

AN INTER-REGIONAL NETWORK PERSPECTIVE TO EVALUATE THE BRAZILIAN ECONOMY

Topic: Network and other analysis

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Since the publication of Wassily Leontief's seminal work, input-output (IO) models went through by several improvements and extensions. In an attempt to proposing new ways of assessing sectoral interdependencies, integration with other models has been extensively explored in the specialized literature. In this regard, this paper aims to deepen the discussion about the productive interdependence among the Brazilian states through integration between an IO model and complex network theory and identify emergent patterns or properties within the Brazilian states. To do so, an inter-regional IO matrix, base year 2008, is used for the 27 Brazilian states and 26 sectors. The main results indicate that the sectors with the highest centralities degree and weighted degree belong to states of the Southeast region, that is, S o Paulo and Rio de Janeiro, mainly, and Minas Gerais. In addition, most of these activities are linked to industry, except for two service sectors: Transport, warehousing and mail and Private services. Economically speaking, this means that these sectors have a significant amount of intersectoral trade relations in Brazil. It is worth mentioning that the out degree of these sectors was greater than the in degree, which reveals, for this group of sectors, a greater relative importance on the supply side of the economy. Oil refinery, coke and alcohol of Bahia is the only Northeast s sector that stands out considering the degree measures. This can be justified by the presence of the Petrochemical Complex of Cama ari, which places Bahia as an important supplier of petroleum refining products in both regional and national terms.