Briefing
September 2016

European Parliament

Regulating electronic communications
A level playing field for telecoms and OTTs?

SUMMARY

Telecommunications markets in the EU are changing rapidly in the face of growing demand for broadband access and the increasing importance of internet and mobile applications in modern life. Telecommunications network operators are facing challenges, including decreasing revenues and greater competition from companies that provide services that run 'over the top' of the internet and that compete directly or indirectly with their service offerings. Network operators argue that less stringent regulations imposed on these 'over the top' (OTT) players create difficulties in competing with these new services. Ensuring fair competition is particularly important as telecommunications companies must invest in new infrastructure if Europe is to meet increasing demand for high-speed, high-quality internet and achieve all of the EU's Digital Agenda goals.

In September 2016, the European Commission is expected to release its conclusions from a review of the current EU telecoms regulation. Definitions of different types of digital services may need updating to reflect technological change and new market conditions. Whilst the recently adopted General Data Protection Regulation has now established stronger cross-sector regulation in the area of personal data, policy options that would help to create a level playing field for telecoms and OTT providers include extending some telecoms regulatory requirements to OTT services, and reducing sector-specific constraints on traditional network operators.

In this briefing:

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Glossary

Body for Electronic Regulation of Electronic Communications (BEREC): An advisory body composed of European national regulatory authorities.

Electronic communication services (ECS): A service which consists wholly or in part in the conveyance of signals on networks. Excluded are broadcasting services which exercise editorial control over content, and information society services.

Information society services (ISS): A service provided for remuneration at a distance by electronic means at the request of the recipient. Specifically excluded are telecommunications and broadcasting services.

Over-the-top (OTT): Refers to the delivery of content, services or applications over the internet (i.e. 'over the top' of the network) without the direct involvement of a network operator or Internet Service Provider.[1] Examples of OTT players include Skype (voice and video calling), WhatsApp (messaging), Google (search), Spotify (music) and Netflix (video content).

Context

Liberalisation of the European telecommunications sector began in the late 1980s and continued through the 1990s. It is considered by most observers to have been successful in increasing competition and promoting consumers' interests, notably by reducing retail prices. However many experts point to what they feel is a lack of timely investment in high-speed networks on the part of traditional telecommunications operators as well as new market entrants that have not found incentives to invest heavily in infrastructure. Investment is important because electronic networks and digital services are considered by economists to make important contributions to growth in all sectors of the economy: they are responsible, by some calculations, for up to 21% of the economic growth in developed economies.

Faced with these complaints about infrastructure investment, telecommunications operators point to challenges in rapidly changing markets. They cite falling revenues, requirements for operators with significant market power to allow competitors to access their network infrastructure at regulated prices, a lack of harmonisation in regulation across the 28 EU Member States, and barriers to consolidation that would allow operators to exploit economies on a European and global scale. In particular, they have complained that they are subject to unfair competition from companies that provide services 'over the top' of the internet, and hence are known as OTT providers. At least some of these OTT services, such as voice and text messaging, compete directly or indirectly with those of traditional telecommunications companies. The competition is considered unfair (at least by some) due to sector-specific regulations that apply to telecommunications companies but not to OTT players.

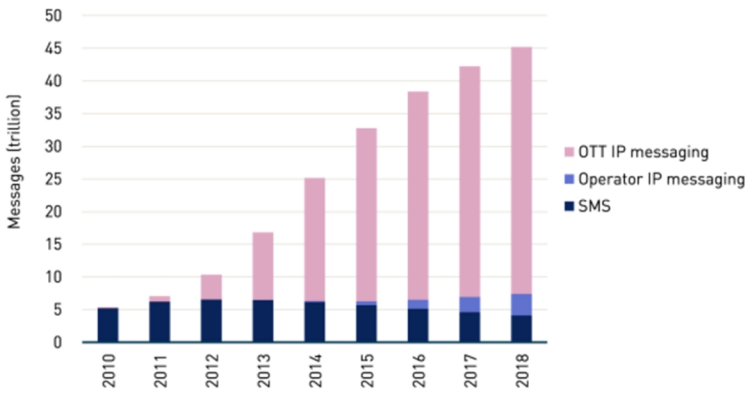
The EU regulatory framework for telecommunications, adopted in 2002 and revised in 2009, is composed of a Framework Directive and specific directives dealing with areas considered to require harmonisation, such as authorisation, access to networks, universal service and privacy and roaming. The European Commission expects to complete a review of this framework in September 2016. The review is expected to consider if competition between telecommunications network operators and OTTs is unfair due to regulation, and whether the Commission needs to create a level playing field by making all services which are substitutable from the consumer's point of view subject to the same rules.

Changing technologies and markets

The telecommunications market is changing rapidly. For example, the proportion of households in the EU with a fixed line telephone continues to fall (e.g. only 13% of households in Finland have fixed lines); while some of this decline is due to increasing mobile use, operators indicate that even mobile call and messaging revenues (and profit margins) are in decline. At least part of this is due to the rise of internet-based 'over-the-top' (OTT) services.

OTT services are innovative services that make use of increased broadband capacity and lower network costs to provide communications and content services over the internet. Internet-based services are different from traditional telecommunications services because they are managed entirely separately from the business of transporting the electronic signals. Such OTT services include voice and video calling (e.g. Skype, FaceTime, Viber), text messaging (e.g. Facebook Messenger, WhatsApp), video content delivery (e.g. YouTube, Netflix) and social networking (e.g. Facebook). In particular, voice and messaging OTT applications (the focus of this briefing) compete with the communications services that telecoms operators have traditionally provided and relied on for a large part of their revenue.

Figure 1 – Messages sent via mobile handsets by type of service, worldwide, 2010-2013 and forecast 2014-2020



Data source: Analysys Mason, OTT messaging volumes will nearly double in 2014, 2014.

Some of these OTT services (often developed or owned by companies based in the United States) have been very successful in the European market, due to 'first mover' advantage and to network effects, whereby consumers prefer services that already have large numbers of other participants. Adding to their popularity, many of these services are delivered in whole or in part without charge to the consumer, but are instead paid for indirectly through advertising that targets users through data profiles. In just a few years, OTT companies are estimated to have captured 10% of global revenues from the telecommunications value chain; OTT revenues are expected to increase fivefold between 2015 and 2020, reaching US$10 billion per year. In July 2014, the six top OTT communications applications in the world (WhatsApp, Facebook Messenger, WeChat, Viber, Line and KakaoTalk) were estimated to have over 2.5 billion monthly users, a 500% increase since the end of 2013.

This rapid growth, particularly in voice and messaging applications, has challenged telecommunications network operators. In one survey of 40 telecom company leaders, the executives cited disruptive competition and an uncertain regulatory environment as the top two perceived challenges facing their industry. In terms of disruption, 91% of the respondents considered OTT app providers as one of the top two actors changing customer demand (only 3% mentioned new entrants in the telecoms market itself). Of course these growing OTT services are transmitted over the networks owned by telecommunication operators, so that increased data transmitted should result in

increases in the revenue that network operators could charge. However observers note that operating a 'bitpipe', a mere conduit for data, provides telecoms companies with little of the return on investment that would come from higher value-added voice calls or text messaging (SMS) services.

Of course telecommunications is only one industry among many that finds itself challenged to adapt business models in the face of internet-based innovation and competition (much as taxi companies are challenged by companies such as Uber).[2] However operators have to invest in building or upgrading networks to handle the ever-increasing stream of data transmitted over the internet. (On the whole, OTT players have little incentive to invest in public internet infrastructure.[3]) If, because of increased competition and disruption in the market, telecoms operators lose the incentive and revenues needed to invest in high-speed network infrastructure, the lack of new infrastructure could hinder the achievement of EU broadband goals, and (given the internet's important contribution to economic growth) also slow down overall growth of the EU economy.

Changing usage of European consumers

A Eurobarometer survey in October 2015 showed that whilst traditional telecommunications services remain common, OTT services are increasingly competing for citizens' business. On the whole, 72% of Europeans use their mobile phone to make or receive calls at least once a day, and 37% participate in a daily call on a landline phone; only 11% make or receive daily calls via internet applications. However the difference in usage is much less with messaging: 46% send or receive a text message daily compared to 36% who use an internet-based instant messaging service once or more a day.

There are significant differences in the use of OTT services among Member States (e.g. in Spain and the Netherlands only a third of the population has *never* used instant messaging, whereas the figures are over 60% in Lithuania, Greece and the Czech Republic). There is also a significant generation gap as use of OTT services declines in each older age group across the EU. For example, every day 68% of the youngest group of respondents (15-24 years) use instant messaging, and almost a quarter of them communicate via internet voice or video calls; in comparison, only 12% of the oldest respondents (55 years and older), use instant messaging daily and 3% make or receive internet calls.

The regulatory environment

There are two regulatory frameworks that are particularly relevant to discussion of telecommunications companies and OTT providers. The Electronic Communications Framework Directive applies to telecommunications networks and to **electronic communications services** (ECS), which are distinguished from other services by the fact that they involve in whole or in part the 'conveyance of signals over a network'. Standard voice telephone and text-message services are ECS since the telecommunications operator is also responsible for the network transmission. On the other hand, the E-Commerce Directive applies to **information society services** (ISS) which are electronic services provided for remuneration remotely at the request of the recipient (explicitly excluding ECS). OTT services are ISS, since the OTT providers rely on others (internet service providers) for the conveyance of signals.

As a result of this regulatory distinction, telecom and OTT services are regulated differently in terms of privacy, quality of service, consumer protection, access to other providers (interconnection), portability of data, emergency calls and numbering. For this reason, telecom companies feel that regulation provides OTTs with an unfair advantage. According to some consultants, this regulatory distortion of competition inhibits investment in advanced networks by preventing network operators from making a fair

return. In 2014, Commission Vice-President Andrus Ansip declared that it was necessary to find a better balance in the relations between telecom service providers and OTT players, because financing broadband networks was a crucial issue.

The regulatory distinction between ECS and ISS does not take fully into account the fact that, from the point of view of the consumer, some ECS and ISS may be very similar or indeed may substitute for one another. In a January 2016 report on OTT services, the Body of European Regulators for Electronic Communications (BEREC) considered that the definition of ECS should be revised in the light of technological change and the need to avoid inconsistency in application across Member States. Many observers believe that services that have the same functionality and that compete with each other should be subject to the same regulatory regime; that regulations should be technologically neutral; or that authorities should 're-balance' regulatory requirements provide all with a level playing field.[4] According to a recent Eurobarometer survey, 86% of Europeans agree that the same level of consumer protection (including security and data protection) that applies to telephones or text message services should apply to internet-based messaging, email or calling services. In a May 2016 Communication dealing with online platforms, the Commission committed itself to the principle of open markets and a level-playing field for similar digital services in a data-driven economy. However BEREC has also pointed out that there may be good reasons for maintaining an 'unlevel' playing field, e.g. if an obligation would be particularly costly, or technically difficult to implement or enforce for certain types of services.

Another problem is that enforcement has not always been consistent. A report from BEREC indicated that there was inconsistency across National Regulatory Authorities (NRAs) in the Member States in interpreting the rules. For example, some NRAs (notably in France and Spain) believe that OTT voice services that allow calls to the standard telephone network are in fact ECS since the connection means that they have taken responsibility for conveyance of the signal. However these NRAs have had difficulty in getting OTT providers to comply with ECS regulation. On the other hand, some NRAs, but again not all, also argue that most OTT voice services are *not* substitutable for regular telephone services because they offer lower quality and are not interoperable with other OTT voice services, i.e. initiators and receivers of calls must use the same service. Note, however that interoperability between different OTT services may not be such an important feature as it is for the standard telephone service, since it is easy enough for a user to download multiple free apps.

Broadly speaking, two different (but possibly complementary) policy approaches have been proposed to provide a more level playing field:

- Applying rules similar to those that exist for telecommunications firms to OTTs providing similar kinds of services. For example, for reasons of consumer protection and public safety, it might be appropriate to ensure that OTT voice and messaging services provide access to emergency numbers, contract transparency and legally ordered intercepts of communications.
- Reducing regulation for telecoms by easing or repealing sector-specific regulations and/or adopting a lighter touch approach. For example, if certain provisions of the e-Privacy Directive which apply to telecom operators, were transferred to the General Data Protection Regulation (GDPR) and hence applied to all companies), the former could be repealed.

Experts adopt a variety of positions on what kinds of reforms are required. Some observers with telecom industry links call for simplification of regulation, and *ex post* rather than *ex ante* regulation to encourage innovation. Regulation experts recommend distinguishing digital infrastructure (e.g. telephone networks) from digital services (e.g. telephone services); replacing sector-based rules with horizontal regulation that applies to all; and increasing harmonisation of national rules. For one economist, in addition to consumer protection, the Commission needs to consider the effect of regulations on the incentives of OTT players to develop new services and business models: new proposals must strike a balance between creating a level playing field and leaving room for innovation. Others point out that providing a level regulatory playing field will not eliminate all advantages that OTT players may have over telecommunications operators, including greater flexibility in maximising tax savings (e.g. by establishing themselves in low-tax regimes), or benefitting from a global scale (whilst EU telecoms firms, following the principle that it is the country of destination that determines applicable rules for a service, must deal with different NRAs and differing regulations in each Member State).

Network neutrality

Some cases of discriminatory treatment by telecoms operators of data transmissions from competing OTT services has spurred network neutrality legislation in Europe, both in Member States (e.g. Netherlands) and at EU level with the adoption of the Open Internet Regulation in 2015 which mandated network neutrality. As a result, network operators are required to treat all network traffic equally, with the exception of 'special services' which demonstrably require a higher quality of service. BEREC adopted guidelines on the application of net neutrality rules in August 2016, following a public consultation.

EU policy positions

In its 2015 Digital Single Market strategy, the **European Commission** promised an ambitious overhaul of current telecoms rules that have varied considerably in their application in different Member States, and have not resulted in the creation of a real EU-wide telecoms market. The reforms were described as including measures to ensure a level playing field for all players, both traditional suppliers and new market entrants that provide competing services. Following the adoption of the General Data Protection Regulation, the Commission launched a review of the e-Privacy Directive whose results are not yet available. In May 2016, with the release of a document on online platforms, the Commission indicated that it was looking at removing some of the regulation of ECS, which are currently subject to competition from online platforms, as well as extending some regulations (such as rules on confidentiality) to OTT players.

A 2015 study for the **European Parliament** came to the conclusion that traditional telecommunications companies have not been put at an unfair disadvantage by the growth of OTTs, even though they face more stringent rules in terms of consumer protection, data, and sector-specific taxes and fees. A more recent study on the review of the regulatory framework concluded that establishing a level playing field based on demand substitutability would allow fair competition between market participants and encourage investment and innovation; the authors called for creation of a new category of 'digital services' with a common set of rules, reformulation of current consumer-protection rules and reliance on *ex post* regulation to encourage innovation. In a 2016 resolution on the digital single market, Parliament stated that, where possible, similar

rules should apply to similar telecommunications services (including OTT services) in order to foster innovation and competition, and to ensure consumer protection.

Ten **Member States**[5] wrote in January 2016 to the Commission to outline their priorities for the review of the telecommunications regulatory framework. They believe that competition, and stable, predictable regulations can spur private investment in high-speed networks. They argue that consumer protection for ECS should not be automatically extended to OTT services; that the application of multiple separate regulations to telecoms services should be avoided; and that some telecoms deregulation should be considered so as to reduce financial and regulatory burdens.

This position was also reflected during a discussion of the telecoms review in the Competitiveness **Council** in May 2016, when Member States said they supported a fairer regulatory environment. Most Member States opposed extending rules to OTTs but preferred reducing or eliminating rules on traditional operators. The Slovakian Presidency which runs from July to December 2016 has promised to make the new regulatory framework for electronic communications a priority in the telecoms field, in part because of the rise of online service providers.

Stakeholders

ETNO, the European Telecommunications Network Operators' Association, calls for replacement of the outdated ECS definition since consumers see OTT voice as substitutable for traditional voice service. They argue for the reduction of sector-specific regulation, e.g. repeal of the e-Privacy Directive after the adoption of the GDPR. ETNO also decries insufficient enforcement of current rules so that OTT voice services that connect to the telephone system do not provide emergency calls or legally ordered intercepts. GSMA, the association representing mobile operators, calls for scaling back regulation given current high levels of competition, and asks for a complete re-think or reformulation of regulation, based on the function of a service (not its structure or technology) and the actual performance of the market (rather than prescriptive *ex ante* rules). ECTA, the European Competitive Telecommunications Association that represents new market entrants, argues that OTT voice services are not substitutable for ECS voice, and suggests lightening regulation of *retail* ECS, while maintaining rules on *wholesale* access to physical networks.

BEUC, the European consumers' association, holds that a level playing field should never imply a decrease in consumer rights, and points out that different connectivity requirements, equipment and functionalities make it difficult for OTT services to be truly substitutable for telephony and text messaging. The views of these and other stakeholders, expressed during a public consultation on the telecommunications regulatory framework in 2015 and early 2016, have been summarised by the European Commission.

Next steps

Changes in technology and markets offer an opportunity to consider the current regulatory environment and put forward reforms that may make regulation more suitable for the new internet era. The European Commission is due to present its proposals for revision of the electronic communications framework in September 2016. The proposals are expected to address whether current competition between telecommunications network operators and OTT companies is unfair due to regulation, and if it is, how to create a level playing field for all.

Main references

BEREC, Report on OTT services, 2016. BoR (16)35.

De Streel, A. and P. Larouche, An integrated regulatory framework for digital networks and services, Centre on Regulation in Europe, 2016.

Schrefler, L., Reforming the regulatory framework for electronic communications networks and services – Implementation Assessment, EPRS, 2016.

Gori, P; P.L. Parcu, Electronic communications policy and regulation in Europe, In: Jaag, C.; M. Finger, The Routledge companion to network industries, Taylor Francis, 2015, p. 141-155.

Policy Department A: Economic and Scientific policy, Over-the-Top players (OTTs), Directorate-General for Internal Policies, European Parliament, 2015. PE 569.979.

Policy Department A: Economic and Scientific policy, Reforming EU telecoms rules to create a Digital Union, Directorate-General for Internal Policies, European Parliament, 2016. PE 570.011.

Rossi, L., Proposal for the reform of the regulation of digital services, Robert Schuman Centre, European University Institute, 2015.

Endnotes

[1] BEREC distinguishes between OTT services that compete directly with telecoms (e.g. voice calling that connects to the public telephone network); some that potentially compete (e.g. other voice services, instant messaging); and others (e.g. search, music and video streaming) that do not compete, at least in a direct way.

[2] Telecoms can respond by developing their own OTT services; partnering with OTT companies to include OTT services such as audio-visual streaming, social networking or cloud services in their subscription bundles at low or no cost; or agreeing, for a fee, with an OTT provider not to count data transfers for their service within data limits for a subscription, a practice referred to as zero-rating. However no OTT has managed to build a truly successful service comparable to the best known OTTs; there may be competition concerns in bundling services; and some zero-rating practices are likely to be prohibited when BEREC adopts its net neutrality guidelines on in August 2016.

[3] If OTT companies invest in infrastructure, they are likely to invest in private content delivery networks (CDNs) that ensure that their content is privately transmitted and available in different geographic locations on the edge of the internet. These investments (more than US$30 billion per year), can benefit other internet users in that they may reduce traffic that needs to be carried over parts of the open internet. For example, in May 2016, Facebook and Microsoft announced plans to jointly lay a transatlantic cable linking the United States and Europe that would exclusively support transmission of their social network and cloud computing data.

[4] See, for example, De Streel, A; P. Larouche, An integrated regulatory framework for digital networks and services, 2016; L. Rossi, Proposal for the reform of the regulation of digital services, Robert Schuman Centre, European University Institute, 2015; Policy Department A, Reforming EU telecoms rules to create a Digital Union, European Parliament, 2016. PE 570.011; Detecon, Policy and regulatory framework for governing internet applications, 2014. The Commission reported that in the telecoms reform consultation most Member States support regulatory requirements for all communication services (telecoms or OTTs).

[5] Belgium, the Czech Republic, Denmark, Estonia, Ireland, Finland, Lithuania, Poland, Sweden and the UK. Six of these Member States also authored a 'non-paper' with Iceland and Norway.

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