Social Accounting Matrices as Accounts

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Introduction

- Are SAMs models?
- Are SAMs Accounting Systems?
- Role of SAMs
- Behaviour in SAMs
- Relationship between SAMs and Models

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Are SAMs models? **NO**

- SAM-Leontief model
  - A Leontief model calibrated with a SAM database
- SAM-based Single country CGE Model
  - A single country CGE model calibrated with a SAM database (2-dimensions)
- SAM-based Global CGE Model
  - A global CGE model calibrated with a SAM database (3-dimensions)

One SAM: many models

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Are SAMs Accounting Systems? **YES**

- A record of transactions within a region for a given period: 'national' accounts
  - Complete
  - Consistent
- A single-entry – matrix – representation of national accounts
- The 'price/cost of everything'
- Independence from behavioural assumptions

A model should not define a SAM

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Accounting Systems

"It is perhaps of interest to realise that the framework of any model concerned with the economy as a whole is always an accounting system. This is true whether we work with highly aggregated models such as that underlying Keynes' General Theory, the input-output model of Leontief or the still more complicated variant with which this series [A Programme for Growth] is concerned."
(Stone, 1962 ,p v).

"Since every economic model has its corresponding accounting framework, and since every such framework can be set out as a SAM, it follows that every economic model has a corresponding SAM."
(Pyatt, 1987, p 330)

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Role of SAMs

Describe economic & social interdependencies

- Define the agents within an economic system
- Identify transactions between agents
- Give empirical content to economic models (quantify transactions between agents)
- Define a system of prices
  - SNA price system
  - Alternative price systems
- Accuracy!!!

Support mathematical models of economies

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Accuracy and Relevance

"The issue of whether the SAM is deterministic or stochastic is crucial as the SAM provides the underlying data set upon which simple SAM-multiplier analyses and more complex Computable General Equilibrium Models (CGEs) are calibrated. Increasingly, these models are used to explore and simulate the impact of policies and exogenous shocks on the whole socio-economic system. An erroneous or inaccurate SAM invalidates the results obtained from these models"
(Thorbecke, 2003, p 186).

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Behaviour in SAMs

- Reports transactions between agents
- No comment on the behavioural determinants of transactions
  - Taxes
  - Factor returns
  - Competitive markets
  - Determination of prices
  - Macroeconomic closure conditions
  - Factor market clearing
  - ….

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Relationship between SAMs and Models

- SAMs report the observed transactions
- Models provide the behaviour
  - Taxes
    - *ad valorem* vv specific vv poll
  - Factor returns
    - Endowments
  - Competitive markets
    - Imperfect competition and rents
    - Perfect competition
  - Determination of prices
    - Command vv market economy
  - Macroeconomic closure conditions
    - Exogenous determinants
  - Factor market clearing
    - Time horizon and competition
  - ….

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Social Accounting Matrices as Accounts

The End

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