

## Appendix 1 - Economic and Social Impact of Broadband

### Economic Impact of Broadband

- 2.1 The economic impacts of public broadband infrastructure investment are difficult to quantify for a number of reasons. Firstly it is difficult to distinguish between the economic impact of the intervention and commercial investment. Secondly data is not readily or reliably available at the local level to analyse the impact where the public investment will have been greatest. Thirdly, it is a technical exercise to isolate the broadband element of the economy's performance which requires econometric techniques to be applied. Finally it is difficult to fully understand the private sector investment that would have otherwise occurred over time.
- 2.2 To provide a picture of what the Scottish Government and UK Government believe to be the public benefit there are two reports to look at.
1. [Evaluation of the Economic Impact and Public Value of the Superfast Broadband Programme](#): Department for Digital, Culture, Media and Sport: August 2018. Prepared by Ipsos Mori
  2. [Digital Scotland Superfast Broadband Contract One Benefits Realisation Study](#): Prepared for Scottish Government: April 2019. Prepared by Analysys Mason
- For a more independent review the results of a report by Ofcom on the impacts of broadband will be used.
3. [The Economic Impact of Broadband: Evidence from OECD Countries](#): Ofcom: April 2018
- 2.3 The UK Government report focuses on 3 key measures; employment, turnover and turnover per employee. The results are that the BDUK scheme increased employment by 0.8%, turnover by 1.2% and turnover per employee by 0.3% in the areas where investment took place. There are 2 key things to note here. BDUK focused on the most disadvantaged areas in terms of broadband, which are often rural and have low productivity so a low base. Secondly it is estimated that 80% of the increases came from businesses relocating into areas due to the investment, which means displacement from other areas. The 0.3% increase in turnover per worker is the key figure as it isn't influenced by displacement and shows a truer picture. Turnover is not profit however.
- In terms of value for money it is estimated that every £1 invested returns £1.96. This is made up of 2 components. Domestic benefit at £1.18 and commercial benefit at £12.28. These are then scaled to get £1.18 per £1.
- 2.4 The Scottish Government review presents one highlight figure that for every £1 of public money invested £12 of economic benefit will be derived. This figure is made up of two key elements. The consumer Surplus (the difference between what a consumer does pay and what they would be willing to pay. In this case £180 per household per year) and the business benefits which are a productivity rise of 5% over 10 years and private sector teleworking at 2% per year. Also included in this is the direct spend (money accruing to BT) and the indirect and induced spend of more money being in the economy from the productivity gains.

- 2.5 The report for Ofcom uses econometric modelling to assess the impact of broadband across the OECD nations. It is therefore the most high level report but the techniques used are the most advanced and likely the most accurate. The results of this study tell us that between 2002 and 2016 the UK experienced an increase in GDP from people adopting broadband of 5.28%. Over this period the UK went from having 3 lines per 100 people to 38.6. In addition to this the investment in the speed of the infrastructure saw an increase in GDP of 1.71%, giving a combined total of 6.99%.
- 2.6 The most interesting part of this study however is its ability to test the relationships between further investment and increases in GDP. It found that beyond a certain speed (9.8mbps) diminishing returns occurred. It was found that without additional investment in preparing an economy to utilise higher speeds the provision itself was not a good investment.

### **Social Impact of Broadband**

- 3.1 The UK Government Report places the wellbeing value of broadband to each upgraded premises at £225 per person. This is based on surveys of life satisfaction measures that are then regressed controlling for variables that are known to affect life satisfaction between different groups. Unsurprisingly the results showed that 18-30 years old achieved the greatest increase in life satisfaction. Older than that the affect was negative. Interestingly the report states that there is no evidence that investment aided those looking for work, rather jobs were created through the investment in business.
- 3.2 The Scottish Government report does not place a value on wellbeing but concludes that there are benefits from smart homes, education, the environment through less travel and social inclusion
- 3.3 The Ofcom report does not focus on social wellbeing.