



Centre on Regulation in Europe
Improving network industries regulation

An Integrated Regulatory Framework for Digital Networks and Services

A CERRE Policy Report

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About CERRE

Providing top quality studies and dissemination activities, the Centre on Regulation in Europe (CERRE) promotes robust and consistent regulation in Europe's network industries. CERRE's members are regulatory authorities and operators in those industries as well as universities.

CERRE's added value is based on:

- its original, multidisciplinary and cross-sector approach;
- the widely acknowledged academic credentials and policy experience of its team and associated staff members;
- its scientific independence and impartiality;
- the direct relevance and timeliness of its contributions to the policy and regulatory development process applicable to network industries and the markets for their services.

CERRE's activities include contributions to the development of norms, standards and policy recommendations related to the regulation of service providers, to the specification of market rules and to improvements in the management of infrastructure in a changing political, economic, technological and social environment. CERRE's work also aims at clarifying the respective roles of market operators, governments and regulatory authorities, as well as at strengthening the expertise of the latter, since in many Member States, regulators are part of a relatively recent profession.

The study, within the framework of which this report has been prepared, has received the financial support of a number of CERRE members. As provided for in the association's by-laws, the study and the report have, however, been developed and completed in full academic independence. The contents and opinions expressed in this report reflect only the views of the authors and in no way bind CERRE, the sponsors or any other members of CERRE (www.cerre.eu).

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Foreword by the Director General

Digital technologies and the Internet are bringing profound changes to the economy and society. The European Commission's Digital Single Market strategy builds upon those changes to stimulate both growth and job creation in Europe and to promote a European Union which is more inclusive for its citizens. As part of that strategy, the EC has launched in 2015 a major review of the EU rules affecting the digital value chain.

Most of those rules have been enacted in the nineties when Internet was still in its infancy. They were, at the time, very ambitious. Today, a new digital environment generates major challenges to industry, regulatory and policy stakeholders. It also provides fantastic opportunities for consumers and users of digital goods and services. To meet those challenges and to fully benefit from those opportunities, it is imperative that Europe's policy makers come up with an updated regulatory framework for the digital sector. As for its predecessors in the 1990s and 2000s, such a framework must be ambitious and consistent with today's technologies and markets. In addition it must be sufficiently flexible and robust to accommodate future, often still unclear transformations in both technologies and markets, among others regarding online platforms, and, as such, remain sustainable in the next decade. This should be conducive to the regulatory clarity, transparency and stability which constitute basic prerequisites to investment in the digital sector. Europe crucially needs such investment.

In line with its core mission, the Centre on Regulation in Europe is contributing to the current review process by providing a set of policy recommendations for the reform of the EU rules. Those recommendations have been designed with a view not only to meet the abovementioned criteria but also to be fully consistent with the various parts of the digital ecosystem as well as with Internet developments.

The process followed to generate this report has included a series of three closed seminars with some 20 senior representatives from telecom, media and Internet firms as well as from regulators, most of them being members of CERRE, and academics. Its initial phase has consisted in a thorough assessment of the functioning of the current EU rules and it has been followed by an analysis of possible futures for the relevant technologies and markets.

As provided for by CERRE bylaws, the report's recommendations have been developed in total independence by two top-level regulation and competition law academics, acknowledged for their expertise in the digital sector, Professors Pierre Larouche and Alexandre de Streel, both of them being Joint Academic Directors (JAD) of CERRE. Their report has also benefited from valuable economic, technology and institutional inputs from Professor Martin Peitz, also a CERRE JAD, Dr Wolter Lemstra, a CERRE Research Fellow, and Jean-François Furnémont, a former chair of EPRA, the European media regulators association. I would like to thank and commend them all for the quality of their work and for their dedication in tackling efficiently sometimes very difficult policy and regulatory issues.

Against the above background, it is unchallengeable that the avenues for reform which are proposed in this new CERRE policy report are not only original and substantive; they are also firmly grounded in the reality of the markets and of their regulation, as well in the institutional and policy environment of both the EU and its Member States.

I am fully aware, however, that some recommendations in this report could and will be disputed. For instance, moving away from vertical, silo-based to horizontal, layers-based regulation could be deemed impracticable because, it could be argued, electronic communications, media and e-commerce are being dealt with by different Commission directorates, by different European Parliament committees and by different configurations of the Council of Ministers.

While fully respecting such views, I think, however, that we need to be up to the challenges faced by the digital sector and, more widely, by our continent, and which have been largely substantiated for many years now.

Political will, strategic visions as well as assertiveness - in overcoming either structural and institutional rigidity and bottlenecks or just mere difficulties to adapt to a changing environment - are required on behalf of all policy, regulatory, industry and user/consumer stakeholders involved.

My CERRE colleagues and I are looking forward to engaging with all of them in a vivid and fruitful discussion on this report's analyses and recommendations.

Bruno LIEBHABERG

Executive summary

Five sets of recommendations for an integrated regulatory framework

I. *From vertical, silo-based to horizontal, layer-based regulation*

Europe needs to **abandon the current, still largely silo-based regulation** of electronic communications, linear audio-visual, non-linear audio-visual and information society services. This should be **replaced with regulation based on horizontal layers, distinguishing between digital networks and all types of digital services**. Such reform should lead to a coherent set of rules. The **current decision chain model should be maintained**, where the main principles are defined in EU and then national law, refined by the Commission and/or NRA networks and then enforced by national regulators.

- Regulatory structure: one regulatory framework for digital infrastructures and another one for all digital services.
- Regulatory objectives: One overarching objective: the promotion of long-term interests of end-users. Several secondary objectives: promotion of network deployment, innovation, internal market and protection of fundamental rights.
- Regulatory principles: non-discrimination and technological neutrality, reliance on economic analysis, proportionality, regulatory stability, decision-chain model and subsidiarity.

II. *A network deployment focus for digital networks regulation*

Digital networks regulation is based on several instruments aimed at ensuring high quality connectivity throughout the whole EU, in urban as well as in rural areas. More than ever, it will **need to stimulate efficient and sustainable private investment**. The latter will have to be topped up with targeted public investment when necessary. State aid control must be rigorously enforced in order to ensure that the public funding design minimises the crowding out of private investment as well as the creation of monopolies.

- Maintain the country-of-destination principle, provided that entry rules are minimal and the main national rules are harmonised at the EU level.
- Base asymmetric regulation on the control of a sustaining bottleneck and reinforce the implementation of the proportionality principle in selecting the regulatory remedies, with an assessment of the impact of the obligations on the prevention of long-term consumer harm, as well as on the incentives for investment and incentives to reach commercial agreements between bottleneck owner and access seeker. The identification of bottlenecks and the selection of the remedies should be done by the NRAs, but in close cooperation and with the opinion of a permanent and independent

Digital Networks Regulatory Scrutiny Board appointed jointly appointed by BEREC and the Commission.

- Maintain the current symmetric rules and extend their scope to fixed and mobile termination.
- Allow public investment for network deployment when there is an unsatisfied pent-up demand, provided that the crowding out of private investment and the possible existence of monopoly are minimised. That should be ensured through State aid control by the Commission, to be exerted in close cooperation with the NRAs.
- Keep universal service as a social safety net and do not use it as an industrial policy tool to promote high broadband deployment financed by the telecom sector only. Ensure that the net cost of the universal service is financed by public funds (and not by a sector fund).

III. Conducive policy and regulatory measures for spectrum policy

One key part of the regulation of digital networks is **radio spectrum policy**. With the development of mobile data and the introduction of 5G, that policy **will be key for Europe's digital future**. However, this will require appropriate policy and regulatory measures. Those should include **implementation of best practices for spectrum assignment** throughout the European Union to ensure an efficient use of spectrum as a scarce resource. This will also require an **enhanced coordination of Member States' procedures** to facilitate the emergence of pan-European operators.

- Strengthen EU institutional mechanisms to exchange, identify and apply best practices for spectrum assignments and better coordinate the national procedures among the Member States to facilitate pan-European networks and services.

IV. Streamlining of digital services regulation and stimulating the internal market

Digital services regulation needs to be streamlined by relying mostly on general EU rules applicable to services (i.e. internal market law and the Services Directive, competition law, consumer protection law, privacy and personal data protection law, copyright rules and security rules). Those **rules** should be **complemented with specific provisions applicable to all digital services, when strictly necessary** due to the particular characteristics of digitalisation. **Vertical rules** applying to audiovisual services **should only be provided for in exceptional circumstances**, when the other rules have proven to be insufficient. **No specific additional rules are currently needed for online platforms**, because they are already subject to rules applicable to digital services and their only common feature (multi-sidedness) does not justify regulation in and of itself. This issue should, however, be revisited in some years with a better understanding of the market dynamics of online platform and the effectiveness of existing rules.

Digital services regulation should also facilitate cross-border trade.

Streamlining the rules and stimulating the internal market are two strategies to incentivise the development of digital services across the continent.

- Simplify and streamline regulation by merging all the specific rules on digital services into a single directive, which would rest on the principles of (i) home-country control, (ii) primacy of general legislation and (iii) commitment to effective enforcement.
- Maintain and extend the home-country control principle for all digital services, with a strengthened harmonisation of national rules regarding main and common public concerns and a consolidation of the EU networks of national authorities, in particular BEREC and ERGA. Ensure that operators established outside the EU and offering digital services in the EU comply with harmonised EU rules.
- EU rules for digital services should not duplicate the existing general rules applicable to all services (internal market law and the Services Directive, competition law, consumer protection law, privacy and personal data protection law, copyright rules and security rules) and should be limited to what is strictly necessary given the specific characteristics raised by the digitalisation of the services.
- Additional EU rules for audio-visual services may be justified given the cultural and political importance of the media, but only when strictly necessary, and without distinguishing between linear and non-linear services any longer.
- At this stage of technology and market development, specific rules for online platforms are not justified, but the issue may need to be revisited in the future with a better understanding of the competitive dynamics of those platforms and the effectiveness of existing rules (in particular competition law and consumer protection law).
- The EU and Member States should commit to dedicate sufficient resources to the enforcement of existing legislation, and to better understand the functioning of the digital ecosystem and the novel issues it raises.

V. An efficient and consistent institutional design for the whole EU digital ecosystem

Given the pervasiveness of regulation across the digital value chain and the margin of discretion for regulators in applying rules which are often principles-based, **an efficient institutional design is a necessary condition for Europe's digital future**. The current patchwork of national regulatory authorities and separate EU coordination mechanisms therefore needs to be streamlined to ensure a coherent implementation of rules across the value chain and across the Member States.

At the national level, the specific **regulators** in charge of digital networks or digital services (e.g. telecom and media authorities) **need to be strictly independent**. They also need to closely coordinate their interventions and to cooperate effectively with those 'general' regulators who are also involved in the regulation of digital services, e.g. agencies in charge of consumer protection, competition law, privacy and personal data protection, security,

etc. **Coordination and cooperation** between all relevant regulators are **essential to ensure a consistent regulatory approach to the whole digital ecosystem**. At EU level, harmonisation and coordination need to concentrate on the parts of the digital value chain which impact most on the completion of the internal market, i.e. digital services since they are more susceptible to cross-border trade. Since the **home-country control principle** is a very effective device to complete the internal market, the **regulation of digital services should continue to be firmly based on that principle**.

- The characteristics and the powers of each national regulatory authority should be based on good governance principles. In particular, NRAs should have sufficient human and financial resources, be independent and accountable. They should also have sufficient investigation and sanctioning powers.
- All the regulators involved in the supervision of the digital eco-system should coordinate their decisions to ensure regulatory consistency. This coordination is particularly needed between telecom and media regulators.
- The EU coordination mechanisms for the regulation of digital networks should be based on the principle of the country-of-destination provided the main rules are harmonised and that Commission, BEREC and RSPG ensure an exchange of best practices and develop common regulatory approaches. The Commission review of draft NRA decisions for the SMP regime should be replaced by a review by an independent Regulatory Scrutiny Board jointly appointed by BEREC and the Commission.
- The EU coordination mechanisms for the regulation of all digital services should be based on the principle of the home-country control, accompanied by a strengthened harmonisation of rules, protecting public interest and promoting mutual trust between Member States based on EU networks of authorities.

Table 1: An integrated regulatory framework for digital networks and services - Recommended architecture

General rules	Specific rules	
<ul style="list-style-type: none"> • Freedom of movement • Consumer protection • Competition • Privacy and data protection • Security • Copyright 	Digital Services	<ul style="list-style-type: none"> • Consumer protection <ul style="list-style-type: none"> ◦ Transparency and minimum requirements ◦ Limitation of commercial communications ◦ Dispute resolution ◦ Portability of digital identity • Protection of minors • Special measures for disabled users • Organisation of numbering space • Limitation of intermediaries' liabilities
	Digital Networks	<p>Additional rules for audiovisual services</p> <ul style="list-style-type: none"> • Promotion of and access to European works • Access to events of major importance
	Digital Networks	<ul style="list-style-type: none"> • Radio spectrum policy • Access regulation • Interconnection and interoperability • Public investment and State aid control • Universal service

1. Introduction

With the Digital Single Market Strategy, the European Commission launched in May 2015 the most important and comprehensive review of the EU rules applicable to the Internet ecosystem in 20 years. Faithful to its mission, the Centre on Regulation in Europe aims to contribute to the ambitious exercise of the Commission by providing policy recommendations to improve and adapt digital regulation to the latest technology and market developments.

Building upon a series of three closed seminars with senior representatives of CERRE members (telecom, media and Internet firms as well as regulators) and academics, which took place between June and December 2015, we assess the functioning of the current EU rules¹ (see Annex 1) and envisage the future of technology and markets (see Annex 2), following the better regulation methodology recently adopted by the Commission.² On that basis, we draw the high-level policy recommendations presented in this report.

We conclude that the 2002 regulatory framework for electronic communications has good foundations and is based on good principles and institutional structure. It has achieved the objectives set in the nineties, i.e. the opening of the existing networks. Its implementation, however, has tended to focus more on short-term than on long-term efficiency. It may accordingly be less adapted to the current period where the deployment of new generation infrastructures with more capacity is needed. Regarding e-commerce and audiovisual services, we note that the relevant directives of 2000 and 2010, respectively, are based on a home-country control principle which proved to be very successful in stimulating the establishment of an internal market for digital services. However, the AVMS Directive still contains some silo distinctions between linear and non-linear services which are not adapted to the technological evolution.

The evolution of technology and markets, such as the Internet of Things or Industry 4.0., will increase the need for connectivity and network deployment.³ Technology is subject to rapid and often unpredictable evolution, such as virtualisation, IP migration and networks hybridisation. This will probably de-silo the digital value chain. In addition, customers expect seamless connectivity, independent of the networks, and they require an intuitive and simple interface. Those evolutions will lead to more complex market relationships where firms depends very much on each other, leading to more intense mixes of cooperation and competition, possible co-existence of different business models (vertical integration or separation; open or closed platforms) and new ways to capture value (access instead of usage, personal data instead of money).

¹ A list of the main EU rules applied to the digital sector is provided at the end of this report.

² European Commission (2015c).

³ Cisco (2015), European Commission (2015a).

All those evolutions require a new integrated regulatory framework for digital networks and services that we present in the next sections of this policy report. Section 2 deals with structure, the objectives and the principles of the regulatory framework. Section 3 deals with the rules applicable to digital networks. Section 4 deals with those applicable to digital services. Finally, Section 5 deals with the institutional design.

At the outset we want to make clear that this report is elaborated as a contribution to the current stage of EU policymaking regarding the Digital Single Market, and in particular the review of EU legislation on electronic communications, audiovisual media services and the investigation of online platforms. EU policymaking is still in its early stages, where the fundamental decisions are taken, later to be developed in concrete proposals. Accordingly, we have chosen in our report to emphasize these fundamental choices, and not to provide minute detail on every element of our analysis and our proposals. Obviously, there is always room for nuances, specification and refinement, including making some justified exceptions at the margins. This will be a matter for the later stages of policymaking, and for future CERRE work.

2. Regulatory Structure, Objectives and Principles

The *structure of the regulatory framework* should reflect technology and market evolutions. These are characterised by an increased substitutability between services provided over different networks. Therefore, the regulatory structure should complete the move away from silos distinguishing between services, towards more horizontal layers, with a refined distinction between the regulation of digital networks and digital services. The former is justified by their particular characteristics (in particular the use of scarce resources, the remaining existence of sustaining bottlenecks and the need to guarantee connectivity through the whole territory). As for the latter, a more horizontal approach is now feasible and desirable, justified by those services' specific characteristics (in particular the need to protect consumers in the digital world).

The *regulatory objectives* should reflect the importance of the digital ecosystem in stimulating growth and jobs. The regulation of digital networks should promote efficient and sustainable infrastructure deployment, connectivity and capacity throughout the Union. The regulation of digital services should promote the development of growth-enhancing services, ideally on a cross-border basis.

Finally, the *regulatory principles* should be adapted to the characteristics of the industry and ensure that regulation stimulates innovation while not pre-empting technological and market choices. Regulation should be based on several substantive good governance principles such as non-discrimination and technological neutrality, reliance on economic analysis, proportionality and regulatory stability and subsidiarity.

2.1 Regulatory Structure: Networks and Services

Currently, three different regulatory frameworks apply to the digital value chain:

- The Electronic Communications regulatory framework applies to electronic communications networks (ECN) and electronic communications services (ECS);
- The AVMS Directive applies to Audiovisual Media Services (AVMS) that may be linear (broadcasting) or non-linear (on-demand); it does not cover Internet services hosting user-generated content;
- The E-Commerce Directive applies to Information Society services (ISS).

Thus, a digital service is subject to different rules depending of its classification as an ECS, a linear AVMS, a non-linear AVMS or an ISS.⁴ Such distinction inevitably leads to complex legal discussions and uncertainty on the classification of some services. It can also lead to regulatory differentiation between services which are substitutable from the perspective of the consumer. With the increased substitutability between several digital services (between linear and non-

⁴ See for the classification of the OTTs: BEREC (2015a), Godlovitch et al. (2015).

linear AVMS, between ECS and ISS), there is a need to build a more horizontal regulation of those services.⁵

Thus, we recommend a simpler, two-stage regulatory structure reflecting the technology and market evolution:

- (i) a regulatory framework for *digital infrastructures* covering the current ECN and, partly, the current ECS,
- (ii) a regulatory framework for *digital services* covering most of the current ECS as well as the current AVMS and ISS.⁶

2.2 Regulatory Objectives: Connectivity and Internal market

The 2002 electronic communications regulatory framework sets three broad and non-prioritised objectives: competition, internal market and the interests of EU citizens, to which promotion of investment was later added.⁷ The AVMS and E-commerce Directives do not refer explicitly to regulatory objectives,⁸ but their main goals are to achieve the internal market (with home-country control) while protecting a harmonised set of public interests, in particular consumer protection. The objectives of the AMVS Directive also extend to an enhanced protection of minors as well as the promotion of European content.

One of the criticisms of the current rules is that their implementation focuses too much on static issues, in particular price evolution, and not enough on dynamic issues, such as investment incentives. To address such critiques and ensure that the implementation of the rules adopts a sufficiently dynamic approach, we recommend setting the *promotion of the long-term interests of end-users* as the overarching objective.⁹ Such a goal would guarantee that long-term interests and dynamic issues are explicitly taken into account and, at the same time, that regulation is user-centric.

To give better guidance to the regulators in pursing such a broad objective, we recommend complementing it with the following secondary objectives which focus on the challenges and opportunities raised by digital technologies:

⁵ Peitz and Valletti (2015) and the preliminary findings of Ecorys et al. (2016).

⁶ Also Rossi (2015).

⁷ Art. 8 Framework Directive. Promotion of investment and innovation was added as a regulatory principle during the 2009 Review.

⁸ According to the Commission, the objectives of the AVMSD are: providing rules to shape technological developments, creating a level playing field for emerging audiovisual media, preserving cultural diversity, protecting children and consumers, safeguarding media pluralism, combating racial and religious hatred, guaranteeing the independence of national media regulators. See recitals 2, 4, 8, 10, 12, 33 and 34.

⁹ Following the example of the Australian Telecom Act which provides at para 3(1) that : *The main object of this Act (...) is to provide a regulatory framework that promotes: (a) the long-term interests of end-users of carriage services or of services provided by means of carriage services; and (b) the efficiency and international competitiveness of the Australian telecommunications industry; and (c) the availability of accessible and affordable carriage services that enhance the welfare of Australians.*

- Several studies have showed that connectivity and capacity are very important to stimulate growth and employment. The Commission observes that the long-run impact on GDP growth of the already observed digital reform efforts has been estimated at above 1%, while further efforts in line with the Digital Agenda for Europe targets would lead to an additional 2.1% of growth.¹⁰ Moreover, in the 21st century, access to the Internet is indispensable for social inclusion. Therefore, one secondary objective should be the promotion of an *efficient network deployment* in urban as well as in rural areas, which will require private and, in some limited cases, public investment.¹¹
- Digital industries show a particularly rapid cycle of technological progress, dramatically increasing their efficiency over the years. Therefore, another secondary objective should be the *promotion of innovation* for every segment of the digital value-chain.
- The completion of the digital internal market has the potential to increase the EU GDP by EUR 415 billion.¹² Therefore, a third secondary objective, which is already foreseen in the current rules, should be the promotion of the *internal market*.
- Finally, digital technologies, in particular the Internet, present the opportunity to foster human rights (such as freedom of expression) but, at the same time, increase the threats to them (e.g. increasing surveillance, threatening privacy). Thus, a fourth secondary objective should be the safeguarding of *fundamental rights*.¹³

We do not see competition, and in particular infrastructure competition, as a stand-alone objective, as it is the case currently, but as one of the crucial means to promote efficient network deployment and innovation.

2.3 Regulatory Principles

2.3.1 Substantive principles: Non-discrimination, economic analysis, proportionality and stability

Currently, the electronic communications regulatory framework is based on several principles such as objectivity, transparency, non-discrimination, technological neutrality, economic analysis, proportionality, legal certainty, promotion of investment and innovation.¹⁴ Although the AVMS Directive does not refer as explicitly to regulatory principles, it is based on legal

¹⁰ European Commission (2015a: 5) and Lorenzi et al. (2014). A study by Godlovitch et al. (2013) estimates the indirect benefit of up to € 90 billion per year could be achieved from policies fostering internal market for business communications.

¹¹ Note that the efficiency condition may imply that the network capacity may vary in the urban and in the rural areas.

¹² European Parliament Research Service (2015).

¹³ Also Finger et al. (2014: 30-35).

¹⁴ Art. 8(5) Framework Directive. Those principles are recalled and clarified in some specific Directives such as Access Directive (Art. 8.3) and Universal Service Directive (Art. 3.2).

certainty, transparency and graduated regulation.¹⁵ Moreover, the general principles of EU law always apply, such as subsidiarity and proportionality.

Those principles are generally recognised by the literature as adequate and necessary for regulation in general and in the network industries in particular.¹⁶ Thus, we recommend maintaining those principles and even strengthening them when they are applied too loosely.

1. Non-discrimination and technological neutrality

A basic non-discrimination principle, also referred to as a regulatory ‘level playing field’, implies that all services which are substitutable (i.e. services that compete with one another, when seen from the long-term consumer perspective that we advocate as the main objective), are subject to the same rules, when technologically possible.

In addition, the stronger technological neutrality principle implies that legislation and regulation are sustainable in the face of technological evolution, that competition should not be distorted by regulation and that regulators should not try to ‘pick technology winners’ when intervening in the markets.

2. Reliance on economic analysis

As regulation mainly aims at remedying economic market failures, it should be articulated around economic/functional categories, as opposed to technological or historical ones.¹⁷ One of the major reforms of the 2002 regulatory framework was to anchor access regulation on a Significant Market Power (SMP) regime, which is partly based on competition law methodology. This paved the way for more economic analysis in the application of sector-specific regulation.¹⁸

However, the use of competition law methods and concepts in regulation creates complexity and can lead to methodological distortions to achieve appropriate regulation.¹⁹ Moreover, there is a risk that the analysis under sector-specific regulation suffers from the same shortcomings as competition law analysis, when dealing with dynamic and innovative economic activities,²⁰ i.e. that the market definition and market assessment methods prove too static to catch the competitive phenomena at work.

To alleviate those weaknesses, we recommend basing regulation directly on economic analysis without the use of competition law methodologies as a vehicle (see *infra*, in particular section 3.4.1).

¹⁵ Recitals 44, 10, 11, 58 and 104 AVMS Directive.

¹⁶ Baldwin, Cave and Lodge (2012), CERRE (2014), Decker (2014).

¹⁷ This is also a consequence of technological neutrality.

¹⁸ See the Commission Guidelines of 9 July 2002 on market analysis and the assessment of significant market power.

¹⁹ de Streel (2008), Hellwig (2009).

²⁰ See further below under section 4.3.3. Also Van Gorp and Batura (2015).

3. Proportionality

Proportionality is a general principle of EU law requiring that public intervention does not exceed what is necessary to achieve its objectives.²¹ This principle is applicable – and expressly included – in the current legislation, but is sometimes insufficiently implemented in practice.

The principle should be applied by the legislator when it makes the rules.²² More specifically, proportionality implies that the need for specific legislation is assessed against the background of existing general legislation that may already be applicable. Therefore, specific regulation for digital networks or services should only be adopted when there is a clearly identified market failure that cannot be remedied by existing general rules, such as competition law, consumer protection law, privacy and data protection law, to name but the main ones.

The principle should also be applied by the regulatory authorities when they implement the rules. Therefore, regulators should identify long-term consumer harm before intervening and demonstrate how their interventions remedy such consumer harm.

4. Regulatory predictability

The digital value-chain, especially its network component, is subject to deep and long investment cycles. Since investment incentives may be undermined by regulatory hold-up, investors and operators need a clear and stable regulation. This implies that regulatory actions take investment cycles into account. In substance, investors in the digital value-chain should not be subjected to a level of regulatory risk in excess of comparable investments. This does not imply, however, that the regulatory risk should be zero.²³

2.3.2 Institutional principles: decision chain model and subsidiarity

Currently, regulation is based on a decision chain model whereby the most general legal statements are progressively turned into individual decisions. Starting from the most general level, the main principles are defined in European legislation, which is subsequently implemented in national legislation. These principles are refined through further decisions made by the Commission and/or NRA networks (such as BEREC or ERGA), while the final development, application and enforcement are completed by the NRAs.²⁴

This model is well adapted to an industry subject to rapid and unpredictable technological changes; hence, we recommend preserving it. The implies a legislative framework focused on objectives, principles, institutions and procedures, with a political level giving the general policy directions and the regulators deciding at the ‘lower’ elements of the decision chain.

²¹ Art. 5(3) TUE.

²² See Commission Better Regulation Toolbox, pp. 24-26.

²³ Larouche (2007).

²⁴ Hancher and Larouche (2011).

In this model, regulators have a wide margin of discretion in implementing general rules and principles; hence, they have a strong influence on the regulatory outcome. This is why they need to have appropriate human and financial resources, be independent from those organisations which are regulated, the executive power and the other political forces, and be accountable. They should also respect basic principles of procedural justice ('due process').

In the EU context, this decision chain model should also reflect the principle of subsidiarity, which requires that EU action takes place only when national actions are not satisfactory and when there is an EU-level added value.²⁵ Such added value is higher for digital services, which are often cross-border, than for digital networks whose regulated segments remain in many respects national or local.²⁶ Thus, EU harmonisation and coordination should be stronger for the regulation of digital services than for digital networks.

Main recommendations for the regulatory structure, objectives and principles

- Regulatory structure: one regulatory framework for digital infrastructures and another one for all digital services.
- Regulatory objectives: One overarching objective: the promotion of long-term interests of end-users. Several secondary objectives: promotion of network deployment, innovation, internal market and protection of fundamental rights.
- Regulatory principles: non-discrimination and technological neutrality, reliance on economic analysis, proportionality, regulatory stability, decision-chain model and subsidiarity.

²⁵ Art. 5(3) TEU. Also Commission Better Regulation Toolbox, pp. 21-24.

²⁶ Nicolaides (2006), Defraigne and de Strel (2011).

3. Digital Networks

The proposed regulatory framework for digital networks deals with the infrastructure part of the digital value chain. It covers several policy instruments: radio spectrum policy, access and interconnection, public investment (under State aid control) and universal service. In order to increase connectivity, capacity and innovation, all those instruments should be used with a view to stimulate, in a consistent manner, sustainable and efficient investment – individual or shared – in urban and in rural areas.

However, such supply-side policies should recognise demand uncertainty and avoid relying too heavily on supply-driven targets. It is important that the separation of regulatory and operational functions, a core consequence of liberalisation, is implemented in both directions: just as firms should not dictate regulation, policymakers and regulatory authorities should not take operational decisions on investment in the place of firms.

Moreover, studies have shown that the main reason for Europeans not to subscribe to broadband at home is more linked to their needs, which in turn are linked to the services and applications available on the Internet²⁷ and that actual consumption is linked as much as to available content than to quality and speed of the networks.²⁸ All of this suggest that broadband availability targets should be complemented by demand-side policies stimulating the development of digital use and digital skills.²⁹

3.1 Scope: network infrastructure

The current electronic communications regulatory framework covers the networks and some digital services which were, in the past, closely linked to the infrastructures and offered by the same telecommunications operators. Today, those traditional services are increasingly in competition with other digital services which are not covered by the electronic communications framework.³⁰

To reflect such technology and market evolution, we recommend focusing the electronic communications regulatory framework on the digital infrastructures and the services which are closely associated to the management of those infrastructures. The more traditional telecommunications services should therefore be dealt with in the horizontal digital services regulation. Thus, the regulation of network infrastructures should cover:

²⁷ TNS Opinion and Social (2013).

²⁸ Arcus et al. (2013).

²⁹ As captured in the 6 pillars of the Digital Agenda for Europe. Godlovitch et al. (2015:91-92) also share the importance of demand-side measures next to supply side ones.

³⁰ See Peitz and Valletti (2015) and the preliminary findings of Ecorys et al. (2016).

- The electronic communication networks as currently defined, with small changes to reflect technological development:³¹ *transmission systems and, where applicable, switching or routing equipment and other resources, including network elements which are not active, which permit the conveyance of signals by wire, radio, optical or other electromagnetic means, including satellite networks, fixed and mobile terrestrial networks, electricity cable systems, to the extent that they are used for the purpose of transmitting signals, networks used for radio and television broadcasting, and cable television networks, irrespective of the type of information conveyed*;³²
- A reduced definition of electronic communications services: *Services which consist in the access to, and the conveyance of signals on, electronic communications networks.*³³

3.2 Jurisdiction: the principle of country-of-destination

Currently, the electronic communications regulatory framework is based on the country-of-destination principle, which means that each operator is regulated by (and in) the country or countries where it operates. This implies that operators active in different Member States are subject to several sets of national regulation.

Throughout the years, the European Parliament and the Council never endorsed successive Commission proposals to move to the principle of home-country control.³⁴ However, this is not a major issue for the establishment of the internal market for several reasons: first, the regulated segments of digital infrastructures remain mostly local and do not have strong cross-border dimensions justifying a home-country control principle or the full harmonisation of national rules;³⁵ second, entry regulation is limited as rights of use – which are functionally equivalent to licence requirements – are limited to radio frequencies and telephone numbers.³⁶ Third, several economic and non-economic rules have been harmonised at the EU level.

Therefore, we do not recommend moving to a home-country control principle, provided that the main substantive rules remain harmonised at the EU level and that the imposition of rights of use remains limited to scarce resources. As explained in Section 4, we recommend to keep

³¹ The change consists in the removal of the reference to ‘circuit- and packet-switched’ which was associated to fixed networks.

³² Art. 2(c) Framework Directive.

³³ This definition is close to the definition of Internet access services of the recently adopted Open Internet Regulation 2015/2120: “a publicly available electronic communications service that provides access to the internet, and thereby connectivity to virtually all end points of the internet, irrespective of the network technology and terminal equipment used”.

³⁴ Regarding the last attempt, see Art. 3 of the Proposal of the Commission of 11 September 2013 for a Regulation of the European Parliament and of the Council laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, COM(2013) 627.

³⁵ The cross-border segments of the digital infrastructure such as Internet backbone infrastructure are not regulated as they are effectively competitive.

³⁶ Authorisation Directive.

and extend to all digital services the principle of home-country control, which implies that there will be a differentiation between the regulatory treatment of the digital networks and services leading to possible, but probably manageable, tensions.

3.3 Radio spectrum policy

Currently, radio spectrum policy remains mostly national because of its strategic importance for the Member States. Some progress towards an EU policy has been achieved with the establishment of the Radio Spectrum Policy Group in 2002 and the adoption of the Radio Spectrum Policy Programme in 2012.³⁷ However, given the crucial importance of radio spectrum in the future, for instance for the deployment of 5G, more needs to be done.

To achieve this, we think that assignment procedures can remain national as there appears to be no clearly identified demand for pan-European spectrum.³⁸ However, national procedures should be improved in several Member States on the basis of best practices discovered through national experimentation to ensure an efficient use of spectrum as a scarce resource. They should also be coordinated at the EU level.

Thus, we recommend strengthening the mechanisms for exchanging national experiences and then identifying best practices for spectrum assignment, in particular within the Radio Spectrum Policy Group. This also implies a broader role for the European Commission, among others in data gathering, analysis and support for the Radio Spectrum Policy Group. We also recommend that Member States apply those practices on their territories. That would ensure that each country has an efficient assignment mechanism but also that, each national procedure being similar, the activities of pan-European groups are facilitated. Some best practices already identified are:

- Assignment modes should be open and, *inter alia*, aligned on the type of radio spectrum use;
- Duration of rights of use should ensure regulatory predictability and be aligned with the investment cycles which may be long for digital infrastructures;
- Use of spectrum assignment to achieve objectives other than an efficient allocation of a scarce resource, such as raising public revenues or increasing competition on the mobile markets, should be clearly justified and in several instances limited – following the Tinbergen rule, that each policy instrument should pursue only one objective.

Finally, we recommend better coordination of national assignment procedures at EU level, in order to ease the possible creation of pan-European groups offering network access on a pan-European basis. In particular, the timeframes for the assignments of spectrum whose use is

³⁷ For the references of the legal acts, see at the end of this report.

³⁸ In any case, the political capital costs necessary to get the Member States approve such pan-EU licence does not seem justified compared to the expected benefits. Note however that some authors advocates for pan-EU auctions, for instance Mariniello and Salemi (2015).

harmonised at the EU level should be better coordinated in order to create, for instance, allocation windows (which are able to accommodate national circumstances).

3.4 Network access, Interconnection and Interoperability

Access and interconnection regulation for digital networks deals with two broad categories of access: one-way and two-way.³⁹ The former should be dealt with by regulation which applies asymmetrically only to operators having market power, while the latter should be dealt with by regulation which symmetrically applies to all network operators.

3.4.1 Asymmetric regulation

Currently, access regulation is based on a four-step analysis:⁴⁰ (i) the markets susceptible to ex-ante regulation are selected on the basis of a test of three cumulative criteria identifying market failures that cannot be dealt with efficiently by competition law;⁴¹ (ii) these markets are further defined on the basis of the SSNIP (Small but significant and non-transitory increase in price) test used in competition law; (iii) these markets are then analysed to determine whether one or several operator(s) have a significant market power (SMP), which is similar to dominant position in competition law; (iv) finally, proportionate remedies, which are mainly behavioural, are imposed on SMP operators.

In practice, the Commission identifies the list of markets susceptible to ex-ante regulation with an analysis of the three-criteria test, which is necessarily superficial and without deep knowledge of national circumstances, as it is done for the 28 Member States. Then the NRAs regulate those markets when they find operators having SMP without investigating whether the three-criteria test is met.⁴² They often impose the full suite of behavioural remedies provided for in the Access Directive.

This system has injected economic analysis in access regulation because competition law methodologies are based on the findings of industrial organisation and other areas of economics. It has also ensured harmonisation of the access products, at least for the twisted-pair copper infrastructure,⁴³ because the market selection done by the Commission determines to a large extent the remedies imposed by the NRAs.

³⁹ Laffont and Tirole (2000).

⁴⁰ Framework Directive and Commission SMP Guidelines. See de Strel (2003a).

⁴¹ Commission Recommendation 2014/710. On the three criteria test, see Never and Preissl (2008).

⁴² The NRAs should not determine whether the three-criteria test is met for the markets selected by the Commission: Recital 19 of the Commission Recommendation 2014/710.

⁴³ There is less harmonisation for the regulation of NGA: see Shortall and Cave (2015).

However, such a system also has drawbacks: it leads to complex and cumbersome procedures; it sometimes only pays lip service to competition law analysis;⁴⁴ and finally it may impede useful regulatory experimentation in the choice of remedies. Moreover, the implementation of the system shows that the three-criteria test to select markets, and the proportionality test to select remedies, are not always properly applied⁴⁵ and that, in addition, authorities tend to focus on wholesale markets instead of retail ones, increasing the risks of type I errors (over-enforcement). Moreover, NRAs sometimes favour static over dynamic efficiency, especially when imposing price control.

To remedy those weaknesses, we propose a reform which maintains and even reinforces the use of economic analysis, and allows national regulatory experimentation when it does not undermine the establishment of the internal market. The link with ‘established’ competition law methods should be downplayed, for much the same reasons that these established methods are showing their limits in the application of competition law itself.⁴⁶ We recommend that asymmetric regulation be based on a two-step analysis, which relates firstly to the selection of the bottlenecks in need of regulation and, secondly, to the selection of remedies imposed on those bottlenecks.

Selection of areas for regulation – identifying the sustaining bottlenecks

Instead of going through complex retail and wholesale market selection, market definition and SMP assessment, we recommend that the NRAs directly *identify the sustaining bottlenecks*⁴⁷ which risk creating long-term consumer harm that cannot be prevented efficiently through competition law (or any other general law). This identification should be done on the basis of two cumulative criteria:

- First, the NRA should define the relevant *retail markets and determine whether they tend towards effective competition within the relevant time horizon* of the market analysis. This determination should be done on a greenfield basis, without taking into account the regulatory remedies currently in place, but taking into account any voluntary commercial wholesale offer by a network operator.
- Second, if a retail market does not tend towards effective competition, the NRA should determine whether such a situation is due to the presence of *high and non-transitory*

⁴⁴ Larouche (2002). On the difficulties of applying competition law methodologies, see also Alexiadis (2015).

⁴⁵ Renda (2006), de Strel (2008).

⁴⁶ See Van Gorp and Batura (2015).

⁴⁷ The proposal to base access regulation on a test of bottlenecks was already made during the 1999 Review: see Squire-Sanders-Dempsey and Analysis (1999) as well as Larouche (2000). At that time, it was maybe too soon to base regulation on such concept as the NRAs were not used to apply economic analysis and the reliance on competition methodologies was a more secure way to force them to use economic analysis.

structural, legal or regulatory barriers to entry, making the access to infrastructure objectively indispensable to ensure effective retail competition.⁴⁸

Thus, the new test requires that NRAs start their analysis from the retail markets because that is where the consumers may be harmed⁴⁹ and then go directly to the identification of the market failure justifying regulation.

It could be ventured that the application of this new test is problematic. (i) First of all, it is difficult to apply, especially in an industry evolving rapidly. Hence, there is an important risk of errors (of type I and of type II), whose costs can be very high. (ii) Secondly, it may increase legal uncertainty because of its novelty and because it is not based on ‘well established’ competition law methodologies;⁵⁰ (iii) Thirdly, it may lead to more diversity in access regulation thorough the EU as the identification of bottlenecks is left to NRAs alone without a common pre-selection done by the Commission. This is not necessarily a problem when infrastructures are local and regulatory experimentation is useful, but it could impede the establishment of the internal market when common access remedies are needed.

To mitigate those risks, we recommend the creation of a permanent and independent Regulatory Scrutiny Board jointly appointed by BEREC and the Commission, in order to support the work of the NRAs. Every NRA proposal to identify a bottleneck should be reviewed by the Digital Networks Regulatory Scrutiny Board,⁵¹ with the following steps:

- First, the NRA notifies the sustaining bottlenecks it intends to identify to the Regulatory Scrutiny Board;
- Then, the Board has one month to examine whether the reported bottlenecks meet the two-criteria test (no expected effective retail competition nor barriers to entry making infrastructure access indispensable);

⁴⁸ Alexiadis (2015) propose a reform going in the same direction based on a sector enquiry combined with a criteria for intervention based on the concept on unavoidable trading partner.

⁴⁹ On the need to start the analysis with the retail markets, see Recitals 7-10 of the Commission Recommendation 2014/710 of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation. This was also be recognised by the Advocate General Jacobs in his opinion in the Case C-7/97 *Bronner*, at para 58: *It may therefore, for example, be unsatisfactory, in a case in which a competitor demands access to a raw material in order to be able to compete with the dominant undertaking on a downstream market in a final product, to focus solely on the latter's market power on the upstream market and conclude that its conduct in reserving to itself the downstream market is automatically an abuse. Such conduct will not have an adverse impact on consumers unless the dominant undertaking's final product is sufficiently insulated from competition to give it market power.*

⁵⁰ This risk and its associated costs should be balanced with the costs of using competition law methodologies which are not always fit for regulatory purposes and in need of adaptation to deal with the characteristics of the digital industries.

⁵¹ The Commission has recently set up a regulatory scrutiny board to assess the methodological quality of its ex post and ex ante evaluation for legislative proposals: Decision of the President of the Commission of 19 May 2015, C(2015) 3263.

- If the Regulatory Scrutiny Board agrees with the NRA, bottlenecks may be selected. If the board disagrees with the NRA, the case is remanded for a new analysis to be achieved within one month.

Thus, the Digital Networks Regulatory Scrutiny Board aims to improve the quality of the NRA analysis and contribute to the development of common approaches across Europe. The review mechanism outlined above should replace the current Commission Article 7 review, as the role of the Commission is less justified when the regulatory analysis is no longer squarely based on competition law methods, and the formation of a common regulatory culture is best achieved in a bottom-up manner within BEREC instead of an top-down manner from the Commission.

The Regulatory Scrutiny Board should also adopt general guidelines on the conditions and methodologies to apply the new two criteria test, in order to replace the current Commission market analysis guidelines. Those guidelines should deal in particular with the economic criteria to determine the absence of effective competition, the type and size of entry barriers to be taken into account and the associated criteria for the indispensability of an infrastructure.

Selection of regulatory remedies – Preventing consumer harm

When the NRA identifies a sustaining bottleneck presenting the risk of long term consumer harm, it should impose on the owner of the bottleneck one or several obligations to prevent such harm. The current list of remedies foreseen in the Access Directive (transparency, non-discrimination, accounting separation, compulsory access, price control and functional separation)⁵² is appropriate as it covers all the possible necessary forms of intervention in case of bottlenecks. Thus, we recommend maintaining that list.

We also recommend adding the possibility of placing these remedies under condition precedent, in the case of new investments, where both the investor and the access-seeker have incentives to agree on access terms and conditions. This would imply that the NRA spells out clearly in advance the conditions under which it will intervene later. It is then to be expected that market parties will adapt their behaviour accordingly and privately reach a situation such that they would avert NRA intervention ('bargaining in the shadow of the law'⁵³). This assumes that the condition precedent is designed such that all stakeholders would consider NRA intervention to be a worst outcome – because of transaction costs or otherwise – than reaching a private settlement.

Using a condition precedent would allow for the optimal combination of *ex ante* and *ex post* elements, for the most efficient use of NRA resources, and for the avoidance of rent-seeking behaviour on the part of regulated firms. For instance, the NRA could provide that access obligation will be imposed if no privately negotiated wholesale access product meeting certain

⁵² Arts. 9-13a Access Directive.

⁵³ To borrow an expression introduced by Mnookin and Kornhauser (1979).

criteria (equivalence, etc.) is offered within a defined period. Parties then have the freedom to design the technical aspects and negotiate the commercial aspects of their relationship.

One of the most difficult tasks for a regulator is the choice of appropriate obligations. We recommend that the selection of remedies is based on a strict proportionality principle and limited to what is strictly necessary to prevent the long-term consumer harm. To ensure that this principle is correctly applied and motivated, the NRA should do an impact assessment before choosing the remedy.⁵⁴ For each remedy, the NRA should explain how the imposed obligation changes the market outcome and prevents the identified risk of long-term consumer harm raised by the control of the sustaining bottleneck. In particular, the NRA should analyse the effects of the obligations on the incentives of every operator (the bottleneck owner and the access seeker) to invest (i.e. run an *investment check*). The NRA should also analyse the effects of the obligations on the incentives of the network operators to conclude commercial agreements and choose the obligations that maximise the probability of the conclusion of such agreements.

The choice of remedies by the NRAs presents the same risks as the identification of the bottlenecks: risks of type I and II errors, legal uncertainty and undermining the internal market. To mitigate those risks, we recommend that the justification of the proportionality test in its three aspects (effects on long-term consumer harm, on incentives for investment and on incentives to reach commercial agreements) is also reviewed by Digital Networks Regulatory Scrutiny Board:

- First, the NRA notifies to the Regulatory Scrutiny Board the remedies it intends to impose and the reasons thereof;
- Then, that Board has one month to examine whether the remedies chosen respect the proportionality principle (and are the most appropriate to prevent the risk of consumer harm) and to give a non-binding opinion to the NRA.

Here again, this procedure would replace and simplify the current complex Article 7a review involving the Commission and BEREC.

3.4.2 Symmetric regulation

Currently, symmetric regulation applies to some access issues as well as to interconnection and interoperability issues:

- Firstly, it covers the sharing of *network elements*, such as buildings, masts, antennae, towers, ducts⁵⁵ and has been extended recently to in-building physical infrastructures.⁵⁶ Those provisions have been applied differently by the Member States when regulating

⁵⁴ Also Renda (2006).

⁵⁵ Art. 12 Framework Directive.

⁵⁶ Art. 3 Cost Reduction Directive.

new generation networks.⁵⁷ Some countries, such as France, Spain and Portugal, rely extensively on symmetric regulation to promote NGA deployment, while other countries, such as Germany, the UK and Belgium have not followed that route. This allows experimentation on an issue where the best regulatory practice is not yet clear.⁵⁸

- Secondly, symmetric regulation covers the obligation of network *interconnection and interoperability* to ensure seamless any-to-any connection.⁵⁹

Those provisions work reasonably well and are broadly adapted to the current technology and market evolution; hence, we recommend maintaining them.

Regarding the symmetric regulation of access, some propose to extend the system to additional access issues and to replace, or at least marginalise, asymmetric regulation. We do not recommend such a change which would be a major departure from the current decision chain model. Symmetric regulation should be limited to clear access cases, where there is no need for a case-by-case appraisal by an NRA. We do not think that all access issues are clear enough to be left to symmetric rules.

Regarding the symmetric regulation for interconnection, it does not currently cover fixed and mobile termination which is subject to the asymmetric SMP regime. However, each operator has SMP on its individual network and regulation of termination rates ends up in practice being symmetric. In addition, the economic literature identifies termination as a form of two-way access which therefore should be subject to symmetric regulation. Thus, we recommend that fixed as well as mobile termination should be subject to separate symmetric regulation, until so long as a change in operational conventions (CPP-Calling Party Pays) does not diminish or remove the need for regulation.⁶⁰

3.5 Filling the coverage gap: Public investment and State aid control

One of the most important objectives of network regulation is to ensure connectivity through the whole EU territory. As already explained, the different supply-side and demand-side policy instruments should be used in a coherent manner to stimulate efficient and sustainable private investment. However, some areas will not be covered by private investment as they are unprofitable; hence, public funding is necessary.⁶¹

⁵⁷ Cave and Peitz (2013) observe that 'the request for symmetric regulation suffer from its limited applicability, as different technologies do not allow for the same access regime'.

⁵⁸ See Shortall and Cave (2015).

⁵⁹ Arts. 4 and 5 Access Directive.

⁶⁰ Also in this sense, Marcus et al. (2013: 192).

⁶¹ We recognise that, in closing the digital divide, end-users may also invest in network deployment, often in combination with private and public parties.

Currently, public financing is subject to the control of the Commission under State aid law.⁶² The current system is appropriate and could even be strengthened to fully ensure that public investment is designed to minimise the crowding out of private investments. The public investment should also be designed to minimise the extent of the monopoly position which may result from such investment. Commission control should be exerted in close cooperation with the NRAs which have a better knowledge of national conditions.⁶³

Therefore, we recommend the following procedure in case of public investment for digital networks:⁶⁴

- First, the NRA should regularly do a granular country mapping to determine the areas where no private investment can be expected in the foreseeable future and where there is a need to satisfy a pent-up demand;
- Second, on the basis of such mapping, central or local authorities may decide to finance private or, if not possible, public establishment of high-speed infrastructures. In this case, the national authorities should notify the investment scheme to the NRA and the European Commission;
- Third, the NRA should adopt an opinion on the financing scheme to determine whether the latter minimises the crowding out of private investment as well as the extent of the monopoly which may result from the financing;
- Fourth, the Commission should assess the scheme under State aid law, taking into account the NRA opinion.

3.6 Universal service as a safety net

The concept and the objective of EU universal service

In the EU, universal service has been conceived as a social safety net ensuring that no one would be left behind after the liberalisation of the telecommunications sector.⁶⁵ Its scope is an EU minimum list of services which should be available to all at an affordable price.

Today, the question is whether universal service should be used as an industrial policy tool to ensure new networks deployment in rural areas. We do not recommend this option as it may place the financial burden of network deployment, which can be very high, on the electronic communications sector only.⁶⁶ This is not efficient from a short-run perspective as it distorts resource allocation. It may also have negative long-run consequences as it leads to a decrease in

⁶² EU Guidelines of 19 December 2012 for the application of State aid rules in relation to the rapid deployment of broadband networks.

⁶³ As already recognised in the Broadband Guidelines, para 42-43.

⁶⁴ This is a strengthening of the procedure provided in para 78 of the State aid Broadband Guidelines.

⁶⁵ de Strel (2003: 205-217).

⁶⁶ Marcus et al. (2013: 190) go even further and recommend to consider the phasing out of universal service.

investment incentives (because of a higher ‘universal service tax’). Moreover, it may reduce entry or induce exit in the electronic communications sector, causing competition to suffer. Therefore, we recommend keeping the original conception and goal of universal service as a social safety net and maintaining most the current principles since those have proved to work well, in general, as outlined below.

The scope and characteristics of universal service

Currently, the scope of universal service includes: (i) a connection at a fixed location⁶⁷ capable of supporting voice, facsimile and data communications enabling a functional Internet access, (ii) directory enquiry services and directories, (iii) public pay telephones and other public voice telephony access points, and (iv) equivalent measures for disabled users.⁶⁸ Those services should be affordable and respect quality requirements.⁶⁹

At the EU level, the Commission reviews the relevance of this scope every three years on the basis of a social criterion related to the risk of social exclusion and an economic criterion related to the general net benefit to society. It has, however, not proposed any change until now.⁷⁰ At a national level, many Member States have removed some services from the universal service scope, in particular directories and public payphones.⁷¹

Given those developments and the evolution of technology and markets leading to an increased separation between networks and services, we recommend limiting the scope of universal service to the provision of a network connection permitting a functional Internet access, taking into account prevailing technologies and technological feasibility. When determining the speed and the quality of the universal Internet access, Member State should assess its impacts on possible market distortion raised by the financing of its costs. Leaving aside special measures for disabled users, the other services currently included in the scope of universal service should be removed.

The means of provision of universal service

EU law sets rules for the provision of universal service. Those aim at maximising delivery efficiency:⁷² (i) if the market does not deliver universal service, Member States may *designate* one or more operators to provide part or the whole universal service in part or the whole territory; (ii) in that case, the *net cost* of the universal service is calculated and, if it represents

⁶⁷ This refers to the end-user’s primary residence and not to a specific technology; the latter is not necessarily based on a fixed network.

⁶⁸ Arts. 4- 7 Universal Service Directive. Member States have some flexibility in defining those services, in particular the determination of the data rate of the universal service connection. They may also remove some services which do not meet users’ needs, such as directories or public pay phones.

⁶⁹ Arts. 9-11 Universal Service Directive.

⁷⁰ See COM(2005) 203 and COM(2006) 163, COM(2008) 572, COM(2011) 795.

⁷¹ European Commission (2015b: 21-22)

⁷² Arts. 8-13 Universal Service Directive.

an unfair burden, it should be compensated; (iii) the compensation can be *financed* with a sector fund and/or public funds.⁷³

Those rules function well and they have not led to important costs for the provision of universal service. Therefore, we recommend maintaining those rules with two improvements. (i) First of all, compensation should not be made subject to a prior determination that the net cost represents an unfair burden; a simpler *de minimis* rule might be preferable. (ii) Second, the possible compensation should only be financed by public funds and not by sector funds because the former is normally more efficient than the later for two reasons: public funds financing is based on a broader tax base than sector financing leading to a smaller crowding-out effect through taxes⁷⁴ and public funds financing ensures that the State supports the consequences of its decision regarding the scope of the universal service and does not externalise them on the electronic communications sector.

⁷³ Currently, the majority of the Member States have chosen a sector fund. In addition to the EU universal service, Member States may impose additional mandatory services such as free or below cost Internet access to schools, public libraries or hospitals. Those Services of General Economic Interests (SGEIs) can only be compensated through public funds: Art. 32 Universal Service Directive.

⁷⁴ European Commission (1999) and Hausmann (1998).

Main recommendations for the regulation of digital networks

- Maintain the country-of-destination principle, provided that entry rules are minimal and the main national rules are harmonised at the EU level.
- Strengthen EU institutional mechanisms to exchange, identify and apply best practices for spectrum assignments and better coordinate the national procedures among the Member States to facilitate pan-European networks and services.
- Base asymmetric regulation on the control of a sustaining bottleneck and reinforce the implementation of the proportionality principle in selecting the regulatory remedies, with an assessment of the impact of the obligations on the prevention of long-term consumer harm, as well as on the incentives for investment and incentives to reach commercial agreements between bottleneck owner and access seeker. The identification of bottlenecks and the selection of the remedies should be done by the NRAs, but in close cooperation and with the opinion of a permanent and independent Regulatory Scrutiny Board appointed joint by BEREC and the Commission.
- Maintain the current symmetric rules and extend their scope to fixed and mobile termination.
- Allow public investment for network deployment when there is an unsatisfied pent-up demand, provided that the crowding out of private investment and the possible existence of monopoly are minimised. That should be ensured through State aid control by the Commission, to be exerted in close cooperation with the NRAs.
- Keep universal service as a social safety net and do not use it as an industrial policy tool to promote high broadband deployment financed by the telecom sector only. Ensure that the net cost of the universal service is financed by public funds (and not by a sector fund).

4. Digital Services

As was mentioned earlier, digital services – defined broadly as any service provided over electronic communications networks – are currently subject to a patchwork of legislative instruments at EU level. Their fate depends on whether they qualify as ‘electronic communications services’ (and are therefore subject to the electronic communications regulatory framework), ‘Information Society services’ (and therefore subject to Directive 2015/1535 and the e-commerce Directive 2000/31) or ‘audiovisual media services’ (and therefore subject to AVMS Directive 2010/13). The first definition is meant to be exclusive of the last two, but the last two are partially overlapping. When compared to digital networks, as discussed in the previous heading, it is apparent that no effort at legislative simplification and organisation has yet been made for digital services.

In addition, issues relating to digital services continue to feature on the political agenda. In recent years, the EU and its Member States grappled with network neutrality, leading among others to the enactment of the Open Internet Regulation in 2015. Now, pressure is mounting for legislative intervention concerning ‘online platforms’, however they may be defined.

In order to maintain coherence in the treatment of digital services, to avoid misguided spur-of-the-moment legislative initiatives and to avert fragmentation of the Internet market, we recommend the introduction of a general EU legislative instrument to govern digital services. This should establish fundamental principles and create a point of reference for any policy discussions.

That instrument should be based on the following principles:

- i) Digital services are subject to *home-country control*, so as to create a one-stop environment for digital service providers;
- ii) Digital services are governed by applicable general legislation (competition law, consumer protection law, data protection and privacy law, etc.), and hence *any legislation concerning digital services is subject to a strict requirement of added value over and above existing general legislation*;
- iii) Digital services require *strong and effective enforcement of general and specific laws*, with a commitment from the EU and Member States to dedicate sufficient resources to understand the market functioning and the competitive dynamics of the digital services as well as the application of the rules to traditional and more novel issues.

Each of these principles is reviewed in turn below, after a brief discussion of definitional issues.

4.1 Scope: all digital services

Currently, three different regulatory frameworks deal with digital services:

- The electronic communications regulatory framework deals with *electronic communications services*, defined as a “service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting, but exclude services providing, or exercising editorial control over, content transmitted using electronic communications networks and services; it does not include information society services (...) which do not consist wholly or mainly in the conveyance of signals on electronic communications networks”;⁷⁵
- The Audiovisual Media Services Directive deals with *audiovisual media service*, which is a “service as defined by Articles 56 and 57 TFEU which is under the editorial responsibility of a media service provider and the principal purpose of which is the provision of programmes, in order to inform, entertain or educate, to the general public by electronic communications networks (...), and an audio-visual commercial communication”;⁷⁶

This category of services is itself divided into two sub-categories:

- *Television broadcasting (i.e. a linear audiovisual media service)* is ‘an audiovisual media service provided by a media service provider for simultaneous viewing of programmes on the basis of a programme schedule’.⁷⁷
- *On-demand audiovisual media service (i.e. a non-linear audiovisual media service)* is ‘an audiovisual media service provided by a media service provider for the viewing of programmes at the moment chosen by the user and at his individual request on the basis of a catalogue of programmes selected by the media service provider’.⁷⁸
- The E-commerce Directive deals with *Information Society service*, defined as “any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services”.⁷⁹

This distinction between the three types of digital services was introduced in the nineties when the Internet was still in its infancy. Given the current substitutability between digital services, the distinction is less justified and is more difficult to implement.⁸⁰ For instance, the 2007 reform of audiovisual media services directive introduced the notion of ‘non-linear audiovisual media

⁷⁵ Art. 2(c) Framework Directive.

⁷⁶ Art. 1(a) AVMS Directive.

⁷⁷ Art. 1(e) AVMS Directive.

⁷⁸ Art. 1(g) AVMS Directive.

⁷⁹ Art. 1(1b) Directive 2015/1535.

⁸⁰ See BEREC (2015a) for a categorisation of OTTs. Also Godlovitch et al. (2015).

services', most of which also qualify as 'Information Society Services', therefore subjecting them to two different sets of rules. More recently, the discussion around the treatment of OTTs showed that competing services could end up falling in different regulatory boxes, leading to undesirable market distortions.

Therefore, we recommend articulating the regulation of digital services around a global definition, in order to ensure consistency, a level-playing field and technological neutrality.⁸¹ On that basis, we recommend that a single instrument applies to all 'digital services', defined as *any service provided at a distance, using electronic communications networks*.⁸² There is no explicit reference to remuneration as digital services are no longer always remunerated with money, but also with valuable data. This definition of 'digital service' would include all 'Information Society services', all 'audiovisual media services' and most 'electronic communications services'. As regards the latter, the very basic service consisting in the transmission of data over electronic communications networks as such, would remain under electronic communications regulation. Accordingly, it might be advisable to exclude that basic service from the definition of a 'digital service' in order to avoid that service being subject to two different sets of rules. Furthermore, services that are non-economic, i.e. provided on a private, small-scale, non-commercial basis, should be excluded from the definition.⁸³

4.2 Jurisdiction: home-country control

Currently, audio-visual media services and information society services are governed according to home-country control principle.⁸⁴ Home-country control implies that every provider is subject to the jurisdiction of one, and only one, Member State. Electronic communications services, however, are subject to the country-of-destination principle.

The implementation of home-country control has been central in ensuring the development of digital services in Europe and contributing to the digital single market, as it allows the services to circulate freely between Member States.⁸⁵ This principle allows for simplicity and clarity for service providers. It is necessary to avoid protectionist measures or measures that would compromise the delivery of cross-border and pan-European services.

⁸¹ Also Fabra et al. (2014:34).

⁸² See also Art. 3 of the proposal of the Commission of 9 December 2015 for a directive on certain aspects concerning contracts for the supply of digital content refers to "*any contract where the supplier supplies digital content to the consumer or undertakes to do so and, in exchange, a price is to be paid or the consumer actively provides counter-performance other than money in the form of personal data or any other data*". Note that Rossi (2015:9) proposes a similar definition: digital services are any services provided at a distance and by electronic means.

⁸³ As is made explicit, for instance, in the AVMS (Recital 21).

⁸⁴ Resp. Art. 3 AVMS Directive and Art. 3 of the E-commerce Directive.

⁸⁵ Results consultation; Also Fabra et al. (2014:38).

Undermining the strength of the home-country control principle could heavily destabilise or undermine the choices made by providers in terms of establishment.⁸⁶ It would also impact (and add complexity to) the organisation, efficiency and streamlining of their overall European operations. As this would add complexity and fragmentation to a regulatory framework that we wish to see moving towards more coherence and integration, we do not support this option. Any concerns relating to the effect of home-country control should be addressed by a consistent move towards more harmonisation of the regulatory framework and more cooperation between NRAs.

Indeed, we recommend not only that home-country control be maintained for audio-visual media services and Information Society services, but that it be extended to all digital services, including many of the current electronic communications services. We recognise that, in order for an extension and strengthening of home-country control to be politically acceptable, it must be part of a broader package including harmonisation of substantive rules, trust-building measures between Member States and the possibility of exceptions when important public interests are at stake.

In that context, two important measures could be taken to improve the functioning and the legitimacy of home-country control.

First of all, while EU-based providers are automatically subject to the jurisdiction of the Member State in which they originate, **non-EU providers** typically begin operations in the EU with an existing base outside the EU. Of course, once their presence in the EU reaches a certain level, they usually have to ‘establish’ themselves inside the EU (within the meaning of EU law).⁸⁷ Non-EU providers might be able to have an influence over which Member State they are established in; at the same time, the AVMS Directive offers a useful model for rules to simplify the determination of the Member State of establishment⁸⁸ and circumscribe the ability of providers to ‘choose’ their home country. Non-EU providers offering digital services in the EU should be compelled to elect an establishment in one of the Member States on the basis of such a set of simple rules and with a *de minimis* exemption, so as to be bound to comply with the harmonised EU rules. This would alleviate important competitive distortions and ensure that fundamental EU values are effectively protected.

Secondly, in addition to forcing non-EU providers to subject to the jurisdiction of an EU Member State, in line the simplified rules for ascertaining the home country recommended in the previous paragraph, **all providers should be obliged to formally declare their Member State of**

⁸⁶ In the recent consultation on the AVMS Directive, some participants advocated measures which, while recognising the merits of the home-country control principle, would nevertheless allow the imposition of some obligations (i.e. promotion of domestic/European works) on a country-of-destination (reception) basis. Others proposed the modification of the jurisdictional criteria.

⁸⁷ I.e. they pursue an activity on a stable and continuous basis in one or more Member State(s), within the meaning given to establishment in Case C-55/94, *Gebhard* [1995] ECR I-4165.

⁸⁸ These rules centre around the location of the head office and the location where the editorial decisions are made: AVMS, Article 2.

establishment, as it results from the application of the jurisdictional rules of EU law. In other words, the ‘home-country’ should be specified at the outset, and not left for determination if and when litigation arises. Here as well, in order to avoid that providers try to game the home-country control system, their **declaration should be open to revision**. The AVMS Directive offers a model for dealing with abusive conduct regarding establishment.⁸⁹ Furthermore, as is done under competition law when it comes to choosing which NRA will deal with a complaint,⁹⁰ a mechanism could be put in place whereby NRAs, in consultation with one another, can override any declaration by a firm and declare which NRA exerts jurisdiction over a given firm.

4.3 The primacy of general legislation

Currently, all (digital and non-digital) services offered in the EU are subject to several general rules regarding freedoms of movement (in particular services and establishment),⁹¹ consumer protection, competition, copyright, personal data protection and security.⁹² Many of those rules have recently been strengthened (for instance, personal data protection⁹³ and security⁹⁴) or are expected to be amended and possibly strengthened (for instance, consumer protection⁹⁵ and copyright⁹⁶). In addition, each of the three types of digital services is subject to complementary specific regulations⁹⁷ which strengthen consumer protection or pursue other public interests, such as media diversity.

In line with the principle of proportionality, it is imperative that specific legislation is subject to a strict test as to whether it adds any value over and above existing general legislation. That strict test cannot be a mere formalistic test on the legal texts; it must also encompass implementation issues. This is why, as discussed further below, the EU and its Member States must commit sufficient resources to the enforcement of general legislation when it comes to digital services. Otherwise a failure at the enforcement level opens the door to the enactment of specific legislation (which in turn might not be sufficiently well enforced), a scenario that can hardly be satisfactory.

Against that background, we find that much of what is currently included in the specific legislation on digital services could be simplified or withdrawn in favour of more general

⁸⁹ AVMS Directive, Article 4.

⁹⁰ Regulation 1/2003, Article 11.

⁹¹ Arts 49-55 TFEU for the freedom of establishment and Arts 56-62 for the freedom to provide services, complemented by Service Directive 2006/123.

⁹² Several of those legal instruments are mentioned at the end of this report.

⁹³ See the 2016 General Data Protection Regulation.

⁹⁴ See the 2016 Network Information Security Directive.

⁹⁵ See Consumer acquis review.

⁹⁶ Communication from the Commission of 9 December 2015, Towards a modern, more European copyright framework, COM(2015) 626.

⁹⁷ Universal Service Directive and Open Internet Regulation, AVMS Directive and E-commerce Directive. For a Table comparing the obligations of the three directives, see Godlovitch et al. (2015: Annex 2).

legislation. This includes, for instance, specific consumer protection measures, including those found in Universal Service Directive inasmuch as they relate to services that would now fall under digital services, such as voice telephony. Similarly, to the extent that much of the measures of E-Privacy Directive concern digital services, there is every reason to question their continuing usefulness, against the backdrop of the upcoming General Data Protection Regulation.

Moreover, the primacy of general legislation should apply not only within EU law, but of course to Member State legislative initiatives as well. Accordingly, we recommend a strengthening of Directive 2015/1535. First of all, its scope of application should be extended to all digital services, and not only include Information Society Services. Secondly, a requirement should be added whereby national legislative proposals concerning digital services that do not offer added value as compared to existing general legislation can be vetoed by the Commission.

In sum, we recommend the regulation of digital services to be organised around three layers. These should be defined on the basis of the characteristics of the regulated services; they should also be consistent with each other.

- The first layer concerns the *general rules* applicable to all services, being digital or non-digital. It is made of the service *acquis*. They are not further dealt with here
- The second layer concerns the *specific rules* applicable to all digital services when they raise additional public policy issues, in particular regarding consumer protection.
- The third layer concerns the *specific rules* applicable to the audiovisual media services.

4.3.1 Specific rules on digital services

The specific rules for digital services consist in a streamlining of the current rules of the electronic commerce, the universal service and the audiovisual media directives based on the following two principles: (i) EU specific rules applicable to digital services should not duplicate the EU general rules applicable to all services (which have been recently strengthened), (ii) specific rules should only be adopted when necessary and proportionate, i.e. the digital service should have particular characteristics justifying public intervention.⁹⁸

On that basis, the following issues are most likely to appear under such specific rules.⁹⁸ However, in line with our principle of primacy of general legislation, further study is needed (which goes beyond the scope of this report) to ascertain whether existing general rules are not already sufficient to deal with these issues.

- transparency and information on consumer contractual conditions (in particular on price and quality),⁹⁹ as well as minimum quality requirement for essential digital services,¹⁰⁰

⁹⁸ For another interesting proposal, see Rossi (2015).

⁹⁹ Based on Arts. 20-22 USD, Art. 5 AVMSD, Arts. 5, 6, 10 ECD

¹⁰⁰ Arts. 22-23 USD

- limitation on commercial communications or equivalent (such as sponsorship and product placement),¹⁰¹
- consumer dispute resolution,¹⁰²
- specific protection rules for minors,¹⁰³ as well as special measures for disabled users,¹⁰⁴
- prohibition of incitement to hatred,¹⁰⁵
- portability of digital identity components, such as telephone number,¹⁰⁶
- organisation of the numbering space,¹⁰⁷
- limitation of intermediaries' liability,¹⁰⁸
- interoperability.

4.3.2 Additional specific rules on audio-visual media services

The distinctive feature that singles out audiovisual media services is the presence of audiovisual content.¹⁰⁹ There is a case for leaving in place additional specific rules for such services, in particular as regards the European works and the access to events of major importance for society.

However, we recommend that, within this set of rules, the silos of linear and non-linear services be abandoned. The distinction between linear and non-linear was already problematic in 2007 from the point of view of technological neutrality, as it meant that different regulations are applied to services depending on the technicalities of delivery. Since then, this silo-based approach has become even more problematic. Connected TV's and internet websites or portals allow for the delivery on the same screen of linear (heavily regulated) content, non-linear (lightly regulated) content, and non-regulated content (for example content which falls outside the scope of the AVMS Directive by not meeting the material or the geographical criteria). Furthermore, the increased sophistication of user interfaces makes the consumption of linear or non-linear content (and the shift between them) increasingly seamless.

Regulation that is applied differently to different types of content delivery creates market distortions, especially with the financing of these programs through commercial communications. Above all, differential treatment might mislead consumers about the level (and the effectiveness) of the protection provided on the screen. Continuing to apply different

¹⁰¹ Arts 9-11 and 19-26 AVMSD, Art. 6 ECD.

¹⁰² Art. 34 USD, Art. 17 ECD

¹⁰³ Art. 12 and 27 AVMSD

¹⁰⁴ Art. 23a USD

¹⁰⁵ Art. 6 AVMSD

¹⁰⁶ Art. 30 USD for phone number portability

¹⁰⁷ Arts. 26-28 USD.

¹⁰⁸ Arts 12-15 ECD.

¹⁰⁹ As stated in the recital 5 of the AVMS Directive, “audiovisual media services are as much cultural services as they are economic services” and “their growing importance for societies, democracy — in particular by ensuring freedom of information, diversity of opinion and media pluralism — education and culture justifies the application of specific rules to these services”..

regulatory frameworks for the same content, visible on the same screen and thus targeting the same audience is therefore inappropriate. When services merge on the same device, regulation should also merge.

Moving rules on consumer protection and on protection of minors to the horizontal layer already solves these issues. When it comes to the issue of promotion of, and access to, European works, the tension could be relaxed by introducing more flexibility for the providers in their choice of measures of promotion of European works, replacing quantitative measures by qualitative ones which, even if different in practice between linear and non-linear services, would in principle have the same public interest objective.

4.3.3 No additional, specific rules on online platforms at this stage

Our approach can also be used to assess the need for specific rules concerning online platforms. The Commission has recently launched a major debate to determine whether online platforms should be subject to specific rules, in addition to the existing rules.

In its public consultation, the Commission defines the online platform as *undertakings operating in two (or multi)-sided markets, which uses the Internet to enable interactions between two or more distinct but interdependent groups of users so as to generate value for at least one of the groups.*¹¹⁰

This definition is controversial, as it is not clear why the Commission emphasises that there must be at least two groups to interact. Using a broader definition, a platform enables at least one group to interact within the same group or with another group.¹¹¹ The key features are within-group or cross-group external effects, which arise because each participant's benefit from joining and using a platform depends on the decision of other participants. Therefore, for us, online platforms cover a range of different digital services which have one common characteristic: the interaction within or across groups active on the platforms.

More generally, the definition proposed by the Commission suffers from two significant shortcomings from a legislative policy viewpoint: first of all, it brings together a series of phenomena that might not share much more than the definition (Google, Facebook, Expedia, Amazon, Uber, etc. operate according to different business and technical models). Secondly, and

¹¹⁰ Commission public consultation of September 2015 on Regulatory environment for platforms, online intermediaries, data and cloud computing and the collaborative economy. The Commission notes that some online platforms may qualify as intermediary service providers.

¹¹¹ Peitz and Valletti (2015) provide a categorisation of digital platforms which includes platforms on which members of a single group interact with each other. As platforms evolve they may change features and move into a different category. For instance, initially Amazon was purely an online retailer, where within-group external effects were present because of Amazon's rating and recommender system for the products it offers. With the increasing importance of Amazon Marketplace, Amazon has become a two-sided platform allowing for the interaction between sellers and consumers.

most importantly here, it does not single out phenomena that raise distinctive issues as compared to phenomena outside of the definition.

The Commission asks whether online platforms should be subject to specific rules, in particular regarding “(i) transparency e.g. in search results (involving paid for links and/or advertisement), (ii) platforms' usage of the information they collect, (iii) relations between platforms and suppliers, (iv) constraints on the ability of individuals and businesses to move from one platform to another and (v) how best to tackle illegal content on the Internet”.¹¹²

For us, the interaction within or across groups active on the platforms, which is the unique common characteristics of online platforms, does not require specific regulation. Therefore, at this stage, we do not see a need to define online platforms as a new category of digital services and to subject them to specific obligations.

In particular, at this stage of technology and market development, we do not see any particular functionality along the digital value chain that is non-replicable and essential for the whole ecosystem, and which would as such justify access regulation. The tendency of platform markets to become concentrated (and possibly monopolised) is a result of the often positive feedback effects between participants (within a group or across groups). From society's point-of-view such concentration is desirable because it implies that these positive feedback effects materialise; of course, it comes at the risk of higher prices. While a large customer base may appear difficult to overcome, a platform's incumbency advantage can be illusionary. Information about consumer behaviour can quickly become outdated and, even if not so, there are often other powerful platforms with a wealth of similar information on consumer behaviour in related markets which are potential competitors.

It is often said that competition *in* the market is replaced by competition *for* the market; yet something even more fundamental might be at work, namely competition amongst platforms for defining the market on their terms. Even if well-known online platforms hold significant market positions on a narrowly defined market comprising the services they offer, this is not the end of the competitive game. These platforms are also jockeying amongst each other to occupy a central position in the broader digital service environment. Each of them tries to pull the carpet from under the feet of the others, so to say, and turn those others into locally powerful, yet globally marginal players. The presence of a number of platforms at different places in the broader digital service environment, each fighting for a central position, might indicate a lively level of competition that is not necessarily caught using classical competition law analysis.

That does not imply that we are calling for an ‘online Wild West’, as online platforms are subject to general economic regulation (in particular competition law and consumer protection rules), and they would fall under the ‘digital services’ category, meaning that they are subject to the

¹¹² DSM Communication, p. 12.

specific rules for digital services,¹¹³ and if they qualify as an audiovisual media service, to the specific rules for such services.

The implementation of those rules should take into account the specific characteristics and competitive dynamics of those platforms. Some of them, in particular the multi-sided relationship between markets, are better understood by economic theory¹¹⁴ and tend now to be more and more applied by the competition and regulatory agencies, although not always.¹¹⁵ Others, such as the relationship between past and current personal data, are less understood and in need of further research. In particular, competition law and policy, while sufficient in theory to deal with a number of issues relating to online platforms or digital services in general, might need to evolve.

In addition, from a European industrial perspective, the chances of success of EU online platforms would certainly be increased through the application of our proposed framework for digital services, since the main legal obstacles for EU-based firms are legal barriers to entry and fragmentation, both of which hamper firms in quickly scaling up to the EU level. The greater emphasis on general legislation could help in dealing with the first issue, and the greater use of home-country control will alleviate part of the latter issue.

4.4 Commitment to effective enforcement

Finally, the last plank of our proposal is a commitment on the part of the EU and its Member States to dedicate sufficient resources – in terms of both money and personnel – to the enforcement of existing legislation concerning digital services.

There is no doubt that many breaches of competition law, privacy and data protection law or consumer protection law, to name but the main ones, are taking place in the digital service environment. These breaches often go unpunished, for lack of enforcement resources. At this juncture, there are too many Type I (over-enforcement) and Type II (under-enforcement) errors being committed.

This leads to a perception, among users, that user rights are not sufficiently protected in the digital service environment. Firms are also affected: law-abiding firms feel that they cannot compete with firms that flout the law and go unpunished.

As these perceptions grow and gain political momentum, it becomes very difficult to address them by referring to the existence of an adequate legal framework, if that very framework has not been enforced properly. Accordingly, calls for urgent legislative intervention quickly arise, and with them the risk that intervention will be punctual and misguided, as we have already witnessed in the past.

¹¹³ At this point in time, many platforms offer ‘Information Society services’ and are thus covered by the e-commerce directive and its implementation in the laws of the Member States.

¹¹⁴ E.g. Evans and Schmalensee (2015) and Belleflamme and Peitz (2015, chapter 22).

¹¹⁵ An example is the treatment of online hotel booking platforms in some Member States.

Accordingly, if the primacy of general legislation is to be emphasised more strictly, as recommended by us, the enforcement of such general legislation must be sufficient and adequate. This requires a commitment on behalf of the EU and its Member States to dedicate the necessary resources, on the one hand, to understand digital services in order to be able to reach the right enforcement decisions and, on the other hand, to investigate and punish breaches of the rules, .

Main recommendations for the regulation of digital services

- ⊕ Simplify and streamline regulation by merging all the specific rules on digital services into a single directive, which would rest on the principles of (i) home-country control, (ii) primacy of general legislation and (iii) commitment to effective enforcement.
- ⊕ Maintain and extend the home-country control principle for all digital services, with a strengthened harmonisation of national rules regarding main and common public concerns and a consolidation of the EU networks of national authorities, in particular BEREC and ERGA. Ensure that operators established outside the EU and offering digital services in the EU comply with harmonised EU rules.
- ⊕ EU rules for digital services should not duplicate the existing general rules applicable to all services (internal market law and the Services Directive, competition law, consumer protection law, privacy and personal data protection law, copyright rules and security rules) and should be limited to what is strictly necessary given the specific characteristics raised by the digitalisation of the services.
- ⊕ Additional EU rules for audio-visual services may be foreseen given the cultural and political importance of the media, but only when strictly necessary, and without distinguishing between linear and non-linear services any longer.
- ⊕ At this stage of technology and market development, specific rules for online platforms are not justified, but the issue may need to be revisited in the future with a better understanding of the competitive dynamics of those platforms and the effectiveness of the existing rules (in particular competition law and consumer protection law).
- ⊕ The EU and Member States should commit to dedicate sufficient resources to the enforcement of existing legislation, and to better understand the functioning of the digital ecosystem and the novel issues it raises.

5. Institutional Design

Given the pervasiveness of regulation, the multiplicity of regulators along the digital value chain and the wide margin of discretion for those regulators (because rules are principles-based), it is crucial that the institutional design at the national level and at the EU level is appropriate and effective.

5.1 National Regulatory Authorities

Currently, multiple EU legislation applying to the digital value-chain imposes the establishment of several national regulators with different degrees of requirements relating to their characteristics, operations and procedures:

- The electronic communications regulatory framework¹¹⁶ imposes the establishment of a national regulatory authority for telecoms. It is the most comprehensive in the specification of the NRA characteristics.¹¹⁷ NRAs should have: (i) *expertise*, which implies *inter alia* having sufficient human and financial resources, (ii) *independence*, from the operators to alleviate obvious conflicts of interest and from the executive and legislative to ensure that decisions reflect the long-term interest of the industry and end-users, (iii) *accountability* to the Parliament and their decisions should be subject to judicial review before an independent court.
- The Audiovisual Media Services Directive also imposes the establishment of national media regulators but it does not deal with their characteristics. In particular, there is no clear requirement for independence,¹¹⁸ while such independence from the executive is even more at risk than for the regulator of electronic communications given the influence of media services on the formation of public opinion.
- The e-commerce directive does not impose the establishment of a specific regulator (as it does not provide for many specific obligations).

Finally, several general pieces of EU legislation impose the establishment of a national regulator to ensure their implementation. The General Data Privacy Regulation imposes the establishment of a national data protection authority which should have adequate human and financial resources and be independent.¹¹⁹ The NIS Directive provides that each Member State should designate a competent authority on the security of network and information systems which

¹¹⁶ Arts 3-4 Framework Directive.

¹¹⁷ Those requirements reflect the literature on good governance, see among others: CERRE (2014).

¹¹⁸ Art. 30 AVMS Directive refers to the independent regulatory bodies, but no specific safeguards are provided.

¹¹⁹ Chapter VI GDPR.

should have adequate financial and human resources.¹²⁰ EU competition law imposes the establishment of a national competition authority.¹²¹

Each national regulator is subject to different EU requirements on their characteristics (in particular independence) and powers (in particular collecting information and sanctioning) due to the autonomous development of each piece of legislation. However, those variations are not always justified by differences in regulatory tasks and may lead to distortions in the regulatory process when one authority in the regulatory value chain is not independent enough or does not have sufficient powers or competences. Therefore, we recommend that the EU requirements on the characteristics of each regulator are streamlined as much as possible and based on best practices, often those applied in the electronic communications regulators. Hence, we recommend stepping up the independence and the power of the media regulator to the level of the one currently provided for the telecoms regulator.

Moreover, the multiplicity of EU legislative instruments leads to a series of authorities in the regulatory value chain. In some Member States, the coordination between those regulators is weak and it does not lead to a coherent set of decisions over the whole digital ecosystem. Therefore, we recommend that all the regulators involved in the supervision of the digital value chain coordinate to ensure consistent regulatory approaches and decisions. This is particularly important for the media and the telecom regulators, which are specific to the digital ecosystem. They could be integrated as is the case in the UK or Italy, or at least cooperate very closely.

EU law cannot, and should not, impose such regulatory cooperation or integration because of the principle of Member States' procedural autonomy, and the related need to leave each country to set up an institutional design that fits best its constitutional and administrative structures. However, the EU institutions can stimulate exchange of best administrative practices between Member States and, on that basis, adopt a recommendation on the cooperation between regulators for a consistent and effective supervision of the digital sector.

5.2 EU mechanisms for coordination of national rules

General coordination mechanisms in the European Union

EU law has several mechanisms to ensure the coordination of the national rules and regulators:

- The first mechanism takes place at the *jurisdictional level*. It is based on the principle of home-country control. It implies that an operator is only regulated in the country where it is established and may provide its services to all the other Member States.

¹²⁰ Art. 6 NIS Directive.

¹²¹ Art. 35 Regulation 1/2003. There is currently a consultation on the review of Regulation 1/2003 to empower the national competition authorities to be more effective enforcers: http://ec.europa.eu/competition/consultations/2015_effective_enforcers/index_en.html

- The second mechanism takes place at the *legislative level*. It is based on EU harmonisation of national rules. Such harmonisation may be minimal when Member States can add national rules, or maximal when they cannot. Harmonisation may be achieved with hard law (regulations, directives or decisions) or merely soft law acts (such as recommendation or guidelines).
- The third mechanism takes place at the *agency level*. It is based on the establishment of networks of national regulators, possibly also with the Commission, to exchange information, build common trust or develop common and best regulatory practices.¹²²

Those three mechanisms are not independent from each other:

- When the principle of the home-country control is applicable, it often requires, to be politically acceptable, a harmonisation of the national rules protecting common and important public interests, confidence that the regulator in the home country effectively implements those rules and objective criteria determining the place of establishment and addressing abusive gaming of the home-country control system.
- When the principle of home-country control is not applicable, it may require additional harmonisation to alleviate that pan-European operators facing multiple and divergent rules and/or require the establishment of EU networks of national regulators to develop common regulatory approaches.

The current coordination mechanisms for the digital networks and services

Currently, those three mechanisms are used to coordinate the specific and general regulations applicable to the digital value-chain.

- For *electronic communications networks and services*, the regulatory framework does not apply the principle of the home-country control. It harmonises some national rules, mainly with directives and Commission recommendations. It also establishes two EU networks of national authorities: the Body of European Regulators for Electronic Communications (BEREC) which contributes to the development of common and best regulatory approaches and assists the EU institutions (in particular the Commission) and the NRAs in fulfilling their respective tasks,¹²³ and the Radio Spectrum Policy Group (RSPG) which coordinates the radio spectrum policies of the Member States.¹²⁴
- For *audiovisual media services*, the AVMS Directive relies on the principle of home-country control. It harmonises some national rules, mainly for consumer protection.

¹²² Coen D. and Thatcher M. (2008); Lavrijssen S and Hancher L. (2008).

¹²³ BEREC Regulation.

¹²⁴ Commission Decision 2002/622 of 26 July 2002.

Recently, an EU network of national media regulators (ERGA) has been set up by the Commission to ensure a consistent implementation of the Directive.¹²⁵

- For *information society services*, the e-commerce directive also relies on the principle of home-country control and harmonises some national rules. It also provides for cooperation between the national contact points to ensure a smooth exchange of information between the Member States.¹²⁶

In addition, the general EU legislation applicable to the digital value-chain establishes EU networks of national authorities. The GDPR sets up the European Data Protection Board (EDPB),¹²⁷ EU competition law establishes the European Competition Network (ECN), the NIS Directive establishes a cooperation network between security authorities, and EU consumer laws provide for cooperation between consumer authorities.¹²⁸

Thus, the three specific regulatory frameworks rely on different principles, levels and means of harmonisation and EU networks of authorities. Such a patchwork of coordination mechanisms is better explained by the autonomous development of each set of legislation rather than by a coherent and rigorous analysis of the different needs of EU coordination and the most effective manner to achieve them. However, the tools for coordination broadly reflect the needs for coordination and they are consistent with each other, hence set good foundations for our recommendations.

Recommended coordination mechanisms for digital networks and services

For digital networks, we recommend to maintain the foundations of the current coordination systems based on the country-of-destination principle, combined with harmonisation of the main national rules and networks of national authorities because local networks are not susceptible to cross-borders trade and regulatory experimentation is needed.

However, to improve the functioning of such system, we recommend three reforms:

- Firstly, to strengthen the role of the RSPG and the Commission in coordinating national spectrum policy (see *supra* section 3.3).
- Second, to replace the Commission and BEREC review of the NRAs decisions imposing asymmetric regulation with a review done by an independent Regulatory Scrutiny Board appointed jointly by BEREC and the Commission (see *supra* section 3.4);
- Third, to improve the effectiveness of the BEREC secretariat, possibly by setting up part of its activities in Brussels to facilitate its coordination with the EU institutions.

For digital services, the need for EU coordination is stronger and this is best achieved at the jurisdictional level, with the application of home-country control. For this principle to be

¹²⁵ Commission Decision of 3 February 2014.

¹²⁶ Art. 19 e-commerce Directive.

¹²⁷ Chapter 7, section 3 of the GDPR.

¹²⁸ Regulation 2006/2004 on consumer protection cooperation.

acceptable, it needs to be accompanied by a harmonisation of the national rules safeguarding the main public interests and sufficient mutual trust that the home regulator implements those rules properly. In that respect, the principle of primacy of general law can alleviate trust issues by referring to established substantive law. Such trust should be built and ensured within EU networks between national regulators. This is broadly the case today for audiovisual media and information society services.

Thus, we recommend maintaining the current coordination mechanisms and extending them to all digital services. We also recommend increased harmonisation of some rules and the consolidation of the recently created EU network of media regulators.

Moreover, given the multiple regulators supervising the digital value-chain, each of them being part of a different EU network of agencies (BEREC, RSPG, ERGA as well as EDPB, ECN), it is also important that those networks continue and strengthen their cooperation, *inter alia* with joint working groups on common issues to ensure an effective and coherent implementation of EU and national rules.

Main recommendations on the institutional design

- The characteristics and the powers of each national regulatory authority should be based on good governance principles. In particular, NRAs should have sufficient human and financial resources, be independent and accountable. They should also have sufficient investigation and sanctioning powers.
- All the regulators involved in the supervision of the digital eco-system should coordinate their decisions to ensure regulatory consistency. This coordination is particularly needed between telecom and media regulators.
- The EU coordination mechanisms for the regulation of digital networks should be based on the principle of the country-of-destination, provided the main rules are harmonised and that Commission, BEREC and RSPG ensure an exchange of best practices and develop common regulatory approaches. The Commission review of the draft NRA decisions for the SMP regime should be replaced by a review by an independent Digital Networks Regulatory Scrutiny Board to be jointly appointed by BEREC and the Commission.
- The EU coordination mechanisms for the regulation of all digital services should be based on the principle of the home-country control, accompanied by a strengthened harmonisation of rules, protecting public interest and promoting mutual trust between Member States based on EU networks of authorities.

List of legal acts

Regulatory framework for electronic communications

Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (**Framework Directive**), OJ [2002] L 108/33, as amended by Directive 2009/140.

Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services (**Authorisation Directive**), OJ [2002] L 108/21 as amended by Directive 2009/140.

Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and services (**Access Directive**), OJ [2002] L 108/7 as amended by Directive 2009/140.

Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (**Universal Service Directive**), OJ [2002] L 108/51, as amended by Directive 2009/136.

Commission Guidelines of 9 July 2002 on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, OJ [2002] C 165/6.

Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (**Directive on privacy and electronic communications**), OJ [2002] L 201/37 as amended by Directive 2009/136.

Commission Decision 2002/622 of 26 July 2002 establishing a **Radio Spectrum Policy Group**, OJ [2002] L 198/49.

Regulation 1211/2009 of the European Parliament and of the Council of 25 November 2009 establishing the **Body of European Regulators for Electronic Communications (BEREC)** and the Office, OJ [2009] L 337/1.

Decision 243/2012 of the European Parliament and of the Council of 14 March 2012 establishing a multiannual **radio spectrum policy programme**, OJ [2012] L 81/7.

Regulation 531/2012 of the European Parliament and of the Council of 13 June 2012 on **roaming** on public mobile communications networks, OJ [2012] L 172/10.

Directive 2014/61 of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of **deploying high-speed electronic communications networks**, OJ [2014] L 155/1.

Commission Recommendation 2014/710 of 9 October 2014 on **relevant product and service markets within the electronic communications sector susceptible to ex ante regulation**, OJ [2014] L 295/79.

Regulation 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning **open internet access** and amending Directive 2002/22 on universal service and users' rights relating to electronic communications networks and services and Regulation 531/2012 on roaming on public mobile communications networks within the Union, OJ [2015] L 310/1.

Regulatory framework for audio-visual media services

Directive 2010/13/EU of the European Parliament and of the Council of 10 March 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (**Audiovisual Media Services Directive**), OJ [2010] L 95/1.

Commission Decision of 3 February 2014 on establishing the **European Regulators Group for Audiovisual Media Services**, C(2014) 462.

Regulatory framework for information society services

Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (**Directive on electronic commerce**), OJ [2000] L 178/1.

Directive 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on **Information Society services**, OJ [2015] L 241/1.

General Legislation

General

Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market, OJ [2006] L 376/36.

Privacy

Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, OJ [1995] L 283/31.

Regulation XXX/2016 of the European Parliament and of the Council of XXX 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation), OJ [2016] L XXX.

Security

Directive 2013/40 of the European Parliament and of the Council of 12 August 2013 on attacks against information systems, OJ [2013] L 218/8.

Directive XXX/2016 of the European Parliament and of the Council of XXX 2016 concerning measures to ensure a high common level of network and information security across the Union, OJ [2016] L XXX.

Consumer Protection

Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, OJ [1193] L 95/29 as amended.

Regulation 2006/2004 of the European Parliament and of the Council of 27 October 2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws (the Regulation on consumer protection cooperation), as amended.

Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market, OJ [2005] L 149/22.

Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, OJ [2011] L 304/64.

Competition Law

Council Regulation 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty, O.J. [1999] L 83/1, as last amended by Regulation 734/2013.

Council Regulation 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Article 81 and 82 of the Treaty, O.J. [2003] L 1/1.

Council Regulation 139/2004 of 20 January 2004 on the control of concentrations between undertakings, O.J. [2004] L 25/1.

EU Guidelines of 19 December 2012 for the application of state aid rules in relation to the rapid deployment of broadband networks, O.J. [2013] C 25/1.

Commission Regulation 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty, O.J. [2014] L 187/1

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