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Newcastle Business School
Response to the Designing the broadband universal service obligation - Call for inputs

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Since the last review of Universal Service Obligation (USO) [1], broadband usage has proved to be a formidable enabler of social inclusion and economic growth [2]. However, according to recent research from Ofcom [3], significant disparities remain regarding across the UK: 83% of premises are covered by superfast broadband while 8% of premises could receive broadband access speeds lower than 10 Mbit/s. The extension of USO to broadband services should be designed to tackle this digital divide, a divide that prevents a substantial number of households and businesses from enjoying the full potential of digitisation.

The consultation document inevitably raises issues that require further elaboration for an effective and efficient USO policy, that would encourage infrastructure deployments and address the digital divides that currently exist. In the following response we draw attention to issues that require further consideration before the policy can be enacted.

The mapping of digitally divided areas is needed to define the geographic scope of USO

Many public and private initiatives have been recently undertaken to provide super-fast broadband in underserved and unserved areas. The combination of private investment and public subsidies is expected to deliver superfast broadband to 95% of UK premises, but further public initiatives are expected to cover the hardest-to-reach areas (Phase 3, BDUK). Moreover, a number of bottom-up local initiatives are currently expanding fibre networks to rural communities, which were initially excluded from major public and private interventions. Consequently, the number and nature of digitally deprived areas is likely to vary significantly over next few years as the impact of the various initiatives is felt.

To effectively and efficiently deploy USO to tackle the digital divides that exist, its geographic scope needs to be based on a detailed and up-to-date mapping of ongoing projects and their outcomes - in terms of coverage and effective speed. This mapping is needed to identify digitally deprived areas, and prevent any duplication with previous initiatives. Of greater significance, however, is that this mapping would provide data that can be combined with other socio-economic data sources to shed light on the determinants of this divide and help design tailored USO interventions.

A 10 Mbit/s USO is not future proof

The demand of bandwidth is expected to escalate, due to the diffusion of bandwidth intensive applications and the increasing number of devices connected to a single fixed line. A download speed of 10 Mbit/s will not satisfy this future demand, nor will it ensure an adequate level of quality to broadband users.

Other public initiatives in the UK have committed to deliver at least 24 Mbit/s and the Digital Agenda for Europe set at 30 Mbit/s the minimum speed to be universally available. As a consequence, we believe that 10 Mbit/s is not an appropriate level for a broadband USO as this would maintain and perhaps even accentuate the divide that exists between the digitally deprived areas and the 95% of UK premises covered by super-fast broadband.

As highlighted in paragraph 1.31 of the consultation, a periodic USO review will be needed to ensure that users relying on universal broadband service are not left behind the rest of the UK. Setting the USO at the minimum speed commonly available to the majority of the UK premises would prevent this risk and allow for a longer review period, reducing the

uncertainty for market operators and the cost for USO implementation.

As the average speed available at national level is likely to increase over the next few years, an ex-ante timetable of USO review may reduce the regulator's responsiveness to market developments. The review should instead be based on an adaptive mechanism to prevent an excessive gap emerging between the speed universally available and the speed provided by commercial operators.

Balancing the cost of enforcement against the risk of market distortion

The designation of single or multiple providers would lead to a rapid and straightforward implementation, since the USO is designed ex ante by the national regulatory authority and enforced as a regulatory obligation. On the other hand, this may result into inefficiencies and market distortion, due to the lack of competition.

Allocating the USO through a competitive process would minimise these risks and increase value-for-money. The process could be designed to enhance cost effectiveness or ensure the quality of the infrastructure provided by the universal service provider(s). Although it might entail a lengthier implementation, a competitive selection process would nonetheless enable comparisons between different bids to be made and could encourage innovative uses of different technologies to be considered.

Regardless of how the funds are allocated, local communities should be actively engaged in the implementation of USO. In fact, they may facilitate network deployment, by raising awareness of broadband, aggregating demand and guiding the USP(s) to design its services according to the actual needs of local residents and businesses.

Different sources of funding should be identified to recover the net cost of USO and minimise market distortion.

Since additional investment to expand and upgrade the broadband network would be required, the costs of USO are likely to outweigh its benefits for the USP(s), thereby representing an unfair burden. A likely source of funding could be an enhanced clawback mechanism: BDUK has recently announced that £408 million is already available to be reinvested [4]. However, the future amount of clawed back funds is difficult to predict, depending on actual take-up and the deployment cost of subsidised FTTC networks. As a consequence, complementary sources of financing are needed.

An industry funding scheme has been previously employed in EU countries to recover the net cost of USO, but its efficiency is debatable [5]. A revenue-based levy on fixed and mobile operators would reduce the resources available for their own infrastructure investment. This would, paradoxically, increase the need for public funds to expand mobile and fixed broadband coverage.

On the other hand, a levy on end-users could increase the burden of affordability and reduce the demand for broadband services, unless, of course, that it is charged on those consumers whose demand is less elastic [6]. A consumption-based levy applied only to heavy-users [7], should minimise this distortion, as their consumer surplus and willingness to pay is expected to be greater. Furthermore, users with a slower connection are likely to be exempt, as the average data usage has proved to be positively related to download speed [8].

Affordability is a multifaceted issue

Affordability should be an integral component of universal service, along with availability and accessibility. Affordability can be defined as the ability of anybody to pay for telecom services such as broadband, regardless of location and/or income level [9]. When addressing this issue, Ofcom needs to take into account all of the factors affecting the overall cost of broadband services, such as the price of devices and the contract cancellation cost, which are perceived by low-income consumers as being barriers to their adoption of broadband [10]. If cost is a barrier to broadband adoption, then the USP(s) need to develop tariffs that encourage adoption as well as reduce the barriers associated with the cost of devices. For example, USP may be innovative in terms of the tariff structure by charging usage-based fees rather than a flat monthly charge like what obtains in well covered premises. Or the USP could charge consumers less and maybe place a cap on their daily usage as it is most likely that these people may need broadband for basic internet services compared to heavy users. If a customer becomes a heavy user over time, such person may then be advised to upgrade to the flat monthly rate for unlimited usage. Furthermore, in addressing one of the barriers highlighted, USP(s) may collaborate with phone and equipment vendors to either produce low-cost devices for broadband usage or spread the cost of payment of existing devices for a longer period of time - beyond the usual 24 months period, for example. Lastly, people in these areas may be exempted from contract cancellation cost or a further reduction of such cost may be applied.

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Notes:

[1] Ofcom (2006), Review of the Universal Service Obligation.
[2] See, for example: Koutroumpis, P. (2009), The economic impact of broadband on growth: A simultaneous approach, Telecommunications policy, 33(9), 471-485.
[3] Ofcom (2015), Connected Nations 2015.
[4] http://www.ispreview.co.uk/index.php/2016/06/bduk-confirm-gbp408m-expanded-uk-broadband-rollout.html
[5] See, for example: Ladcomm Corporation (2013), Universal Service Fund study conducted on behalf of the GSM Association.
[6] For example, early adopters, higher education institutions, corporate bodies and some individuals who use broadband as part of their daily business infrastructure. See, for example: Jones, S. (2002), Internet goes to college: How students are living in the future with today's technology, Diane Publishing; Anderson, B. (2008), The social impact of broadband household internet access, Information, Community & Society, 11(1), 5-24.
[7] See, for example: OECD (2015), Digital Economy Outlook 2015. For each speed tier, different bandwidth usage profiles are defined: high usage ranges from 50 GB/month (for download speed lower than 10 Mbit/s) to 1000 GB/month (for download speed greater than 1

Gbit/s).

[8] Ofcom (2015), Connected Nations 2015, paragraph 4.29).

[9] Oestmann, S. & Dymond, A. (2008), Universal Access and Service: Module 4, ICT Toolkit. Washington, DC: infoDev and ITU. Retrieved from http://www.ictregulationtoolkit.org/4

[10] Futuresight (2014), Affordability of essential communications services. A qualitative research study final report prepared for Ofcom.