

International Case Studies in Community Informatics

1. Alleman, J., Hunt, C., Michaels, D., Mueller, M., Rappoport, P., & Taylor, L. (1999). *Telecommunications and Economic Development: Empirical Evidence from Southern Africa*. Sydney, Australia: International Telecommunications Society.

Retrieved on July 17, 2007 from

http://www.colorado.edu/engineering/alleman/print_files/soafrica_paper.pdf

This paper attempts to outline the impact of telecommunications investment on the Southern African Development Countries and the Republic of South Africa's economic development. This paper begins with a review of the methodology, models and data utilized in previous international and regional studies of information communications technology investment and its relationship to economic development. A thorough review of both the quantitative and qualitative applications that is available for this type of research allow the authors to develop a framework to determine the most appropriate analysis for these specific regions of the world. The paper also provides an overview of the types of services offered in these regions, the weaknesses of these services, and an initial overview of the telecommunications impact on these economies.

2. Arunachalam, S. (1999). Information and knowledge in the age of electronic communication: A developing country perspective. *Journal of Information Science*, 25(6), 465-476.

These authors argue that the information technology revolution is the fourth information revolution in history, after the invention of writing, the book, and printing. Research from the United States already illustrates that this technology has the potential to widen an already existing digital and racial divide. Given an existing global divide in relation to access to telephone, computers, networks, Internet, bandwidth and electronic journals; this is only likely to widen as the developing world continues to struggle to catch up with the rest of the world. In order to prevent further marginalization of these nations, scientists argue that technology deployment models, based on ideas other than commerce need to take precedence. Bottom-up models, such as the M.S. Swaminathan Research Foundation's work, have the potential to make a real difference in the lives of the world's poor. These models involve communities as partners and focus on deploying technology that delivers knowledge and content that communities can utilize to improve their lives.

3. Berkeleys, N., Clark, D., Ilbery, B. (1996). Regional variations in business use of information and communication technologies and their implications for policy: Case study evidence from rural England. *Geoforum*, 27(1), 75-86.

Using data from surveys of small businesses in south Warwickshire and north Lancashire, this paper compares the access, subscription, and use of information communication technologies in an accessible rural region and a “remote” rural region. The results indicate that while adoption rates are low for both groups they are especially low for the “remote” rural region. The results indicate that low uptake of technology occurs for many reasons, including business size, infrastructure requirements, cost and complexity of the technology, education and training background and perceptions of future needs. General differences in the business culture and climate also contribute to the awareness and knowledge of technology related issues. The authors conclude that policymakers must be aware of these rural differences and when necessary policy interventions should be encouraged to allow for technology access across all rural regions.

4. Berra, M. (2003). Information communication technology and local development. *Telematics and Informatics*, 20(3), 215-234.

This paper examines the importance of civic networks in three distinct Italian regions with different economic, social, political development. Using a survey approach, these authors analyze the links between local, economic development and the importance of communications in civic networks and local information systems. Civic networks are argued to improve public communication and administrative services and as a way to build communication networks among community members. Civic networks in these Italian communities have evolved in unique and different ways and have been greatly influenced by the social and administrative environments of their regions. These authors specifically highlight how environments of cooperation, compromise and confrontation across communities influence the social interaction, the potential of local government, and general civic participation.

5. Bruce, D., Gadsden, P., & Sackville, N. B. (1999). *Internet access and use in rural and small town Atlantic Canada*. Canada: Mount Allison University.

This report is the result of a 1998 survey of 1500 adults living in different communities across Atlantic Canada. The survey focuses on Internet access, usage patterns, and related technology issues. The analysis uses the New Rural Economy classification scheme (<http://nre.concordia.ca>) to describe access and use patterns among the different communities. Specific issues related to gender, income, age, education, employment, and lifelong learning are revealed in this analysis.

6. Capello, R., & Nijkamp, P. (1996). Telecommunications technologies and regional development: Theoretical considerations and empirical evidence. *Annals of Regional Science*, 30(1), 7-30.

This paper highlights the role of network externalities in the telecommunications sector and its impact on corporate and regional development. The role of telecommunications in economic development has been well established. This paper highlights the importance of the interrelationship of technologies in further spurring economic development. This idea is illustrated when a new subscriber joins the network and the marginal costs of his entry are lower than the marginal benefits he creates for people already in the network. This difference between marginal benefits and marginal costs, and the multiplicative impact of this difference with network externalities, highlights the importance of telecommunications to regional and national development. The last part of this paper attempts to measure telecommunications network externalities by reviewing regional differences across firms located in northern and southern Italy.

7. Hansen, S., Cleevely, D., Wadsworth, S., Simon, B., & Hilary, B. (1990). Telecommunications in rural Europe: Economic implications. *Telecommunications Policy*, 14(3), 207-222.

The European Union commissioned a 3 part study to determine the economic impacts of the provision of technology infrastructure and services to businesses and public service providers across rural Europe. One phase of the three part study found that investments in information communications technology in rural regions are likely to spur substantial gains in employment in these regions. Moreover, the cost of gaining this new employment compares favorably to other types of employment recruitment. Additionally, this study found that rural telecommunications providers may have difficulty breaking even in the early years of service provision and thus, these deployments may require public support in the deployment phase, as well as the early years of provision.

8. Hudson, H. E. (1999). Beyond the myths: Universal access from Tanana to Timbuktu. *Rural Telecommunications*, 18(5), 22-30.

New wireless and satellite technologies can extend information technology (IT) connectivity to rural and developing regions around the world. The demand for rural access to telecommunications services is growing as underserved populations around the world recognize the importance of this technology. This author argues that while universal service and universal access are sometimes used interchangeably, access is a much broader concept. Universal access is much harder to achieve as it includes; infrastructure, services, affordability, and quality. This paper concluded with several approaches to extending access to telecommunications services to underserved populations.

9. Mitchell, S., & Clark, D. (1999). Business adoption of information and communications technologies in the two-tier rural economy: some evidence from the South Midlands. *Journal of Rural Studies*, 15(4), 447-455.

This paper utilizes surveys and in depth-interviews to examine the reasons why rural firms choose to adopt and use information communication technology (ICT). The evidence reveals significant variation in adoption rates across rural communities and provides further evidence of the importance of reconceptualizing the rural economy. Rural firm adoption appears to be driven by a combination of customer and supplier pressure and management response. These authors introduce the idea of a two-tiered rural economy based upon technology adoption and further discuss issues for developers who advise and assist rural business.

10. Richardson, R., & Belt, V. (2001). Saved by the bell? Call centres and economic development in less favoured regions. *Economic and Industrial Democracy*, 22(1), 67-98.

11. Simpson, L., Daws, L., Pini, B., & Wood, L. (2003). *Rural telework: Case studies from the Australian outback*. *New Technology, Work, and Employment*, 18(2), 115-26.

Drawing from two Australian case studies, this paper examines the impact of infrastructure and isolation on rural telework. Differences between rural and urban telework experiences are reviewed. Finally the potential of telework for rural communities is explored.

12. Skogerbo, E., & Storsul, T. (2000). Prospects for expanded universal service in Europe: The cases of Denmark, the Netherlands, and Norway. *The Information Society*, 16(2), 135-146.

Universal service has deep historical roots in Europe and is still an important issue for national policy making. These authors attempt to clarify the likelihood of expanded universal service in the context of an integrated European Union and ongoing technological development. Examining telecommunications policy in Denmark, the Netherlands, and Norway the authors find the business community, in general, is well networked and would argue against universal service extension. They conclude it is unlikely that universal service will be extended in the future as efforts to do so appear fragmented and unorganized.

13. Torero, M., Chowdhury, S. K., & Galdo, V. (2003). Willingness to pay for the rural telephone service in Bangladesh and Peru. *Information Economics and Policy*, 15(3), 327-361.

Using contingent valuation methods, this paper measures Bangladeshi and Peruvian household's willingness to pay (WTP) for public telephone service. Utilizing both parametric and nonparametric estimations, the results suggest that rural telecommunications projects would be welfare improving. These results are consistent with the multiple benefits that rural households may obtain with access to a public telephone service. Finally, the central tendency measures obtained in this analysis may be used in a cost benefit analysis (CBA) of rural telephone projects.