

# The Impact of the Broadband Policy Framework on Jobs and the Economy

by Dr. Raul Katz,  
Director of Business Strategy Research, Columbia Institute for Tele-Information  
Adjunct Professor, Columbia Business School



Numerous governments around the world have recently made highly visible announcements regarding the promotion of deployment of next generation broadband networks. The announcements represent either National Broadband Plans (Germany, United Kingdom), stimulus programs where government contribute to the investment in broadband (United States, Ireland, Portugal) or both (Australia, Singapore).

It is widely agreed that the deployment of broadband infrastructure is a positive counter-cyclical investment and that it has the potential to improve productivity, stimulate innovation, accelerate business growth and create jobs. In this context, it is critical to complement the formulation of National Broadband Strategies with the enactment of appropriate policy frameworks to stimulate the needed private investment since the private sector remains the key contributor to the deployment of broadband infrastructure. An appropriate policy and regulatory framework is a prerequisite to provide the necessary incentives and certainty for this investment to occur.

Substantial academic research proves broadband's positive productivity effects, positive spill-over on other industries, and the contribution to GDP and employment<sup>1</sup>. Furthermore, several studies have quantified the forward-looking economic impact of investment in broadband on employment, and economic growth<sup>2</sup>. The evidence is substantial and noteworthy: employment creation ranging from 968,000 in Germany to 280,000 in the United Kingdom to 200,000 in Australia; a contribution of 0.60% to GDP

growth. The key question to be answered is: How do countries maximize the investment in this technology to make sure that the described effects do materialize?

The primary source of investment for the deployment of advanced broadband networks is the private sector. For instance, in the United States, the government broadband stimulus program of USD 7 billion pales in relation to the USD 58 billion invested by the private sector in the past four years and the USD 38 billion to be invested in the next two in broadband deployment. Similarly, while the Australian government has agreed to invest A\$ 11 billion in the construction of the National Broadband Network, its total cost will be A\$ 43 billion (the remainder of which will come from private investment). Finally, in Singapore, the government investment (S\$ 750 million) represents only 34% of the total cost of deploying a state-wide fiber optic network. In other words, whatever the size of the government investment is, it will not replace private sector funds. Therefore, to achieve the broadband objectives it is fundamental to create the right policy framework that ensures that private investment takes place.

This is particularly critical for promoting ultra broadband deployment in Europe. There is substantial evidence that the current European regulatory framework delays investment<sup>3</sup>. At a more fundamental level, there is considerable evidence from economic research that shows that any company will hesitate investing in a new infrastructure if it knows that it will have to provide access of the said facilities to competitors who do not incur investment risks of their own. Along

these lines, widespread agreement exists among policy makers, the private sector and academic researchers that the existing regulation in Europe does not provide the necessary incentives and planning certainty required to rapidly build up a costly new complete-coverage broadband infrastructure.

In addition, the empirical evidence shows that while countries with infrastructure-based competition are engaged in multibillion private sector investment in advanced broadband infrastructure, progress in Europe is slow. After over two years of intensive deliberations, the European Commission, the European Parliament and the Council of Ministers have agreed in April 2009 on a package of reforms for European telecommunications law. The proposed compromise would provide options for diversifying investment risks – for example, via long-term contracts with minimum purchase quantities on wholesale level. Unfortunately, disagreement about a single, admittedly important, issue – the terms for blocking Internet access in cases of copyright-law violations – is delaying reform of the EU laws for the European telecommunications market, impacting investments worth EUR 300 billion.

How much longer can the European telecommunications sector afford to wait for reforms? Time is of the essence: Leading non-European countries are continuing to widen their lead in the area of state-of-the-art fiber-optic access networks. Europe needs a modern, complete-coverage broadband infrastructure, and it needs an incentives-oriented, reliable regulatory framework conducive to private infrastructure investments. Such a new, investment-friendly framework needs to be

enshrined in the planned EU directives package and, equally important, must be reflected in the Commission's upcoming Recommendation on regulated access to Next Generation Access Networks (NGA) and in regulatory practice.

#### footnotes

<sup>1</sup> See, for example, Lehr, W., Osorio, C., Gillett, S., and Sirbu, M. (2005). *Measuring broadband economic impact*. Paper presented at the 33rd Research Conference on Communications, Information and Internet Policy, September 23-25, Arlington, VA; Crandall, R., Lehr, W. and Litan, R. (2006). *The effects of broadband deployment on output and employment: a cross-sectional analysis of US data*, Economic Studies Program at the Brookings Institution, Washington, DC: Brookings Institution Press; Thompson, H.G. and Garbacz, C. (2008). *Broadband impacts on State GDP: Direct and Indirect Impacts*. Paper presented at the 17th Biennial Conference of the International Telecommunications Society (ITS). Montreal, June 24-27; Katz, R.L., Vaterlaus, S., Zenhäusern, P. and Suter, S. (2009b). *The Impact Of Broadband On Jobs And The German Economy*. Columbia Institute for Tele-Information Working Paper; Quiang, Z., Rosotto, C., Kimura, K. (2009). "Economic Impacts of Broadband" in World Bank (2009). *Information and Communications for Development 2009: Extending Reach and Increasing Impact*. Washington DC.

<sup>2</sup> See, for example, Atkinson, R., Castro, D. and Ezell, S.J. (2009). *The Digital Road to Recovery: A Stimulus Plan to Create Jobs, Boost Productivity and Revitalize America*, Washington, DC, The Information Technology and Innovation Foundation; Katz, R.L. (2009). *La Contribución de las tecnologías de la información y las comunicaciones al desarrollo económico: propuestas de América Latina a los retos económicos actuales*. Madrid, España: Ariel; Liebenau, J., Atkinson, R., Kärrberg, P., Castro, D. and Ezell, S. (2009). *The UK's Digital Road to recovery*. LSE Enterprise Ltd. & The Information Technology and Innovation Foundation.

<sup>3</sup> See, for example, Crandall, R. (2005). *Competition and Chaos*. Washington DC: Brookings Institution Press; Friederiszick, H., Grajek, M., and Röller, L.H. (2007). *Analysing the Relationship between Regulation and Investment in the Telecom Sector, ESMT Competition Analysis*; Waverman, L., Meschi, M., Reillier, B., and Dasgupta, K. (2007). *Access Regulation and Infrastructure Investment in the Telecommunication Sector: An empirical investigation*, ETNO Working Paper; Wallsten, S. (2006). *Broadband and Unbundling Regulations in OECD Countries*, Brookings-AEI Joint Center Working Paper 06-16, June 2006.