

Partially endogenized consumption: a new method to incorporate the household sector into input-output models

Topic: Final demand in input-output analysis

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The partially closed input-output model with endogenous consumption is applied to many fields, both on national level and regional level, for it takes into account the linkage between the household sector and the production sector. In our study, we find that the household consumption behavior captured by this model is not consistent with the consumption theory, because in this model the current consumption is only determined by the current income. However, from the point views of related consumption behavior hypotheses, such as the relative income hypothesis and the life cycle-permanent income hypothesis, the household consumption is also determined by many other factors such as past consumption level and future income. In that case, the linkage between the household sector and the production sector would be overestimated by this model. To address this problem, we proposed a new method to incorporate the household sector into the input-output model, which can reconcile the input-output analysis with the consumption theory. The endogenous consumption coefficients of eight categories of commodities in China from 1989 to 2008 are estimated by the time varying parameter method. Using these results, we construct our new model, partially closed input-output model with partially endogenized consumption, based on China's input-output table of 2007. Finally employing our new model, the short-term impact of the 4 trillion yuan stimulus package announced by the Chinese government on the GDP of China under different scenarios is investigated.