



Axon Advisory Research

Role of regulators in the digital ecosystem: the opportunity is now



Today's digital ecosystem must be accompanied by an enabling regulatory and policy environment. This paper explores the main challenges to be overcome by regulators and policy-makers in order to fully exploit the benefits of the new digital era.

Axon Partners Group

February 2021

www.axonpartnersgroup.com

Authors:

Álvaro Neira, Principal

1. Introduction

Today's digital ecosystem is transforming citizens' lives and boosting every sector of the economy. Such an ecosystem – comprised of digital infrastructures, platforms, applications, and ultimately users – is bringing countless benefits to the society and helping to build a better future for us all. It has become an essential means of improving the quality of life, reducing poverty, connecting the unconnected, and unlocking innovative solutions across multiple sectors.

However, in order to fully exploit these benefits, the digital ecosystem must be accompanied by an enabling policy and regulatory environment. Regulation and policy have experienced a significant transformation over the past decades, beginning with the liberalisation of markets. They then expanded to encompass ICTs¹ that address new technologies and services enabled by the Internet. Currently, the magnetism between ICTs and the digital ecosystem is already a reality, leading policy-makers and regulators to assess multiple regulatory and policy challenges arising from new digital technologies and services. The challenges to be addressed include online platforms, data privacy, cybersecurity, and competition, among others.

The remainder of this paper explores the main challenges to be overcome by regulators and policy-makers in order to fully exploit the benefits of the new digital era.

In order to fully exploit its benefits, the digital ecosystem must be accompanied by an enabling policy and regulatory environment

¹ Information and communication technologies.

2. Main challenges arising from the digitization of ICTs

As a result of the appearance of the new digitised era and the collapse of the traditional telecommunications sector's borders, regulators and policy-makers must overcome a number of challenges.

We provide below the areas that, in our view, will constitute a paradigm's shift in the regulatory landscape of the new digital ecosystem.

Competition

Before the new digitization, telecommunication markets were mainly focused on the provision of a limited and standardized set of services to end users. Most countries around the world have already resolved the traditional monopolistic situations in these markets, offering some degree of competition and consumer choice.

However, the digital disruption experienced over the past few years has completely changed this outlook. The emergence of digital platforms (mainly driven by OTT² players) and development of data-centric business models is raising questions on whether the traditional way of assessing and regulating competition issues is still valid.

In our opinion, legacy telecommunications services (e.g. mobile broadband) will still exist, and traditional regulation of services and prices will still be relevant. Traditional ex-ante regulation based on market definition, dominance, and determination of remedies will continue to be important in the coming years, specifically for the regulation of network infrastructure access.

However, there is a need to reconsider such regulations with a new perspective, especially considering that:

The emergence of digital platforms and development of data-centric business models is raising questions on whether the traditional way of assessing and regulating competition issues is still valid

² Over-the-top.

- ▶ Traditional services are constrained by OTT applications, as they provide their services over the infrastructure that traditional players make available and the services are usually substitute.
- ▶ Traditional players and digital platforms compete in different ways – while the former tries to capture revenues from services provided to end users, the latter tries to capture revenues from the data that such end users generate. This tends to create competitive distortions.
- ▶ Digital platforms are transnational – i.e. their scope of services is borderless.

Traditional services are constrained by OTT applications

The paradox comes with the fact that, although digital platforms are transnational in nature, they still need access to national infrastructure for the provision of services. In a certain way, traditional players and digital platforms are called to understand each other.

In our opinion, the regulation focus should therefore be on ensuring that no competition concerns arise in the availability of this access with sufficient capacity, at acceptable quality of service and on fair terms. Prices for access to such infrastructure should ideally be driven by commercial negotiations rather than by regulated tariffs – however, emphasis should be placed on overseeing that the terms and conditions imposed by infrastructure owners do not result in abuse of their dominant market position.

The focus should be on ensuring that no competition concerns arise in the availability of infrastructure access with sufficient capacity, at acceptable quality of service and on fair terms

In this sense, the increasing demand for data, again mostly driven by OTT applications, puts pressure on national network infrastructure, especially access networks (both mobile such as 4G/5G and fixed such as ADSL/FTTH). Although the investment required to provide adequate bandwidth will put pressure on the relation between digital platforms and infrastructure owners, they are destined to get along well. Therefore, the regulatory ecosystem may explore the creation of partnership models in which digital platforms can share the cost of national infrastructure. Also, the contribution of digital platforms to cost sharing may be funded through updated taxation mechanisms.

Overall, several questions need to be addressed by regulators and policy-makers in this new ecosystem.

Competition – Key questions

How to accommodate the disruption of digital platforms within the traditional regulation of telecoms markets, especially considering their data-driven business models and transnational nature?

How to ensure that digital platforms can contribute to the funding of high-capacity infrastructure in order to achieve a sustainable growth of the cooperation between digital platforms and infrastructure owners?

How to ensure a level playing field in the taxation of digital platforms and services within the digital ecosystem?

Universality of services

ICTs have become a central component of citizens' and businesses lives, reshaping the way we live and work. The COVID-19 pandemic has further accentuated the need of every person and business to access affordable and good-quality ICTs.

However, the world is still experiencing a digital divide between those that enjoy such access to ICTs and those that do not – either because they are from socially and economically disadvantaged sections of the population or from areas without access to appropriate infrastructures and services.

The experience gained over the years has proved that private investments should take a leading role in bridging the digital divide. Private players only need the right incentives. Logically, market forces alone are unable to commercially extend digital services to certain areas (e.g. remote rural areas) or groups (e.g. those with low income). Therefore, regulators and policy-makers should promote policies that foster investment and leverage new technologies and business models.

In our view, the main challenges that regulators and policy-makers should overcome revolve around the following pillars:

The world is still experiencing a digital divide, and private investments should take a leading role in bridging it

Pillar	Challenges	Key potential actions
Connectivity: make available the appropriate infrastructure for a certain quality of service	Limited sources of financing Absence of right incentives for the private sector	Redesign Universal Access and Service Funds (UASFs) in accordance with the new market realities of the digital ecosystem Promote cross-sectoral infrastructure deployment (e.g. electricity, oil and gas) Foster infrastructure sharing (passive and active) between telcos but also among all sectors Explore the creation of public-private partnerships (PPPs) Promote regulatory incentives (e.g. access to spectrum in return for infrastructure deployment or infrastructure sharing) Enable the use of non-traditional business models (e.g. satellites, drones, Wi-Fi)
Pricing: affordability concerns for the take-up of digital services and devices	Low purchasing power of certain population groups	Targeted subsidies to increase affordability of digital service and devices Promote free Internet access points, such as schools, libraries, etc.
Inclusion: digital skills to consume services	Lack of digital skills and literacy Limited awareness of benefits of ICTs	Implement digital skills training initiatives and learning programmes Promote government adoption of ICTs and roll out of e-government services and applications (including e-health, e-education)

Table 1: Main challenges related to the universality of services

In light of the above considerations, several questions need to be addressed by regulators and policy-makers within the digital ecosystem.

Universality of services – Key questions

What factors should be taken into consideration to update the universality targets (e.g. broadband speeds, quality of service)?

How can the Universal Access and Service Funds (UASFs) be accommodated to the new market realities?

Which policy and regulatory measures are likely to make a larger impact with the available funds, given the specific situation of the country?

Data-driven emerging technologies

The digitization of societies and economies is becoming extremely reliant on the amounts of data that the digital ecosystem is able to generate. Within this data-driven outlook, several technologies, although existing from long time ago, are increasingly gaining importance. Examples of such technologies are: cloud computing, artificial intelligence (AI), big data, blockchain and internet of things (IoT).

All these technologies have in common that they all deal in one way or the other with data, bringing enormous benefits such as the proliferation of new innovations and business models, but also several challenges such as data protection and cybersecurity concerns.

Currently, the regulatory approach towards these technologies is different: on the one hand, IoT is generally subject to ICT sector regulations, while the others generally are not. Either way, these technologies call for a redesign of the regulatory landscape because they are able to combine, analyze, and utilize disparate sources of data, providing insights that do not only apply to one sector but across sectors and not only to one jurisdiction but to many (again, showing a clear transnational nature).

This fact has clear consequences for national regulatory authorities, including ICT regulators, and competition bodies, especially on delimiting the role that they have to take. The regulatory focus should be placed then on:

- ▶ Promote a regulatory landscape that allows the exploitation of the benefits of these technologies across society, including both citizens and businesses. Regulatory sandboxes, awareness campaigns and innovative spectrum-award mechanisms are just few examples of regulatory mechanisms that can enable the promotion of these technologies.
- ▶ Ensure a coherent regulatory landscape, with a sensible organizational structure and clear roles and responsibilities. Any application based on these technologies should be subject to horizontal regulation by agencies responsible for data protection, cybersecurity, etc. Whether or not ICT sector-specific regulatory oversight is warranted depends on the functionalities of these

The digitization of societies and economies is driving the emergence of data-driven technologies such as AI, big data or IoT

Data-driven technologies call for a redesign of the regulatory landscape due to their transversal nature and implications across several sectors

applications and how they are used in a sector. The priority must be to have a robust horizontal regulatory ecosystem in place. This may require updating laws and establishing new agencies.

Given the cross-border nature of data-driven applications and technologies, collaboration and harmonization across jurisdictions is key to facilitate the digitization of economies and societies.

Data-driven emerging technologies – Key questions

How can the regulatory ecosystem be adapted to properly define roles and responsibilities given the cross-functional and transnational nature of the applications that emerge upon these technologies?

Which policy and regulatory measures should be taken to promote the proliferation of innovative business models driven by these technologies?

How can issues arising from these technologies such as data privacy be tackled within the regulatory ecosystem?

3. Concluding remarks

As policy-makers and regulators start to adapt their regulatory frameworks to the digital ecosystem, it is crucial that they avoid the mere extrapolation of existing regulations to new players or new topics. This approach is only a recipe for failure.

Instead, they should adopt measures – which may include soft regulation or even deregulation – that will lead to the evolution of the digital ecosystem, which should be driven by larger investments, proliferation of emerging technologies and innovation, and greater collaboration.

The regulator's traditional roles and areas of responsibilities are expected to continue in the years to come within the digital ecosystem, e.g. regulation of access networks. However, implementation of regulation should become less rigid and more collaborative ('friend rather than a policeman' approach).

With the increasing emergence of new digital services and technologies, regulators and policy-makers are called to address several new issues, including OTT services and emerging technologies such as AI or blockchain. These new areas are not always clearly incorporated into existing regulatory frameworks, due to their cross-horizontal and transnational nature. Many countries are currently debating whether their ICT regulators possess the jurisdictional authority to address such areas. A holistic approach needs to be taken from policy-makers, providing strategies and roadmaps with clear roles and responsibilities.

Additionally, and related to the above, a multi-stakeholder collaborative approach is more needed than ever. Virtually all sectors of the economy rely to some extent on ICTs. This requires collaborative efforts among ministries, regulators, and interested stakeholders, in order to effectively promote the progress of digitization.

All the above ingredients must be properly mixed to ensure a coherent regulatory ecosystem that will promote the development of the digital ecosystem.

About Axon Advisory

Axon is an international investment and advisory firm offering, through its Advisory arm, world class consulting and corporate finance services to a broad client base in the ICT industries.

In the last 10 years, Axon has executed +500 projects in +60 countries in the ICT domain, for major private companies, institutional bodies, and technology companies worldwide.

Axon has been at the forefront of the ICT regulation, having advised regulatory and policy-makers across the globe in a wide range of public policy and regulatory issues, including the definition of regulatory roadmaps and the update of regulatory regimes in accordance with the new digital ecosystem. For more information about our 'Public Policy and Regulation' practice, please see:

<https://www.axonpartnersgroup.com/public-policy-and-regulation>

Analysts Team at Axon Partners Group³

³ The views and opinions expressed in this article are those of the authors and do not necessarily reflect the view of Axon Partners Group.