

The Conversation article

Will the UK's broadband network be able to cope with increased homeworking brought about by the Coronavirus pandemic?

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With yesterday's announcement that people should work at home 'wherever possible' the focus has increasingly shifted to the robustness of the UK's broadband network and its ability to cope with increased usage. This has been brought into sharp focus with moves in Spain, where [calls](#) have been made for residents to reduce their use of the internet. UK broadband operators, however, have argued that we have sufficient network capacity to cope with spikes in usage. While it is unclear whether we should expect a slowdown in the UK's ability to connect, the coronavirus outbreak is likely to present ongoing challenges for the nation's broadband infrastructure and our use of it.

Although it may not be possible for all workers to work from home it is likely that many more will be doing so in the near future. Broadband access is vital for many workers enabling them to access information and colleagues remotely. It can also help to make contacts with friends and relatives and access to shopping opportunities – all of which may be vital in any extended period of homeworking or self-isolation. In this respect broadband's role in supporting mental health has already been [noted](#). Not all workers, however, have the ability to work from home. In the 'gig economy' for example, workers may a drop in income, and if ill, reliance on '[paltry sick pay](#)'. Likewise, families may face extra challenges associated with multiple users of Wi-Fi if, as anticipated schools are closed. This may require parents to limit screen time of children and encouraging homework, and potential upgrading connection speeds.

One of the main challenges facing greater home working in the UK is the availability of high speed, fibre broadband. Fibre provides fast, reliable speeds, relative to older copper wire connections such as [ADSL](#). Ofcom, the UK regulator, [estimates](#), however, that only around three million homes (10% of all homes) can access fibre connections – a figure that is significantly behind other [countries](#). Mobile broadband is increasingly being used by some workers as they access cloud-based applications. This represents a further deployment challenge in the UK, with access to 4G dependent on [where you live](#). This means that many households could face potential challenges in making use of video conferencing, cloud access and other digital technologies necessary for work. Indeed in our own research at [Cardiff Business School](#) we have found both access to broadband and its use can vary significantly across business sectors.

Despite these challenges broadband providers have expressed [confidence](#) that their networks are sufficiently robust to prevent a slowdown of the internet in the UK. They argue that the network has been designed to cope with high volume usage peaks in the evening as people log on to social media and video in the evening. Business use of broadband and enabled technologies is also said to require lower levels of data transfer than typical social applications. Openreach have even argued that '[Suggestions that the network 'won't cope' are ill-informed and pretty irresponsible](#)'.

Academics and other commentators, however, have begun to question whether the 'UK's '[ageing](#)' broadband infrastructure can cope with millions of people logging in to work from home. This has seen calls for broadband operators to prioritise [resilience](#). The reality here is that those households on older copper based connections are likely to face the greatest threat of slower broadband speeds

and access. These connections that are generally less robust and subject to greater dropout. This also has a spatial dimension, with our research pointing to faster broadband speeds and digital technology usage in urban (and not rural) areas, further implying the challenges of encouraging widespread remote working from home.

Additional concerns have been raised that working from home may carry greater cybersecurity risks. Here, it is well established that home connections are more open (than corporate networks) to hacking and calls made for remote workers to ensure their security patches are up to date, and where possible connection to work networks via secure technologies such as [virtual private networks](#) - particularly where working with sensitive data.

So while there may be significant benefits in having access to broadband in the current context question marks exist about the robustness of the UK broadband network its geographical reach, and the ability of workers to make full use of the digital technologies needed to work online. Moreover, while this is a fast moving, fluid situation, all of this does may point to the longer term importance of the Conservatives delivering on their '[optimistic' election promises re broadband](#) of ensuring "every home and business" has access to a "full fibre and gigabit-capable broadband" service by the end of 2025.

PS I'm writing this from home with a reasonable broadband connection – currently!

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