

## ***Community Informatics and Economic Theory***

1. Barnett, A. H., & Kaserman, D. L. (1998). The simple welfare economics of network externalities and the uneasy case for subscribership subsidies. *Journal of Regulatory Economics*, 13(3), 245-254.

U.S. telecommunications policy over the last fifty years has been dominated by the objective of universal service. This policy objective has been promoted with subsidies across both service providers and subscribers. While the economic justification for subsidies is network externalities, this paper reveals that the presence of network externalities does not justify subscribership subsidies. As well, this paper argues that the nature of telecommunications markets make it unlikely that subscribership subsidies of any kind will increase social welfare.

2. Boekema, F., Morgan, K., Bakkers, S., & Rutten, R. (Eds.). (2000). *Knowledge, innovation and economic growth: The theory and practice of learning regions*. Northampton, MA: Edward Elgar.

This book examines the important role of human capital knowledge and learning for economic growth in the modern economy. The authors use theories of innovation, industrial networks and institutions to highlight the many factors which contribute to learning regions. Examples of factors that influence the formation of a learning region include regional government innovation policy, geographical firm clustering, and the importance of education and research centers in a region. Using case studies in Germany, Holland and Belgium this book examines the possibilities of this model for exploring the importance of knowledge and innovation for economic growth. The authors also examine European Union and regional government policy on innovation and regional development. Finally, they examine inter-firm and intra-firm collaboration and regional business and innovation systems. This innovative new book will prove invaluable to regional scientists, economic geographers and regional planners.

3. Bresnahan, T. F., & Greenstein, S. (2001). The economic contribution of information technology: Towards comparative and user studies. *Journal of Evolutionary Economics*, 11(1), 95-118.

This paper reviews and compares the existing literature on information technology (IT) changes and improvements in economic welfare. These authors develop a framework for identifying the importance of value creation, demand-side heterogeneity and co-inventive activity. While the authors highlight the difficulty in measuring economic welfare from advances in information technology, they do identify the most useful tools currently available for measuring the economic benefit from regional IT improvements.

4. Brynjolfsson, E., & Kahin, B. (2000). *Understanding the digital economy: Data, tools, and research*. Cambridge, MA: MIT Press.

This book covers a wide spectrum of topics for developing a more comprehensive understanding of the growing digital economy. Topics such as; GDP, productivity and the digital economy, market structure and commercial Internet markets, small business and innovation in the digital economy, the digital divide and improving access to information communications resources across the economy, and organizational change in a digital economy, are all covered in this edition. A wide selection of authors and expertise are also represented.

5. Cremer, J. (2000). Network externalities and universal service obligation in the Internet. *European Economic Review*, 44(4-6), 1021-1031.

The paper examines the role of network externalities for “broadcasting” capabilities created by the Internet. It is revealed that as Internet subscribership increases, the marginal value of an added network participant is potentially very high. Further, this author argues that the universal service argument for Internet service “broadcaster” applies here and should be utilized to justify subsidization of providers.

6. Cronin, F. J., Colleran, E. K., Herbert, P. L., & Lewitzky, S. (1993). Telecommunications and growth: The contribution of telecommunications infrastructure investment to aggregate and sectoral productivity. *Telecommunications Policy*, 17(9), 677-690.

Productivity growth and its causes has been a topic of considerable debate by policy makers at all levels. While there is a substantial body of research on various issues related to productivity, less focus has been given to understanding and measuring the variables that have contributed to the nations’ productivity over recent historical periods. For example, telecommunications advancements are the type of industry-specific improvement that not only contribute towards productivity improvements in its own sector but also have the potential to improve national productivity. The empirical results from this paper suggest that telecommunications infrastructure investments are causally related to the nation’s total factor productivity. Moreover, the impacts of telecommunications advancements on sector specific and aggregate productivity improvements are not only quantifiable but more importantly direct and positive.

7. Downs, E. (1987). A contextual view of development information technology. *The Information Society*, 5(2), 119-122.

The knowledge that comes from the development and use of any technology can lead to both beneficial and adverse side effects. This paper reviews the applications of

information technology to communications, expert systems, and manufacturing to further highlight the costs and benefits of this technology. While there are many different technologies that can be leveraged, there continue to be barriers to achieving the full potential of Information technology resources. This research attempts to improve the knowledge of the benefits and costs of IT in order to further improve the effectiveness of policy efforts to promote IT investments in communities across the nation.

8. Kellerman, A. (1993). *Telecommunications and geography*. London: Belhaven Press.

This book begins with a presentation of important geographical concepts for the study of telecommunications. Part Two of this book takes the geographical contexts of, urban, regional, national and international and relates them to the telecommunications environment. Finally, it concludes with present and future trends.

9. Madden, G., & Simpson, M. (1996). A profit model of household broadband service subscription intentions: A regional analysis. *Information Economics and Policy*, 8(3), 249-267.

As regions and communities are passed over for networking services there is an ongoing concern whether there are sizable groups within these communities that are either unwilling or unable to subscribe to these services. This paper examines which households are less likely to subscribe and whether there is a relationship between measures of social disadvantage and subscribership. Using a national survey of one thousand households, these authors use a probit regression analysis to model potential subscribership. Their results illustrate that in the current environment for networked services there is the potential for an information underclass to develop.

10. Mansell, R. (1988, April). The role of information and telecommunication technologies in regional development. *Science, Technology, Industry Review*, 135-173.

11. Min, J., Sukhumaran, B., et al. (2001). *Internet-based economic development for rural communities* (Reviews of economic development literature and practice, no.9). [Washington, DC]: U.S. Economic Development Administration.

12. Murdoch, J. (2000). Networks – a new paradigm of rural development? *Journal of Rural Studies*, 16(4), 407-419.

This paper utilizes existing models of networks and network economies to understand rural development. Using different approaches to network theory, this paper illustrates how networks may assist in understanding the diverse forms of rural development. It describes two main network “bundles” in rural development: vertical

networks that link rural communities to the traditional agro-food sector and horizontal networks that link rural spaces to more general, non-agricultural sectors of economic change. Overall, this paper argues that rural development policy should utilize network theory to refocus future development strategies.

13. O'Neil, D. (2002). Assessing community informatics: A Review of methodological approaches for evaluating community networks and community technology centers. *Internet Research*, 12(1), 76-.

This paper uses the existing community informatics literature to gain an understanding of how project impacts are identified and measured. This paper reveals that community networks and community technology center efforts fall into five major categories: strong democracy, social capital, individual empowerment, sense of community; and economic development opportunities. This paper also makes recommendations for future evaluation and measurement of community informatics projects.

14. Saunders, J., Warford, R., & Wellenius, B. (1983). *Telecommunications and economic development*. Baltimore, MD: The Johns Hopkins University Press.

This book uses available evidence to examine the role of telecommunications in economic development. It further identifies how existing principles of economic analysis can be used to justify telecommunications investment in developing countries and rural and inner-city areas in industrialized countries. This book also details the importance of investment, pricing, tariff policies, and restructuring of the telecommunications sector.

15. Schement, J. R., & Lievrouw, L. (Eds.). (1987). *Competing Visions, complex realities: Social aspects of The Information Society*. Norwood, NJ: Ablex.

This book examines social aspects of information-oriented society in the United States. Each contributor focuses on a specific and significant social aspect of the information-oriented society. Areas covered include: understanding the extent of information work in the United States; analyzing information work in the health care industry; defining information in an information-oriented society; the evolution of the concept of information in the courts; the corporatization and privatization of information in the economy; information and the restructuring of the family environment; information in the rural sector; the emergence of Silicon Valley; and social attitudes and values toward information technology.

16. U.S. Department of Commerce, Office of Technology Policy. (2002, September 23). *Understanding broadband demand: A review of critical issues*. Washington, DC: Author.

This analysis "... examines the state of broadband demand and usage in the United States, identifying successes, challenges and actions to promote more aggressive uptake. Our goal is to identify trends, issues and opportunities for policy makers and business leaders" (p. 1).

17. Wellenius, B. (1984). On the role of telecommunications in development. *Telecommunications Policy*, 8(1), 59-66.

This paper summarizes over twenty years of research on the relationship between telecommunications and economic development. This synthesis reveals that research has generally shown the positive impact of telecommunications on economic development. However the author argues that until these results can be communicated directly to government officials and international agencies responsible for these investments this research will have little impact on the developing world. Moreover, the benefits of telecommunications investment must be specifically connected to telecommunications project plans, utilizing economic documentation, prepared case material, and data on benefits distribution.

18. Wilson, R., & Teske, P. (1990). Telecommunications and economic development: The state and local role. *Economic Development Quarterly*, 4, 158-174.

19. Yilmaz, S., & Dinc, M. (2002). Telecommunications and regional development: Evidence from the U.S. states. *Economic Development Quarterly*, 16(3), 221-228.

This paper examines the impact of telecommunications infrastructure on output growth of the service sector among the 48 contiguous U.S. states. Individual state regressions reveal that there is substantial variation in the returns from telecommunications investment across states. This research illustrates that not every state receives the full benefits of its telecommunications infrastructure. Further analysis confirms that the states that experience the largest gains are those whose businesses use the telecommunications infrastructure most efficiently.