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The Economic Impact of High-Speed Networks

Ultra-Fast Broadband in Europe: State of Play and Trends

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The socio-economic impact of telecommunications networks

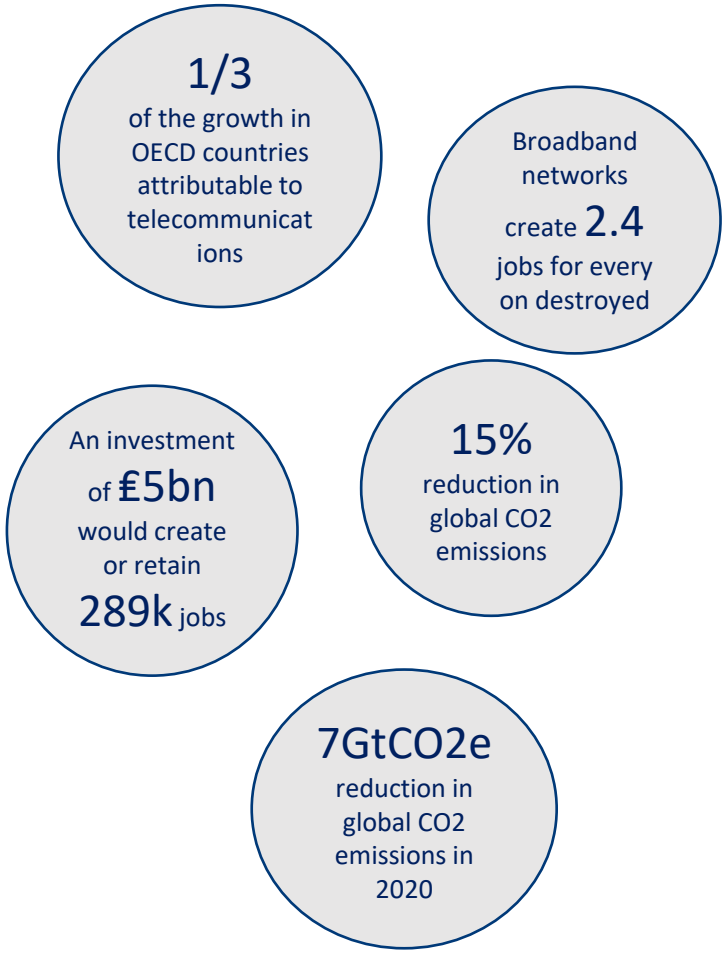
Previous studies have unanimously concluded that there exists high positive correlation between deployment of broadband networks and socio-economic development

ECONOMIC IMPACT ON PRODUCTIVITY GROWTH

- Despite slight differences in the way Internet's impact on productivity growth and GDP is measured and the variables used, prior research is relatively consistent in that every 10 percent increase in broadband penetration results in 0.9 to 1.5 percentage point higher GDP growth.

SOCIAL AND ENVIRONMENTAL IMPACT

- Internet an broadband improves regional coherence by allowing businesses and industries to be established in more rural parts of countries (digital inclusion)
- Whilst accounting for 2% of the global emissions, studies show the positive environmental impact of ICT technologies due to various different aspects
- Telecommonication networks also enable improved education and healthcare through enabling remote consultations and teaching among other various benefits such as electronic health recors
- In less developed parts of the world in particular access to information has a significant effect in increasing in democracy and freedom of speech



The socio-economic impact of speed

Do the benefits of NGNs outweigh the cost of deploying these networks - what is the marginal impact delivered by broadband speeds?

1) Doing what people do now more productively

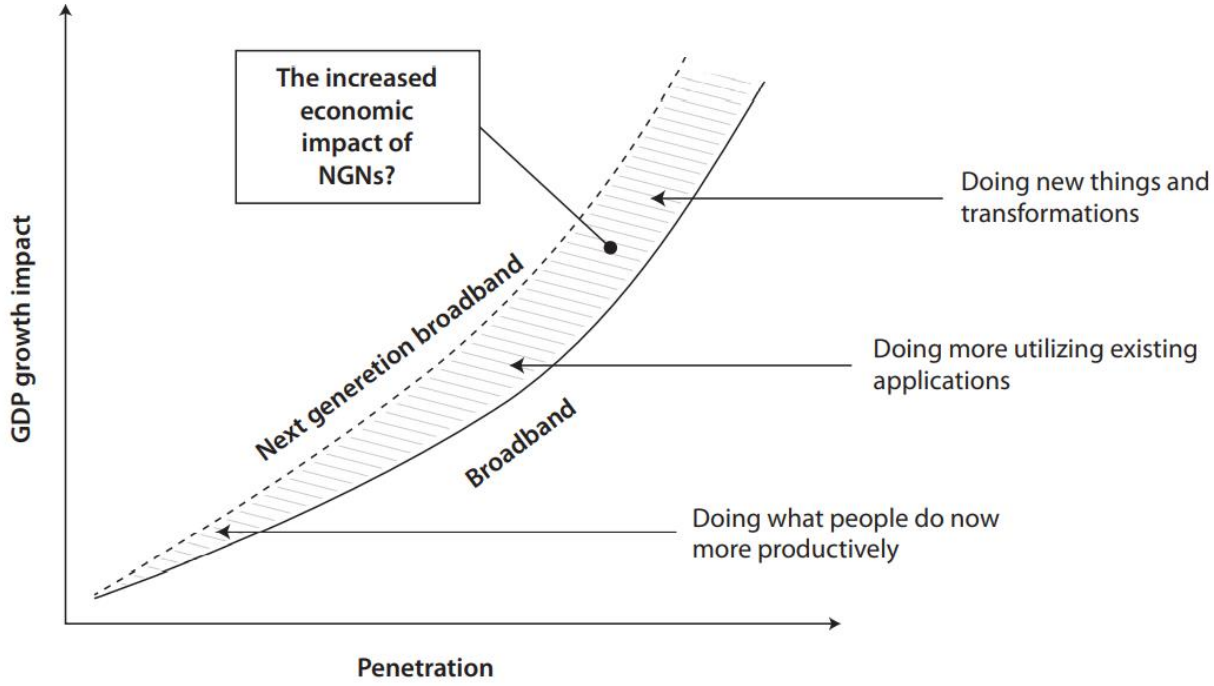
In EU one-minute daily saving per person resulting from the increased speed of the network would result in an economic value of time savings of around EUR 20 billion a year

2) Doing more utilizing existing applications

Full adoption of cloud solutions by all European SMEs would lead to productivity gains of some EUR 23-32 billion per year. Sectors such as electricity, education, transport and health are estimated to achieve 0.5-1.5% from FTTH networks.

3) Doing new things and transformations

High speed networks enable modernizing of industries and development of new business models across industries



Policy implications and role of the public authorities

Whenever the economic benefits outweigh the cost and market mechanisms are unable to deliver, public intervention is justified and called for

1) From the total cost of building nation-wide high speed broadband networks, 50% is associated to reaching 20% of the households in rural areas

2) The economic return of NGN networks are higher where the financial return is low – the economic value of parallel networks are very marginal

3) Market mechanisms alone are unable to provide nation-wide NGN networks

4) Whenever the economic benefits outweigh the costs, there is a rationale for the public sector to intervene into the construction of high-speed broadband networks

	Regulatory setting	Financial support	Co-development
Advantages	Does not impose any financial burden on the public sector Can lower the risk of deployment for the private sector while ensuring sufficient competition	Can lead to faster deployments More suitable for funding widespread deployments as the public funding can be given to an established commercial operator to deploy and operate the network	Combines public-sector financial stability with private expertise Allows different business models Public sector retains a certain level of control and can ensure that socio-economic objectives are met
Disadvantages	A tool to remove barriers to investment, yet alone not sufficient to attract private investment to NGN	Private sector still needs to initiate projects Limited ability to ensure that socio-economic objectives are met	Added bureaucracy to deployment and potential conflicts of interest

Currently and in a post-COVID economic environment, the “new normal” imposes an increasing need for reliable and widely available super fast broadband networks.

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