The Choice of Multi-Regional Input-Output Tables in CGE-Models

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Spatial CGE-models are widely used for simulating impacts resulting from economic policy changes, larger scale investment projects and other kind of economic â€œshocksâ€•. They rely on more or less spatially and / or sectorally disaggregated multiregional input-output tables. While national input-output tables have become widely available in recent years, provided by national statistical offices, tables on a regional scale are still scarce. They are usually estimated based on the information contained in the corresponding national tables; the extent of regional data used to derive these tables varies considerably. Two different views on how much effort researchers should make and how much regional information they should collect or estimate when compiling such tables have emerged: Some argue that rather simple regionalization algorithms are sufficient when regional input-output tables are to be embedded in other types of models, for example CGE-models. Researchers should concentrate their efforts on calibrating the model and in the course of doing so change the underlying regional tables if simulation results seem implausible. Others, however, argue instead in favor of maximizing regional information in the process of table compilation.

The paper at hand attempts to produce some empirical evidence pointing in one or the other direction applying two spatial CGE models for Austria. These models differ only with respect to the system of multiregional input-output tables they are based on: While one system has been compiled based on an algorithm using the national input-output table for the year 2011 and little, but freely available regional information, the other system fits the â€œhybridâ€• type of regional input-output tables: While it is based on the same national table for Austria, it makes use of a wide range of data reflecting regional differences in private and public consumption, investment and exports on the demand side and in production structures on the supply side of the table. Various simulation scenarios are carried out applying these two CGE-models to shed light on the empirical relevance of the choice of multiregional input-output tables embedded in the models.