Manufacturing Clusters in Functional Economic North-Central Region of Mexico: A spatial approach using input-output analysis

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Regional analysis using an input-output table is an important tool for the understanding of regional economies. Nevertheless, they are based on political and administrative units - municipalities and states -. This fact does not allow to understand and know the economic spatial behavior of the region, which is the essence of economic regions performance. Therefore, spatial economic interactions between places or sites are not revealed, so the economic region is seen as a whole, without a precise spatial economic behavior. In addition, cluster analysis has been done, mainly from a sectorial and aggregate level, leaving aside their inherent spatial bases, so economic policy predictions and solutions are straightforward simple and reductionist, lacking of the essence of their economic behavior, which relies on spatial components. Furthermore the way in which the regional input-output table is traditionally constructed, come from a national input-output matrix, reinforcing a homogeneous and a-spatial view of the region.

Therefore this essay is oriented to identify and analyze manufacturing clusters in a region, based on its economic functional structure and performance, by constructing in a first stage an interaction probabilistic index which reveals the existence of productive chains, complemented with spatial econometrics in order to validate the spatial economic dependence of the industry in the region. Then, as a second stage it is going to be constructed a regional input-output matrix from bottom to the top taking into account information from the national input-output table. Then, it will be analyzed its spatial representation and main economic and social impacts through different linkages index and multiplier analysis. It is worth to mention, that the estimation of the regional matrix will be based on identification and characterization of the economic and functional regional performance and its main manufacturing clusters, taking into account the National account system, state accounts and available information. Finally, we will spell out the sectorial-spatial interactions as a result of cluster linkages, which reveal the productive structure spatially by pointing out the locations of production and consumption of the main manufacturing chains of the region and their main economic and social impacts.