

A Dynamic Input-Output Model for Small Regions: Updated for the Mexican Case

Topic: Regional Model Building

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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; Albornoz, 2009; Rosales, 2010; Fuentes, Bruges and Díaz, 2013). In all cases, the regional multisectoral model has been seen as an instrument, which provides a basis for economic planning and projecting, 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 reached from both analytical and a systematic 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 and can lead to the solution only with great effort. The systematic 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, in order to study the evolution in time of the included variables for a predefined period, which will maintain the validity the assumptions used in constructing the model. Thus, the combined analysis allows considering the algebraic detail and the reproduction of the behavior of the dynamic regional intersectoral model behavior.

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