

The semi-closed input-output model and its application to income policy analysis

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In the open input-output model, all final demand categories (such as household consumption, government consumption, capital formation, and export) are treated as exogenous variables and therefore assumed mutually independent. This treatment, however, may yield problematic outcomes. For example, the open input-output model implies that increased government consumption may lead to decreased household consumption per worker.

Semi-closed models can be used to tackle the problem by endogenizing household consumption together with labor input. However, we may find that this only partly solves the problem, since other final demand categories are still treated as exogenous variables. To completely solve the independent problem, we develop a variant in which a selection of final demand categories is endogenized together with their corresponding factor inputs. As an application of the model, we investigate the impact of income policy on the Chinese economy, an exercise that is difficult to accomplish in standard input-output modeling.