

Regional vertical specialization of the automotive chain in the Central North region of M xico and its main effects on regional production structure: A spatial approach using an Input-output regional table.

Topic: Vertical Specialization and Value Chains

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The importance of automotive industry in M xico since the opening of the Mexican economy in 1994, brought about that the country would be convert in one of the main world exporters. Nevertheless, just a few regions of the nation were specialized in this industry. This is the case of the Central North region of M xico, which has also been characterized by its high participation in the regional production. Nevertheless, the high dependency of the regional exports from the imports evidences that this industry has vertical specialization because it belongs to a global value chain. Within the region causes are formed two patterns of regional economic growth highly differentiated that make up the structural heterogeneity: The enclave economy and local economic activities. This duality in growth generates two gaps showing dependence on imports for exports and a steady flow of foreign direct investment in providers that not allowing to link the local economy with the exporter modern sector. By not articulate local traditional activities with the exporter sector is recorded duality also in the regional development because the multipliers of investment are nullified in employment, income, consumption and welfare of people in the region.

Therefore, the aim of this article is to characterize the vertical specialization of the automotive chain in the Central North region of M xico as well as identify and measure the dual economy created by the automotive industry as an enclave economy in the region, using an input-output regional table as a way to measure and characterize the analysis of a regional enclave economy.

Hence the methodology consists of the following stages:

1. The regional dual productive structure and the cluster or enclave economy of the automotive industry. This analysis is addressed to characterize the economic activities of the region and their spatial distribution taking into account as criteria: productivity, technology, employment and exports. To identify them it will be applied diverse index numbers combined with the use of LISA and MORAN Indexes analysis in order to spell out their sectorial and spatial attributes.
2. The vertical specialization of the automotive industry in the region. This analysis will be done through the identification of the exports of the automotive industry and incorporating external value to the region by quantifying the imported content of imports to exports and their participation in the so called global value chains through indicators of domestic and foreign value added embedded in its exports. For this analysis it is applied a multi-regional matrix based on the ICIO model Input-output tables inter countries methodology. Then once it has be defined the Leontief inverse, will be defined the domestic and foreign value added. It is worth to mention that it will be utilized the input-output table of the Central-North region to the analysis of automotive chain, which has been developed by the CEDRUS research group and whose data refer to the year 2008.
3. The linkages and economic interactions of the productive structure of the region and the effects of the automotive chain. This stage is done through traditional indexes of economic linkages and multipliers of income, employment and production, focusing the analysis on the automotive chain and its effects on the rest of the economic sectors of the region. Further more it will be applied a diffusion model, in order to assess the extent that the subset of economic activities that make up the regional automotive industry is linked to other activities in that region. This will be done through the pretopologic approach, which let to characterize the closures and interiors of subsets of branches that make up the block from the automotive industry to clarify its functional role as an enclave.

Keywords: enclave, region, input output matrices, vertical specialization, global chain.