

Global Value Chains and Production Fragmentation: A Feedback Loop Analysis Based on ICIO 2016 Database

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The underlying geographical structure of global value chains is the main object of study in this paper. The objective is to elucidate the spatial production structure by means of the hierarchical feedback loop methodology. In essence, this methodology offers a detailed view of economic interactions, first by identifying the paths of influence across regions, and then by proposing a hierarchical extraction method to identify the paths in terms of their economic importance. This application takes into account value-added flows involved in the supply chains, rather than interregional gross trade. The paper first presents a background perspective on how the fragmentation of production processes has led to the reorganization of economic activities around the globe and within countries. Then, the hierarchical feedback loop methodology is applied using the new OECD's ICIO 2016 database which takes into consideration 64 world regions (63 countries and the rest of the world) and 34 sectors, allowing in this way a macro level analysis, at the global level, of the spatial structure of the flows linking major economies across trade blocks. Therefore, the results allow a better understanding of how the production fragmentation takes place in the world.