

INVESTMENT IN HIGH SPEED INTERNET IN THE COURSE OF ECONOMIC STIMULUS PACKAGES

In response to the current economic crisis, many countries initiated economic stimulus packages to mitigate the economic downturn and stimulate growth. Many of these stimulus packages place emphasis on the investment in high speed internet and promote the roll out of broadband networks. This is based on the idea that broadband infrastructure is an essential input since it allows the distribution of decentralised information and ideas. This goes beyond a reduction of transaction costs due to telecommunication infrastructure for voice telephony purposes. While the latter has a coordination function and reduces transaction costs for existing businesses, high speed internet via broadband infrastructure distributes ideas and information and fosters competition for and the development of new products, processes, and business models.

The exchange of information as it is enabled by broadband infrastructure not only contributes to better usage of the existing knowledge stock but it also leads to new findings and increases knowledge. Modern economic growth theory considers the creation of knowledge and technological progress as the key drivers of economic growth. Following this argument, high-speed internet via broadband infrastructure may lead to growth through the following channels: first, it may increase the innovative capacities of the economy and newly developed products and processes will promote growth. Second, the easy transmission of information may facilitate the adoption of new technologies devised by others which again promotes economic growth. Finally, broadband in combination with other technologies, e.g., information technologies, may also lead to new products and affect firm productivity and thereby economic growth.

Table 1 gives an overview of the goals and financial funds that are scheduled for broadband infrastructure in the course of economic stimulus packages of twelve OECD countries and the EU. These broadband policies share two main goals: to provide unconnected rural and remote areas with broadband infrastructure and to increase the speed of existing broadband networks. Some countries lay out goals

for relatively low speeds for the short run: Slovenia aims at 1 Mbit/s by the end of 2010 and the UK at 2 Mbit/s by 2012. Other countries aim at higher speeds: Finland plans to reach 100 Mbit/s by 2016, and Australia and Germany aim at 100 Mbit/s and 50 Mbit/s, respectively.

Also, the amount of funds provided for investments in broadband networks varies widely across countries. The lowest budgets are scheduled by Slovenia (USD 22 million), Portugal (USD 73 million) and Finland (USD 96 million). The country that plans to spend the highest amount is Australia with a budget of USD 33.4 billion, closely followed by Japan with USD 29 billion. The third highest budget is projected by the US with USD 4.9 billion.

Despite convincing arguments in favour of a positive effect of broadband on economic growth, an empirical evaluation is still missing. The effect of telecommunication infrastructure for voice telephony purposes on economic growth has been analysed by Röller and Waverman (2001). For a sample of 21 OECD countries for the time period 1971–90 they find that about one third of growth can be attributed to telecommunications. The impact of broadband infrastructure has been analysed by Crandall et al. (2007) and Gillett et al. (2006). Both studies exploit differences in broadband development across US states and find positive effects of broadband penetration on different economic outcome variables such as employment, wages or housing prices. However, these results can only be seen as correlations between the emergence of broadband infrastructure and economic development. An identification of the growth effects of broadband infrastructure is still pending.

N.C.

References

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Table 1

Investment goals in communication networks as an element of stimulus packages

	Planned investment	Goals	Penetration targets	Speed targets
Finland	EUR 66 million of EUR 200 million (public-private)	Extending high-speed broadband.	Every household by 2016.	At least 1 MB/s by 2010, 100 MB/s by 2016
France		Development of broadband network in small or medium-sized cities, extending (fixed/mobile) broadband. Internet on TGV Est lines (EUR 15 million), and development of networks for education and research.	Access to broadband by 2010 and mobile broadband by 2012 for everyone.	
Germany	Estimated EUR 150 million (USD 219 million)	Accelerating the spread of broadband networks. By 2010 all unserved areas connected. Nationwide capable broadband access by no later than the end of 2010.	By 2014, 75% of households should have access to high-speed Internet (all by 2018).	Target is 50 MB/s
Luxemburg	EUR 195 million (USD 285 million)	Accelerating the development of the Luxconnect information highway, also by boosting public telecommunications works.		
Portugal	EUR 50 million – fiscal incentives ^{a)} (USD 73 million)	Subsidised investments in new generation broadband networks.	Optic fibre that will allow 1.5 million users to connect.	
Slovenia	over EUR 15 million	Extending broadband to households and public institutions.	Connecting households and public institutions.	At least 1 MB/s by end of 2010
Spain		Measures for overseeing the installation of new generation fibre and regulating broadband.		Up to 30 MB/s throughout Spain, “at cost-oriented prices”
United Kingdom ^{b)}	to be announced	Universal service commitment for broadband.	Virtually every community.	2 MB/s per second by 2012
EU	EUR 1 billion (USD 1.46 billion)	Extending and upgrading high-speed Internet (focus on rural communities).	100% coverage of high speed internet by 2010.	
Australia	AUD 40 billion (USD 33.4 billion)	Fibre all the way to the premises.	90% of Australians.	100 MB/s
Canada	CAD 225 million (USD 211 million)	Extending broadband coverage to unserved rural and remote communities.		
Japan	JPY 3 trillion (USD 29 billion)	Intelligent transport systems, improving IT infrastructure in the medical sector (new fibre-optic network), training of IT personnel, the promotion of e-government, and the creation of new industries such as environment-related IT.		
United States	USD 7.2 billion (EUR 4.9 billion)	To foster broadband service to unserved/underserved areas, promote broadband in schools, libraries, health-care providers, and other entities.		Not set minimum data speeds.

Empty cells: Data not available. – ^{a)} Together with its stimulus package, Portugal is planning to increase broadband Internet and local area network access in schools (EUR 61 million). – ^{b)} The UK is pursuing the “Digital Region” project, a GBP 100 million (USD 145.7 million) project to roll out next-generation broadband to South Yorkshire.

Source: OECD (2009).