

Chapter 2

Measuring the World City Network: New Results and Developments

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ABSTRACT

Measuring the world city network is achieved by careful specification of a network model plus customised data collection to operationalize the model. The resulting interlocking network is described as advanced producer service firms in the role of city network-makers through their routine work across multiple offices. The basic measurement derived is the network connectivity of a city; this describes how well that city is integrated into the world city network. Selected results from the latest data collection (2008 – 175 firms, 526 cities) are presented with leading ('alpha') cities divided into connectivity strata. It is shown that compared to previous analyses in 2000 and 2004, the upper echelons of the world city network are becoming more and more integrated.

LISTS, RANKINGS, HIERARCHIES AND CITIES

We live in an age of 'list-mania'; there is so much information available that ordering selected topics has become popular entertainment. And so it is with cities, there are numerous rankings of cities available in both the commercial and academic spheres. People are interested in where their city ranks and this can be fun. Some years ago my city, Newcastle, was ranked above Rio as a 'world

party city'; it made headlines in the local press. But beyond boosterism there has been a genuine concern for cities as business centres in a rapidly globalizing world economy. GaWC, with its measures of network connectivity, has contributed to this situation with its rankings of the importance of cities in the world city network. In fact, it appears that it is these rankings that most people want from GaWC. But there is a basic sense in which concern for city rankings operates against the spirit of the GaWC project. (Taylor, 2004)

City rankings fit into the approach to inter-city relations that emphasizes competition between

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cities. This is in keeping with the long-term, conventional theoretical approach to inter-city relations that described 'national urban systems' in each of which exists a 'national city hierarchy' broadly conforming to classical central place theory. The intellectual power of this theoretical framework can be appreciated through the fact that 'city hierarchies' appear almost natural (Taylor, 2009) – how else would cities relate to each other except through hierarchies? From this position ambitious cities are expected to 'climb the hierarchy' at the expense of rival cities. But there is an alternative position. I think that inter-city relations are inherently cooperative; cities exist in city networks and networks can only exist through collective complementarities (Powell, 1990; Thompson, 2003). Cities need one another; they grow through relations with one another, not by eliminating one another in a world of city competition. Thus one of GaWC's aims has been to reposition research on inter-city relations from the easy seduction of hierarchies to the complex subtleties of networks.

Of course, in practice, inter-city relations are both cooperative and competitive; it is a matter of where to begin. At GaWC we start with network so that we measure a 'world city network with hierarchical tendencies' (Taylor 2004). We treat network relations as generic to cities and hierarchical relations as contingent: city competitiveness varies in space and time with competitive relations being stronger locally and in cyclical downturns. Returning to theory, our starting point is the specification of a world city network to replace hierarchical theory in its various forms (Taylor et al 2010a).

THE INTERLOCKING NETWORK MODEL

Networks are relatively easy to understand. They usually consist of two layers, the net level and the node level. For instance, in a social network

analysis of a gang, members are nodes, the gang is the net level and relations between the nodes (members) define the nature of the network. Formal city government associations work in this way with the cities (members) as nodes, the city association represents the net level, and the formal relations between members within the association define the network. Such networks can be an important component of global governance but this is not how cities operate as key components of the global economy. In the latter, it is advanced producer service firms that are the network makers; they create the world city network through their everyday practices linking offices across the world. This defines a different type of network, an interlocking network (Knoke & Kuklinski, 1982).

An interlocking network is unusual in having three layers. In the case of the world city network there is the net level of the global economy, the node level of cities, and an additional sub-nodal level of service firms. The latter are not just an additional level, they define the critical level: this is where the agents of network formation are found. In the global economy, it is firms who are the network makers not the cities themselves. Thus for studying the world city network it is service firms that are investigated in order to understand the city network as the outcome. In other words, it is through studying the locational strategies of firms that it is possible to describe and analyse the world city network: firms are the object of the research, cities are the subject of the research.

Why focus on these service firms? In the 1970s two separate industries, computers and communications, merged their technologies to enable work to be coordinated worldwide based upon simultaneous connections. Early on Sassen (1994) spotted two contrasting economic geography effects: first, a dispersal of production to cheaper labour locales, and second, a contrary trend towards concentration of management and business service industries. The latter were required to organize the new worldwide production and were concentrated in cities. As Sassen

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