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Product Technology vs. Industry Technology: A New Look

One of the main aims of constructing input-output balance models is to assess an impact of exogenous changes in net final demand (at constant prices) on simultaneous behavior of the economy. Nowadays, two approaches to constructing input-output coefficients are widely used in practice, namely, ones based on so-called product technology assumption and industry technology assumption.

Material balance equation, classical Leontief equation and *commodity technology* model form the system of equations with production and intermediate consumption matrices as unknowns. It is shown that this system can be solved in the manner that guaranties the exogenous changes in net final demand at constant prices.

In turn, material balance equation, classical Leontief equation and *industry technology* model form another system of equations (with the same unknowns) that can be also resolved with respect to production matrix and intermediate consumption matrix. However, exogenous varying net final demand in obtained solution leads to quantity changes in the intermediate consumption matrix and to price changes in the production matrix. This type of economy's response to exogenous changes in final demand seems to be implausible artifact that is out of economic sense. Thus, there are some certain doubts about plausibility of underlying background for an industry technology assumption and a fixed product sales structure assumption that are widely used for transforming supply and use tables to symmetric input-output tables.