming the Supply and Use Tables into Input-Output Tables
Chapter 13: Compiling Physical Supply, Use and Input-Output Tables and other environmental analysis
Chapter 14: Applying Supply and Use Tables for Quarterly National Accounts
Chapter 15: Disseminating Supply, Use Tables and Input-Output Tables

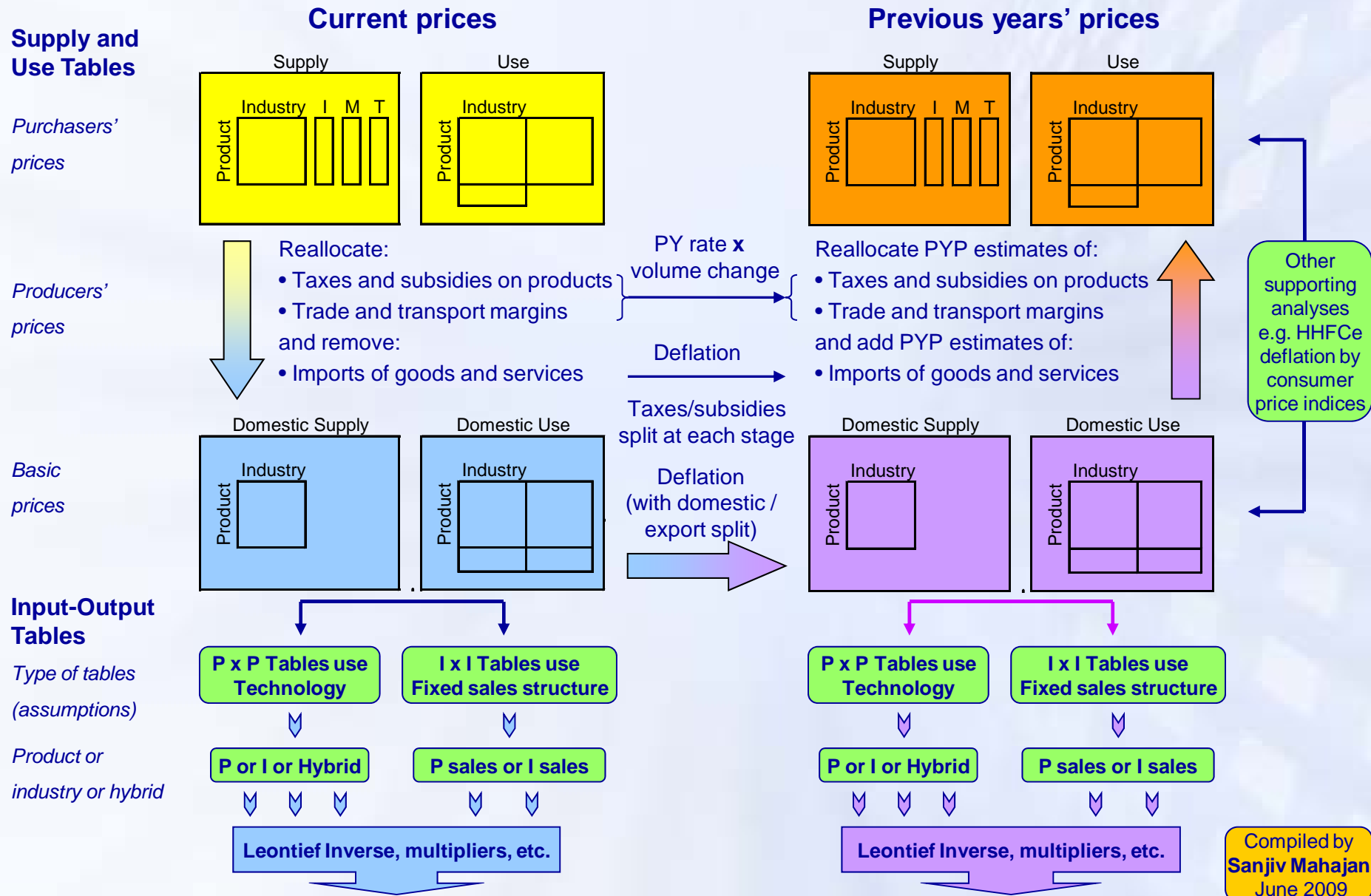
PART C: Extensions and applications

Chapter 16: Regional Supply and Use Tables
Chapter 17: International Supply and Use Tables and Input-Output Tables
Chapter 18: Projecting Supply, Use and Input-Output Tables
Chapter 19: Extensions of Supply, Use and Input-Output Tables
Chapter 20: Modelling Applications of Input-Output Tables
Chapter 21: Application of the SUTs framework - Examples of rapidly changing and different compilation practices

End phase

Glossary
References
Index

An overview of the compilation schematic integrating Supply and Use Tables and Input-Output Tables – “H-Approach”



Examples of key guidelines, features, recommendations/steers on best practice and principles to consider for producing SUTs and IOTs and related aspects

Item	Specific reference(s)
Organisational	
1	Organisation of the economic statistics system – a centralised system is preferred rather than a de-centralised system.
2	Various components of the SNA framework should be coordinated and compiled in an integrated manner: National Accounts (including Balance of Payments and Financial Accounts) and Public Sector Finance statistics. SUTs and IOTs together with PSUTs and PIOTs. Environmental Accounts and Regional Accounts. All of the above should take place in the same institution - not necessarily the same division or directorate within the institution.
3	Recommended - Compilation processes of SUTs and IOTs should broadly align with the principles underpinning the IES and GSBPM.
4	Recommended - SUTs and IOTs (alongside PSUTs and PIOTs) should be integrated, coordinated and compiled at the heart of the National Accounts: Leads to better quality, coherency and consistency of National Accounts, Balance of Payments and related statistics. Creates effective and powerful data quality and coherence feedback loops.
5	Recommended - Final estimates of National Accounts aggregates should be based on the SUTs framework.
6	Environmental Accounts and Regional Accounts should sit alongside the compilation of SUTs and IOTs.
7	Reflect stakeholder interests - data suppliers and users together with regular stakeholder meetings.
8	Governance - accountability and guidance supported with "appropriate" programme, project and process management including risk management.
9	Schedules, timetables and customer/supplier service level agreements.
10	Various standards and policies - revision policy, disclosure controls, etc.
11	Staffing: Recruitment, retention and skills development.
12	Training requirements: National Accounts - Technical skill focus covering National Accounts concepts, methods, processes and guidance, etc. Systems - IT systems, programming, data management (standards and principles), data dissemination including web-site management, etc. Management - Staff management, effective leadership, communication, etc.
13	Computing: Robust, reliant, structured, quick and well-documented systems. Database software and hardware, speed, structure, flexibility, statistical functionality, data management and links to web-dissemination.
14	Documentation: Operational, methodological, system, metadata and recording specific issues, adjustments, etc. for each quarterly/annual exercise.
15	Resources and costs.
Compilation	
1	Basis of the statistical unit, business register and data collection.
2	SUTs (and IOTs) are produced annually, and ideally, if possible, an appropriate role quarterly.
3	Recommended - "H-Approach" for producing the SUTs/IOTs in current prices and in previous years' prices (including valuation and imports matrices).
4	Recommended - SUTs are produced first, then IOTs are derived from the SUTs using additional information and assumptions.
5	Recommended - Number of products/industries - SUTs should be rectangular (preferably with many more products than industries): Greater the detail, better the quality - however, more detail will impact on the burden on business, systems and resources.
6	Recommended - Ensure comparability using internationally recognised classifications (e.g. ISIC, CPC, COICOP, etc.) at appropriate detailed levels.
7	Data requirements cover all areas of SUTs and PSUTs: Comprehensive business register. Wide-range of (preferably annual) regular business surveys (including structural detail), household surveys, administrative data, prices, etc. Benchmarking/reconciliation - preferably, annually, reflecting rapidly changing economies (use of fixed factor or stability assumptions minimised). Incorporation of labour and capital information ensuring coherence for productivity estimates.
8	Choice of index number formulae and base year.
9	Recommended - Recording of all the data building blocks separately: Source data, coverage (including exhaustiveness) adjustments, conceptual adjustments, quality adjustments, balancing adjustments, etc.
10	Approaches widely used by NSOs for creating IOTs: Model A (Product by Product) IOTs using the product technology assumption. Model D (Industry by Industry) IOTs using the fixed product sales structure assumption. Hybrid - Mix of technologies usually chosen to avoid having any negatives (approach is used by a few NSOs).
11	Regional SUTs link to National SUTs - Bottom up approach (preferred) to compiling Regional SUTs and should be reconciled with National SUTs.
12	Documentation - operational, methodological and supported with appropriate metadata and revision analysis.
Balancing	
1	Production of balanced SUTs creates: Single estimate of GDP incorporating the components of production, income and expenditure approaches to measuring GDP. Volume of GVA through double-deflation. Balance between supply of products and use of products. Balance between industry inputs and industry outputs.
2	Recommended - Balancing should encompass simultaneously: SUTs in basic prices and purchasers' prices. SUTs in current prices and volume terms (preferably, previous years' prices). SUTs links to IOTs, the PSUTs and PIOTs (as appropriate) and the various items covered in (4) below.
3	Recommended - Powerful integration theme: Goods and services, Production account, Generation of income account, parts of the Capital account and Use of disposable income account. Incorporation of PSUTs and PIOTs (as appropriate). Productivity estimates (labour, capital and multi-factor).
4	Recommended - Incorporate table linking the SUTs and the institutional sector accounts: Goods and services. Production accounts by industry and by institutional sector. Generation of income accounts by industry and by institutional sector. Parts of the Use of disposable income account and parts of the Capital account (by industry and by institutional sector).
5	Balancing process: Simultaneous balancing preferred over sequential balancing. If not possible, an alternative is sequential balancing (first in current prices, then in volume terms) with quick and effective feedback loops. Recommended - Centralised balancing rather than de-centralised balancing.
6	Production and balancing of SUTs should enable the identification of source data incoherence: Mechanism should be developed to provide feedback to data suppliers and help prioritise areas for improvement and allocation of resources.
7	Documentation and annual review of balancing adjustments - should identify and avoid any evolving biases.