The Logic of General Equilibrium Modeling

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Module 2
“The first requirement posed by scarcity is not efficient choice but rather a method for allocating conflicting claims to desired scarce performances and objects so that people do not assault and kill each other in pursuit of them. The market system is such a method.

...It limits every person’s claims to the sum of money obtainable by that person’s offer of something of value on the market: a rule—look at it as a political rule—of quid pro quo”

Lindblom (2001)
Outline

- What is a General Equilibrium Model?
- The Basic Walrasian Framework
- The Circular Flow of Economic Activity
- The Social Accounting Matrix
What is a General Equilibrium Model?

- A logical representation of a socioeconomic system wherein the behavior of all participants is compatible.

Key modeling issues:

- Identification of participants.
- Specification of individual behavior.
- Specification of mode of interaction.
- Characterization and desirability of compatibility.
Basic Walrasian Framework

- Template for most applied CGE models.

- Two categories of agents or participants:
  - producers or firms
  - and consumers or households.
Basic Walrasian Framework

- Optimizing behavior
  - Entails specification of (1) actions an economic unit can take; (2) the constraints it faces; and (3) the objective function used to evaluate individual actions (Varian 1984).
  - Supply and demand behavior is thus an observable consequence of the optimization assumption.
Basic Walrasian Framework

- **Market interaction**: method of social coordination by mutual adjustment among participants based on “quid pro quo” (Lindblom 2001).

- **Compatibility**
  - All markets are in equilibrium: incentives configuration is such that the amount of effective demand equals the amount supplied. Alternatively: No feasible change in individual behavior is worthwhile.
Basic Walrasian Framework

- **Comparative Statics** entails the comparison of equilibrium states associated with changes in the socioeconomic environment.
  - Social desirability depends on chosen criterion.
  - Social peace would be maintained if market system accepted (by law and popular acquiescence) as preferred allocation mechanism.
Basic Walrasian Framework

- **Pareto efficiency** focuses on how well the system promotes individual objectives. Compatibility implies no other situation is unanimously preferred by all participants.

- **Empowerment perspective** requires a **poverty-focused criterion**: less poverty is preferred to more.
Circular Flow Chart for an Open Economy

- **Factor markets**
- **Factor services**
- **Firms**
- **Intermediate goods**
- **Households**
- **Product markets**
- **Final goods**
- **Exports**
- **Imports**
- **Rest of the world**

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- **Factor markets**
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- **Households**
- **Product markets**
- **Final goods**
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- **Rest of the world**
# The Social Accounting Matrix

Structure of a Basic SAM for an Open Economy

<table>
<thead>
<tr>
<th>Activity</th>
<th>Commodity</th>
<th>Factor</th>
<th>Household</th>
<th>World</th>
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<td>Total</td>
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<td>Total Supply</td>
<td>Factor Payments</td>
<td>Taiwan Values</td>
<td>Taiwan Imports</td>
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</table>
The Social Accounting Matrix

An accounting framework that reflects the circular flow of economic activity.

- A square matrix, the dimension of which is determined by the number of sectors and agents considered.
- Each entry represents a payment to a row-account by a column-account.
- Consistency implies that row total must equal corresponding column total.
- Also, if all but one accounts balance, the last one must balance as well (Walras’ law).
### The Social Accounting Matrix

**Analytical Expression for a Basic SAM**

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References


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