

The Information Economy and American Cities. Matthew P. Drennan. Baltimore: The Johns Hopkins University Press, 2002. 153pp, 3 Figs., 34 Tables, Index, US \$35.-. ISBN 0-8018-6934-X. A cornucopia of tables left out of the presentation in the book is available on line as a supplement to the text, at www.press.jhu.edu/press/books/titles/s02/s02drin.htm and at www.crp.cornell.edu/publications/facultypubs/drennan/Supplement_list.html.

This slim and to-the-point book focuses on the definition, history and evolution of the information economy in American urban regions, discussing its relevance for economic growth, for income convergence and poverty in cities and for metropolitan policies concerning human capital and ICT-infrastructure. Notwithstanding its compact structure and dense presentation the book appeals to and touches on many research fields that are of interest for regional scientists. Conclusions in the book hint at their significance for endogenous growth theory, agglomeration theory and economic base theory. One of the major contributions of the book is that it provides a well documented and on the regional level of analysis applicable definition of the information economy. Although much has been written about the growing role of information on society and economic performance, such an application was still missing. The definition provided in the book has interpretation advantages over ambiguous conceptualizations on the 'new economy' or on high-technology firms. Some important implications of defining the information sector are rightly stressed concerning data collection in international sectoral statistics and input-output data.

Interestingly, Drennan's econometrically obtained arguments, using his economy-wide sectoral definition, question some common beliefs on the social and economic circumstances of development of American urban regions. Three themes deserve mentioning. First, an important observation is that no proof is found for the thesis that growth of the information sector is caused by vertical disintegration and substitutive outsourcing processes in manufacturing firms (as profoundly stated by especially Scott, 1998). Instead, analysis of input-output data suggests that manufacturing and information services activities are complements. Second, it is convincingly argued that the stock-market decline in 2000/2001 in the US was not a direct hit on the information sector as defined in the book. This implicates that it is not likely that the stock market drop indicates that the information sector will grow more slowly than production and distribution activities. The information sector is diverse in its composition, not only being temporarily vulnerable computer software firms. This portfolio spreads risks. The third important conclusion of the book is that metropolitan growth of the information sector not necessarily is bad for low-skilled, low-income households in inner cities. The study suggests that metropolitan areas that are specialized in the information sector (especially financial and business services) have lower poverty rates and lower growth in poverty population than cities with other or no specializations. Growth in high-skilled work being accompanied with growth in low-skilled work can be the driving force behind this observation.

Some of the book's strong arguments can also be interpreted as weaknesses. The book sets out a 'definite' definition of the information economy, while not testing its sensitivity when compared to other definitions (of the service sector or high-technology industries). Although Drennan states that a quarrel over his definition would not be an interesting quarrel because he is certain that it encompasses the essential core of the information sector (p.12), other definitions may be substitutes for predictive analysis, or even better suited for specialized causal questions. Another reason for caution when interpreting the research results concerns the measurement of earnings as explained variable. This is of course justified by the focus of the book, but one should be careful in comparing the results with the pioneering studies by

Glaeser *et al.* (1992) and Henderson *et al.* (1995) on urban external economies, because these studies use employment dynamics as explained variables. Between employment and earnings, dynamics in productivity is an important factor that might lead to different research results. Further definition questions can be raised on the conceptualization of localized human capital as being solely captured by the percentage of the labor force having a college degree (Acs 2002 for instance hints at entrepreneurial innovative behavior in the same context, while McCloskey and Klammer 1995 convincingly argue that human capital depends on limited measurable aspects anyway). Questionable is the interpretation of non-specialization (as measured by location quotients smaller than one) of urban regions as a measure for diversity. Any diversity-measure that optimally uses the detailed sectoral structure of the data (e.g. a Herfindahl index or an entropy-measure) will turn out to be uncorrelated to specialization patterns of two or six broad sectors as used in the study. Diversity as meant in the current agglomeration literature is not reciprocal to specialization. Further, the analysis of full-time equivalents in the analysis in chapter 2 and the study of jobs dynamics in chapter 3 also raises questions on comparison: part-time jobs are an important element in the explanation of the growth of the information economy.

One very interesting and fundamental aspect comes to the fore in the book that gives clues for further geographical research. The spatial level of analysis in the book is predominantly that of urban regions, in which central cities, suburbs and edge-cities are all taken together. But one of the most interesting conclusions concerning the current agglomeration debate (is it specialization or diversification of the urban environment that enhances economic development?) hints at the interaction of local and regional levels of dynamics, in the sense that the data strongly suggest that *metropolitan* specialization favors *city* growth (p.82). The same conclusion was drawn in a study concerning economic development in a European context (Van Oort 2004). This means that the multilevel character of agglomeration forces deserves much more attention in modeling and theorizing. It would be interesting to decompose the urban regions in the US to smaller areas of analysis. Although this fragmentation requires the inclusion of more spatial econometric analyzing techniques (to avoid endogeneity problems because of the separation of working and living places), its conclusions will be more interesting for economic and geographical research on localized knowledge spillovers that as a stylized fact by now are believed to have steep distance decay functions, and for local policy makers.

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