

## On the tectonics of the empirical basis of input-output analysis

Topic: Methodological aspects of input-output analysis 1

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Leontief defined input-output analysis “as a general methodological approach designed to reduce the steadily widening gap between factual observations and deductive theoretical reasoning”. The paper deals with some aspects of the relationship between theoretical concept and the available data.

In the standard case the theoretical concepts are operationalized in a two step procedure in order to arrive at the parameters describing structural relationships. In the first step supply and use matrices are compiled. The nature of these matrices is usually seen as belonging to the category of descriptive statistics. On the basis of model assumption the information of supply and use tables is then transformed into technology matrices.

In contrast to the usual interpretation no direct micro-macro link can be established for most of the elements of the use tables at basic prices, the point of departure for estimating technology matrices. Only for use matrices in purchasers' prices there is a straight forward equivalent in the universe of observable phenomena. But in order to achieve more homogeneity as regards valuation and as a prerequisite for arriving at the identity of total supply and total use in the commodity accounts, purchasers' prices have to be transformed to basic prices.

The paper will concentrate on the different layers of valuation matrices which bridge between valuation at purchasers' prices and valuation at basic prices. It will be shown that the “distance” between these two concepts differs significantly in the various parts of the system and even across rows. The various layers (trade margins, transport margins, commodity taxes, commodity subsidies) are also of quite distinct relevance by industries and commodities. Because the various layers are in a different way rooted in direct observations the “model content” and thus the cognitive character of the elements of an absorption matrix at basic prices is not equally distributed.

The multifaceted tectonics of the absorption matrices will be illustrated on the basis of Austrian data for 2007. In a final chapter some of the implications of the complexity and inhomogeneity of the underlying data on the results of input-output analyses will be discussed.