SUMMARY

Universal service is the principle that all citizens should be provided with a range of basic but good quality services at affordable prices so that they are able to participate fully in society. Since 2010, functional internet access has been included in EU legislation on universal telecommunications service. However in the intervening years, the data volumes and connection speeds used by consumers have continued to increase. For some, designating broadband internet access as a universal service could complement other EU measures to ensure the availability of faster internet connections and to encourage widespread internet use in the Digital Single Market.

Designating broadband as a universal service could arguably help reduce social exclusion by overcoming the 'digital divide', as well as encouraging social and economic development, particularly in rural regions where the costs of providing broadband are higher than in urban areas. On the other hand, setting an EU-wide minimum speed could distort markets, reduce competition, and reduce private investment in infrastructure projects in some Member States. Financing this change could also be a problem, particularly in those countries where broadband access is below the EU average or where many households do not currently use the internet due to cost.

The forthcoming review of telecommunications regulation in the EU promises to revive debate on this subject. A recent American decision to provide subsidies for low-income families for internet access at average broadband levels highlights differences in current approaches between the United States and the EU.
Context

Universal service is the principle that all users should be provided with a range of basic but good quality services at affordable prices. The concept of universal service has been most closely associated with telecommunications in liberalised, post-monopoly markets, where the costs of servicing certain categories of users may exceed potential revenues. While ensuring access to standard services for people with disabilities is a common universal service obligation (USO), arguably the most important goal (and the principal one to be considered in this briefing) is to provide for social inclusion of those who, because of limited financial resources or geographic location, would otherwise not be able to access and use basic services available to the great majority of citizens.

Telecommunications services covered under USOs have traditionally been telephone-related services such as the right to a connection at a fixed location (home or office) or public payphones. With the increasing importance of the internet in daily life, data communications at a rate suitable for internet access has been added to USOs in different countries around the world. However due to the expected rise in needs for connectivity in the future, designating access at broadband speeds to be a USO could complement current supply-side measures that increase the availability of broadband in the EU and demand-side measures that encourage internet use. With the forthcoming review of European telecommunications regulations expected from the Commission in latter half of 2016, the inclusion of broadband internet access in USOs is expected to prompt discussion and debate.

Universal service in the EU

The Universal Service Directive (USD) is the legislation defining universal service for telecommunications in the EU. Officially, the EU defines universal service as 'the minimum set of services of specified quality to which all end-users have access, at an affordable price in the light of national conditions, without distorting competition' (Article 1(2)). It is based on the idea that a universal service should be available at the same level for all users at all times without discrimination on the basis of where they live or work; that the service should be affordable, even for those on low incomes; and that disabled users should receive equivalent levels of service at a similar cost. The purpose is to provide 'a safety net of universal service', in particular for those whose finances or location do not allow them to access basic services 'which are already available to and used by the great majority of citizens and which are considered essential for participation in society.'

The definition of broadband

There is no universally agreed lower (or upper) bound to the data transfer rates that qualify as broadband. The European Commission categorises download speeds between 144 kilobits per second (Kbps) and 30 million bits per second (Mbps) as broadband. However a very small percentage of current internet subscriptions in the EU provide downstream speeds of less than 2 Mbps. Above the basic broadband level, the Commission defines access at downstream speeds between 30 and 100 Mbps to be 'fast broadband' and at rates higher than 100 Mbps to be 'ultra-fast broadband'.

The Organisation for Economic Co-operation and Development (OECD) sets the bar for basic broadband higher than the EU, requiring a connection with a minimum downstream speed of 256 kbps. Since 2015, the Federal Communications Commission (FCC) in the United States has been much more demanding: for the FCC, a broadband connection must have a minimum download speed of 25 Mbps and 3 Mbps for upload.
The 2009 revision of the USD, which was originally adopted in 2002, specified that access to the public communications network should support 'functional access to the internet, taking into account prevailing technologies, used by the majority of subscribers, and technological feasibility'. When transposing the measures of the Directive into national legislation, EU Member States have wide scope to define the exact terms of USOs, and the funding mechanisms used, based on national conditions. Functional access has most often been associated with dial-up speeds, i.e. data transfer rates that are below what is widely considered as 'broadband'. However Member States are free to decide what speeds are necessary for functional internet access. As a result, there are a variety of approaches to implementing USOs in general, and internet access in particular, across the EU.

In terms of the funding of universal services, there are also different approaches. In some Member States, designated telecoms operators are expected to meet USOs as part of their general business. However in other Member States, if it can be shown that providing a universal service is an unfair burden on an operator (based on market conditions and the level of competition in the market), the operator may be compensated for the net cost of providing that service. The compensation can be paid directly from government funds or through a universal service fund (USF). USFs are commonly funded from a levy on operators based on a fixed fee or a (potentially capped) percentage of annual operating revenues, though smaller operators may be excused from contributing, based on a threshold in terms of gross revenue or a percentage market share. Governments may also partially finance their USF through other sources (e.g. revenue from general taxation or from spectrum auctions).

There are also a variety of means to ensure the affordability for citizens of universal services. In 2010, different EU Member States used mechanisms including:

- Price caps;
- Uniform pricing (with differences based on objective and non-discriminatory criteria);
- Social tariffs for special groups (particularly low income groups) either for telephone or broadband services;
- Subsidised rates for broadband for households that had no internet access or only a dial-up connection; and
- Special tariffs for those only needing accessibility (e.g. non-frequent callers).

In addition, making computer equipment more affordable can facilitate internet access. Measures in this regard include income tax rebates for personal computers, and sales of laptops bundled with mobile broadband to secondary school students, teachers and adult trainees.

**Criteria for defining a universal service**

Including a new service or level of service, such as broadband access, in Universal Service obligations typically relies on a number of factors. One expert has defined four such criteria, namely, that the service be essential to education, public health and safety; that it be used by a substantial majority of citizens; that it is deployed in public telecommunications networks, and that it is consistent with public interest, convenience and necessity. According to the USD, in deciding whether to review the scope of USOs, the European Commission must take into account technological, social and market developments; in deciding to modify the scope, it must consider the
services used by a majority of consumers, the social exclusion that may result to the minority that do not have access, and the general net benefit to all.

In its third telecoms review in 2011, the Commission suggested criteria for Member States when considering adding broadband to USOs. The criteria included general concerns such as expected commercial availability, disadvantages incurred by the minority, and both the cost and benefits of intervention. However the Commission also suggested specific requirements, namely, that broadband penetration should reach at least 50% of all households, and the proposed data rate should be achieved by at least 80% of those subscribers. During the same review period, the Body of European Regulators of Electronic Communications (BEREC) outlined various policy options for defining broadband as a new USO, including adding broadband to the scope of USOs across all of Europe, triggering its addition only when certain levels of coverage and take-up were reached in each national market, or leaving the decision entirely to each Member State.

Various arguments have been put forward in favour or against including broadband under USOs. The main argument in favour is the importance of overcoming the digital divide and social exclusion, thereby providing all citizens with the ability to participate fully in social, cultural and political life. Another is the positive role that broadband can play in encouraging social and economic development. On the other hand, arguments against the inclusion of broadband in USOs are that it could distort markets, reduce competition, and reduce private investment in infrastructure projects, particularly in under-served or rural areas. Other means are available to encourage broadband supply through financing broadband infrastructure, including state aid from Member States and EU funding through regional development funds, the Connecting Europe Facility or the European Fund for Strategic Investments (EFSI).

Estimating the net costs of including broadband in USOs is difficult: a 2012 study came up with EU-wide estimates ranging from about €350 million to more than €2 billion annually, depending on the counts of eligible households, the take-up rate, whether the lowest or median prices were used as the base and the discount (50% or 30%) applied.

There are significant differences in Member States in terms of the common speed of broadband access and the percentage of households that have this access. In some Member States, broadband users clearly represent a very substantial majority, whereas in others, the percentage is much smaller (see Figure 1). This would mean that any EU-wide standard for broadband as a USO would imply small expenditures for some Member States (i.e. where there were few households without broadband) and very significant expenditures for other Member States (where there were a larger percentage of households without broadband, and a relatively large percentage of households who did not have access because of the cost of an internet subscription.) In some countries, the costs risk having a detrimental effect on government budgets or the required contributions of telecoms operators, which would in turn affect prices paid by the average consumer. Many national regulatory authorities (NRAs) have felt that including broadband as a USO would require re-examining the financing mechanisms (general taxation or contributions from market players) as well as the use of any subsidies, special tariffs or financial assistance.
In 2011, only Finland, Malta and Spain provided for a minimum broadband speed in national law. Other Member States such as Germany and the UK have moved in that direction or announced their intention to do so. In 2011, at the conclusion of the third review of the USD, and after a public consultation that showed a wide range of views, the European Commission concluded that it was not appropriate at that time to include broadband in EU universal service rules, given the different levels of development of networks in the Member States and the potential costs of guaranteeing broadband access, particularly in Member States with lower coverage and low income levels. This was in line with the views of NRAs, none of which expressed approval of an EU-wide harmonised data rate. However Member States continued to exercise the right to include broadband connections in USOs if they desired, particularly when broadband take-up was already high in the Member State.

**Broadband access and universal services in selected Member States**

There is no published up-to-date, comprehensive review of the situation in Member States, but the following information on selected Member States highlights some of the different current approaches to broadband and universal service.

**Romania**

In 2011, Romania revised its legislation on universal service implementation in the electronic communications sector. A 2015 strategic analysis by the Romanian NRA on the inclusion of broadband in USOs found that the cost of extending broadband coverage to cover rural areas would exceed the resources of the USF. A Romanian telecommunications expert has commented that since in Romania internet speed is usually high, but take-up is low, the government should prioritise increasing internet use, not speed.
Finland
Since 2010, under universal service provisions in Finland, consumers and businesses have been entitled to broadband access at a speed of at least 1 Mbps at their residence or place of business. Broadband access must be provided at a reasonable price (estimated in 2010 to be about €30 to €40 per month) but universal service providers can charge customers reasonable expenses for deployment and installation. In 2015, the decision was taken to double the minimum broadband speed requirement to 2 Mbps (this decision comes into force in early 2016 and is to be reviewed again in 2017).

Spain
In addition to public aid for the expansion of broadband networks, Spain has a universal service obligation for a connection that supports 'functional internet access' in accordance with the USD. However the Telecommunications law specifies that 'functional internet access' requires a connection supporting download speeds of at least 1 Mbps; the government can update this specification depending on social, economic and technological developments; the services most used by users; and market conditions. Although low income groups under a predefined income threshold can benefit from a social tariff (abono social) providing for discounts on installation cost and the monthly subscription fee for a fixed line telephone line, there are no subsidies for broadband access.

The UK
In the UK, USOs have only included 'functional internet access' as per the USD (understood to mean at dial-up speeds). However the UK has set up a Basic Broadband Subsidy Scheme for those unable to find a commercial offer for broadband of at least 2 Mbps, if they are not covered by one of a number of superfast broadband projects supported by the government. This Basic Broadband programme provides subsidies of about £350 toward the installation of satellite broadband which means the household or business will not pay more than about £400 per year for broadband access. Moreover, in November 2015, the UK government announced that it would include broadband access at a rate of at least 10 Mbps under USOs by the end of the current Parliament. A consultation on a broadband USO was launched in March 2016. In addition, discussions have taken place on the feasibility of setting up a USF in the UK, funded by an industry levy, in order to finance fast or ultrafast broadband access for the 'final 5%', i.e. the most inaccessible, under-served locations in the UK.

Broadband and universal service in the United States
In March 2016, the Federal Communications Commission (FCC), which is the NRA in the United States, approved measures to foster access to the internet at broadband speeds by subsidising the fees of low-income families. FCC's National Broadband Plan in 2010 included the goal that 'every American should have affordable access to robust broadband service and the means and skill to subscribe if they so choose'. Its 2016 broadband report found that 5% of Americans lacked fixed (wired) access to the internet at download speeds over 4 Mbps and upload speeds over 1 Mbps. The adoption rate at the higher speed of 25 Mbps/3 Mbps was 37% overall, but was significantly lower in rural areas and in areas with low household incomes. Other surveys and reports found that cost is the most important reason that people do not subscribe to broadband, and that disparities in adoption exist for people with low incomes, seniors, minorities, the less-educated and those without jobs.
The Universal Service Fund (USF) in the United States supports the deployment, adoption and use of both fixed and mobile telecommunications. It is funded by mandatory contributions from telecommunications providers based on their interstate and international end-user revenues. The USF funds a range of programmes which include support for the supply of affordable voice and broadband services in high-cost areas; discounts for schools, libraries, and rural health providers; and discounts for low-income consumers. Under the latter heading, the Lifeline Program has traditionally provided a monthly discount of US$9.25 for one fixed or mobile telephone connection per household to ensure that people can access a telephone to get a job or call for help in an emergency. A March 2016 FCC decision extends the monthly Lifeline subsidies to households to cover 10 Mbps access to the internet.

This decision to extend the programme did not go uncriticised. Arguments were raised that given the pressures on the USF and subsequently on the contribution rate, this was too ambitious an undertaking, and that the USF already supported broadband deployment through its other programmes. Some commentators have called the Lifeline Program wasteful and mismanaged; while the decision includes the independent verification of eligibility based on existing government programmes of aid to the poor, the extension to broadband raises concerns about a possible repeat of the abuse, fraud and waste that occurred when the programme was first extended to mobile telephone service. Another criticism has been that the US$9.25 subsidy is too small in terms of broadband costs (only roughly a quarter of the monthly cost) to have much effect. Most telecoms operators have also viewed the extension of USOs to broadband with caution, due to the uncertainty surrounding the service definition, the cost and the funding arrangements.

The forthcoming telecoms review

The European Commission will consider the future role of broadband within universal service as part of the fourth telecoms review, expected in the latter half of 2016. Other EU institutions and bodies have already put forward views. In 2013, the European Economic and Social Committee strongly supported the inclusion of internet access in the universal service because of the key role internet access plays in economic growth, job creation and the assurance of cohesion and well-being. In a 2016 own-initiative resolution on the digital single market, the European Parliament welcomed the forthcoming review of the USD, notably in the light of ensuring that requirements for high-speed broadband internet access were appropriate for reducing the digital divide. A policy study for Parliament’s Committee on Industry, Research and Energy (ITRE) on reforming telecoms rules argued that, although conditions are different in each Member State, more harmonisation in the implementation and enforcement of universal service regulations was required to reduce strong divergences. The study recommended subsidies, through vouchers or tax breaks, to promote broadband services, in particular for satellite broadband in remote areas. Finally it also suggested shifting USOs to focus on user-oriented functions such as online training or eGovernment rather than on specific services.

As part of its preparation for the review, in 2014, the Commission provided a questionnaire to the NRAs concerning implementation of the USD. The results of this questionnaire were synthesised by BEREC in 2014, but this report is not yet publicly available. Later, in October 2014, the Commission contracted a partnership of four companies to undertake review of the scope of the universal services (SMART 2014/0011) but the study is also not yet available. The Commission also initiated in late 2015 a public consultation on the regulatory framework for electronic communications, including universal services. Preliminary results indicated that the vast majority of respondents considered that the review was an opportunity to reconsider completely
the universal service regime. Member States reaffirmed the need for universal service obligations but with flexibility for each country to decide whether to include broadband and how to fund US. The Commission is analysing the replies to the consultation and will publish a synopsis in due course. At least some stakeholders have called for a comprehensive review of electronic communications services, not just in terms of the USO regime but also the Digital Agenda (or more recently Digital Single Market) since these share objectives such as universally available, inclusive and affordable ICT services. They underline that new financing mechanisms also need to be considered, including potentially a wider contribution base of contributors to USFs.

Main references


ESRC Centre for Competition Policy, Criteria to define essential telecoms services, Ofcom, 2013.


Van Dijk, Broadband availability and affordability, European Commission, 2013.

Endnotes

1 According to the International Telecommunications Union (ITU), by mid-2013, about 20 countries around the world had identified internet access or broadband access as a right.


3 e.g. state aid for broadband infrastructure (see EPRS in-depth analysis Broadband infrastructure, Davies, R., 2015).

4 e.g. training for citizens in information and communications technology or the provision of eGovernment services.


6 Batura, O., Universal service in the EU information society policy, info 16(6), 2014, pp. 24-34.

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