Socioeconomic consumption modelling in an input-output model

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Author: Britta Stöver
Co-Authors: Marc Ingo Wolter, Thomas Drosdowski

Household specific consumption behavior is of interest for various social and economic problems. The "Poverty Report" of the Federal government of Germany for example uses the information on consumption expenditures by different household types in the context of social participation. Other fields that can be addressed are poverty consumption, sustainable consumption, effects of income redistribution, implications of demographic change etc. These subjects play a major role in the project soeb3 (Sozioökonomische Berichterstattung, Reporting on socioeconomic development, http://www.soeb.de/en/) that aims at analyzing the social development in Germany.

To quantify the consequences of changes in the household composition the macro-econometric input-output model INFORGE has to be extended by socioeconomic information. This will be done by including a household specific consumption module into the model environment. The paper will describe the methodology, structure and functioning of the consumption module disaggregated by socioeconomic characteristics.

The applied method takes into account the availability of data and combines a macroeconomic model with micro-data based information. The socioeconomic consumption module includes 70 consumption purposes and 42 income components from the German Household Budget Survey (Einkommens- und Verbrauchsstichprobe (EVS)). The social dimensions are social status linked with household size. Changes in income estimated in the macro-economic input-output model induce changes in the household specific income composition. These changes affect the households' consumption expenditures. Summing up the newly calculated consumption expenditures by social characteristics the aggregate consumption by purpose can again be reintegrated into the macroeconomic model. The resulting economic consequences can then be traced and quantified.

One significant result is the possibility to model complex socioeconomic interactions with limited data availability. The applied method provides the opportunity to integrate socio-economic structures in an economic model environment and thus reveal the inter-related macroeconomic effects of social characteristics. The combination of micro-based and macro data enhance the original model output. Finally, the implications of demographic change, social transformation and/or changes in income can be analyzed.