

A Dynamic Input-Output Model for Small Regions: The Mexican Case.

Topic: Regional input-output modeling I

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Recently, in Mexico, special attention has been paid to the empirical construction of regional input-output matrices. As a result of this, a wide variety of regional intersectoral matrices have been estimated (Fuentes, 2005; Armenta, 2007; Chapa, 2009; Cruz, 2008; 2005; Rosales, 2010; Fuentes, Brugués and Díaz, 2013). In all cases, the regional multisectoral model has been seen as an instrument, which provides a basis for economic programming and projection, but in no case has it been used in the construction of dynamic simulation models. This text aims to develop a regional multisectoral and intertemporal model, and perform an empirical application of the same to a system of dynamic simulation (Stella/IThink).

The analysis of the dynamic regional multisectoral model is approached from an analytical approach and a systemic approach. The analytical approach consists of studying in great detail the various algebraic relations of this model. This approach can be very fruitful, but has a disadvantage consisting of the detailed knowledge of the model that can lead to the solution only with great effort. The systemic approach, meanwhile, allows the analysis of the system from a global perspective, reproducing its behavior through the interconnected operation of various partial relations that make up the model, and thus, study the evolution in time of the included variables for a predefined period, it shall be that where the validity of the assumptions used in the construction of the model is maintained. Thus, the combined analysis allows considering the algebraic detail and the reproduction of the behavior of the dynamic regional intersectoral model.

Key words: Input-Output, Regional Development and Dynamic Simulation.