Economic effects of NAFTA on the Northeast Mexico economy

Topic: Policy Analysis I
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The North American Free Trade block (NAFTA) went into operation twenty years ago. A long list of studies have estimated the NAFTA effects on Mexico, among them Sobarzao (1992), U.S. International Trade Comission (1997), Krueger (1999), Clausing (2001), Caliendo y Parro (2009) and others, but none has addressed the regional effects of NAFTA. In this paper it is estimated the impact of NAFTA on the economy of the Northeast Mexico, i.e. Nuevo LeÃ³n, Coahuila and Tamaulipas combining the use of time series econometrics techniques jointly with an applied general equilibrium model for the region. Using a multivariate GARCH model and switching regimens models it was found that NAFTA have increased the synchronization of the business cycle of the region to United States and Canada, increasing the regionâ€™s exports to those countries by 132% and the Direct Foreign Investment (FDI) the region receives from abroad by 290%. In order to assess the impact of such injections to the Northeast economy, a general equilibrium model for the region (MEGAN-03) was built, allowing to model the interrelationships of two types of households (rural and urban), 23 sectors, 18 types of labor, the capital, the local and the federal government, and the external sector that is disaggregated as the four largest state commercial partners from the United States (Texas, California, Michigan, Illinois and Indiana), the largest Canada provinces (Ontario, Quebec, Alberta and British Columbia) and the rest of the world. The MEGAN-03 is a static model that assumes perfect competition and fix prices, and it is calibrated using a regionalization of the Mexico Input Output table for 2003, employing the Flegg-Webber (1997) method. In order to assess the NAFTA impact, the counter-factual situation was generated, where regionâ€™s exports and FDI would decrease in the estimated magnitudes derived from the time series econometric estimates; then a comparison of this situation was carried out with the baseline year used to calibrate the general equilibrium model. It can be concluded that the regionâ€™s raise in exports caused by NAFTA implied an increase in the region output of 7%, in the region value added of 5.2% and in the overall employment of 4.6%, the metallic and the machinery and equipment industries presents double digit gains occasioned by the NAFTA export boom. On the other hand, the increment in the FDI that Northeast Mexico received could produce an extra increase of 1.6% in output, value added and employment in the region, being the construction sector the most beneficiated sector.