

Economic interaction estimation for the construction of a regional input-output matrix from a bottom-up approach: a review of the appropriate inferential framework for regional data.

Topic: (6.5) Methodological aspects of IO analysis (2)

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The set of analytical tools used in regional economics, considers the most popular inferential framework used, that is, the parametric approach of statistical analysis. However, non-parametric approaches are part of regional economic techniques and methods and are included in specialized literature as a suitable approach to analyze regions.

As part of the methodological proposal for the construction of a regional input-output matrix from the bottom-up approach and the theoretical development of the spatial dimension of the economy, it is important to investigate the estimation of the regional economic interaction, from a non-parametric logical framework, emphasizing the spatial economic concentration as the main attribute of economic distribution through territory.

The objective of this work is to present a new proposal for the estimation of economic interaction at the regional level, from a non-parametric approach and to obtain spatial autocorrelation from a modified Moran Index, by using a weights matrix (W_{ij}) which captures economic interaction; as well as to estimate correlation by the median as a suitable reference for the regional analysis.

The research question of this work is: What type of regional economic interaction index would be required from a non-parametric perspective and how can it be applied in the construction of a regional matrix based on the bottom-up approach?. The proposal will use available data from the economic census of 2014 for the manufacturing sector of the north central functional region of Mexico, as well as the methodology proposal described in Asuad and SÁnchez (2016).

This work constitutes a contribution in terms of the proposal and application from a non-parametric approach for the regional input-output methodology. It helps to strengthen regional economic analysis and recover the importance of disparities at spatial level, and economic interaction as a crucial fact of spatialized economic performance.