

A proposal for the construction of a input-output regional model from bottom to top by hybrid Methods

Topic: (7.3) Regional input-output modeling (1)

Author: Normand E ASUAD

The main purpose of this essay is to develop a methodology and its application for the construction of an input output regional model, which, based on a bottom-up approach and in a hybrid approach, allows us to pick up the essential aspects of the particularities of the economy of a region and its adequate combination with the national data. This is done through the construction of a basic regional statistical system by which regional data lead us to orient the process of regionalization of the national accounts and the construction of the key variables for the construction of the regional supply and use input-output tables. In our view this fulfill the regional data requirements and the use of superior data at national level, making possible the construction of regional IO matrixes by a bottom-up approach.

It is known that the methodology for the construction of an IO regional model depend on the regional disposable data, the information data plays a key role in the construction of an IO matrix. As a matter of fact his construction is supported in a statistical system, which relies on the elaboration of the national accounts. This is one of the main achievements that lead internationally to develop the IO national matrixes and their use as basic tools of the national economic performance

According to Miller and Blair 2009, among the most formidable challenges in using input-output analysis in practice is assembling the detailed basic data needed to construct input-output tables characterizing the economic area of interest - national, regional, or perhaps multiple-regions.

The argument that the lack of regional data is the main cause that the regional IO matrixes be built depending on national IO, has its roots according, to our view in the lack of a regional statistical system that enhance us to elaborated regional accounts and the basis under which the IO regional matrix can be built.

Nevertheless, depending of the national statistical system, particularly to the development of the national accounts and the regional disposition of data is possible to establish a data base in order to estimate through hybrid methods the key regional variables that are crucial for the construction of a regional input-out table.

In the case of Mexico we have a solid system of national accounts as well as consolidated accounts at national level of both non-financial corporations, government, institutions and no profit-making sectors. Besides we have estimations of the value added for the federative entities of the nation, considering the sectoral classification of the North American Industrial Classification System (NAICS)

Therefore we assume that the results that come about from this research, it seems to me that they can contribute to the development and application of a methodology for the construction of regional matrixes from bottom-up approach.

Furthermore in the literature there are few and important recommendation concerning the regionalization procedures for the construction of a input-output regional matrix by the construction of regional accounts, considering as a key feature the regionalization of national tables: Jackson 1998 and Lahr's 2001. In México to my knowledge there is not such type of analysis.

Therefore our main interest is to develop a methodology based on the creation of a regional data base that lead to built of a supply and use regional matrix and regionalize the national table and the creation of the regional make and use IO tables, taking into account the regional data and its combination with the national one based on hybrid methods.

Finally in order to show some empirical results we take the state of Sonora as a case study.

The methodology that we developed comprises the following: 1. Review of the main theoretical concepts and of the input-output regional models; 2. The methodology proposal: 2.1 Identification and demarcation of the spatial economic functional units (SEFUs); 2.2 Estimation of the basic data for the construction of Input-output regional model and 2.3. Construction of the input-output regional model.

Therefore the essay consist of the following parts: 1. Review of the main theoretical concepts and of the input-output regional models; 2.The Methodology proposal and 3. Preliminary empirical results.