

Measuring Central Place Architectures in Multi-Regional Input-Output Systems

Topic: Structural analysis

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While multi-regional input-output (MRIO) and central place theory (CPT) are both constructed on the basis of trade across distinct regions in space, there is little mixing of the two methodologies in the professional literature. This separation may be ending. The rapid advance of computer technologies in the last several years means that fully-detailed MRIO models that were little more than theoretical ideals just a decade or two ago are now readily available and even likely soon to become commonplace.

In this paper we cast the most basic elements of CPT in MRIO terms and derive a simple algebraic expression for measuring the presence and extent of central place hierarchies. We turn next to a large-scale and just recently available MRIO data set covering all 3,000+ counties of the United States and empirically test our central place measure in the setting of three spatially diverse regions.

We follow our empirical explorations with a discussion of our central place-MRIO measure, and the importance of the CPT-MRIO connection in defining appropriate regions, and in addressing notable issues of regional policy.