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United States of America

Developmental Aspects of the Internet

The United States believes that the foundational aspect of the digital economy is connectivity. As more countries come online, the focus increasingly will turn to addressing shortfalls in rural service, gender divides, and the gap between those who “know how” to use technology and those who don’t. The risk of being left behind grows exponentially with each leap forward by the economies that are connected and adept at deploying the benefits of computing.

The benefits of broadband deployment, Internet access, and the digital economy in general are well documented. In the United States, recent studies have correlated broadband reach and adoption with social and economic growth. For example:

* *Expanding Broadband infrastructure yields more than a 1:1 return on investment.* Based on an extensive study,[[1]](#footnote-1) every 2.0 percent increase in broadband infrastructure availability can be expected to return approximately $5.7 billion annually. Put differently, areas with more ubiquitous broadband had greater GDP than those without broadband—and the increased GDP exceeded the costs of the infrastructure spending.
* *Expanding Broadband infrastructure increases employment.* The same study showed modest spending on broadband infrastructure could be expected to create tens of thousands of long-term jobs. A separate study of a single Tennessee County[[2]](#footnote-2) showed the availability of broadband – even where only half of all residential households subscribed – yielded between $865 million and $1.3 trillion net economic and social benefits, and between 2,800 and 5,200 new jobs.
* *Expanding Broadband infrastructure provides value to new subscribers:* 
  + Several studies estimate the value of broadband Internet access to the average American household at about 3.4 percent of household income.[[3]](#footnote-3)
  + Expanded broadband infrastructure is beneficial particularly to minority group members seeking access to the job market and employment.[[4]](#footnote-4)
  + Broadband access to online resources is *the most important* (more important than personal contacts) tool for job-seekers.[[5]](#footnote-5)
  + High-speed broadband Internet enables Telemedicine, which “is transforming treatment in rural communities.”[[6]](#footnote-6)
  + Reliable, fast broadband facilitates Telecommuting, so that “people can work where they live rather than having to live where they work.”[[7]](#footnote-7)
* *Expanding Broadband infrastructure reduces costs:* Contrary to what one might expect, expanded broadband infrastructure – including increased data rates – has tended to reduce subscription prices per Mbps for each user: from $293 per Mbps per month before expansion to $14 per Mbps per month afterward.

Falling behind in building connectivity could cripple a country’s growth potential. According to the McKinsey Global Institute, the amount of cross-border digital bandwidth that is used today to move data has grown 45 times since 2005.[[8]](#footnote-8) It is projected to increase an additional nine times over the next five years -- connecting more people, ideas, and businesses. For those who are digitally-isolated, their opportunities for growth and success will diminish, exacerbating inequality and further disadvantaging billions of people.

Challenges

The challenges to developmental aspects of the Internet – ensuring the developing world can take advantage of the connection between increased broadband deployment and social growth – are easy to state, but can present unique challenges:

* Limited competition in communications markets. This is a complicating factor in expensive-to-build areas or in countries where regulations are burdensome and stifle investment.
* Lack of incentives for infrastructure deployment. This issue is particularly acute in large geographic regions with difficult topography, such as mountains, rain forests and vast swaths of land where there is no existing transportation or telecommunications infrastructure. Similar hurdles exist for suburban or sparsely inhabited rural areas where there is a lack of basic infrastructure.
* Affordability is a common barrier and exacerbated in low income countries or communities where a large percentage of the population is unable to afford basic services.
* Connecting schools and training centers poses a challenge, especially in communities that don’t have other basic infrastructure. Availability of broadband services to schools is a necessary element in addressing the skills gap and ensuring populations don’t become further behind.
* Slow adoption of broadband and ICTs by businesses limit the revenue potential for service providers and stymie innovation and competitiveness within the business sector.

Promoting Good Practices

The United States and dozens of other countries and stakeholders already collaborate on approaches to accelerate connecting the next 1.5 billion people to the Internet. Tentative conclusions suggest developmental aspects of the Internet best can be achieved by encouraging policies such as:

1. Internet connectivity should be an integral part of national development strategies;

1. All stakeholders, including governments, industry, civil society, the technical community, international financial institutions, and international development organizations, should accelerate efforts toward universal connectivity;
2. Innovative industry-driven solutions to extend connectivity to remote areas should be encouraged;
3. Enabling environments should be created by adopting policies and strategies that focus not only on spurring connectivity, but also entrepreneurship, cross-border information flows, and open and competitive marketplaces;
4. Digital literacy should be fostered, and the development of locally relevant content, applications, and services enabled and promoted as they are essential to widespread adoption of the Internet and increase its social and economic value to people, families, and communities; and
5. Public Internet access should be encouraged, for example in public libraries and community centers, among others.

Resources

A growing number of resources provide good practices and policy guidelines for developing countries. Below is a small sample:

* *Mobile Policy Handbook* (GSMA, 2016a)
* *Competition Policy in the Digital Age Handbook* (GSMA, 2015a)
* IDB and OECD, *Broadband Policies for Latin America and the Caribbean: A Digital Economy Toolkit* (IDB, OECD) <http://www.oecd.org/publications/broadband-policies-for-latin-america-and-the-caribbean-9789264251823-en.htm>
* United States Telecommunications Technical Training Institute <http://ustti.org>
* *World Bank Group Broadband Strategy Handbook* <http://broadbandtoolkit.org>
* NTIA, BROADBANDUSA, *Connecting America’s Communities* <http://www2.ntia.doc.gov/Broadband-Resources#introduction>

1. ASR Analytics, “Broadband Technology Opportunities Program Evaluation Study, Social and Economics of the Broadband Technology Opportunities Program,” Order No. D10PD18645 (Sept. 14, 2014), *available at* <https://www.ntia.doc.gov/files/ntia/publications/asr_final_report.pdf>. [↑](#footnote-ref-1)
2. Bento J. Lobo, Ph.D, “The realized value of fiber infrastructure in Hamilton County, Tennessee” (June 18, 2015), *available at* <http://ftpcontent2.worldnow.com/wrcb/pdf/091515EPBFiberStudy.pdf>(cited with permission of author). [↑](#footnote-ref-2)
3. *See* note 1. [↑](#footnote-ref-3)
4. John Horrigan, Ph.D, “Broadband and Jobs: African Americans Rely Heavily on Mobile Access and Social Networking in Job Search,” Joint Center for Political and Economic Studies (October 2013), *available at* <http://jointcenter.org/sites/default/files/Broadband%20and%20Jobs.pdf>. [↑](#footnote-ref-4)
5. Aaron Smith, “Searching for Work in the Digital Era,” Pew Research Center (Nov. 19, 2015), *available at* <http://www.pewinternet.org/2015/11/19/searching-for-work-in-the-digital-era/>. [↑](#footnote-ref-5)
6. Becker’s Health IT & CIO Review, “How telemedicine is transforming treatment in rural communities,” (Apr. 8, 2016), *available at* <http://www.beckershospitalreview.com/healthcare-information-technology/how-telemedicine-is-transforming-treatment-in-rural-communities.html>. [↑](#footnote-ref-6)
7. U.S. Senator Agnus King (I.-Maine) (Aug. 14, 2014), *available at* <http://www.king.senate.gov/newsroom/press-releases/king-hails-cutting-edge-broadband-investment-in-rockport>. [↑](#footnote-ref-7)
8. McKinsey Global Institute, “Digital Globalization: The New Era of Global Flows,” *available at* <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/digital-globalization-the-new-era-of-global-flows>. [↑](#footnote-ref-8)