1. Recommendations

This chapter summarises policies analysed in subsequent chapters and provides a general assessment of strengths and weaknesses of the Brazilian communication and broadcasting frameworks. It provides insights on potential benefits of further public policy initiatives and of regulatory reform. These include recommendations on how to improve the institutional and regulatory framework; overhaul and the taxation, fees and tariff framework; improve market conditions; foster competition in communication and broadcasting markets; and strengthen national policies and evidence-based policy making.

Assessment of the Brazilian communication and broadcasting frameworks

Introduction

Effective communication and broadcasting sectors are the backbone of the digital transformation of the Brazilian economy. Without connectivity, there is no digital transformation. Design of policies and regulation for the communication[1] and broadcasting sectors in Brazil should pursue the overarching objective of increasing access to high-quality communication and broadcasting services at competitive prices. To achieve this objective, the assessment recommends a set of policies and regulations clustered into the following key areas:

- improving the legal and regulatory framework by strengthening institutions and adapting them to a convergent environment
- overhauling the taxation and fees framework for the communication and broadcasting sectors
- improving market conditions
- fostering competition in communication and broadcasting markets
- strengthening national policies and evidence-based policy making.

Strengths

Brazil has strengthened its legal and regulatory communication framework in recent years (Box 1.1). As the main strength of Brazil's communication policy and regulation, the government has clearly understood the need for: i) regulatory reform; ii) a sound institutional framework; and iii) effective competition in the country.

Brazil has made strides to strengthen the independence of the communication regulator, but further improvements can be made. The regulatory framework, including the reform in October of 2019, incorporates many regulatory instruments that are best practice in OECD countries. For example, Brazilian authorities have issued measures to promote competition in mobile markets, such as lowering termination rates. In addition, the regulator has implemented asymmetric measures in wholesale communication markets for players with significant market power through the General Competition Plan (Plano Geral de Metas de Competição).

To foster competition, a separate authority complements the National Telecommunications Agency (Agência Nacional de Telecomunicações, Anatel) in competition issues. This allows for a second review to ensure that communication operators do not act against competition law. This other body, the Administrative Council for Economic Defence (Conselho Administrativo de Defesa Econômica, CADE), in charge of competition law enforcement, has adjudication powers to prevent anticompetitive conduct from harming any market, including communication markets.

Brazil's institutional structure for Internet governance is another strength. CGI.br, the Brazilian Internet Steering Committee (Comitê Gestor da Internet) co-ordinates and integrates Internet service initiatives in Brazil. It has been an example of best practice of multi-stakeholder institutional arrangements in the Internet ecosystem.

As one of the interesting features of Brazilian Internet infrastructure management, revenues from the domain name registration (under CGI.br) fund improvements in Internet management and infrastructure. Among others, this includes programmes to enhance traffic management and exchange; to measure the quality and use of broadband connections; and to support

IPv6 adoption. Within CGI, CETIC.br has made important contributions to improve data collection of Internet use among firms, individuals and Internet service providers (ISPs).

In the mobile communication market, Brazil has made significant progress in spectrum management, including planning and assignment. In particular, the regulator uses market-based auction mechanisms for spectrum assignment, which is best practice among OECD countries. Furthermore, the use of spectrum caps and coverage obligations in auctions has helped promote competition, while improving network coverage. As a result, Brazil's mobile market is less concentrated than the markets of peer countries in Latin America.

Communication regulators in OECD countries widely accept that mobile termination rates – the wholesale interconnection tariff paid by one network to terminate calls in another – can substantially favour larger operators if these rates are set above efficient costs.[2] Brazil transitioned from having one of the highest mobile termination rates compared to OECD countries to a country with a rate lower than the OECD average. The reduction of these rates improves market conditions as it eases market entry, and fosters competition and innovation in mobile services. This is also reflected in prices for mobile communication services, which are quite affordable compared to OECD average prices.

For broadcasting services, free-to-air (FTA) broadcasting television remains the audio-visual medium with the highest reach in Brazil in terms of geographic coverage and population usage. Brazil has enacted legislation to strengthen local content in its cinema in the past decade. As a result, among other factors, production of local audio-visual content has intensified over the last ten years.

Box 1.1. Strengths of Brazil's communication and broadcasting frameworks

- Anatel was legally conceived as an independent regulatory agency for communication markets, with administrative independence, absence of subordination, stability of its directive members and financial autonomy.
- Competition law institutions in Brazil are generally sound and have made important contributions to the development of competition law in Latin America during the past decade.
- Brazil has a strong Internet governance framework through CGI.br, and has improved Internet Protocol interconnection through multiple Internet exchange points around the country.
- Anatel has managed to reduce mobile termination rates, passing from the highest prices among OECD countries in 2014 to termination rates lower than the OECD average.
- Free-to-air broadcasting television remains the audio-visual medium with the highest reach in Brazil (i.e. reaching practically 100% of municipalities), and efforts around promoting local audio-visual content resulted in more domestic production between 2007 and 2017.

Weaknesses

Despite the strengths of Brazil's communication policy and regulatory framework, some weaknesses persist that call for regulatory reform (Box 1.2).

One important weakness is the high level of taxes and fees applied to the communication sector. These may directly affect prices of communication services and can impact investments for the deployment of communication infrastructure. For example, overall taxes and fees in Brazil represent a tax burden of around 40.2% for prices of fixed and mobile broadband services (Anatel, 2020[1]). As connectivity is a foundational pillar of the digital transformation, lowering fees and taxes in the market will have positive spillover effects in other sectors of the Brazilian economy. This can only be addressed through a holistic overhaul of the fiscal framework.

In terms of institutional design, Anatel has been conceived as an independent regulatory agency, but several issues undermine its independence. These are related to budgetary independence, *ex ante* advice from the Federal Court of Accounts (Tribunal de Contas da União, TCU) and the liability of public servants. Budgetary independence is important to safeguard autonomous decision making of the regulator. With respect to liability, public servants are currently held *personally* liable in Brazil. While public servants should be professionally accountable, this should not extend to personal liability. Holding public servants liable through personal lawsuits as a result of regulatory action is not common practice in OECD countries. It can have several negative effects on multiple levels. For example, it may dissuade highly qualified professionals from taking-up public office. In addition, it may encourage public servants to take inadequate regulatory decisions to minimise the threat of lawsuits.

For pay TV, the regulatory mandate is currently split between Anatel and the National Film Agency (Agência Nacional do Cinema, Ancine). For FTA broadcasting, regulatory and policy-making roles fall under the responsibility of the Ministry of Science, Technology and Innovation (Ministério da Ciência, Tecnologia, Inovações e Comunicações, MCTIC).

As technology evolves, network convergence blurs the contours of previously separated sectors and markets (e.g. broadcasting and communication). This implies an increase in the provision of multiple services over multi-purpose communication networks, often in a bundle. In this context, multiple players and networks will likely provide voice, data and video services.

Consequently, a coherent regulatory framework adapted to a convergent environment is needed. As convergence gains momentum, both different licensing regimes for communication services and broadcasting, as well as separate agencies for communication and broadcasting, become anachronistic. This fragmentation further hinders the effective monitoring of developments in communication services and markets.

The creation of a converged regulator, established at arm's length from policy making, would help simplify the regulatory regime and address the new convergent reality. In this respect, spectrum assignments for both broadcasting and communication services would benefit from being conducted by a single entity.

Communication services are defined in multiple ways, which is also not adapted to a converged communication and broadcasting market. The existence of varied service definitions not only has negative impacts on market entry, but also renders the taxation system more complex as it may foster arbitrage to escape tax or regulatory burdens. Adopting a "unique licensing" approach that only requires registration would address this weakness and ease market entry.

As in other OECD countries, co-ordination to achieve policy objectives of the digital economy is becoming increasingly complex. Yet co-ordination among different levels of government to avoid gaps and overlapping functions is of paramount importance.

Box 1.2. Weaknesses of Brazil's communication and broadcasting regulatory frameworks

- High fees and special taxes in the communication sector severely impact the communication sector in Brazil. This raises the cost of communication services, compromising the sector's potential for innovation and investment. This, in turn, hinders adoption of communication services.
- The institutional framework is not well-adapted to convergent communication and broadcasting sectors. This includes the lack of a converged regulator with market regulation and monitoring responsibilities over communication, broadcasting (including pay TV) and emerging over-the-top (OTT) services.
- Multiple definitions for communication services create an artificial distinction between communication and broadcasting services, raising barriers to market entry and leading to taxation and regulatory arbitrage.
- The regulator's lack of budgetary consistency and independence, coupled with the control of the Federal Court of Accounts over some *ex ante* functions, potentially undermines Anatel's independence, limiting its capacity to carry out its functions.
- Consumer protection functions for telecommunication services still overlap, particularly between the National Telecommunications Agency (Agência Nacional de Telecomunicações, Anatel), the National Consumers Secretariat (Secretaria Nacional do Consumidor, Senacon) and local departments for consumer protection (Procuradorias de Proteção e Defesa do Consumidor estaduais ou municipais, Procons).
- No clear division exists between public policy and regulation for broadcasting and pay TV.
- A lack of data collection and monitoring of connectivity targets, and lack of monitoring of broadcasting markets, generally weaken the efficacy of policies.

Recommendations for the future

The following recommendations are based on the findings of this report, in conjunction with good practices in communication policy and regulation in OECD countries. These good practices are mostly drawn from solutions to challenges similar to those identified in Brazil presented throughout the review. The list does not provide recommendations in order of priority. It should instead be regarded as various elements of a holistic approach.

Improving the institutional and regulatory framework

Creating a converged regulator and separating policy from regulatory functions

Create a converged independent regulator overseeing the Brazilian communication and broadcasting sectors through a merger of the regulatory functions of Anatel, Ancine and MCTIC.

Multi-purpose Internet Protocol (IP)-based networks have enabled the provision of different services over the same network. As convergence progresses, and with the increase of bundling of communication services, it will be more challenging to distinguish operators according to the platforms upon which they deliver services. This will affect the clarity of regulators' roles given a potential duality among their functions. In the face of increasing convergence over IP networks, the institutional framework in Brazil is not well suited to oversee communication services effectively.

In the area of competition, for example, OECD's 2008 Review of the Regulatory Reform acknowledged the potential surge of impediments to competition derived from the institutional framework of the sector (OECD, 2008[2]). This was particularly true given the independence between telecommunication and broadcasting regulators that oversee different sectors that are converging.

With respect to broadcasting and pay TV services, multiple authorities are tasked with developing and implementing policy and regulation (e.g. MCTIC, Ancine and Anatel). The responsibilities of these different agencies are often intertwined and not well adapted to tackle the challenges inherent to a convergent environment. Furthermore, contrary to international best practices, there is no clear distinction between general policy formulation and the issuance of *ex ante* regulation in pay TV and broadcasting markets.

Regarding pay TV, understood in Brazil as a telecommunication service, the distinction between different activities in the value chain seems arbitrary. The pay TV law (known as SeAC), which assigns content programming and packaging to Ancine, and content distribution to Anatel, can create conflicting sectoral views. Under this framework, the conflict resolution mechanism is unclear in the event of divergent decisions from each sectoral regulator. Furthermore, it is not clearly defined which regulatory body should have oversight authority over the distribution of content over the Internet.

To strengthen the institutional framework, Brazil could create an independent convergent authority. This entity would oversee communication and broadcasting markets (including pay TV) and monitor evolving over-the-top (OTT) services. At the same time, it would keep an arm's length between regulation and policy making as suggested in the next recommendation.

The creation of such an entity would follow good international practice. An increasing number of OECD countries such as Australia, Hungary and the United Kingdom have merged their broadcasting and communication regulators (OECD, 2008[2]; OECD, 2017[3]).

In Brazil's case, the regulatory functions of Ancine and Anatel, as well as some regulatory powers of MCTIC over broadcasting, should be merged into this converged regulator. Should there be a need for a separate authority to foster national audio-visual content, Ancine could retain its public policy mandate in this area.

Nevertheless, the newly converged regulator should address all issues that affect *ex ante* competition in pay TV and FTA markets, such as must-carry/must-offer regulation and OTT services. On topics related to the remit of other authorities (e.g. public health, copyright issues), the convergent regulator could implement formal co-operation protocols.

In sum, a converged independent regulatory body should be entrusted with regulating the entire broadcasting and pay TV value chain under an integrated and coherent set of rules. These rules would ensure efficiency in the regulatory process and uniform application of the regulatory regime across public institutions. This, in turn, would create legal certainty for regulated entities.

Introduce a clear separation between policy making and regulation in the areas of broadcasting, pay TV and emerging OTT/video-on-demand.

OECD best practice is to distinguish clearly between policy making (i.e. providing the overall framework for the market) and regulation that translates this framework into the operational details needed for implementation. That is, the regulator should have commensurate powers to carry out its role and retain an arm's length from the government.

The institutional framework reflects the fragmentation in broadcasting and pay TV services regulation. Multiple authorities are tasked with develop and implement policy and regulation. These are primarily MCTIC, Ancine and Anatel, but others such as CADE manage *ex post* competition enforcement. Contrary to international best practices, there is no clear distinction between general policy formulation and the issuance of *ex ante* regulation to tackle market failures, promote competition and protect consumers (especially concerning OTT services).

General policy formulation for the broadcasting and pay TV sector should be primarily vested in MCTIC. However, an independent and accountable regulatory agency (ideally a converged regulator) should be in charge of all regulatory functions, such as the awarding of licences, the issuance of spectrum, and the application of the sanctioning regime. This entity should function without interference from the executive or legislative powers.

Combine all spectrum management functions (i.e. including allocation and assignment) in one regulatory entity (e.g. the converged regulator) to avoid concurrent powers.

Spectrum assignment and management in Brazil is complex, with concurrent powers in the area of broadcasting. As defined by law, Anatel is generally responsible for spectrum management in Brazil. However, when it comes to broadcasting services, Anatel is only in charge of spectrum allocation. Its licensing follows a complex structure as several other entities also participate in the process.

For broadcasting, the intertwining of responsibilities between multiple institutions is particularly cumbersome. For example, Anatel is responsible for spectrum allocation and provides technical studies for availability of channels and non-interference. Meanwhile, MCTIC, the President and Congress are in charge of the assignment process. This division of labour renders the process long, costly and inefficient. On average, it can take more than ten years to substantially modify an existing broadcasting licence in Brazil or to grant a new one.

Therefore, ideally, all regulatory functions regarding spectrum management, including licensing spectrum for broadcasting services, should be simplified and should lie solely within a converged regulator. If the creation of a converged regulator is not possible in the short- to medium-term, Anatel's functions should be broadened to include spectrum assignment for broadcasting services.

In the shorter term, for as long as Congress and the President take part in the broadcasting licence process, a rule of positive silence could be established. This rule would grant licences automatically after a certain period if Congress and/or the President remain silent.

With respect to auction design, the converged regulator should be able to define the different elements of the auction. The auction design should consider the policy objectives

of increasing coverage of communication networks, while enhancing competition in mobile markets. Coverage obligations can contribute to a broader coverage of the population in rural and remote areas. However, the extent of coverage obligations should not be an impediment for certain actors to bid in the auction. While designing auctions, the converged regulator should avoid imposing additional industrial policy obligations that may distort auction results or raise deployment costs.

Increasing the independence of the regulator and creating an independent oversight for regulatory impact assessments

> *Increase the independence of the sector – or converged – regulator to ensure that it can define its budget in an independent manner and enforce its decisions autonomously to fulfil its mission.*

To guarantee regulatory independence, the regulator must be the only entity overseeing the sector. Regulators require governance arrangements that ensure their effective functioning, preserve their integrity and allow effective achievement of their mandate. Furthermore, establishing the regulator with a degree of independence (both from those it regulates and from the government) can provide greater confidence and trust that regulatory decisions are made with integrity (OECD, 2014[4]). Ensuring adequate funding levels is of paramount importance in enabling the regulator to operate efficiently and to fulfil government objectives effectively (OECD, 2014[4]).

Financial independence should be guaranteed in all scenarios. In the absence of a new converged regulator, Anatel must be empowered to fulfil its mission and reduce market uncertainty. Despite improvements in Anatel's budget setting and stability since 2018, Anatel lacks direct and autonomous budgetary control over the sector fees directed at the specific purpose to fund the regulator (Telecommunications Oversight Fund [Fundo de Fiscalização das Telecomunicações, FISTEL]).

Therefore, Anatel's budget should be clearly defined and ring-fenced from the rest of government. This aims to minimise any ability or incentive for the government to use its budget for other purposes or to withhold it (i.e. for the sake of achieving fiscal balance with the agency's resources) (OECD, 2008[2]). Likewise, multi-annual budgets are preferable as they are less contingent to short-term political influences. Proposals in Congress to simplify sectoral funds should ensure the financial independence of Anatel (or the new converged regulator) so it can properly fulfil its mandate and implement regulation.

> *To promote an independent decision-making process on the part of the regulator, focus the important role of TCU on* ex post *assessments. Limit* ex ante *advice to the extent possible to balance the accountability framework and effective regulatory independence. Limit the personal liability of public servants.*

TCU's control is potentially undermining Anatel's independence, limiting its capacity to function properly. As the OECD noted in 2008, performance assessment by national audit offices can protect the public interest. However, the extent to which TCU *ex ante* assessment and advice is applied to the regulatory agencies in Brazil is unusual (OECD, 2008[2]).

According to the OECD Best Practice Principles on the Governance of Regulators, regulators should have enough autonomy to conduct their functions without interference from the Executive, Congress or Parliament. A clear framework for accountability needs to be balanced with the effective autonomy of the regulator. Certain prerogatives are essential to ensure the technicality, impartiality and predictability of the regulatory function (Moreira, 2004[5]).

Overall, TCU should refrain from imposing changes to regulatory decisions that are formally adequate and duly motivated.

Accountability is the other side of the coin of independence, and a balance is required between the two. Comprehensive accountability and transparency measures actively support good behaviour and performance by the regulator. These allow the legislature or another responsible authority to assess the regulator's performance (OECD, 2014[4]). A regulator is therefore accountable for its actions to the legislature. It should report regularly and publicly to the legislature on its objectives and the discharge of its functions. In addition, the judiciary should help ensure that the regulator operates within the powers attributed to it (OECD, 2014[4]).

However, while ensuring accountability of the regulator is crucial, it is not common practice in OECD countries to hold public servants personally liable for their actions. Brazil holds public servants liable through legal procedures against their personal wealth in case the regulatory measure is deemed inadequate. This may create the opposite of the intended effect. On the one hand, it may lead to lack of incentives for talented individuals to hold public office (e.g. heading regulatory agencies) due to inherent risks. On the other, once in office, public officials may seek to minimise the threat of lawsuits through their regulations instead of promoting social welfare. This would undermine the intended purpose of such mechanisms. Therefore, the personal liability of public servants should be limited, while ensuring proper accountability measures for the regulatory agency.

Establish an independent oversight body to review the regulatory impact assessments of different institutions, such as Anatel, Ancine or a future converged regulator.

Since 2007, Brazil has advanced in its regulatory policy agenda, particularly regarding regulatory agencies. For example, it initiated its Programme for the Strengthening of the Institutional Capacity for Regulatory Management and followed OECD recommendations made in 2008 (OECD, 2008[2]).

Anatel has led the way with its use of public consultation and regulatory impact assessments (RIAs), even before they were appropriately harmonised across the public administration in 2018 (Brazil, 2018[6]). However, Anatel could still improve regulatory practices.

Anatel has been the most active regulator in Brazil to promote RIAs. However, it has focused mainly on qualitative assessment and has little experience with quantitative assessment. Additionally, Anatel's information related to RIA implementation is difficult to access.

Overall, RIA reports should be consistent and readily accessible to the public. To that end, Brazil should establish an independent body to systematically review RIA reports of different institutions with regulatory roles, ensuring oversight and quality. This requires a "whole-of-government" approach and permanent co-ordination mechanisms and bodies that address policy coherence and strategic commitment in the long term (OECD, 2016[7]).

Many OECD countries have explicitly adopted such an approach for their RIA oversight bodies. Experience across the OECD suggests that such central oversight bodies are most effective if they: i) are independent from regulators (i.e. not closely tied to specific regulatory missions); ii) operate in accordance with a clear regulatory policy, endorsed at the political level; iii) operate horizontally (i.e. cut across government); iv) are staffed by experts (i.e. with information and capacity to exercise independent judgement); and v) are linked to administrative and budgetary authority (centres of government, finance ministries) (OECD, 2008[2]).

Establishing a converged regulatory and policy framework

> *To adapt the legal framework to a converging communication and broadcasting market, reform the legal framework to introduce a single-class licensing regime for communication and broadcasting services. Introduce a single licence to eliminate the differences between communication services categories (multimedia communication service, fixed telephony service, mobile telephony service, communication services classified as value-added service, pay TV and other broadcasting services).*

In light of increased convergence of communication services over IP networks, there is a need to overhaul the regulatory and policy framework, which has grown over time. Adapting the framework would allow market developments to be addressed holistically. At the same time, it would simplify the policy and regulatory framework and render it more transparent.

One key adaptation should consist in the introduction of a single-class licensing regime for communication and broadcasting services. Simplifying licensing would considerably reduce transaction costs, facilitate market entry and speed up the administrative processes for network deployment throughout Brazil. A single-class licence model based on a "registry" is one way to simplify the process. In this system, the company or legal entity interested in obtaining a licence agrees to reporting requirements and to operate under Anatel's regulations.

The regulation for individual licences in Brazil requires an authorisation for every type of communication service provided. It is therefore too burdensome for operators, creating artificial barriers to market entry. Anatel has taken steps in the right direction through Resolutions No. 719 and 720 of 2020. These aim to simplify the licence-granting procedure. However, the plurality of communication services subject to different regulations, fees and taxes raises barriers to entry in an increasingly convergent environment.

Anatel has gradually simplified its classification of communication services and licensing framework over the years. However, four main service categories still require an authorisation: fixed telephony (Serviço Telefônico Fixo Comutado, STFC); mobile telephony (Serviço Móvel Pessoal, SMP); "multimedia communication services" such as fixed broadband (Serviço de Comunicação Multimídia, SCM); and pay TV (Serviço de Acesso Condicionado, SeAC).

In addition, under the current licensing framework there are value-added services (serviços de valor adicionado, SVAs), which are considered neither telecommunication nor broadcasting services. Value-added services can include OTTs and certain Internet connection services. Some of the "small Internet service providers" (Prestador de Pequeno Porte), defined as ISPs with a national market share of less than 5%, provide portions of their broadband services as value-added.

Value-added services in the Brazilian framework are broadly defined as those that "complement" and "assist" telecommunication activities. For fixed broadband access, the most common

applicable telecommunication service is "multimedia services" (SCMs).[3] Conversely, Internet connection is the most prominent example of a value-added service (i.e. the authentication of the user in the network that originated in the past due to dial-up Internet services). In contrast to telecommunication services, value-added services are subject to limited regulation by Anatel. They are not subject to the tax on telecommunication services under the Service and Merchandise Tax (Imposto sobre Circulação de Mercadorias e Serviços, ICMS).

The plurality of definitions and classifications, even for the same service (i.e. broadband service), leads to arbitrage with respect to regulatory measures and in the area of taxation (Chapter 7). Furthermore, unclear distinctions are a burden that extends beyond the public. In the communication sector, lack of quality also negatively impacts administrative resources needed by companies, the regulator and tax authorities. This adversely impacts market entry.

Therefore, communication services classified as value-added services, such as Internet service provision, should be streamlined in the single-class licence regime. This does not imply that other general value-added services (such as OTTs, platforms and online applications) would be subject to additional regulation. The latter would entail a larger discussion of the mandate of communication regulators over digital platforms, which is still currently debated in many OECD countries.

For broadcasting services, the licensing regime is discriminatory as it applies different requirements to FTA broadcasting and equivalent pay TV services. Moreover, it is also cumbersome and may enable political influence in the granting of FTA licences.

Therefore, consideration could be given to abandoning the individual authorisations in use for all types of communication operators, including audio-visual content providers. These could be replaced with a class-licensing regime, except where resources are scarce, such as spectrum. In other words, a single licence would be available for all communication providers, moving from a service-based to a convergent licensing regime. This move could lower administrative entry barriers to the market and simplify the tax regime (see below).

Changing the licensing regime would require a modification to legislation in Brazil. In addition, to ensure the feasibility of a single-class licence regime, a simplification of the FISTEL tax table, part of the Annex of Law No. 5 070, would be required.

Remove legal restrictions on the integration of the pay TV value chain and cross-ownership between telecommunication and pay TV services on both foreign and domestic service providers. In particular, eliminate Articles 5 and 6 of the SeAC law that prohibit de facto vertical integration of communication players (e.g. content production and distribution).

The pay TV law (SeAC) of 2011 was a product of a long-debated demand from the audio-visual sector that sought, among other objectives, to support the production of independent content. Despite its positive effects on the growth of local content, the legislative change came at a moment where the audio-visual sector was undergoing profound changes in areas ranging from technology and business developments to general convergence.

The OECD generally favours free and unencumbered market access as much as possible. However, special considerations apply in the area of media policy in many countries. These considerations include the need to respect national, regional and local heritage, as well as to ensure media pluralism.

For these reasons, media ownership restrictions are not unusual. Like Brazil, Canada has a strong focus on encouraging local content production and availability, for example. Its Broadcasting Act sets forth the principle that "the Canadian broadcasting system shall be effectively owned and controlled by Canadians" (Canada, 1991[8]).

Restrictions on vertical ownership, however, are not common. In light of convergence, common ownership of content and transmission may offer economies of scope. Common ownership might also, however, lead to a loss of media pluralism, or to competition problems (e.g. vertical foreclosure). These issues have raised concerns in a number of jurisdictions,[4] but an outright prohibition as in Brazil is unusual.[5] In Brazil, the SeAC law establishes strict ownership restrictions between telecommunication and pay TV services.

Categorical restrictions on vertical integration may prevent potential economic efficiencies. These restrictions may hinder the sector from adapting to new demands and new technological contexts. Case-by-case reviews of vertical integration would be preferable. Competitive problems are more likely to occur when parties have market power in either or both of the upstream and downstream markets. Anatel's recent decision to loosen these vertical restriction rules only for foreign-owned firms seems arbitrary and is difficult to justify in the medium to long term.

Public policies and objectives in the areas of media pluralism, content production and fostering competition can and should be achieved through other means. The sector ministry can address concerns related to media pluralism through public policies.

Meanwhile, the sector or a converged regulator can address issues related to *ex ante* competition. The analysis of the potential harm of vertical mergers, for transactions above the merger notification threshold, should be done *ex ante* by CADE and by the converged regulator on a case-by-case basis. In the interim, CADE or one regulatory authority (either Anatel or Ancine) should ideally do the analysis.

Enhancing co-ordination of policies and regulation at all levels of government

> *Enhance the co-ordination of the federal, state and municipal level on issues such as streamlining rights of way, easing antenna deployment and harmonising power density regulations to promote broadband diffusion, particularly in underserved areas.*

The 2008 OECD Review of Regulatory Reform highlighted a significant overlap of functions between federal, state and municipal regulatory agencies in Brazil. Institutions at different levels of government had co-ordination mechanisms, but they were not frequently used (OECD, 2008[2]).

Brazil should promote co-ordination among the three levels of government (i.e. local, state and federal), which is particularly important for rights of way. The effective implementation of sectoral regulation sometimes depends on other related laws. This is the case for the telecommunication and broadcasting sectors, as the state and municipal levels handle relevant issues of both industries.

Removing barriers to infrastructure deployment is crucial for communication network investments and for lowering barriers to market entry. Any legal or administrative permits involved in the process of deploying networks should be carefully reviewed and assessed whether they are needed or whether there is room to reduce administrative burdens. In addition, provisions should be harmonised across the country to reduce the burden on operators.

Promote co-operation arrangements between CADE and sector regulators to eliminate multiple and possibly competing decisions ("double windows"), particularly on broadcasting issues (including pay TV).

Anatel and CADE seem to co-operate effectively on communication issues, although they may disagree on market definitions and on implementation of certain regulatory interventions. That co-operation would benefit from a formal agreement between the two agencies, as is the case between CADE and Ancine.

Nevertheless, regarding pay TV (considered a telecommunication service in Brazil), both Anatel and Ancine hold *ex ante* regulatory powers as established by the SeAC law. They are also involved in different stages of the service value chain and the broadcasting market more broadly.

CADE can further invite Anatel and Ancine to issue technical opinions on merger proceedings as competent sector regulators, according to the competition law. This creates a double window that could hamper an effective and expeditious analysis of merger review requests by CADE. This is especially the case when both institutions have diverging opinions (e.g. the recent AT&T/Time Warner merger).

In the absence of a converged regulator, Brazil should establish a process to resolve disputes between competent authorities during merger reviews in the communication and broadcasting sectors. This would entail an amendment to either the 2011 competition law or the SeAC law. One solution could be to preserve the non-binding nature of the technical notes. Such a measure could require CADE to justify its final ruling if it decides not to follow any Anatel or Ancine recommendation.

Improve co-operation and reduce overlapping functions in the regulatory design and enforcement of consumer protection regulations through upscaling co-operation instruments among Senacon, Procons and Anatel.

The work in the area of consumer protection could greatly benefit from an even closer and formal co-operation between Anatel and Senacon to address the regulatory and enforcement regime in consumer protection for communication services. Until recently, Anatel and Senacon had a technical co-operation agreement. This provided for the exchange of information and data related to complaints registered against communication service providers (Ministério da Justiça, 2013[9]; Anatel, 2019[10]).

Some consumer protection functions for communication services still overlap among Senacon, Anatel and the Procons. For example, Anatel has the technical capabilities and specialised knowledge to protect consumers' rights in light of specialised issues (e.g. signal quality). For its part, Senacon formulates, promotes, co-ordinates and implements the National Policy of Consumer Protection in a broad sense. Therefore, Anatel and Senacon require close co-ordination to address issues related to consumers of communication services.

Consumer protection also needs better co-ordination between the states and municipalities. There are more than 800 state and local departments for consumer protection (Procon) linked to the Executive Power, which also oversee communication companies. The creation of a Procon is subject to each state or municipality, which leads to different levels of access

to consumer protection organisations throughout the country. Procons may help protect consumer rights more effectively by intervening on behalf of consumers at the local level. However, the 800 state and local departments for consumer protection would benefit from clear and established co-ordination mechanisms. These would provide for exchange of information and experiences, as well as encourage enforcement bodies to simplify regulations.

Thus, to promote legal certainty and regulatory coherence, Anatel, Senacon and Procons should formally increase their roles and co-operation. Furthermore, they should be transparent with respect to the mechanisms put in place to this end. Therefore, the different institutions involved in consumer policy related to communication services should maintain close co-operation underpinned by clearly established formal procedures that ensure good co-ordination in regulatory design and enforcement.

Ensuring effective regulatory enforcement

> *Anatel should strengthen its enforcement framework, seeking to establish proportionate sanctions (monetary or non-monetary) based on quantitative evidence and targets, considering the severity of the violation and the resulting harm. It should further aim at improving the effective collection of administrative fines, using more actively the payment enforcement means at its disposal.*

Despite its sanctioning powers, Anatel has imposed far more fines than it has been able to collect. Between 2010 and 2017, Anatel imposed 60 000 fines, of which only 66% were fully paid by operators. This represents 13% of the monetary value of the total fines imposed (Anatel, 2017[11]).

Both the role of the judiciary in enforcement of regulatory decisions, as well as the high value of the fines, may be causing the significant divergence between the fines applied and actually collected. Anatel's administrative decision can be appealed through judiciary avenues. A significant number of companies appeal the fines imposed by Anatel, a process that can take up to ten years (Rosa, 2018[12]). In 2017, the judiciary suspended 1.2% of the fines imposed by Anatel (i.e. 34% if measured in monetary value)[6] (Anatel, 2017[11]).

To improve enforcement of applied fines and increase collection, Anatel should carefully substantiate the sanctions, which should fit the nature of the offence. Fines should be high enough to deter behaviour, but also follow the principle of proportionality to deter appeals. This would lessen the probability of the fines being successfully appealed and stalled in the judicial process.

From 2007 onwards, Anatel started to enforce quality of service (QoS) compliance. As a result, the number of applied fines increased dramatically from 2008-13, and many appeals were filed against Anatel's sanctions.

For Anatel, the legal challenges and the costs of collecting fines in the peak period of fines (2008-13) led to study groups and public consultations to standardise regulatory compliance. In 2012, Anatel adopted new rules for regulatory monitoring. These included the Sanction Guidelines (Regulamento de Aplicação de Sanções, Resolution No. 589 of May 2012) and the Guidelines of Regulatory Monitoring (Regulamento de Fiscalização, Resolution No. 596 of August 2012).

Anatel intends to modify its oversight regulation to adopt preventive and reparatory measures instead of punitive ones (Anatel, 2019[13]). It will consider a variety of sanctions besides monetary ones, including remedial conduct and warnings. This new regulation should follow best practice principles, including establishment of rational and proportionate sanctions. When imposing fines, it should also consider aggravating and mitigating factors when fines are imposed (e.g. severity of the violation). Finally, it should consider the resulting harm to users and service provision, as well as prior infringement (OECD, 2018[14]).

Shorten the appeal procedure through judiciary processes to avoid weakening the effectiveness of the enforcement decision of Anatel, through specialised training of judges and judiciary-related personnel. If training has proved insufficient, consider the creation of specialised courts on communication and broadcasting matters.

Anatel's administrative decisions can be appealed through judiciary processes. In 2017, the judiciary suspended 34% of fines imposed by Anatel measured in monetary value (Anatel, 2017[11]). The appeal procedure through the judiciary avenue should be shorter to avoid weakening the effectiveness of Anatel's regulatory and administrative measures.

Decisions in complex communication and broadcasting matters require a sound technical and legal knowledge about communication technologies. One way to shorten the process for judiciary decisions is through specialised training of judges and judiciary-related personnel. If this is deemed insufficient and has been tried in the past, the creation of specialised courts is a more complex option.

Brazil could establish specialised judges and courts for the substantiation of appeal procedures (injunctions) pertaining to the communication and broadcasting sectors. Such a move was a breakthrough for Mexico in 2013 during the reform of its telecommunication sector. In Brazil, it would alleviate the workload of other judicial institutions, and guarantee public servants had sufficient background to make decisions on highly complex and technical issues. This could stimulate greater efficiency within the whole judicial apparatus and increase the soundness of judicial resolutions. To implement specialised courts effectively, investment in human resources and their expertise/training is required.

If Anatel wishes to continue promoting the regulatory compliance tool of a "Conduct Adjustment Agreement" (TAC) that allows operators to commit to investment obligations instead of paying fines, carefully set and monitor these obligations.

Anatel has used the legal instrument of operators' Conduct Adjustment Agreement (Termos de Compromisso de Ajustamento de Conduta, TAC). This allows operators that have breached a regulation to trade fines for investment obligations. In TAC agreements, arrangements are negotiated after communication service providers have already been fined. In addition, Anatel has been modifying its sanction framework prior to deciding upon fines. This involves replacing eventual monetary sanctions by non-monetary ones (i.e. investment commitments) through "future obligations" (obrigação de fazer).

Any investment obligations stemming from TAC agreements, "future obligations" sanctions or set by coverage obligations within the context of an auction should be carefully monitored both in terms of design and implementation. For example, there is a substantial lack of

reporting of small ISPs. As these ISPs do not have reporting obligations, Anatel's statistics only partially accounted for them. However, these operators accounted for about 20% of the broadband market in 2019 in terms of subscriptions.[7] As a consequence, it is difficult for Anatel to have a full overview of network coverage and planned investments.

Asymmetric information and lack of granular data of the presence of broadband networks in the country may lead to challenges when designing TACs. On the one hand, it could allow a larger player to trade fines for coverage obligations in rural and remote areas that already have small operators. On the other, operators might have invested in certain areas anyway based on their longer-term investment plans, which are often not public. In these cases, an operator may be trading for an "obligation" it had already intended to make.

Therefore, if Anatel wishes to continue using the TAC, it needs sufficiently detailed information on both fixed and mobile broadband access network coverage and planned investments. To that end, it should undertake a thorough analysis *ex ante* to establish where such obligations should be imposed, and monitor ex post their implementation. Deployments under these agreements should also comprise open access obligations to foster infrastructure sharing and access by other service providers.

Overhauling the taxation, fees and tariff framework

Harmonise the ICMS across states and reduce the high ICMS rates for communication services to the extent possible because of their negative effects on adoption. In light of convergence, establish as mentioned above, a single-class licensing regime to eliminate the distinction among different communication services (SCMs, SeAC, SMP, STFC, SVAs) to minimise legal costs, administrative burdens and the potential for tax arbitrage. In the long run, pursue the fundamental reform of the indirect tax framework to reduce distortions caused by the current indirect tax treatment of the communication and broadcasting sector.

The high level of fees and special taxes severely impact the communication sector in Brazil. The high fees likely contribute to the total cost of communication services, compromising the sector's potential for innovation and investment. They thus hinder the adoption and lower the affordability of communication services.

In light of the extensive positive spillover effects of communication services on its economy and society, Brazil should reconsider the high taxes and fees and identify ways to reduce them. The high ICMS burden, in particular, may affect the cost of communication services and consequently their use. Brazilian states should therefore consider harmonising the ICMS across states and reducing the applicable ICMS rate to communication services to the extent possible.

The complexity around the application of the ICMS due to a multitude of communication service categories may results in higher entry barriers for some operators and thus hampers competition. The exact distinction between the different communication services (SCMs, SeAC, SMP, STFC, SVAs), as well as broadcasting services (FTA), for tax purposes is subject to discussions and legal disputes between companies of the sector and tax authorities. This leads to legal uncertainty, as well as tax arbitrage and, in consequence, to a loss of economic surplus. For taxation and convergence purposes, then, Brazil should consider a single-class licensing system to eliminate the distinction between communication and broadcasting services.

Regulatory and legal arbitrage concerning taxation regimes might be one competitive advantage of smaller operators. It may also have helped drive the emergence of a large number of small operators of telecommunication services, including ISPs. The growth of small operators is very welcome given their contributions to increased broadband coverage and more competition in the country. However, Brazil could put in place other mechanisms that do not rely on different interpretations of service types, such as special tax reductions, to foster their growth. This would also reduce legal uncertainty for the entire sector.

In the long run, it is recommended to pursue fundamental reform of the indirect tax framework to reduce distortions caused by the current indirect tax treatment. In line with previous OECD work on taxation issues in Brazil, it is suggested to consolidate consumption taxes at the state and federal levels into one value-added tax with a broad base and full refunds for input of value added paid (OECD, 2018[15]; OECD, 2019[16]).

Merge sectoral funds into one single fund to reduce costs and increase efficiency. Ensure that contributions to the funds are used for the further development of the digital economy in Brazil, including broadband deployment. Avoid using fund resources to close the general government budget deficit as this would result in a clear case of double taxation. In the long term, consider abolishing all sectoral contributions.

Fees paid to FISTEL are split into the Contribution for the Development of the National Film Industry (Contribuição para o Desenvolvimento da Indústria Cinematográfica Nacional, CONDECINE) and the Contribution to Foster Public Broadcasting (Contribuição para o Fomento da Radiodifusão Pública, CFRP). Moreover, the Universal Service Fund (Fundo de Universalização dos Serviços de Telecomunicações, FUST) and the Telecommunications Technological Development Fund (Fundo para o Desenvolvimento Tecnológico das Telecomunicações, FUNTTEL) are accounted for separately, which results in three different funds in Brazil (FISTEL, FUST, FUNTTEL). In line with simplification and convergence, Brazil should consider integrating all contributions into one, as for example Colombia did recently (OECD, 2019[17]). An integration of all funds into one single contribution may further reduce administrative costs and increase efficiency.

Resources collected through FISTEL, FUST and FUNTTEL have largely not been used for their designated purposes. By using fund contributions exclusively to develop its digital economy, Brazil could reduce contributions or use them more effectively. This would serve the development of the digital transformation in Brazil, particularly through expansion of broadband services. Fund resources should not be used to close general government budget gaps as this would result clearly in double taxation, but to extend connectivity, especially for underserved areas.

The OECD cannot recommend, under any circumstances, legal proposals that lead to the abolishment of sectoral funds for communication services but keep sectoral fees for these funds. Such proposals effectively transform the fees into a tax. This would lead, again, to a double taxation of the communication sector.

Integrating all sector contributions into one would represent a major improvement to the current situation. However, in the long term, Brazil should consider abolishing all sectoral contributions and funds in the communication sector. At the same time, it should ensure solid funding of the sectoral regulator and the availability of funds for specific broadband deployment projects in geographical areas where private funding may be insufficient. The

communication sector is crucial to the country's economy with positive spillover effects on productivity and thus growth and development. It should thus not be subject to unnecessary burdens (OECD, 2014[18]; OECD, 2017[19]).

> *Actively promote the entry of Mercosur countries into the WTO Information Technology Agreement, which creates a credible schedule for the reduction of tariffs on an increasing number of ICT goods.*

Steps taken by the government to reduce import tariffs on selected information and communication technologies (ICTs) and capital goods are welcome. However, the basket of goods exempted from import tariffs is still limited. With only 34 ICT goods falling under the new regime, tariffs still apply to potentially crucial components. Brazil should therefore actively promote the entry of Mercosur countries into the World Trade Organization (WTO) Information Technology Agreement, which would create a credible schedule for the reduction of tariffs on an increasing number of ICT goods. This would create a credible schedule to reduce tariffs on an increasing number of ICT goods. One estimate suggests that access to the ITA could increase gross domestic product growth by 0.08 percentage points in the first year alone. The increase in tax revenues from higher growth, including in the ICT sector, would exceed the loss in import tariffs from the fourth year onwards (Ezell and Foote, 2019[20]).

Improving market conditions

Lowering barriers to entry and easing infrastructure deployment

> *Reduce barriers to entry to the minimum possible, such as further ensuring fair and non-discriminatory access to ducts, poles and rights of way to promote deployment of next generation networks, and by reducing costs of infrastructure deployment through dig-once policies and streamlining rights of way. Further promote infrastructure sharing among communication providers with a focus on passive infrastructure sharing, while monitoring competition in the market.*

The deployment of communication infrastructure in Brazil, especially concerning access to rights of way and installation of cellular sites, has continued to be cumbersome. Operators must comply with both federal and local regulations, which may vary by municipality and by state.

The Senate started debating in 2012 how to develop a framework to standardise, simplify and streamline the process of obtaining rights of way. This initiative culminated three years later with the approval of the "Antennas law" (Lei das Antenas, Law No. 13 116 of 20 April 2015). This law mandated infrastructure sharing, when technically feasible. It also obliged all public interest infrastructure projects (e.g. roads, electrical grids) to accommodate the deployment of communication infrastructure, which is commonly known as "dig-once" policy.

The original project of the Antennas law contemplated an automatic tacit approval of requests in case of non-response (i.e. positive administrative silence or *afirmativa ficta*).

That rule was replaced in the end of the legislative process by one that transferred the decision from the municipality to Anatel if the former did not respond within 60 days.

The President's Office (Casa Civil) vetoed the new proposal as such clause was considered a violation of the Constitution: land-use and zoning are the prerogative of municipalities. Although there has been progress towards streamlining rights of way, states and municipalities have been slow in adapting their local rules to the Antennas law. An agreement on tacit approvals by municipalities would significantly contribute to a faster deployment of infrastructure.

To reduce costs of infrastructure deployment, Brazil should further establish dig-once policies, including for construction of highways, energy transmission lines, etc. The federal government should harmonise the application of the Antennas law. To that end, it should issue norms that promote deployment of infrastructure under the principle of positive silence.

Anatel should encourage infrastructure sharing among communication operators, either through mediation between operators or, if stronger measures are deemed necessary, by laying down general conditions for infrastructure sharing. Furthermore, Brazil could envision a general conflict resolution body for passive infrastructure sharing among utility providers, such as roadside ducts and electric cables.

Finally, Brazil could consider developing a one-stop online portal that geo-references publicly owned buildings available for lease. This would allow setting up communication infrastructure like the one built for Mexico. The Mexican National Information System of Telecommunications Infrastructure includes information on rights of way. It is aimed at allowing concessionaires to deploy telecommunication infrastructure on public assets, such as buildings. The purpose of the inventory is to reveal the availability and status of this infrastructure so as to lower deployment costs and increase the efficiency of deploying communication networks (OECD, 2017[19]).

Further increase backhaul and backbone connectivity and promote open wholesale access models.

Fixed and wireless broadband services need to be developed in tandem, playing complementary roles. Both need fixed networks for traffic offloading from mobile networks, which usually requires fibre deep into the backhaul and access networks. 5G technology will exacerbate requirements for fibre backhaul connectivity. This will be needed for extensive fixed infrastructure deployments to aggregate wireless data streams and hand them over to backbone networks.

Fibre backhaul, if accompanied by an effective open access regime, should also help decrease the costs of deploying 4G and 5G mobile networks. These networks are crucial for reaching end users in rural and remote areas of Brazil. Thus, Brazilian authorities should develop a strategy to further develop high capacity fixed backbone networks. In areas which are not commercially viable, the government may wish to adopt incentive mechanisms to foster backhaul connectivity. This would further promote investment in fibre backhaul and backbone connectivity in all parts of the country.

Anatel should consider using a bottom up, long-run incremental cost model (BU-LRIC) to regulate ex ante *wholesale national roaming rates to set them at efficient costs instead of the fully allocated costs model based on historical cost accounting (FAC-HCA).*

In the past, some regulators used historical cost accounting (HCA) models to set wholesale interconnection rates. These models cannot incorporate the impact of continuously evolving technologies, and thus fail to reflect market inefficiencies (ITU, 2009[21]). Many OECD countries have moved towards setting wholesale interconnection rates *ex ante* using long-run incremental cost (LRIC) models. LRIC models calculate the incremental costs of providing the relevant interconnection service. They consider only the costs that would be avoided if third parties did not provide the interconnection service.

Unlike HCA models, LRIC rates reflect the costs that an efficient entrant would face using modern technology. As one key study noted, "(T)he further termination rates move away from incremental cost, the greater the competitive distortions between fixed and mobile markets and/or between operators with asymmetric market shares and traffic flows" (European Commission, 2009[22]) . Before eliminating international mobile roaming rates in June 2017, the European Commission calculated wholesale roaming rates with a bottom up-LRIC model (European Commission, 2016[23]). This was similar to how mobile and fixed termination rates are determined in Europe.

Anatel has moved from a top-down fully allocated costs model based on HCA (FAC-HCA) to a bottom up-LRIC model to establish the glide path for mobile termination rates. This welcome development reduced interconnection rates by 90% from 2014 to 2019. The reference wholesale rates for national mobile roaming in Brazil could also benefit from using a similar cost methodology as the one used for mobile termination rates.

Foster the Internet of Things (IoT) by eliminating taxes such as FISTEL, establishing a separate IoT numbering plan, and re-examining outright IoT permanent roaming restrictions.

Several steps are crucial to foster the Internet of Things (IoT) ecosystem. These include interoperability, spectrum management, extra-territorial use of numbers and solutions to facilitate provider switching to avoid lock-in.

The Brazilian government has taken several positive steps to promote deployment of the IoT. These include the elaboration of the National IoT Plan (Decree No. 9 854 of 25 June 2019). Anatel has further accelerated the process to review regulation of IoT devices and services. It also launched a public consultation in August 2019 focusing on aspects related to licensing, taxation, numbering, Quality of service (QoS), spectrum and regulation for mobile virtual network operators (MVNOs).[8] Nevertheless, improvements can still be made to foster the IoT.

In Brazil, all active lines must pay contributions to FISTEL, not only when the line is activated but also on a yearly basis. Many IoT connections are services with low average revenue per user (ARPU) communication. As a result, FISTEL could make the service unprofitable or simply unviable. If IoT devices are exempt from certain taxes (i.e. ICMS and FISTEL), end-user prices would be substantially lower, which could lead to higher

adoption rates. This exemption measure, and consequent higher adoption rates, can increase productivity and growth of gross domestic product. This would generate positive effects across economic sectors and thus increase tax revenues. The National IoT Plan refers to reducing FISTEL for the IoT, but this requires reforming the FISTEL law.

Congress has been debating whether to eliminate FISTEL charges for IoT connections since 2016, but it has not reached an agreement. The Executive Power is considering a provisional measure that would set this rate to zero for IoT devices; however, the Ministry of Finance has requested an impact evaluation on foregone revenue. In addition, communication revenue may decrease if IoT development is hindered.

Numbering is another potential barrier to the diffusion of IoT devices, which are projected to grow exponentially, surpassing personal communications. Using the current numbering plan for mobile telephony, a scarce resource, may not be the appropriate solution. To avoid a bottleneck, establishing a separate numbering plan and fostering the deployment of the numbering protocol IPv6 could alleviate this issue.

When it comes to massive and dispersed connected devices, the IoT has evolved to provide new solutions, particularly at a global scale and along supply chains spanning multiple countries. Many IoT devices may be initially activated in one country and exported to another permanently. In other words, IoT applications and services transcend borders.

Therefore, many countries allow, or do not explicitly prohibit, permanent roaming for the IoT. However, a few countries (e.g. Brazil and Turkey) do not permit permanent roaming. In 2012, Anatel ruled that foreign-based carriers using foreign SIM cards may not offer services in Brazil on a permanent basis.

Anatel could reassess its current stance and re-examine its restrictions on permanent roaming to promote innovative services and facilitate deployment of IoT services. Allowing permanent roaming for IoT devices may complement existing solutions in the market, such as the use of embedded SIMs. It could also further drive growth in diverse sectors of the Brazilian economy, such as manufacturing and agriculture.

Permanent roaming arrangements could be subject to freely negotiated commercial rates between Brazilian network operators and international providers. This policy could mitigate any concerns from local players that international providers – which are not subject to local regulation and taxation – would gain an undue advantage.

Consider removing the legal restrictions on foreign direct investment in broadcasting in which foreign companies or individuals cannot hold more than 30% of the total and voting capital of free-to-air broadcasting companies.

Eliminating restrictions on foreign direct investment (FDI) would reduce barriers for market entry, and therefore spur investment and substantial progress in the broadcasting sector. Although this change requires a constitutional reform, it would allow new entrants to join the market and thereby boost competition.

At the same time, the change would also encourage greater availability of advanced technologies and specialised knowledge from foreign and national firms, all of which would benefit end users. Measures to maintain national identity, promote local content or support other objectives often associated with broadcasting, if desired, can be implemented in ways that foster competitive neutrality, while ensuring FDI benefits. In other words,

firms should compete on their merits and not receive undue advantages due to their ownership or nationality.

Streamlining and simplifying the licensing process for broadcasting should foster plurality and choice in the market. Easing the entry of new broadcasting service providers into the market may be critical to challenge large players. Removing barriers to FDI can further help meet these policy objectives in broadcasting through increased investment, employment, competition and media plurality.

Ensuring efficient spectrum management

> *Closely monitor the effects of changes introduced by Law No. 13 879 regarding a successive renewal of spectrum licences on market entry and competition in mobile markets. As spectrum auctions are one of the main tools to foster competition in mobile markets, the successive renewal of spectrum licences should only be done sparingly in order to promote new auctions of the bands granted for a predictable time horizon.*

Well-designed licensing regimes provide legal certainty in the aim of fostering long-term investment. As a consequence, it is recommended that spectrum licences be awarded for periods longer than ten years, or at least, provide mobile players with sufficient certainty that their licences will be renewed with a transparent renewal path. OECD countries have licence duration periods typically ranging 10-30 years, depending on the spectrum band; most last 15-20 years. This allows the pursuit of two important goals simultaneously. On the one hand, countries provide legal certainty, which strengthens incentives to invest in networks through licences lasting around 20 years. On the other, countries can hold auctions after the initial licence period ends when other parties are interested in using the assigned spectrum. The latter ensures that a scarce resource – radiofrequency spectrum – is used in the most efficient manner and to foster competition in the mobile market.

With the approval of Law No. 13 879 on 3 October 2019, spectrum licences in Brazil can now be successively renewed, without limit, after the first 20-year term. Each renewal is accompanied by a payment, determined by Anatel, which operators may exchange for investment commitments. Spectrum auctions are one of the main tools that countries use for a series of policy objectives, including to foster competition in mobile markets. As a result, Anatel should carefully observe and analyse the effects of this new arrangement on market entry of new mobile operators. Overall, there is considerable risk that the new arrangement reduces Anatel's tools to promote competition in mobile markets and may limit market entry in the Brazilian mobile market.

Some changes introduced in the law, such as spectrum trading and infrastructure sharing, may reduce some undesired effects in the competitive dynamics of the market. However, if spectrum is not assigned efficiently in the primary market, efficiency in the secondary market cannot be guaranteed. Given the significance of the secondary spectrum market, this is an important consideration.

Most OECD countries favour long spectrum licences with clear conditions in case of licence renewals in the primary market. However, this does not mean that countries cannot revoke spectrum licences. For instance, the United Kingdom had removed predefined licence

terms to increase certainty surrounding spectrum licences. Still, the regulator (Ofcom) can revoke any licence for spectrum management grounds, with a five-year notice.

In other words, "indefinite licences" only mean that Ofcom has limited rights of revocation during an initial term of 20 years. After this term, with appropriate notice to the licencee, Ofcom can revoke the licence. Ofcom retained this right to revoke licences due to the risk of specific market failures, such as lack of competition, as part of a suite of regulatory levers, designed to ensure efficient use of spectrum. Other levers include ensuring optimal allocative efficiency in the first instance and the application of opportunity cost licence fees after the expiry of the initial term.

Overall, countries need all possible tools to foster competition in the mobile market. This is an important communication market in Brazil, which may gain further importance with the launch of 5G services.

Brazil should further clarify the conditions for the non-renewal of a licence after the first 20-year period in Brazil, as efficient spectrum management also entails correcting for market failures, such as lack of competition. As it stands (Article 167 of Law No. 9 472 of 1997, modified by Article 2 of Law13 879 of 2019), it is unclear whether Anatel could revoke a licence to correct for market failure (such as lack of competition) through a new auction. The article only explicitly states that Anatel can revoke licences in case of infringement of regulation or if the spectrum band will be allocated to another use.

Anatel has already issued decisions to revoke licences for spectrum management reasons. However, non-renewal of spectrum licences, in spite of idle use, can prove to be more complicated than expected if operators appeal decisions through the judiciary. The regulator should further clarify whether this new spectrum arrangement will also apply to existing spectrum licences or only to new ones (e.g. the upcoming 5G auction). Finally, when assessing licence renewals, Anatel should consider undertaking a public call for expression of interest prior to the renewal of spectrum licences to consult with the market whether there is demand for the assigned spectrum.

Carefully design the upcoming 5G auction as the vast amount of spectrum planned to be placed in the market combined with the possibility of successive renewal of spectrum licences translates into high stakes of the effects of this auction in the competitive dynamics of the market.

The upcoming 5G auction will place a vast amount of spectrum in the market. Together with the changes brought about by Law No. 13 879, where spectrum licences can be successively renewed, the stakes of getting the design right of this 5G auction are extremely high.

The design of this particular auction may predetermine the competition dynamics of mobile market in Brazil in the long term, as the players that win spectrum would shape the market in the long run. Therefore, the different elements of the auction design (i.e. the design of blocks, reserve prices, coverage obligations and spectrum caps) should embody the objectives of enhancing competition in the market and providing incentives to expand coverage of mobile networks.

Consumer empowerment

> *Improve transparency of advertised fixed broadband communication service plans to empower consumers when deciding which commercial offer to contract.*

In Brazil, there is lack of transparency in advertised fixed broadband offers. Operators establish a price cap for fixed services and register the plan tariffs with Anatel prior to commercialisation. Online advertised plans in Brazil appear with time-limited promotional tariffs and a price cap tariff. These are the only two prices that Brazilian consumers can see when deciding on a fixed broadband plan. That is, fixed broadband operators in Brazil do not explicitly state the price in effect after the promotional tariff expires. This policy is not common practice in most OECD countries. The regulator suggests the price ceiling advertised in offers is non-binding, which means users in Brazil have no idea about the actual cost of the contract following the promotion. This lack of transparency in advertised plans hinders consumer empowerment. Consumers who can make informed choices, are a necessary condition to ensure competition in communication markets.

The regulator is holding a public consultation to eliminate the practice of setting price ceilings through the revision of the Regulatory Framework for Consumer Rights of Telecommunication Services (Regulamento Geral de Direitos do Consumidor de Serviços de Telecomunicações). However, the transparency of fixed broadband offers should be increased. This is in line with one of the key objectives of the regulator, which is to empower consumers by providing information that supports their decisions.

Brazil should enforce regulation that increases the transparency of broadband offers. At the very least, consumers ought to know, when contracting an offer, the price that they would have to pay once the promotional period expires. As is the case in all OECD countries, Brazilian operators should explicitly state the post-promotional price of fixed broadband offers when advertising these plans.

Fostering competition in communication and broadcasting markets

> *Follow the OECD recommendations of the 2019 Peer Review of Brazil of the Competition Committee. Remove the 20% threshold for market share as a proxy for market power from the competition law. Issue guidelines on a clear analytical framework to assess market dominance.*

The OECD Competition Committee, in its 2019 Peer Review of Brazil, made a number of key recommendations for improving the country's competition law and policy in general (OECD, 2019[24]). These included removing the purely market share-based definition of dominance in the competition law for one that considers a broader array of market information. Moreover, it recommended issuance of guidelines that clearly explain Brazil`s analytical framework to assess market dominance.

It further recommended to determine market power based on a rigorous assessment of all factors affecting competitive conditions in the market rather than market shares alone

(OECD, 2019[24]). Even among jurisdictions that consider market power from a certain market share threshold as a factor, Brazil's threshold – at 20% – is low.

In some other jurisdictions, a company is unlikely to be deemed dominant if its market share is under 40% (OECD, 2019[24]). Defendants can present evidence that they do not actually have market power. For example, they might present evidence showing that entry barriers are quite low. However, with such a low threshold, the likelihood of false positives is high. That translates into unnecessary investigations, and thus needless expenditures of government resources, as well as corresponding expenditures and distractions for businesses.

For the OECD's Competition Committee (2006[25]), "[m]arket share data continue to be the 'high priest' in assessing whether a firm has substantial market power, although the limitations of market shares as [a] proxy of market power are widely acknowledged." Market shares can nevertheless be a useful first step in competition analysis. However, if Brazil desires to retain market share as an initial proxy for market power, it should at least consider raising the threshold.

With regards to particular markets, the OECD previously recommended that Brazil monitor market dominance and market dynamics of the audio-visual sector (OECD, 2019[24]). It should focus on FTA, pay TV and emerging trends in OTT/video-on-demand (VoD) services. Anatel periodically assessed distribution of pay TV services and bundling of communication services. With Ancine, it also studied the whole pay TV value chain. However, market studies of the audio-visual services that consider FTA services are still absent in Brazil.

The Constitution prohibits the monopoly or oligopoly of media and limits ownership of FTA. However, Brazil has not systematically or effectively monitored or enforced competition principles in FTA broadcasting markets. The ownership rules enacted in the 1960s have mostly been ineffective. On the one hand, Brazil does not monitor whether ownership is already granted to business partners or family members. On the other, it does not monitor if one affiliated broadcaster is transmitting all of another's programming. MCTIC was expected to fulfil this monitoring role, but this has not happened.

A future converged regulator should carry out an integrated analysis of the sector to accurately assess the state of audio-visual markets in Brazil and capture emerging trends. In the absence of a converged regulator, Anatel, Ancine and MCTIC must work together with CADE on such an analysis. It should study market dominance in all types of audio-visual services, particularly FTA broadcasting, long excluded from most competition studies in Brazil. In the short term, CADE could also analyse broad sectoral competition to investigate issues of market dominance and failures in the audio-visual sector, including FTA.

The 2019 Peer Review of Brazil makes several other recommendations. These include: delineating the functions of the General Superintendence of CADE and the Tribunal; establishing a more transparent appointment system for CADE Commissioners and the General Superintendent; improving arms-length separation of CADE from the Ministry of Justice; prioritising abuse of dominance cases; improving settlement policy in line with international standards; and introducing a new merger notification threshold based on the value of the assets involved in the transaction to ensure CADE's resources are employed effectively. The OECD reiterates those recommendations, as they also apply for the communication and broadcasting sectors.

> *Conduct* ex post *reviews of significant merger decisions in the communication sector by examining their actual price and non-price effects, and compare them with the initially expected effects.*

CADE or Anatel should consider conducting some *ex post* reviews of significant mergers to examine their actual price and non-price effects, and to compare them with expected effects. Through its Department of Economic Studies, CADE has invested in improving staffing levels to conduct more detailed technical analyses and *ex post* evaluations (OECD, 2019[24]).

Ensure the competitive neutrality of State-owned enterprises, such as Telebrás, to avoid crowding out private investment.

The Brazilian government holds a majority share in the company Telebrás. The firm is also implementing the National Broadband Plan, including the supply of essential wholesale infrastructure and provision of retail broadband services in areas with low coverage at affordable prices. In this context, competition laws should be applied effectively to safeguard competitive neutrality. In this way, firms would not receive undue advantages due to their ownership or nationality. Furthermore, justification for subsidies should be transparent. They should only be used when not causing market distortions. For example, subsidies could be used in unserved areas with no viable business case for the private sector.

As its governance and legal framework, Telebrás should follow the *OECD Guidelines on Corporate Governance of State-Owned Enterprises* (OECD, 2015[26]). These contain good practices for preserving competition among private and State-owned enterprises. Public policies and regulations should not favour Telebrás beyond what is necessary and reasonable to attain its public policy goal of promoting the universalisation of Internet services.

In some markets, Telebrás faces competition from privately owned operators (whether wholesale or retail). In these cases, its conduct should be subject to the same standards and scrutiny applied to those companies by all relevant institutions. To increase transparency and prevent distortive cross-subsidies, Telebrás should hold separate accounts for its commercial and non-commercial activities.

Aside from competitive neutrality issues, the maintenance of Telebrás' operations in view of its recurring losses may be a concern. In particular, OECD guidelines call for State-owned enterprises to have market-consistent conditions on debt and equity financing and to achieve return rates comparable to competing private enterprises. State-owned enterprises should not receive any indirect support from the State that confers undue competitive advantage. Moreover, the guidelines recommend that when State-owned enterprises engage in public procurement, procedures should be competitive, non-discriminatory and transparent (OECD, 2015[26]).

In general, the OECD does not take a position on whether the State should own enterprises. The choice of whether to privatise a State-owned enterprise, for example, depends on a number of factors related to the national economy, domestic policy choices and emerging technology trends. If the government, however, decides to follow through with plans to privatise Telebrás again, this complex and challenging process should be based on internationally recognised good practices; public investments should not be left stranded.

A well-planned and executed privatisation process can enhance investors' confidence in the sector and gain support from stakeholders and the public. This needs to be backed by sound rationales, strong institutions, and good regulatory and governance arrangements. A recent OECD publication offers practical advice on key stages of the process, from inception to post-privatisation (OECD, 2019[27]).

Strengthening national policies and evidence-based policy making

Expanding broadband networks and services

> *Establish targets for the Connected Brazil Programme and other programmes directed at expanding networks, and monitor their implementation. Improve co-operation among governmental entities and across the different levels of government (national, state and municipal) for implementation of broadband connectivity initiatives.*

The E-Digital programme was an important step towards establishing a coherent governance model for digital initiatives and will be analysed in depth by *Going Digital in Brazil* (OECD, forthcoming[28]). However, except for the number of public schools to be connected, the programme does not define quantitative targets and relies on aggregate global comparison indexes.

Moreover, while both the decree and the background document mention high-speed broadband, they do not indicate a minimum desired speed for broadband. Most OECD countries measure with concrete targets measured in terms of percentage of population, households or business connected with 30 Mbps, 50 Mbps or even 100 Mbps.

In addition, significant co-ordination issues between national, regional and local governments hinder the effective deployment of connectivity initiatives. Hence, streamlining the institutional framework to create a single, independent and convergent regulator vested with the power to issue and implement *ex ante* regulation is critical. MCTIC should be clearly in charge of formulating policy.

Moreover, a public forum should be created for federal, regional and local governments to discuss their policy initiatives and reach collaborative agreements (e.g. respecting building permits and rights of way). This could take the form of an inter-governmental body meeting periodically, possibly under the E-Digital framework.

This body could be complemented with MCTIC field visits to the different regional and/or local governments and communities to liaise and clarify their policies. In a country as large as Brazil this could prove challenging and time-consuming. However, lack of communication between the three levels of government has generated substantial costs and wasted public resources, while hindering effective infrastructure deployment.

To ensure effective evaluation of policy programmes (such as Connected Brazil), clear milestones and specific targets must be defined from the start. These should address coverage, speed, population, number of schools and health centres connected, etc. (by geographic market). Complete measurements should be taken at the beginning to serve as baseline values.

In sum, broadband connectivity initiatives supported by the government should seek to be sustainable and involve local stakeholders. They should privilege infrastructure sharing (such as ditches, ducts and poles), and implement reasonable, cost-based access rates for such infrastructure.

Lastly, broadband connectivity programmes should be closely monitored for their implementation and quality performance, to ensure that they meet the required quality parameters, and experience quality improvements over time.

Expand high-quality broadband networks to underserved regions by fostering investment in infrastructure to bridge the digital divide.

In Brazil, income inequality is high (and incomes in underserved and remote areas are low). Moreover, in rural areas educational attainment is usually low and infrastructure deployment in such areas has been scarce due to the high costs of deployment. To foster broadband adoption in these areas, Brazil needs innovative approaches to incentivise investment and address the infrastructure gap.

It has taken steps in the right direction by including rural coverage obligations in spectrum auctions as a prerequisite to participate in the bidding process. Brazil has applied this measure for over ten years; it has also proven effective in many OECD countries. Other positive developments are policies encouraging the creation of Internet exchange points and their growth (which significantly reduced IP interconnection costs) and good practices in infrastructure management through CGI.br.

Nonetheless, incorporating coverage obligations with a clearly defined timeline for deployment in spectrum licences is insufficient if these are not accompanied by clear and reasonable QoS standards. It needs measurable objectives that define quantitative targets for what "high-speed" broadband means in a given geographical market. Finally, it needs periodic information reporting, which facilitates monitoring by the regulator.

However, even if such coverage and QoS obligations are set, other elements of the legal and regulatory framework may still deter operators from timely and adequate investment. These include the tax regime, which constitutes an important market barrier in Brazil.

Recent initiatives in Mexico and Peru (*Red Compartida* and *Internet para Todos*, respectively) aim to establish wholesale-only networks in remote and underserved areas. MNOs and MVNOs can access these networks under fair, reasonable and objective conditions to provide affordable retail communication services. It is still too soon to determine the success of these policies. However, they do suggest the need for innovation in infrastructure deployment. For example, *Internet para Todos* in Peru has connected 6 000 localities across Peru with more than 800 base stations with 3G and 4G technologies (Internet para Todos, 2020[29]).

Public-private partnerships could help bridge the digital divide. They could also diminish reliance on public resources derived from taxation (which are already high for communication services in Brazil) or universal service funds. A number of countries have used reverse auctions in the design of such partnerships to good effect.

Such policies will not be successful without co-ordination among multiple competent authorities and different levels of government. This is why a public forum for these authorities to co-ordinate initiatives related to building permits and rights of way should be established.

Lastly, considering the increasing relevance of broadband services, resources allocated to the different funds to expand fixed telephony deployment (i.e. FISTEL, FUST and FUNTTEL) should be liberated for use in broadband deployment.

Promoting inclusive and forward-looking audio-visual public policies

Design an integrated and overarching public policy vision for broadcasting, pay TV and emerging OTT services/VoD.

Unlike in the communication sector (e.g. E-Digital 2018-2020, Connected Brazil Programme), there is no overarching public policy vision for broadcasting, pay TV and emerging OTT services/VoD. Yet such a vision is needed in an increasingly convergent environment. FTA broadcasting has not received much attention in sector regulation and public policy making. In Brazil, where most consumers access information through FTA, this lack of attention is a concern for inclusion, media pluralism and diversity.

In an increasingly converged landscape, a holistic, technology-neutral policy vision is needed for the broadcasting, pay TV and VoD sectors. The first step is a regulatory and institutional reform that assigns clear roles for the sector or converged regulator and the policy-making institutions (ministerial or as a separate audio-visual authority). Policies should also be adapted to evolving market dynamics, including greater adoption of OTT services.

In the absence of such reform, MCTIC could lead the formulation of such public policies in co-ordination with other entities such as Anatel and Ancine. These policies should emphasise the need for competitive neutrality between all industry players through the issuance of convergent regulatory measures. In addition, media plurality, and diversity of regional and local content must be guaranteed (especially in light of market concentration in the broadcasting sector) and policies developed to foster media literacy.

Strengthen the national public broadcasting system by ensuring sufficient funding and editorial independence of public broadcasters, including EBC.

In comparison to OECD countries, Brazil lags behind in terms of funding, staffing and editorial independence of its public broadcasting system. A strong national public broadcaster can promote media pluralism and can help provide national, regional and municipal content that may not be commercially viable. As in many countries, trustworthy public journalism is at risk. Public service broadcasting could provide an important, independent voice in FTA broadcasting.

However, two factors have weakened the public service broadcasting system in the country. First, Brazil lacks a co-ordinated public policy concerning FTA broadcasting. Second, the governance and structure of the principal public system broadcaster in Brazil – EBC – have recently changed.

Ensuring the full editorial independence of EBC from the government would entail reversing the 2016-17 reforms. More funding would allow Brazil to guarantee the independence of EBC (or an equivalent new entity).

More opportunities for the sector could be possible through two actions. First, Brazil could promote infrastructure sharing for public broadcasters, and possibly local and community broadcasters. Second, it could integrate converging technologies into the strategy to promote public broadcasting.

Foster pluralism and domestic/regional content production and promote local and community broadcasters through a cross-media policy perspective for a multi-platform environment.

Brazil should encourage development of local content. The country has over 200 million inhabitants, and a geographical extension of over 8.5 million km^2. Moreover, FTA broadcasting delivers the bulk of information to residents. Encouraging locally relevant content where audiences can see themselves can bolster ICT adoption, and also promote media plurality, diversity and freedom of expression. This is especially the case as one vertically integrated player dominates FTA broadcasting.

Brazil has made efforts to promote the production of domestic content in the past decade. The Audio-visual Sectoral Fund (Fundo Setorial do Audiovisual, FSA), for example, subsidises the production of Brazilian content, and provides diverse financial tools to support the national film industry. In addition, Brazilian movie theatres must exhibit Brazilian films for a minimum number of days per year. Furthermore, Brazil has audio-visual package quotas whereby one-third of TV channels must show domestic content. However, these policies do not address promoting pluralism in broadcasting.

While FTA broadcasting still reaches the largest audience, broadband and audio-visual OTT services are steadily growing, with consumers tending to favour streaming platforms with Brazilian content. Therefore, the regulatory framework must ensure a fair competitive landscape for traditional broadcast and TV providers, as well as OTT service providers. Regulations tilt the playing field to the benefit of OTT service providers through tax asymmetries and lack of quotas for Brazilian content. Nevertheless, the solution is *not* to impose legacy regulations on OTT providers which are important drivers of broadband adoption in the country. Instead, a more balanced and consistent framework could promote competition, while encouraging investment in domestic content production and transmission.

Another issue related to domestic/regional content in the Brazilian market is the complex, lengthy and discriminatory licensing regime for broadcasting services. Commercial TV stations must submit competitive bids through a public procurement process to obtain a licence (Chapter 6). The process is lengthy, with multiple steps, and may take many years depending on the type of licence.

The bidding processes that apply to commercial TV and radio licences, as well as community radio broadcasting should be streamlined and subject to compulsory timelines to avoid unnecessary delays. More importantly, a converged and independent regulator should confer licences. It should guarantee transparency, equal access and an objective and impartial selection for interested parties. To reiterate an earlier recommendation, neither the President nor Congress should participate in the awarding of broadcasting licences. The process should include only the sector or converged regulator.

The regime establishes additional requirements for parties interested in setting up a community radio service. These include, for example, meeting requirements for local community coverage; a board of directors formed by residents of the community and use of low power in the transmission of their programming. In addition, community radio services are banned from inserting commercial advertising and on forming networks of community broadcasters.

Community broadcasters foster constitutionally protected values such as national and regional identity and contribute to the production and transmission of domestic and regional content. Therefore, Brazil is encouraged to move towards more flexible licensing requirements (e.g. considering removing low-power transmission obligations). Moreover, it could allow some limited advertising to make operations financially viable. On the one hand, such measures could incentivise the creation of community radio stations. On the other, they would level the competitive landscape. In other words, public service broadcasters that

offer content similar to their commercial counterparts would be subject to more lenient licensing and operation requirements (e.g. educational radio stations).

Improving data collection for evidence-based policy making

> *Substantially improve the data collection of the broadcasting sector and continue to improve the collection and analysis of statistical information with respect to connectivity coverage maps and use of communication services.*

Inconsistency within the institutional and regulatory framework of the broadcasting sector in Brazil has led to a profound scarcity of data on related services for both the most basic and more advanced indicators. Data needed to analyse market performance, the state of competition in the sector and the effectiveness of broadcasting policies are not systematically collected and reported. This also hinders fundamental monitoring and evaluation of administrative processes under MCTIC's responsibility. Substantial improvements in collecting data on broadcasting are needed, particularly on FTA. These data should consider convergence trends and emerging services, such as OTT and VoD.

Detailed and updated data are needed on deployment, adoption and usage of communication services, as well as on emerging trends, to allow consistent communication public policy and regulatory design. Anatel, MCTIC and Cetic.br collect and report data on the communication sector. Anatel's ambitious data portal launched in 2019 compiles numerous indicators. These cover access, infrastructure coverage and technology, investment, numbering, allocation of licences, spectrum, competition, product certification, QoS and consumer issues.

However, granular data on the availability and quality of communication services in Brazil still need improvement. In particular, information on mobile and fixed broadband access to network coverage should be gathered regularly. This would ensure new obligations do not overlap with existing or planned infrastructure investments.

Brazil has taken important steps in this direction. Recently, Anatel improved a sectoral database through the Telecommunication Networks Structural Plan (Plano Estrutural de Redes de Telecomunicações). For its part, MCTIC commissioned studies to map broadband networks in Brazil.

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Notes

[1] The term communication service is used along the document meaning services provided by telecommunication and cable operators.

[2] This is especially the case when traffic is unbalanced in favour of incoming traffic to those operators. This puts the larger operators in a position where they can gain competitive advantage and large profits from creating a substantial disparity between on-net and off-net call prices, exploiting what are known as "club effects" or "tariff-mediated network externalities" (OECD, 2012[31]).

[3] Both concepts are laid out in Law No. 9 472 of 1997, Articles 60 and 61: "Art. 60. Telecommunication services is the set of activities that enables the offer of telecommunication. §1° Telecommunication is the transmission or reception of symbols, characters, signs, writings, images, sounds or information of any nature, by wire, radio-electricity, optical means or any other electromagnetic process. [...]

Art. 61. Added value service is the activity that adds to a telecommunication service that supports it new utilities related to access, storage, presentation, movement or retrieval of information, but shall not be confused with the telecommunication service itself. §1º Added value service does not constitute telecommunication service and its provider can be classified as a user of the telecommunications service that supports it, with the rights and obligations inherent to this condition".

[4] See for instance Dewing (2014[30]), Canadian Broadcasting Policy, op. cit.

[5] Art. 5 SeAC. "Control or ownership of more than 50% (fifty percent) of the total and voting capital of companies providing telecommunication services of collective interest shall not be held, directly, indirectly or through a controlled company common, by concessionaires and licencees of sound broadcasting and of sound and images and by producers and programmers based in Brazil. […] Control or ownership of more than thirty percent (30%) of the total and voting capital of concessionaires or ownership of more than thirty percent (30%) of the total and voting capital of concessionaires and licencees of sound broadcasting and of sound and images and of producers and programmers based in Brazil shall not be held, directly, indirectly or through a company under common control, by providers of telecommunications services of collective interest […]."

[6] This difference in values is due to the fact that large companies, which tend to appeal to the judiciary, are responsible for high-value fines.

[7] The ICT Providers survey by CETIC.br/NIC.br estimated that Brazil had 6 618 ISPs, out of which 75% were small ISPs with fewer than 1 000 subscriptions (CGI.br, 2019[32]).

[8] The public consultation submitted in August 2019 can be found here: https://www.anatel.gov.br/institucional/noticias-destaque/2333-anatel-aprova-consulta-publica-para-diminuir-barreiras-a-expansao-de-iot-e-m2m-no-brasil.