



**THE INTERNATIONAL SCHOOL
OF INPUT-OUTPUT ANALYSIS**

MODULES
12th Workshop of the APDR
Leiria, Portugal – 14th February 2012

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1. Construction of Social Accounting Matrices

Lecturer: Susana Santos

School of Economic and Management (ISEG) – Technical University of Lisbon (Portugal)



Summary:

The Social Accounting Matrix, usually referred to as SAM, will be presented as an important working instrument for analysis and research into many areas of theoretical and applied (socio) economics, as well as economic policy design and analysis. The SAM will be defined and presented as a numerical representation of the transactions taking place in the economy over a certain period, represented schematically by the circular flows (of product, income and expenditure) in the economy. The full set of concepts related with the SAM will accompany the exposition. The construction of numerical versions of the SAM will be explained and experienced. A top-down method will be adopted, considering the national accounts as the basic source of information. Possible disaggregations and extensions will be presented. Aggregates and institutional balances will also be calculated.

Outline:

1. SAM – definition and conceptual framework
2. Numerical versions of a SAM
 - 2.1. The macro-level and possible disaggregations and extensions
 - 2.2. Aggregates and institutional balances

Remarks:

Since the subject is a very broad one and the time available for the teaching module is short, the aim will be to approach the main aspects related with the SAM and its construction in as systematised a fashion as possible, providing all the guidelines (references, links, information on software, etc.) needed for possible future studies. Before the beginning of the Module, the students that have enrolled in the course will be given the link to the website where they can find support materials for the teaching part and the assignments. Those materials will be: the Power Point file, with the presentation; the bibliography used for the preparation of the Module; other references, links and materials considered relevant by the lecturer or requested by the students.

Bibliography:

Inter-Secretariat Working Group on National Accounts - ISWGNA (1993 and 2008), System of National Accounts (1993 SNA) and (2008 SNA) United Nations Statistics Division and the United Nations regional commissions, New York; International Monetary Fund - IMF, Washington, DC; World Bank, Washington, DC; Organisation for Economic Cooperation and Development - OECD, Paris; Statistical Office of the European Communities - Eurostat, Brussels/Luxembourg.

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Santos S. (2006), "Better policy analysis with better data. Constructing a Social Accounting Matrix from the European System of National Accounts", Working Paper No. 22/2006/ Department of Economics/Research Unit on Complexity and Economics - ISEG-TULisboa, Lisbon, July 2006, 14p.

Santos S. (2007), "Macro-SAMs for Modelling Purposes. An Application to Portugal in 2003". Working Paper No. 17/2007/ Department of Economics/Research Unit on Complexity and Economics - ISEG-TULisboa, Lisbon, October 2007, 17p.

Santos S. (2009), " From the SNA to a SAM-based Model. An Application to Portugal " *Edições Almedina, Coimbra (Portugal)*.

Santos S. (2011), "The Underlying Database of an Instrument for Economic and Social Policy Analysis for the Azores. Application and Extension to 2005". Working Paper No. 14/2011/ CEEAplA (Research Centre for Applied Economics in the Atlantic), University of Azores and Madeira, April 2011, 52p.

Santos S. (2011a), "Constructing SAMs from the SNA" Working Paper No. 18/2011/Department of Economics/Research Unit on Complexity and Economics – ISEG-TULisboa, Lisbon, July 2011, 32p.

2. Updating Symmetric Input-Output Tables (SIOT)

Lecturer: Joerg Beutel

Constance University of Applied Sciences (Germany)



Summary:

In recent years, several countries have considerably reduced the time lag for the publication of input-output tables. However, the problem remains that many applications of input-output analysis are obsolete because the database is outdated or the time series of tables are incomplete. It is costly to compile symmetric input-output tables, as they rely to a great extent on surveys and primary statistics. Therefore, many countries compile input-output tables only for certain benchmark years. As supplement for the years in-between, but also to cover the time lag between the last submitted input-output tables and the most recent set of national accounts, updates of input-output tables are essential for economic analysis. Methods for updating input-output tables can be categorised in univariate, bivariate, econometric and stochastic procedures. All methods try to solve the problem that row and column sums of an input-output table should correspond to the exogenous projection and negative inputs should be avoided. A new updating procedure will be presented that avoids arbitrary changes of important input coefficients that sometimes occur if traditional RAS-procedures are applied.

Outline:

1. Methods for updating input-output tables
 - 1.1. Univariate methods
 - 1.2. Bivariate methods
 - 1.3. Stochastic procedures
2. Empirical applications
 - 2.1 Projection of input-output tables for Greece
 - 2.2 Projection of supply and use tables for Slovenia
3. Software

Remarks:

The objective of the module is to inform the participants about the main methods for updating input-output tables. A summary of the main methods is given in Chapter 14 of the "Eurostat Manual of Supply, Use and Input-Output Tables" of 2008. Small numerical examples will help to understand the various compilation procedures in an easy way. Empirical applications will include projections of supply, use and input-output tables for selected countries of the European Union. The software system contains Excel files, SAS programs and Eviews programs to be used in the future by the participants for their own activities. The students will be informed in due time about the link to the website where they can find support materials for the module. The information will include the PowerPoint presentation, the Eurostat Manual and the software system (Excel, SAS, Eviews) for both the numerical examples and the empirical applications.

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