

Author(s): Ted Hanss, 2010

License: Unless otherwise noted, this material is made available under the terms of the **Attribution License**

<http://creativecommons.org/licenses/by/3.0/>

We have reviewed this material in accordance with U.S. Copyright Law **and have tried to maximize your ability to use, share, and adapt it.**

Copyright holders of content included in this material should contact open.michigan@umich.edu with any questions, corrections, or clarification regarding the use of content.

For more information about **how to cite** these materials visit <http://open.umich.edu/education/about/terms-of-use>.

Any **medical information** in this material is intended to inform and educate and is **not a tool for self-diagnosis** or a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional. Please speak to your physician if you have questions about your medical condition.

Viewer discretion is advised: Some medical content is graphic and may not be suitable for all viewers.

This week's readings address two topics: telecommunications infrastructure (Picot & Wernick; Djiofack-Zebaze & Keck) and the thesis that "open" is a relevant topic for ICT4D (Smith et al.).

Picot and Wernick discuss the "societal importance and relevance of broadband" (p. 660), citing an OECD study attributing significant productivity gains to broadband deployment. Djiofack-Zebaze and Keck make the same point for Africa, noting "better performance of the African telecommunications sector, in turn, improves real GDP per capita" (p. 929).

Picot and Wernick examine different government approaches to facilitating broadband access through public goods and competition-based mechanisms, doing a comparative analysis of Europe, South Korean, and the U.S. They note that some regulators treat transmission platforms differently, with distinct policies for cable versus DSL versus wireless. National and regional regulators also take different approaches to service and infrastructure/platform competition. The U.S. relies more on private sector competition and deregulation than either Europe or South Korea. Patterns of broadband deployment can be attributed to those different approaches along with geographic and population density differences.

Picot and Wernick mention that the U.S. regulatory environment is headed for a broadband "duopoly of incumbent telecommunications and cable network operators" (p. 671). I believe they could have spent more time discussing the need to enable more market entrants, going beyond duopolies to get real competition. Scholarly publications and the popular business press have observed that real competition does not occur until there are at least three market players. Per the Economist, "Britain's experimental introduction of competition into its telephone network suggests that too little competition is not much better than none at all."¹ A study of the U.S. telecommunications market found "outright cartel pricing" resulting from collusive duopolies.² Picot and Wernick do note "significant local initiatives" backing municipal wireless as public goods (p. 671), but do not provide details about any public sector-led successes that have benefited competition.

A criticism not addressed by Picot and Wernick is the accusation that the OECD rankings (on p. 662) may be flawed. According to the American Enterprise Institute, the OECD does not share the details of how its rankings are calculated and thus likely overlooks the significant number of U.S. internet users who use dial-up connections and are not interested in broadband connections.³ While the conservative American Enterprise Institute may be arguing its point in order to forestall government intervention in the internet access marketplace, the points about transparency in the OECD's methodologies are well taken.

Djiofack-Zebaze and Keck examine telecommunications liberalization in Africa, providing some interesting statistics about developing countries closing the gap of telecommunications access with developed countries. Africa, however, as a region is still behind global averages of mobile phone penetration (though perhaps not as far behind as some ITU surveys may indicate) and pays higher costs for what is offered.

¹ "British Telecom and Mercury; Duopoly rhymes with monopoly," *The Economist*, July 7, 1990 (p. 86).

² Parker, P. & Roller, L. (1997). Collusive Conduct in Duopolies: Multimarket Contact and Cross-Ownership in the Mobile Telephone Industry. *The Rand Journal of Economics*, Vol. 28., No. 2, pp. 304-322.

³ Sacher, S. (2006). What U.S. Broadband Problem? *AEI Online*, July 25, 2006. <http://www.aei.org/issue/24712>

Djiofack-Zebaze and Keck's contribution is a new model for analyzing liberalization progress, introducing variables for such measures as "degree of competition," "regulatory quality," and "multilateral liberalization commitments" (p. 923). The latter is a focus area, as on a global basis individual nations adopting the WTO Reference Paper on Telecommunications correlates with lower prices. For Africa, while liberalization has opened up markets the continent has not seen the price declines. One possible reason is the significant use of pre-paid plans that are higher per minute than credit-based plans, but appropriate to the African market. The authors also point out that African multilateral reforms are too new to show the same effects as have been observed globally. While Djiofack-Zebaze and Keck point to the important of regulation as a key factor influencing sector performance, "it would be desirable to have better data on actual regulatory practices" (p. 930).

Smith et al. look at ICT4D with a fairly new lens, that of "openness," drawing upon their own observations, the experiences of others, and theory (e.g., quoting Sen). Their stance is fairly conservative---they are not making ideological arguments about "all information must be free" and patent reform. The paper is more of a philosophical exploration than a call to action. They note changes in technology in recent years that have enabled new ways of organizing people and work and ask whether these changes may "lead to more positive social outcomes" (p. 5). The authors are very post-modern in their approach, noting that the various dimensions of openness aren't binary, polar opposites but spectrums encompassing a range of openness.

To assert the benefits of openness, one of the stances they take echoes the readings from last week on local, indigenous knowledge. For Smith et al., openness "will arguably allow for highly contextualized per-poor innovations" taking "advantage of local knowledge that exists at the community level" (p. 14).

A correction to the paper is that the Creative Commons developing nations license noted on page 17 was retired in 2007 because of both disinterest and a conflict between a discriminatory license and the philosophy of "open everywhere."⁴

I take issue with their characterization of cloud computing as a threat to Open ICT4D. They assert that cloud computing is "the antithesis of openness" (p. 27) backed by questionable assertions, including that cloud computing removes power from the ends. As long as end users have the ability to export their data and write their own applications, regardless of where they execute, that need not be true. I would assert it's important be vigilant in any networked environment about any threats to openness. It is premature to indict cloud computing as being an enemy of openness.

Week 6: BUILDING CRITICAL INFRASTRUCTURE (Feb 22nd)

A. Picot and C. Wernick, "The Role of Government in Broadband Access," *Telecommunications Policy* 31:10/11 (2008,) pp 660-674.

Calvin Djiofack-Zebaze and Alexander Keck, "Telecommunications Services in Africa: The Impact of WTO Commitments and Unilateral Reform on Sector Performance and Economic Growth," *World Development* 37:5 (2009), pp 919-940.

Matthew Smith et al., *Open ICT4D* (draft paper, International Development Research Centre, 2008).

⁴ <http://creativecommons.org/licenses/devnations/2.0/>