



DOMINICAN REPUBLIC
LEVERAGING COMPETITION IN THE TELECOM SECTOR TO
ACCELERATE ECONOMIC GROWTH

World Bank Policy Note

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1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

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DOMINICAN REPUBLIC

GOVERNMENT FISCAL YEAR

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CURRENCY EQUIVALENTS

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(Exchange Rate Effective as of 5/20/2020)

US\$1.00 = RD\$55.45

Abbreviations and Acronyms

BTI	Bertelsmann Transformation Index
DR	Dominican Republic
DFS	Digital Financial Services
FDI	Foreign Direct Investment
GNI	Gross National Income
ICT	Information and Communications Technology
INDOTEL	<i>Instituto Dominicano de las Telecomunicaciones</i> (Dominican Telecommunications Institute)
ISPs	Internet Service Providers
LAC	Latin America and the Caribbean
LRIC	Long-Run Incremental Costs
MCPAT	Market and Competition Policy Assessment Tool
MoUs	Memoranda of Understanding
MVNOs	Mobile Virtual Network Operators
OECD	Organisation for Economic Co-operation and Development
PMR	Product Market Regulations
SPEI	Interbank Electronic Payment System

Vice President:	Carlos Felipe Jaramillo
Country Director:	Michel Kerf
Global Director:	Marcello Estevão
Sector Managers:	Jorge Thompson Araujo and Martha Licetti
Task Team Leaders:	Johannes Herderschee and Georgiana Pop

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Executive Summary and Policy Recommendations

Limited competition hinders the optimal use of telecommunication services in the Dominican Republic, which lags peer countries in mobile subscriptions and internet penetration. Despite recent reforms designed to enhance competition, the telecommunications sector remains dominated by a small number of companies. In addition, the antimonopoly policy is perceived to be weak compared to regional peers. High infrastructure costs limit the economic viability of replicating key facilities, creating bottlenecks. Fixed telecom prices have remained largely unresponsive to changes in demand over the last eight years. Moreover, prices for both mobile communications and fixed broadband are higher in the DR than in peer countries.

Following the World Bank Group’s Markets and Competition Policy Assessment Toolkit (MCPAT), this policy note provides a brief overview of key bottlenecks affecting the telecommunications sector, as well as key pro-competition reforms that could improve the regulatory landscape.

Due to its inherent characteristics, the telecommunications markets – fixed, mobile and internet - in DR are concentrated. Currently, there are three main operators in the fixed, mobile and internet markets, with few smaller operators having a residual market share in the fixed and internet markets. While market concentration is common in the telecommunication sector in many countries, the interaction between market characteristics and the regulatory framework for telecommunications is key to yield efficient market outcomes in terms of prices, quality and access to services.

Infrastructure and regulatory bottlenecks appear to limit competition along the telecommunications value chain. Stringent licensing regime and burdensome qualifying proceedings may hinder the entry of new telecommunications operators, including mobile virtual network operators (MVNOs) and internet service providers (ISPs). The lack of effective asymmetric regulation weakens oversight of operators with significant market power and reinforces the position of incumbents. To prevent anticompetitive practices, regulators must formally identify operators with significant market power. However, the Dominican Telecommunications Institute (*Instituto Dominicano de las Telecomunicaciones*, INDOTEL), in charge of regulating the telecommunications sector in the DR, has not yet taken this step.

Suboptimal tariff regulation may also undermine merit-based competition among market players. Unsatisfactory regulation of interconnection rates can lead to on-net/off-net price differentiation and encourage club effects, reinforcing market dominance. Lack of effective ex ante tariff regulation also constrains access to infrastructure, notably the international gateway. Although the government has passed important reforms designed to enable new competitors to use essential passive infrastructure, these rules and obligations are not defined in an asymmetric manner to ensure that players with significant market power are properly regulated.

Lack of clear rules granting access to essential infrastructure may raise barriers for new entrants. Moreover, regulatory constraints that inhibit the deployment of additional fixed network infrastructure further benefit incumbents at the expense of small firms and new entrants. As far as radio spectrum policies are concerned, even though spectrum rights are allocated through auctions, tender conditions do not appear to be consistently open and non-discriminatory, which creates an uneven playing field between operators.

Overlapping institutional mandates may have weakened the effective enforcement of prohibitions on anticompetitive behavior in the telecommunications sector. The Telecommunications Law empowers the sector regulator, INDOTEL, to review mergers and prosecute anticompetitive practices, while ProCompetencia has concurrent powers to promote competition in the telecommunications sector. In the absence of effective coordination mechanisms between ProCompetencia and INDOTEL, their overlapping mandates may weaken the enforcement of competition law.

Limited competition in the telecommunications sector is slowing the development of the digital economy, including the deployment of new payment methods that are essential to financial inclusion. Competition in payment markets occurs between both rival payment providers and alternative platforms. However, a lack of interoperability among payment platforms can distort competition among providers.

Policy Recommendations

Policy recommendations encompass ex ante and ex post regulatory aspects to foster competition and better market outcomes. Ensuring an effective ex ante regulation is essential to facilitate entry of new operators, eliminating regulatory barriers and imposing asymmetric obligations to operators with a significant market power. Once markets are adequately regulated, an effective competition enforcement system further guarantees market contestability.¹ The table below presents a set of pro-competition reforms prioritized based on their feasibility in the short and medium-term.

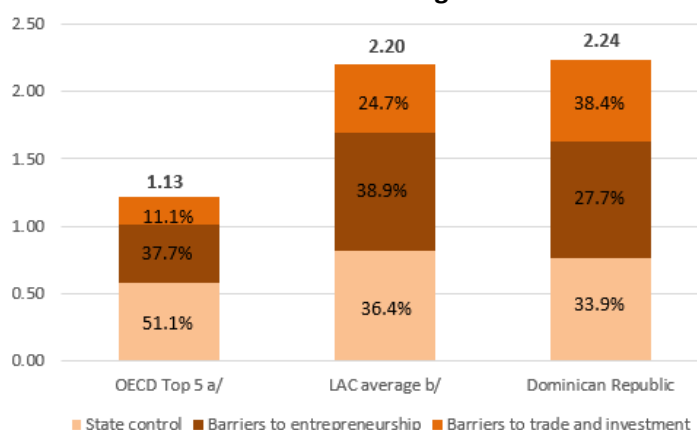
¹ See also: World Bank (2018), Better Markets for All through Competition Policy in Senegal, box 17.

Recommendations	Responsibility	Priority
Ex ante regulatory interventions to enhance contestability		
Adopt a clear general authorization regime subject to minimal administrative requirements	INDOTEL	Short-term
Promote roaming agreements and require MNOs with significant market power in the mobile sector to host MVNOs	INDOTEL	Medium-term
Introduce a secondary spectrum market	INDOTEL	Medium-term
Grant preferential access to the spectrum to new and smaller operators in a non-discriminatory manner	INDOTEL	Medium-term
Promote an effective harmonization and coordination of the licenses for the deployment of fixed network infrastructure	INDOTEL \	Short-term
Introduce asymmetric principles in the existing regulation on passive infrastructure sharing and effective enforcement of the mechanisms for conflict resolution	INDOTEL	Short-term
Eliminate non-dominant operators' obligations to provide access to their network infrastructure	INDOTEL	Medium-term
Combine interconnection charges with off-net price caps for the incumbent operator	INDOTEL	Short-term
Ex post competition policy enforcement mechanisms		
Limit the prohibition of abusive conducts to operators with significant market power	ProCompetencia / INDOTEL	Short-term
Strengthen the institutional framework and further develop the rules, guidelines, and administrative capacities necessary to effectively prevent, investigate, and prosecute anticompetitive practices.	ProCompetencia / INDOTEL / Ministry of Industry, Commerce and SMEs	Short-term
Introduce a cross-sectoral merger-review system	ProCompetencia / INDOTEL / Ministry of Industry, Commerce and SMEs	Short-term

I. Introduction

1. In recent years, the Dominican Republic (DR) has taken important steps to promote competition, both in key sectors and economy wide. In 2008, the government approved a new competition law, and in 2011 it established an independent competition authority, the National Commission for the Defense of Competition (ProCompetencia). Meanwhile, the elimination of sector-specific barriers to competition has reduced restrictions, as indicated by the Product Market Regulations (PMR) indicators which are now aligned with the regional average (Figure 1).² The private sector's increased participation in network industries, especially telecommunications;³ the unbundling of the electricity market;⁴ the establishment of independent sectoral regulators;⁵ the expansion of access to markets for professional services;⁶ and the lack of restrictions on foreign direct investment (FDI) in most sectors highlight the government's commitment to fostering competition.

Figure 1. Restrictiveness of Product Market Regulation in the Dominican Republic



Source: WBG/OECD PMR data 2013-2016.

Note: OECD PMR indicators are on a scale of 0-6, with higher values denoting more restrictive regulations affecting competition. a/ Top 5 OECD countries include Netherlands, United Kingdom, Austria, Denmark and New Zealand. b/ LAC countries include: Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Honduras, Jamaica, Mexico, Nicaragua and Peru.

² PMR measures the extent to which de jure public policies either promote or inhibit market forces in key economic sectors, including electricity, gas, telecommunications, postal services, transportation, water, retail distribution, professional services, and other sectors. It also evaluates administrative requirements for starting a business, the treatment of foreign parties, the governance arrangements for state-owned enterprises, antitrust exclusions and exemptions, and similar issues. For more on the PMR methodology, see: Nicoletti et al. (1999), Conway et al. (2005), and Wolf et al. (2009). The World Bank Group collected PMR information for the DR in 2013 as part of a joint initiative with the OECD to calculate PMR indicators for 16 regional countries.

³ According to the PMR data, there are no public enterprises in the telecommunications sector. See also WTO (2015). Trade Policy Review, Dominican Republic. WT/TPR/S/319, p.191. (https://www.wto.org/english/tratop_e/tpr_e/s319_e.pdf)

⁴ Although operated by public enterprises, ownership separation in the generation and transmission segments is established by Article 11 of Law No 125-01 (<http://sie.gob.do/images/sie-documentos-pdf/leyes/LeyGeneraldeElectricidadNo.125-01.pdf>)

⁵ The DR has an independent regulator for the telecommunications sector (INDOTEL), which was created by Article 76 of Law No. 153-98 (http://www.sice.oas.org/investment/NatLeg/RDM/L_TeleCom_s.pdf). The regulator receives most of its budget from services to the regulated industry (Article 102.1 of Law No. 153-98), and its decisions can be appealed before the court (Article 96.3 of Law No 153-98). The electricity sector is regulated by the Superintendent of Electricity, which has the powers to set prices in the industry and issue sanctions and penalties (Article 24 of Law No 125-01). Finally, the Port Authority is an independent regulator for overseas transportation (Article 1 of Law No. 70).

⁶ The PMR data include four regulated professions: lawyers, accountants, engineers, and architects.

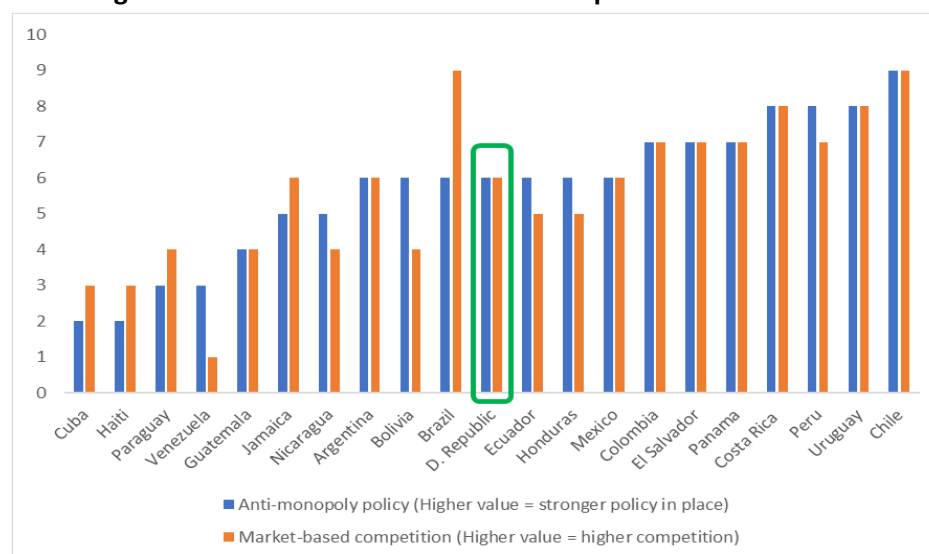
2. However, remaining regulatory bottlenecks in network industries and the limited implementation of the competition law are inhibiting the DR's ability to unleash the full potential of a competitive economy. The most recent Bertelsmann Transformation Index (BTI) found that the DR lags both its peers in Latin America and the Caribbean (LAC) and global comparator countries on perceptions-based indicators of antimonopoly policy and market competition (Figure 2). The country's BTI score of 6

out of 10 on both indicators⁷ points to an uneven playing field for market participants, inconsistent enforcement of the competition law, a high degree of market concentration, and state presence in

⁷ The market-organization indicator measures perceptions regarding market fundamentals, including: barriers entry and exit in product and factor markets, the freedom to initiate and withdrawn investments, discrimination based on ownership type (state versus private, foreign versus domestic) or firm size, the presence of the informal sector, market pricing mechanisms, and the movement of labor and capital across borders. The competition policy indicator measures perceptions regarding competition safeguards, including antitrust law, the presence of an independent competition authority, and the overall role of the state in the market. See: Bertelsmann Stiftung. “BTI 2020 Codebook for Country Assessments” (https://www.bti-project.org/content/en/downloads/codebooks/BTI_2020_Codebook.pdf)

strategic sectors, including electricity.⁸ The PMR data confirm that the regulatory protection of incumbents, coupled with significant state intervention in network sectors, continues to pose a major obstacle to competition.⁹ While greater competition could yield important benefits, improving key services that depend on telecom, such as payment services would require further regulatory changes (Box 1).

Figure 2. BTI Scores for the Dominican Republic and Selected LAC Countries



Source: BTI, 2020.

Note: The BTI is a perception indicator based on in-depth assessments by Bertelsmann Stiftung.

Box 1. Widespread deployment of payment services may require regulatory changes

The ability to transact digitally is an important element in building digital economies. Enhancing access to and usage of transaction accounts requires strong public-private sector commitment, foundational telecommunication services and financial infrastructure and conducive legal and regulatory framework that allows innovation and support entry of new players and business models. In addition, catalytic actions on four areas are required - product design, financial literacy, increasing access points and digitizing large volume and recurring payment flows.¹⁰ Global experience shows that countries that implement basic regulatory and policy enablers^{11,12} see greater innovation, adoption and use of Digital Financial Services (DFS). For example, countries where mobile money has taken off typically allow non-banks to own and operate DFS deployments and agent networks that allow customers to get cash in and out of their digital wallets.

Competition in payment markets takes place among both payment providers and payment methods. Traditional payment methods such as credit cards and checks must now compete with new methods like mobile money and

⁸ Bertelsmann Stiftung, BTI 2020. "Country Report — Dominican Republic" (https://www.bti-project.org/content/en/downloads/reports/country_report_2020_DOM.pdf)

⁹ The OECD-WBG PMR data are available at <https://www.oecd.org/economy/reform/indicators-of-product-market-regulation/>

¹⁰ See: World Bank Group and Bank for International Settlements (2016), Payment aspects of financial inclusion, available at: <http://pubdocs.worldbank.org/en/963011459859364335/payment-systems-PAFI-Report2016.pdf>

¹¹ See the Payment Aspects of Financial Inclusion (PAFI) guidance developed jointly by the World Bank and the Committee for Payments and Market Infrastructure (CPMI) of the BIS. <https://www.worldbank.org/en/topic/financialinclusion/brief/pafi-task-force-and-report>

¹² CGAP's [Basic Regulatory Enablers Focus Note](#) offers an overview of the key regulatory enablers of DFS, as well as where various countries stand in terms of their progress towards putting them in place

fast payment services (also called instant payment services), which may provide more attractive services. For instance, the DR's central bank has developed a retail payment system called Instant Payments, which allows end-users to process urgent or high-value payments, fund transfers, or pay off credit cards or loans in just 15 minutes by using the electronic platforms of their respective banks which are all participating in the Instant Payments.¹³

In the DR, the central bank is exclusively responsible for regulating payment methods. Under the Regional Treaty on Payment Services and the Law on Systemic Risk, the central bank is the sole overseer of the payment and settlement systems.¹⁴ Multiple payment systems can coexist and are classified according to the amount or priority of the transfers that they manage and other design attributes. The DR is integrated into Central America's Interconnected Payment System, which aims to modernize, harmonize, and link different payment systems in the Central American Countries.¹⁵

Interoperable retail payment systems that are accessible to banks and non-banks alike improve convenience, enhance efficiency and promote competition. In the absence of interoperability, network effects generated by dominant platforms can disincentivize the emergence of new platforms and providers. As a result, the market either may become concentrated with a few dominant DFS providers or inefficient, with constrained usage of digital payments – for example by forcing individuals and businesses to maintain multiple accounts and decide which account to use based on the type of transaction and counterpart. Restricting access to retail payment systems to only financial institutions that have a settlement account at the central bank could inhibit market entry by non-bank financial institutions and slow the adoption of new financial technologies.¹⁶ On the other hand, forcing non-bank financial institutions to incur on the costs of obtaining a banking license before they can access the national payment infrastructure could create a serious barrier to entry.

In this context, a market study could be undertaken to assess options for the government to design specialized protocols for these institutions, in line with the analyses undertaken by other countries of the region to balance the need for access for the non-banks versus the policy objective of continued safety, reliability and efficiency of the national payment system. Access to a payment system has two dimensions – ability to directly interface to send and receive payment instructions; and ability to settle for the transactions on own account. Some jurisdictions allow non-banks to access only the former, some both and some neither. The direct interface to retail payment systems is more important than direct access to settle on own account. In the absence of a direct interface, non-banks could still indirectly participate in a payment system through partner banks, although this can introduce inefficiencies for the non-bank and makes them dependent on a potential competitor. However, in some contexts indirect access has also worked, particularly where there are regulatory requirements to protect the interests of the non-banks or where the market structure allows non-banks to partner with specific set of banks that are not active in retail payment services. Some examples of jurisdictions allowing direct access to non-banks include Mexico, Switzerland and UK. Mexico allows non-bank financial institutions to participate in the Interbank Electronic Payment System (SPEI), which enables customers to make instant electronic payments. Similarly, Switzerland allows access to the Swiss Interbank Clearing system for entities licensed as financial technology firms, so long as they comply with financial rules, anti-money-laundering provisions, and audit requirements. The United Kingdom has issued guidelines allowing certain non-bank institutions, including payment providers, to create accounts at the Bank of England and directly access national payment systems, though they are subject to enhanced supervisory oversight, including compliance assessments and periodic

¹³ Central Bank of DR's webpage: <https://www.bancentral.gov.do/a/d/4030-instant-payments>.

¹⁴ See Article 27 of the Monetary and Financial Law no. 183-02. The Treaty, Art. 11, does not include the respective Central banks as supervisors but as overseers of Systemic Important Payment Systems with the relevant need to coordinate with other supervisors (e.g. *Junta Monetaria* or *Superintendencias*). The supervisory framework is established under the laws of the respective country.

¹⁵ Banco Central de la República Dominicana <https://www.bancentral.gov.do/a/d/4011-conceptual-aspects>

¹⁶ Regulation on Payment Systems of 18th December 2014.

audits.¹⁷ For a detailed discussion on these aspects, please refer to the discussion in the World Bank Global Payment Systems Survey analysis¹⁸.

In parallel, any regulatory reforms should be complemented with a strong institutional framework that ensures competition enforcement in the payments sector. In this regard, enhancing cooperation between the central bank and ProCompetencia will be critical to prevent anticompetitive effects arising from market consolidation in payment systems. Although competition enforcement is not part of the explicit mandate of the central bank, its regulatory functions include authorizing mergers, takeovers, splits and other actions by financial-intermediation entities that may affect market concentration. Even though there is no general merger control proceeding in place yet, the central bank's competence for reviewing these transactions could be used to analyze the impact of mergers in the financial sector from a competition standpoint. In this context, systematic cooperation between the central bank and ProCompetencia under a memorandum of understanding could help enhance legal certainty in line with the practices of other countries of the region.

I.1. Main features and competition issues in the telecommunications sector

3. The interaction between market characteristics and the regulatory framework for telecommunication services appears to be weakening competitive pressure in the sector in DR. A well-functioning telecommunications value chain requires dynamic market conditions and pro-competition regulation at all levels (see Annex). Although the telecommunications sector is often characterized by disruptive innovation and the rapid growth of startup firms, telecommunications markets are also subject to the traditional characteristics of network sectors, which are prone to market concentration and vulnerable to anticompetitive practices. These characteristics include significant fixed costs and sunk investments, economies of scale and scope, bottlenecks in essential infrastructure, and a reliance on finite resources, including spectrum bands. Entrants in upstream market segments often face especially high fixed costs for both technical and commercial infrastructure, which offers incumbents a strategic advantage, as new firms have fewer clients over which to distribute their fixed costs. In addition, enabling equitable access to telecommunications services among firms and households may require the authorities to intervene directly in local markets where private service provision would be commercially unviable (Figure 3).

Figure 3. Telecommunications Industry Features and Competition Dynamics

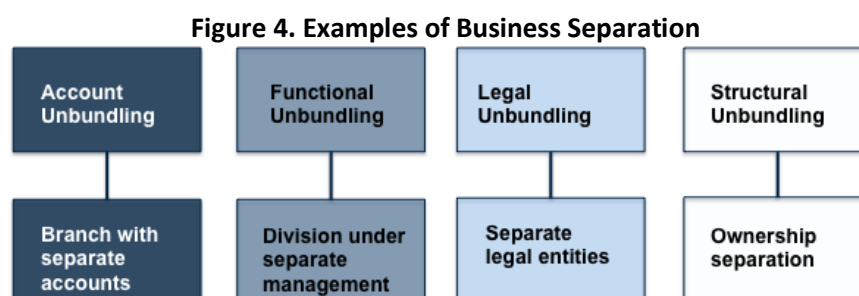
¹⁷ https://www.snb.ch/en/mmr/reference/pre_20190111/source/pre_20190111.en.pdf; <https://www.bankofengland.co.uk/-/media/boe/files/markets/other-market-operations/accessfornonbankpaymentserviceproviders>; <https://www.bankofengland.co.uk/news/2018/april/non-bank-ppp-access-to-the-payments-system-announcement> ; <https://www.banxico.org.mx/sistemas-de-pago/d/%7B9ACA4DC8-2B96-8EB3-6FF3-F58DDFA3FE51%7D.pdf>

¹⁸ <http://documents1.worldbank.org/curated/en/115211594375402373/pdf/A-Snapshot.pdf>

Industry Features	Competition Dynamics	State's procompetitive interventions	International Best Practices
Significant fixed costs and sunk investments	Bandwagon effects	Setting obligation of interconnection	Competition as the central regulatory tool for prices
Economies of scale and scope	Operators need to interact reciprocally to compare calls	Setting termination rates	Regulation only used to correct market failures or where competition is not viable
Network's essential facilities and bottlenecks	Operator's refusal or discriminatory practices	Asymmetric regulation of operators with significant market power	Market-based pricing in competitive markets and cost-based pricing in non-competitive markets
Reliance on scarce resources (spectrum and numbering)	Government controls access to radio spectrum and numbering resources	Procompetitive spectrum assignment; allowing spectrum transfers; promote entry	Market-based approach to spectrum (tenders and secondary market level) and anti-hoarding rules
Disruptive innovation and constant technological change	First-mover advantage and anticompetitive practices	Continuous review of relevant markets; level playing field in spectrum assignment	Light-handed regulation in emerging markets

Source: World Bank Group Global Competition Policy Team.

4. High infrastructure costs limit the economic viability of replicating certain facilities, leading to bottlenecks and market concentration. Market entry into retail telecommunications services requires either access to essential network infrastructure or the ability to resell services. Unless the regulatory framework mandates that infrastructure access be offered to new entrants, incumbents will be able to discriminate in favor of their vertically integrated subsidiaries. Consequently, preventing market dominance in the telecommunications sector often requires that the incumbent firm that controls essential infrastructure be transparently separated from downstream operators (Figure 4).



Source: World Bank Group Global Competition Policy Team elaboration; OECD (2012).

5. Because the structural features of the telecommunications sector can create barriers to entry and enable the abuse of market power, a pro-competitive regulatory framework is necessary to prevent the abuse of market dominance, including preventing incumbents from monopolizing essential infrastructure. A strong and independent competition authority must effectively enforce competition rules *ex post* to complement sector-specific regulations (Box 2). If concurrent powers for *ex post* prevention of anti-competitive practices exist between the competition agency and the sectoral regulator, cooperation between both authorities is essential to facilitate enforcement and prevent duplicative efforts. The United States, many European countries, and several Latin American countries—including the

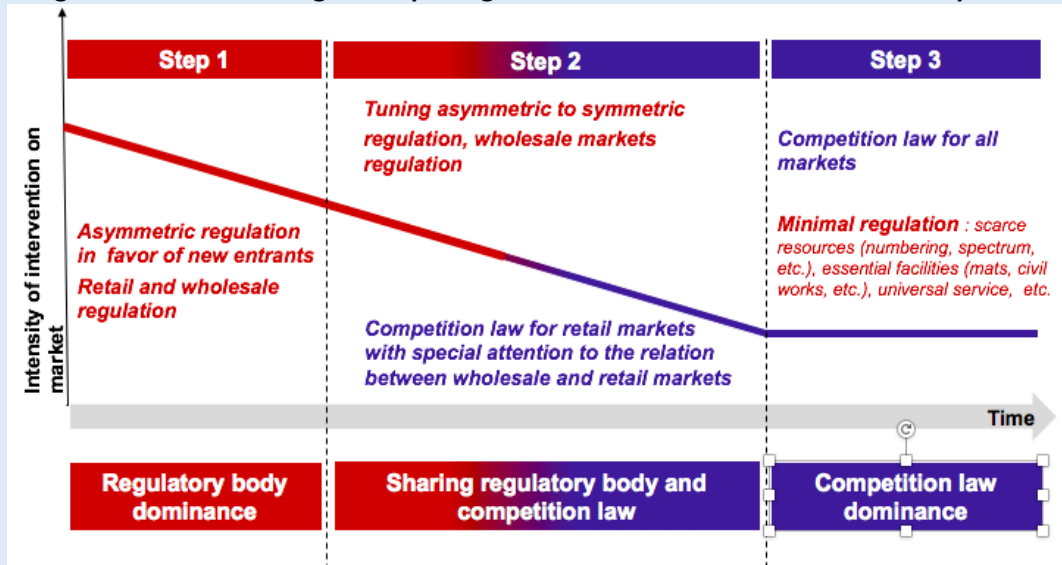
DR—have executed memoranda of understanding (MoUs) between competition agencies and sectoral regulators that define how they will exercise their respective functions when their purviews overlap.¹⁹

¹⁹ European countries with such MoUs include Albania, Bulgaria, Croatia, the Czech Republic, Hungary, and Portugal. In the United States, the Federal Trade Commission and the Department of Justice often advise sector-specific regulators on non-merger issues that affect competition. In the DR, the relevant MoU is known as the Interinstitutional Cooperation Agreement between INDOTEL and PROCOMPETENCIA (*Acuerdo de cooperación interinstitucional INDOTEL – PROCOMPETENCIA*), which is available at <https://transparencia.indotel.gob.do/media/10701/acuerdo-coop-interinstitucional-procompetencia-indotel-6-7-2018.pdf>

Box 2. Balancing Ex Ante Regulation and Ex Post Enforcement in the Competition Framework

An appropriate balance between pro-competition regulation and enforcement should reflect the progressive opening of markets to competition. This process involves three stages and entails an evolving role for sectoral regulators and competition authorities (Figure 5).

Figure 5. The Three Stages of Opening Telecommunications Markets to Competition



During the first phase of opening markets to competition, regulation is proactive and asymmetric, as it must establish the conditions to allow new operators to enter the market and compete with entrenched incumbents. This first phase is characterized by a focus on tariff regulation at the wholesale level (e.g., network infrastructure access and termination rates) and, if necessary, at the retail level (e.g., telephone service subscriptions). Tariffs should be consistent with the costs of an efficient operator, though determining what these costs are requires overcoming information asymmetry between the incumbent and the regulator regarding the former's cost structure. An independent auditor designated by the regulator can control the costs of the operator, and the regulator or independent trustees designated by the regulator can design ad hoc cost models that reduce information asymmetry and help ensure that regulated tariffs reflect objective and verifiable benchmarks.

Once wholesale markets are adequately regulated, the freedom for players to choose their own tariffs can be introduced at the retail level in the second phase. However, an effective competition authority must be in place to detect and deter potential abuses by the dominant operator in newly deregulated retail markets.

In the third phase, the progressive establishment of viable operators can enable the creation of competitive wholesale markets in some segments. These segments may be regulated primarily on an *ex post* basis through competition enforcement. In market segments where structural conditions make competition especially difficult or impossible, the authorities may continue to focus on asymmetric regulation. Competition may be infeasible in geographic areas with low population density or where certain capital assets (e.g., radio frequencies, passive infrastructure, capacity links) cannot easily be replicated and can be leveraged by incumbents as barriers to entry. Identifying these essential facilities allows the regulator to determine the parameters of long-term regulation, as a competitive, transparent and objective process for assigning rights to finite resources is essential to competition. The market must remain active, and service-based competition can complement infrastructure competition whenever the latter is not viable in the near term.

Source: World Bank Group Global Competition Policy Team and Tera Consultants. See: World Bank (2018), Better Markets for All through Competition Policy in Senegal.

I.2. Market outcomes in the telecommunications sector remain suboptimal

6. The DR's telecommunications sector is concentrated and composed of vertically integrated operators. Claro is the main operator in the fixed telecommunications market, with a 69.6 percent market share in 2019. Smaller operators include Altice (23.1 percent) and Viva (4.4 percent). Other operators such as Wind Telecom occupy a residual position, with a combined 2.9 percent market share in the fixed telecommunications market. The mobile telecommunications market is composed of three operators: Claro (58.9 percent market share), followed by Altice and its subsidiary, Tricom (35.0 percent), and Viva (6.1 percent). All three operators are vertically integrated, and the DR has no mobile virtual network operators (MVNOs). Similarly, the internet services market is dominated by Claro (54.8 percent market share), followed by Altice (37.9 percent), Viva (6.1 percent), and other operators (1.2 percent).²⁰ As a result, the fixed, mobile and internet markets are concentrated, as shown by a Herfindahl-Hirschman Index (HHI) above 2,500 for each of them.²¹ Market concentration is not unusual in the telecommunication sector across countries given its inherent features that result in competition dynamics which can create strategic barriers to entry. The latter would require both *ex ante* and *ex post* regulatory intervention to ensure market efficiency and protect consumers and competitors from abuses of market power.

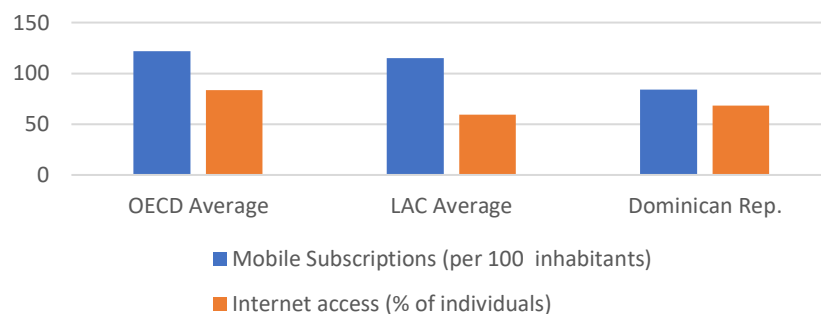
7. Although mobile technologies now dominate the telecommunications sector, the DR lags its peers in terms of both mobile subscriptions and internet penetration. Demand for mobile services is robust across the country, and 3G and LTE coverage rates are high at 99.2 percent and 90.4 percent, respectively. However, the number of mobile subscriptions per capita is significantly below both the LAC and OECD averages.²² While internet penetration in the DR has improved in recent years, it remains well below the OECD average (Figure 6).

²⁰ INDOTEL (2019), Memoria Institucional. Market shares are calculated based on the number of subscriptions for each company.

²¹ Based on 2019 market shares, the HHI ranges between 5,397.13 and 5,405.54 in the fixed telecommunications market (the number of companies holding 2.9% of the market shares is unavailable based on public information). Similarly, in the mobile telecommunications market, the HHI is 4,723.42. Lastly, the HHI in the internet telecommunications market ranges between 4,476.66 and 4,478.1, depending on the number of operators that hold 1.2% of the market shares. Based on the HHI, the concentration levels are classified as follows: 1) Unconcentrated Markets: HHI below 1,500, 2) Moderately Concentrated Markets: HHI between 1,500 and 2,500, 3) Highly Concentrated Markets: HHI above 2,500 (Horizontal Merger Guidelines 2010; U.S. Department of Justice and Federal Trade Commission).

²² See also INDOTEL's 2019 Annual Report. For every 100 inhabitants, 81.4 are subscribed to mobile services, whereas 12.4 are subscribed to fixed lines. Although the use of fixed lines is progressively disappearing, triple play offers helps decelerating this trend. Taken together, fixed telephony and mobile telephony penetration indicators are still lower than the world average.

Figure 6. Mobile Subscriptions and Internet Penetration in the Dominican Republic



Source: International Telecommunication Union, 2017 (internet) & 2018 (mobile).

8. New entrants and small firms face significant obstacles in obtaining access to essential infrastructure, which appears to shield incumbents from competition. According to a recent study, competition in the DR’s telecommunications sector has been limited over the past several years, and as dominant operators have slightly increased their market shares, market concentration has increased.²³ In a similar vein, inadequate regulatory enforcement may have enabled dominant firms to create unjustified delays in granting competitors’ access to essential infrastructure or impose prohibitive tariffs on upstream services.²⁴

9. The lack of adjustments in the prices for fixed and mobile telecommunications in response to changing demand indicate a lack of market dynamism. For example, prices for voice calls in the fixed telecommunications market have not fallen in response to declining consumer demand (Figure 7). While prices in the mobile telecom market have proven somewhat less rigid, they have remained relatively stable overall, particularly among the DR’s three main operators, Claro, Altice, and Viva. The lack of data from Altice and Tricom (acquired by the former in 2014)²⁵ for 2018 and 2019 prevents an analysis of whether Altice’s average postpaid price remains higher than those of its competitors (Figure 8).²⁶

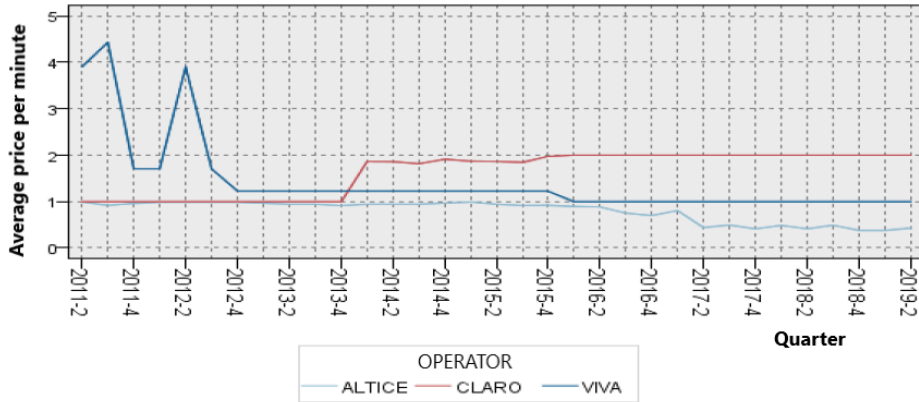
²³ For instance, the main operator has reinforced its dominant position in the fixed telecommunications market. Similarly, in the mobile sector, Claro seems to get an ever-larger share of the market. See: European Union, COWI and INDOTEL (2020), *Consultoría para la identificación de mercados relevantes sujetos a regulación ex ante en el sector de las telecomunicaciones de la república dominicana*, presented in Resolution no. 047-2020.

²⁴ In this regard, VIVA (the third mobile operator) reported that dominant operators tend to delay access to their essential facilities and charge excessive tariffs for it, thereby preventing entry of potential competitors. See: Alliance For Affordable Internet (2017), *Infraestructuras compartidas de telecomunicaciones en la República Dominicana*.

²⁵ The acquisition of Tricom, S.A. by Altice Dominican Republic, S.A.S. was approved in March 2014 by INDOTEL’s Resolution no. 008-14. Until 2017, the companies were operating in the market as different commercial brands.

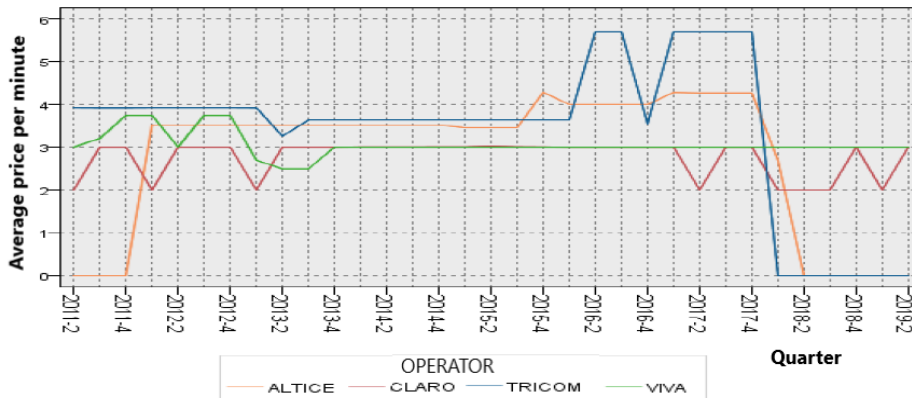
²⁶ See European Union, COWI and INDOTEL (2020).

Figure 7. Average Prices per Minute for Fixed Telecommunication Services, Q2-2011 to Q2-2019



Source: European Union, COWI and INDOTEL, 2020.

Figure 8. Average Prices per Minute for Mobile Telecommunication Services (Postpaid), Q2-2011 to Q2-2019



Source: European Union, COWI and INDOTEL, 2020. Lack of data is shown as "0".

10. Moreover, prices for mobile communications and fixed broadband in the DR are higher than in peer countries. The monthly cost of mobile calls and texts in the DR represents 2.02 percent of gross national income (GNI) per capita, below the regional average of 3.16 percent.²⁷ However, monthly prices for mobile services in the DR are still significantly higher in nominal terms (US\$12.41) than the average for comparator countries (US\$8.63) (Figure 9). Similarly, monthly broadband prices represented 3.21 percent of GNI per capita, below the regional average of 5.45 percent, but they are slightly higher in nominal terms (US\$19.69) than those of some comparator countries (US\$18.47) (Figure 10)²⁸.

²⁷ International Telecommunications Union, 2019. ICT Price Baskets (<https://www.itu.int/net4/ITU-D/ipb/#ipbrank-tab>)

²⁸ The International Telecommunications Union defines "the Americas" as including all sovereign nations in continental North and South America as well as the Caribbean.

Figure 9. Prices for Mobile/Cellular Services (70 min + 20 sms) in Selected Countries (US\$/month)

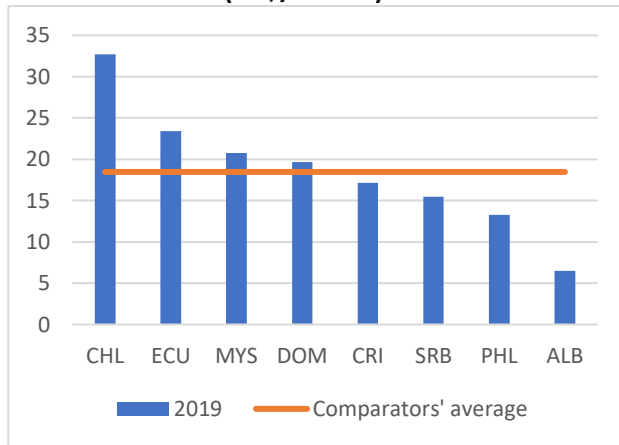
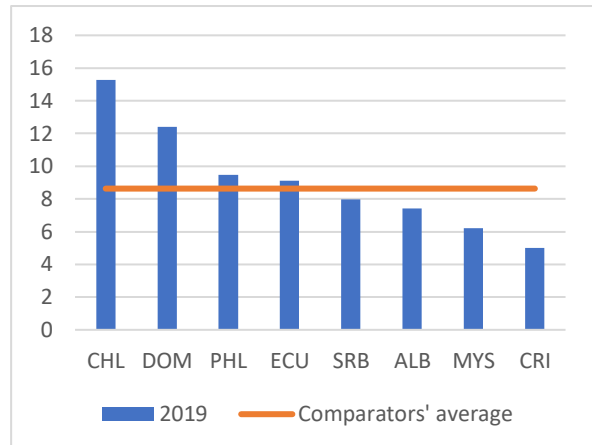


Figure 10. Prices for Fixed Broadband Services (5GB) in Selected Countries (US\$/month)



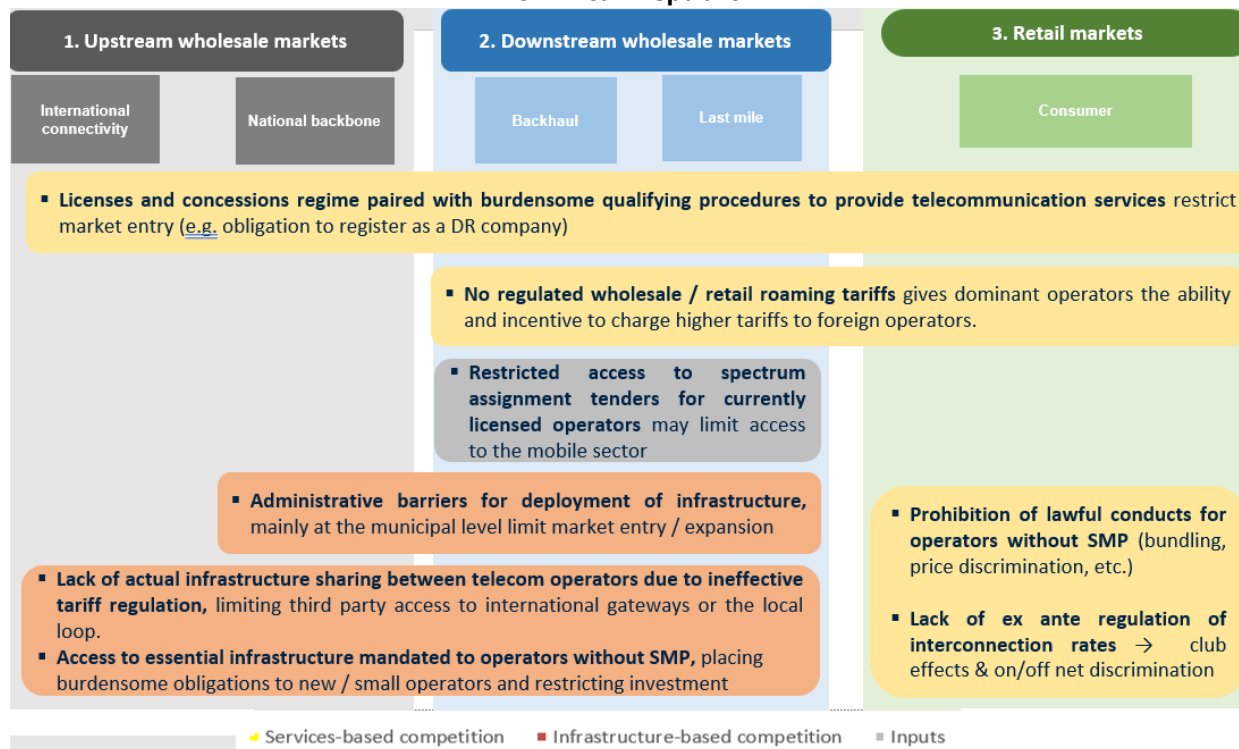
Source: International Telecommunication Union (2019).

Note: These service levels (70 min + 20 sms for mobile services and 5GB for fixed broadband) represent low usage.

I.3. Regulatory Bottlenecks and institutional constraints may limit competition along the Dominican Republic’s Telecommunications Value Chain

11. A variety of constraints can inhibit competition in the fixed and mobile telecommunication value chains. The DR’s telecommunication sector appears to suffer from regulatory bottlenecks at the wholesale and retail levels (Figure 11). Key challenges include restrictive licensing, a lack of asymmetric regulation, suboptimal tariff policies, administrative and regulatory barriers to accessing essential infrastructure and overlapping institutional mandates.

Figure 11. Regulatory Restrictions on Services-Based and Facilities-Based Competition in the Dominican Republic



Source: World Bank Group Global Competition Policy Team.

I.4. Restrictive licensing requirements and a lack of effective asymmetric regulation appear to limit market entry and protect incumbents

12. A restrictive licensing regime and burdensome qualifying procedures may limit the entry of new telecommunications operators, including MVNOs and ISPs. Pursuant to the Telecommunications Law, the provision of all public telecommunications services is subject to a concession and licensing regime.²⁹ As opposed to an authorization system, licenses and concessions allow regulators to set absolute limits on the number of permits that can be issued. Moreover, the current rules require new operators to complete a burdensome process before they can provide telecommunication services, which likely discourages market entry. Applicants are required to be incorporated or registered as a legal person,³⁰ and all telecom operators are required to submit an investment plan and establish a guarantee fund with the Dominican Telecommunications Institute (*Instituto Dominicano de las Telecomunicaciones*, INDOTEL) equal to up to 20 percent of the proposed investment for the first five years of operation.³¹ These

²⁹ See Article 19 of the Telecommunications Law (No. 153-98), in conjunction with Article 13 ff. of Resolution No. 036-19 on the "Regulation of authorizations for telecommunications services". See also: Resolution 004-00 on the "Regulation of Concessions, Inscriptions in Special Registries and Licenses to Provide Telecommunications Services in the Dominican Republic". See also: <https://www.indotel.gob.do/servicios/gesti%C3%B3n-de-autorizaciones/solicitud-de-concesion/>

³⁰ See Article 22 of the Telecommunications Law (No. 153-98).

³¹ See Article 20 of Resolution 004-00 on the Regulation of Concessions, Inscriptions in Special Registries and Licenses to Provide Telecommunications Services in the Dominican Republic.

requirements may constitute important administrative barriers for new entrants, including ISPs and MVNOs, which may lack the resources necessary to comply.³²

13. A lack of effective asymmetric regulation weakens oversight of operators with significant market power and can reinforce the position of incumbents. While the Telecommunications Law requires operators with significant market power to provide timely access to their essential facilities and bars them from charging discriminatory prices,³³ similar obligations are imposed on operators without significant market power. For instance, the legal definition of essential facilities can be applied to all operators regardless of their market power. Similarly, practices that would be generally considered unlawful for a dominant market player—such as below-cost pricing or price discrimination—are prohibited for all players irrespective of their market power.³⁴ These regulations prevent smaller firms and new entrants from offering competitive prices and promotions to attract consumers. By contrast, practices that are generally considered abusive, such as bundling or margin squeezing, are not illegal for operators with significant market power. This allows dominant operators to leverage their position in one market to assert control over another and to develop foreclosure strategies against other operators, stifling competition.

14. Operators with significant market power have not been formally identified. The market analysis recently approved by the telecoms regulator, INDOTEL, represents a first step in the identification of dominant players.³⁵ Although the study also explores competition conditions and identifies possible dominant companies in each market, INDOTEL has yet to formally designate firms with significant market power.

I.5. Suboptimal tariff regulation undermines merit-based competition among market players

15. Unsatisfactory regulation of interconnection rates may lead to on-net/off-net differentiation and encourage club effects, reinforcing market dominance of incumbents. The Telecommunications Law establishes freedom of contract as the general principle for defining interconnection rates.³⁶ Although the law empowers INDOTEL to set interconnection rates in cases where the parties disagree, INDOTEL does not currently invoke this authority.³⁷ This is at odds with international good practices, as most countries have established a system of ex ante interconnection rates regulation (Figure 12). According to a recent

³² Another example include public broadcasting services (i.e., radio and broadcast television) must be controlled by a Dominican national, which would require foreign companies to create a joint venture with a national company in order to provide services in the DR. See Article 73 of the Telecommunications Law (No. 153-98).

³³ See Article 9 of the Telecommunications Law (No. 153-98) and Article 9 of Regulation No. 022-05 of 24 February 2005, on free and loyal competition in the telecommunications sector.

³⁴ Other obligations are also imposed to all service providers irrespective of their market power, such as prepare and submit Reference Interconnection Offers if required by the regulator. See Article 6.3. Regulation on Infrastructure.

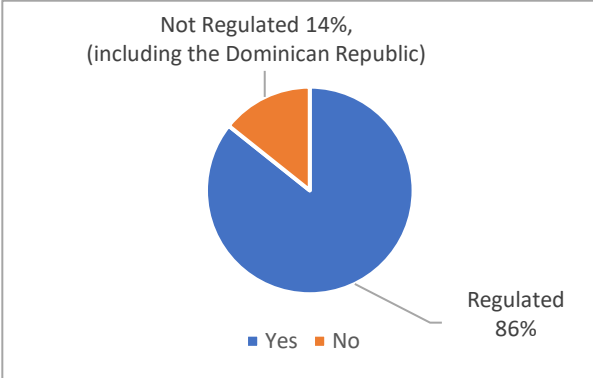
³⁵ See *European Union, COWI and INDOTEL (2020), consultoría para la identificación de mercados relevantes sujetos a regulación ex ante en el sector de las telecomunicaciones de la república dominicana*, presented in Resolution no. 047-2020.

³⁶ The principle is established in Article 41 of the Telecommunications Law and Article 5 of the Regulation on Infrastructure. However, under Resolution no. 049-03, INDOTEL overruled the precedent setting contractual freedom as the general principle for determining interconnection costs.

³⁷ After receiving a formal complaint from one of the operators, INDOTEL decided to open a proceeding to set interconnection fees. However, this decision has been subject to several appeals from the incumbent operators, which is slowing down the final decision (see, for instance, Resolution no. 077-18). One example of regulation of interconnection rates can be found in Resolution 056-17 on the decision approving the concentration between Altice Hispaniola, S.A, and Tricom, S.A. However, these obligations are justified by INDOTEL on the basis of remedies considerations rather than on the application of the competences described by the Resolution on Interconnection.

market study, current rates in the DR are significantly higher than those in other countries in the region and do not reflect actual service costs (Figure 13).³⁸ Lack of effective implementation of the long-run incremental costs (LRIC) methodology may lead to wider price gaps for on-net and off-net calls, increasing club effects for the operator with the largest user base and reinforcing its dominant position. To address this situation, most telecom regulators determine interconnection rates by following the LRIC approach, under which rates are set at the level that an efficient entrant would face, thereby facilitating market entry. For instance, the European Commission recommends using the LRIC methodology to reduce market distortions and promote efficiency,³⁹ and LRIC models have been adopted in New Zealand, Australia, the United Kingdom, and the United States, among others. LRIC models are based on estimates of the forward-looking incremental costs incurred by an efficient operator. Incremental cost measures the cost variance when the production output increases or decreases in a discrete increment. Since LRIC cost modelling only consider costs that are incurred during the efficient provision of an additional increment of output, LRIC models promote efficiency and minimize potential competitive distortions.⁴⁰

Figure 12. Share of Countries in Which Interconnection Rates Are and Are Not Regulated



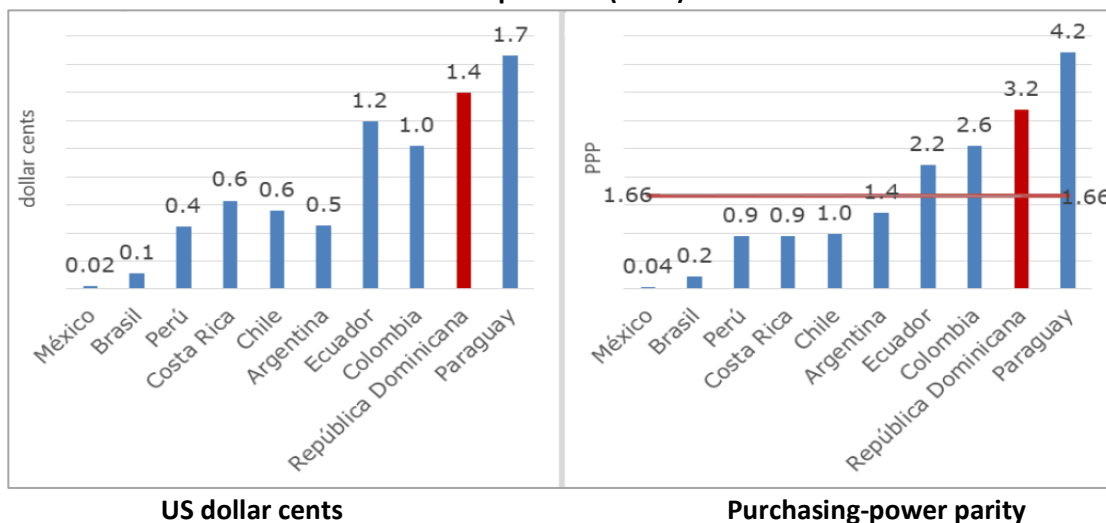
Source: PMR data for Dominican Republic, 2014, OECD and OECD – WBG PMR data.

³⁸ For instance, the DR’s interconnection rate is US\$0.014, whereas aspirational comparators such as Costa Rica and Chile charge US\$0.006. See *European Union, COWI and INDOTEL (2020), consultoría para la identificación de mercados relevantes sujetos a regulación ex ante en el sector de las telecomunicaciones de la república dominicana* in Resolution no. 047-2020.

³⁹ European Commission Recommendation 98/195/EC

⁴⁰ International Telecommunication Union, “Regulatory accounting guide”, 2017.

Figure 13. Interconnection Charges in Fixed Networks (Local Termination), Dominican Republic and Comparators (2020)



Source: European Union, COWI and INDOTEL (2020), consultoría para la identificación de mercados relevantes sujetos a regulación ex ante en el sector de las telecomunicaciones de la república dominicana.

16. Lack of effective ex ante tariff regulation also affects access to infrastructure, notably the international gateway. The General Interconnection Regulation for Public Telecommunications Services networks defines international gateways and submarine cables as essential facilities and mandates that all operators be allowed to access them.⁴¹ However, INDOTEL can only regulate access tariffs in the event of a disagreement between the parties, which would trigger the opening of formal administrative proceedings.⁴² Moreover, INDOTEL’s power to set access tariffs in the event of a dispute between the parties has not yet been invoked, and the local loop –although formally mandated– has not been fully unbundled, which is inconsistent with international good practices (Figure 14).⁴³ Consequently, dominant operators can refuse access to their essential facilities. Similarly, mobile operators are subject to transparency obligations when setting their own international roaming rates, but wholesale and retail roaming rates are unregulated, which creates incentives to charge higher rates to foreign operators.⁴⁴

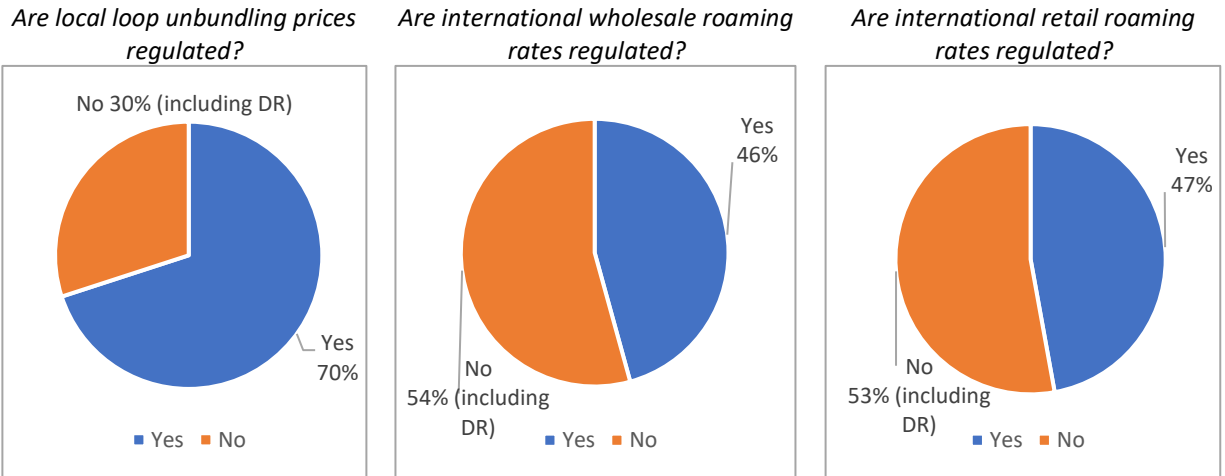
⁴¹ Article 13 of the Regulation for Public Telecommunications Services networks, as modified by Resolution no. 038-11.

⁴² Alliance For Affordable Internet (2017), Infraestructuras compartidas de telecomunicaciones en la República Dominicana.

⁴³ See, for instance, World Bank (2016), Building a better future together : Dominican Republic policy notes, available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/949151486105331993/building-a-better-future-together-dominican-republic-policy-notes>. See also: Annex to the study on shared telecommunication infrastructures in Dominican Republic: comments made by companies Trilogy Dominicana, S.A. (VIVA) and Altice Hispaniola, S.A. (Orange) and written reply of the author.

⁴⁴ Resolution No. 069-17 on measures for activation and billing of mobile data services; international roaming services (data and voice roaming) and premium mini-message services (SMS) by public service telecommunication providers, as amended by Resolution 048-18.

Figure 14. Conventional Practices for Telecommunications Regulation



Sources: PMR data for Dominican Republic, 2014, OECD and OECD – WBG PMR data.

I.6. Limited infrastructure access appears to create barriers to entry in the telecommunications sector

17. Although the government has passed important reforms designed to facilitate access to essential passive infrastructure, rules and obligations are not defined in an asymmetric manner. While the recent adoption of new regulations on passive infrastructure is a positive step, the new regulations unnecessarily mandate access to ducts, poles, towers and other infrastructure by every owner, irrespective of their relative market power, which unnecessarily burdens small operators.⁴⁵ For instance, the main operator in the fixed, mobile, and internet markets (Claro) owns most of the country’s fixed broadband lines and fiber-optic networks.⁴⁶ The high costs of replicating the existing infrastructure would require an investor to have a large customer base over which to spread its fixed costs. Since smaller players and new entrants lack such a base, Claro is able to maintain a de facto monopoly in 69 of the DR’s 154 municipalities and a quasi-monopoly position in another 37.⁴⁷ The symmetrical regulatory obligations imposed on smaller operators prevent potential entrants from recovering their investment costs within a reasonable period. The international experience underscores the importance of asymmetric regulation in both the wholesale and retail service markets (Box 3).

⁴⁵ General Regulation (Resolution 089-17) on passive infrastructure and connected facilities sharing, as amended by Resolution 005-19. After review of the Regulation by INDOTEL, access to dark fiber was finally excluded from the list of passive infrastructures. Granting access to the dark fiber could increase competition in internet services but might reduce operators’ incentives to deploy their own infrastructure. Thus, dark fiber should only be included in the regulation if national fiber is sufficiently developed.

⁴⁶ Alliance for affordable Internet (2017), “Infraestructuras compartidas de telecomunicaciones en la República Dominicana”.

⁴⁷ European Union, COWI and INDOTEL (2020), *consultoría para la identificación de mercados relevantes sujetos a regulación ex ante en el sector de las telecomunicaciones de la república dominicana*, presented in Resolution no. 047-2020.

Box 3. The International Experience with Implementing a Combined Wholesale and Retail Regulatory Strategy to Lower Interconnection Costs

In **Mexico**, the Instituto Federal de Comunicaciones (ITF) introduced asymmetric price caps in its licensing agreements with Telmex, an operator with significant market power, to promote competition in the fixed telecommunications sector. These price caps cover international tariffs, interconnection rates, and similar services. To define the level of the cap, the ITF applies a CPI-X cost model, calculating the X factor based on a study of productivity gains from the firm and the industry, the price of the inputs used by the operator to provide its service, and broader price changes in the economy. This study is carried out by a group composed of one expert selected by the IFT, a second selected by the operator, and a third agreed upon by both parties.

In **Kenya**, after unsuccessfully attempting to introduce competition in the retail voice market, the Communications Authority adopted a rule requiring dominant providers to implement a price cap for off-net call prices to the level of their on-net prices. This rule successfully addressed club effects in a market with persistently high percentages of on-net traffic, significant asymmetries between MNOs, and a dominant operator that regularly employed price-differentiation strategies. Due to the nature of this rule, the Communications Authority has committed to regularly review it and to eliminate it once there is enough evidence of effective competition at the retail level.

Sources: OCDE (2017), *Estudio de la OCDE sobre telecomunicaciones y radiodifusión en México 2017*, Éditions OCDE, París; available at: <http://dx.doi.org/10.1787/9789264280656-es>. See also: World Bank (2018), *Better Markets for All through Competition Policy in Senegal*; and Determination no. 1 of 2007, which can be accessed at: <https://ca.go.ke/wp-content/uploads/2018/02/Determination-on-Interconnection-Rates-for-Fixed-and-Mobile-Telecommunications-Networks-Infrastructure-Sharing-and-co-location-and-Broadband-Services-in-Kenya-16th-August-2010.pdf>

18. Additional regulatory constraints that inhibit the deployment of new fixed network infrastructure further benefit incumbents at the expense of small firms and new entrants. Administrative barriers to the deployment of passive infrastructure at the municipal level appear to be an important restriction on competition in infrastructure.⁴⁸ The process for granting permits by municipal districts and neighborhood associations seem to be needlessly slow and complicated by a lack of uniformity in regulations across city councils and municipal districts. Moreover, multiple licenses cannot be requested in from different municipal authorities simultaneously, only sequentially, which unnecessarily extends the time required to obtain them.⁴⁹ Other countries in the region –such as Mexico— have approved innovative regulatory reforms to address similar challenges (Box 4).

⁴⁸ See European Union, COWI and INDOTEL (2020), *consultoría para la identificación de mercados relevantes sujetos a regulación ex ante en el sector de las telecomunicaciones de la república dominicana*, presented in Resolution no. 047-2020. See also: Alliance For Affordable Internet (2017), “Infraestructuras compartidas de telecomunicaciones en la república dominicana”, available at: http://a4ai.org/wp-content/uploads/2017/02/Medios-Compartidos-en-la-Republica-Dominicana_Estudio-A4AI-RD_FINAL.pdf.

⁴⁹ Alliance For Affordable Internet (2017), “Infraestructuras compartidas de telecomunicaciones en la república dominicana”, p.11, see *supra*.

Box 4. Promoting the Development of Passive Infrastructure in Mexico

In Mexico, an OECD study identified multiple administrative barriers to the deployment of network infrastructure at the municipal level. A lack of clear and harmonized rules on civil works and licenses created significant barriers to the deployment of passive infrastructure and heightened legal uncertainty for both investors and local authorities, which prevented market entry and limited the development of new infrastructure. To facilitate the approval of licenses and authorizations for the deployment of passive infrastructure, the OECD recommended: (i) ensuring effective coordination between all government levels and the industry through cooperation agreements and the development of harmonized rules; (ii) establishing a system for renting government infrastructure; (iii) creating a national registry of passive infrastructure; (iv) promoting rights of way; and (v) deploying new backhaul and backbone infrastructure. In this context, the Communications and Transport Secretariat and the National Regulatory Improvement Commission published a paper consolidating the OECD recommendations and proposing other administrative and regulatory reforms to harmonize and simplify local and national requirements for the deployment of passive infrastructure in Mexico.

Sources: OCDE (2017), Estudio de la OCDE sobre telecomunicaciones y radiodifusión en México 2017, Éditions OCDE, Paris; available at: <http://dx.doi.org/10.1787/9789264280656-es>; Government of Mexico (2020) *Despliegue de Infraestructura Pasiva de Telecomunicaciones*; <https://www.xevt.com/nacional/pide-economia-a-alcaldes-del-pais-ponerse-de-acuerdo-con-conamer-para-tener-acceso-a-telecomunicaciones/103531>

19. Even though spectrum rights are allocated through auctions, tender conditions do not appear to be consistently open and nondiscriminatory, which creates an uneven playing field between operators. INDOTEL has exclusive authority to design tenders for spectrum assignment. While tenders are subject to the principles of open and equal access for all interested companies,⁵⁰ in some cases tender conditions have been set in a discriminatory manner. For instance, in tender No. LPN-002-2017, INDOTEL excluded bidders that did not already hold a valid operating license, which prevented new foreign and domestic entrants from participating. In addition, the tender limited potential bidders to those having less than 60 MHz of spectrum allocated.⁵¹ While this second requirement was designed to favor smaller players, it effectively narrowed the field to the mobile operator Viva, which was the only operator that fulfilled both conditions. Consequently, the bidding process was not effectively competitive and barred the entry of new players. These challenges can be addressed by clearly defining the rules and principles that INDOTEL must follow when designing spectrum tenders.

I.7. Overlapping institutional mandates may weaken the enforcement of prohibitions on anticompetitive behavior

20. The Telecommunications Law empowers INDOTEL to prosecute anticompetitive conduct and review mergers in the telecommunications sector. The Law on Telecommunications⁵² includes enforcing pro-competition policy in the telecommunications sector within INDOTEL's mandate. The law and its implementing regulations⁵³ define competition as a principle for ex ante regulation and also grant INDOTEL ex post antitrust enforcement powers, including merger review. Sectoral regulations issued by INDOTEL that are designed to promote or protect competition supersede the general competition law enforced by ProCompetencia.⁵⁴ Consequently, breaches of sectoral regulations must be prosecuted and

⁵⁰ Regulation on authorizations for telecommunications services (Resolution no. 036-19).

⁵¹ Licitación Pública Nacional No. INDOTEL/LPN-002-2017

⁵² Article 3 of Law 153-98.

⁵³ INDOTEL Resolution 022-05 "Regulations for Free and Fair Competition in the Telecommunications Sector".

⁵⁴ Law 42-08, article 2

sanctioned under sectoral rules and not general antitrust provisions, as the latter only apply in a supplemental manner.

21. ProCompetencia has concurrent powers to prosecute anticompetitive conduct in the telecommunications sector (Table 1). The General Law on the Defense of Competition, which has been in full force since 2017, applies to all sectors and delineates the mandate of ProCompetencia. The law prohibits anticompetitive conduct, but it does not include a cross-sectoral merger control system, and thus INDOTEL has exclusive jurisdiction to review mergers in the telecommunications sector. In July 2020, the law’s key implementing regulations were issued, but other procedures and guidelines necessary for its full enforcement (e.g., leniency and settlement programs for anticartel actions) are still at a draft stage. ProCompetencia also has explicit powers to advocate for pro-competition regulatory reform across all sectors, and it has pursued initiatives in the telecommunications sector.⁵⁵ For example, in 2018, ProCompetencia issued an opinion to the legislature on a bill regulating prepaid mobile services arguing that it was within INDOTEL’s mandate to regulate such services under open and transparent procedures.

Table 1. Scope of institutional mandates in DR’s competition policy for the telecommunications sector

	sector	
	ProCompetencia	INDOTEL
Anticompetitive Practices	Yes	Yes
Merger Review	No	Yes
Competition Advocacy	Yes	No
Regulatory Principle of “Competition Promotion”	N.A.	Yes

Source: World Bank Group Competition Policy Team.

22. Unless effective coordination mechanisms are established between ProCompetencia and INDOTEL, their overlapping mandates could weaken the effective enforcement of competition law. The agencies signed a Cooperation Agreement in 2018, which sets forth procedures and timelines, describes the execution of joint activities, defines information-sharing and confidentiality obligations, and establishes a working group to enforce competition law in the telecommunications sector. Coordination is vital to avoid duplicative efforts and guaranteeing the uniform interpretation of competition law. Formal collaboration protocols to address instances of potential jurisdictional overlap are common worldwide (Box 5).

⁵⁵Law 42-08, articles 13-15

Box 5. Coordinating Policy Implementation: The UK's Concurrency Framework for the Telecommunications Sector

In the United Kingdom, the Competition and Markets Authority (CMA) and Office of Communications (OFCOM) have concurrent powers to enforce competition law (except merger review) and carry out market studies in the telecommunications sector. Both agencies are part of the broader concurrency legal framework meant to ensure proactive enforcement of competition law by sector-specific regulators and improve interagency coordination. The framework encompasses the exchange of information, decision-making authority, dispute-resolution mechanisms, and case transfers. Both agencies are also part of the UK Competition Network, which coordinates the competition regime and promotes complementary regulatory practices. The network composes all UK agencies with a role in supporting and enabling competition.

In 2016, the CMA and OFCOM signed a memorandum of understanding that established a framework for cooperation in relation to competition issues. Under the memorandum, both parties declare that they will use their powers to achieve more-competitive outcomes in the electronic communications, broadcasting, and postal sector via the concurrent application of competition law, merger control, and direct regulatory action. The parties will always consult each other before applying their concurrent competition enforcement powers and before launching a market study. The parties will engage in open dialogue and share relevant information on cases and consult each other on relevant issues. Finally, the parties will endeavor to reach an agreement as to which agency will exercise concurrent competition powers in each case; however, the CMA will have the final decision.

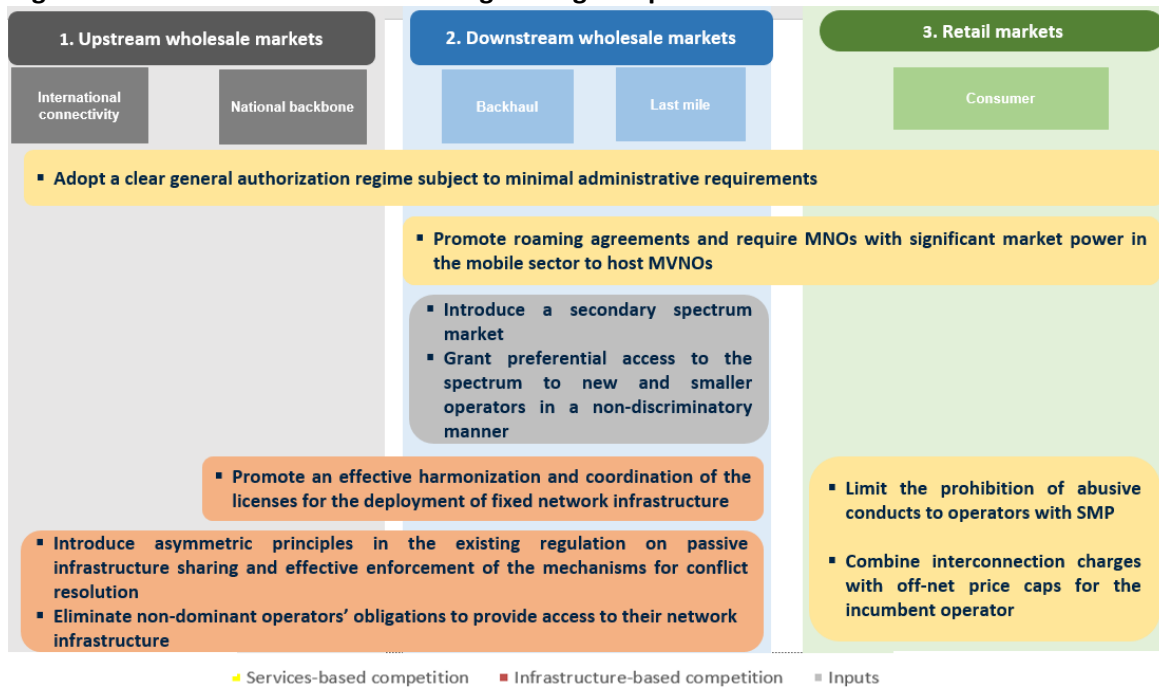
Source: Government of the United Kingdom (2016). Memorandum of Understanding between the CMA and the OFCOM https://www.ofcom.org.uk/_data/assets/pdf_file/0021/83523/cma_and_ofcom_mou_on_use_of_concurrent_consumer_powers_webversion.pdf

II. Policy recommendations

II.1. Introducing pro-competition regulations in the telecommunications sector can eliminate barriers to entry

23. The competition constraints identified in this analysis can be addressed through both **ex ante** and **ex post interventions**. To achieve their full effect, reforms targeting the retail market must be complemented by reforms targeting both the upstream and downstream wholesale markets (Figure 15).

Figure 15. Recommendations for Strengthening Competition in the Telecommunications Sector



Source: World Bank Group Global Competition Policy Team.

24. **Rationalizing administrative procedures, including the concession and licensing regime, would encourage market entry, particularly for ISPs and MVNOs.** Telecommunication activities should be subject to a general authorization regime without quantitative limitations or unnecessary restrictions, such as nationality requirements or the obligation to submit a guarantee bond. Moreover, MVNOs and ISPs should be subject to minimal administrative requirements to encourage market entry. Concessions and licenses should be limited to the allocation of scarce resources, such as spectrum bands, and the issuance of contracts for subsidized service provision in low-density areas.

25. **Regulation of interconnection charges can be temporarily coupled with other regulatory policies at the retail level, such as off-net price caps for the incumbent operator.** Implementing a combined strategy at both levels is more likely to eliminate club effects for dominant operators with a wide network of clients. However, once retail markets are competitive, all price regulation should be withdrawn.

26. **Improved regulations for sharing essential infrastructure could substantially reduce barriers to entry in the fixed and mobile telecommunication markets.** For instance, establishing a clear and detailed

set of rules for the DR's fixed telecommunication market, including the technical conditions that underpin the cost-estimate methodology, could facilitate access to essential facilities. These rules could be complemented by measures that enable access to bitstream (including technical provisions and terms of remuneration), so that alternative providers can offer added-value services under their own brands. In the mobile sector, promoting voluntary agreements between operators or mandating that MVNOs be hosted by MNOs with significant market power could foster the entry of new MNVOs into the mobile telecommunications market.

27. Allowing a certain degree of preferential access for small operators or new entrants for a limited amount of time could incentivize market entry and reduce spectrum hoarding in the mobile subsector.

In this light, several pro-competition spectrum-regulation alternatives, such as set-asides, caps, or band plans, can incentivize new or small operators for a limited time (Box 6). However, any measures granting preferential access to smaller or new operators should be defined in an objective and non-discriminatory manner, and the entry of foreign operators should be explicitly permitted.

Box 6. Pro-Competition Spectrum-Regulation Instruments

Pro-competitive spectrum regulation can help mitigate the risks posed by assigning spectrum through tenders, as is generally the case in the DR. If preferential access is temporarily granted to a smaller operator or a new entrant, the authorities should consider adopting price concessions, such as spectrum set-asides, caps, or band plans, to avoid spectrum hoarding by incumbents, who generally have more financial resources and can propose lower bids.

- **Set-asides** remove the incumbent from the bidding process, and one or more blocks of spectrum are reserved for a specific type of bidder, such as a new entrant or a smaller operator. This approach is often highly effective in attracting participation in the auction, as it guarantees that a new entrant or smaller firm will at least win the designated block(s). However, this approach can also encourage the entry of operators with higher costs and less attractive services than incumbents, and INDOTEL's efforts to create a set-aside policy have attracted criticism.⁵⁶
- **Bidding credits** subsidize a specific class of bidders, such as new entrants, by offering a discount on the winning bid.
- **Spectrum caps** limit the maximum quantity of spectrum that can be held in a specific geographic area. Caps can be applied either to an individual auction or to a category of radio frequencies. Spectrum caps allow entrants to bid on larger quantities of newly available spectrum, and limit spectrum hoarding among incumbents. However, spectrum caps can result in the inefficient allocation of spectrum.
- **Band plans** partition spectrum by geographic areas and block size. Band plans slice radio spectrum into blocks and divide it across geographic areas. These areas must be precisely defined: if they are too broad, smaller and local operators may be excluded; if they are too narrow, larger operators may have difficulty obtaining all the licenses necessary to develop more expansive and transformative business plans.

Source: Peter Cramton, Evan Kwerel, Gregory Rosston, and Andrzej Skrzypacz, Using Spectrum Auctions to Enhance Competition in Wireless Services, SIEPR Discussion Paper No. 10-015; Arthur D. Little (2009), Mobile Broadband, Competition and Spectrum Caps (study for Ofcom). See also: WBG (2020), Getting the Competition Game Right in Mobile Communications and Radio Spectrum in West Africa: An Assessment of Regulatory Restrictions to Competition. WBG Global Competition Policy Team's elaboration.

28. Introducing market-based mechanisms for spectrum management, such as the creation of a secondary spectrum-trading market, could further enhance competition in the mobile subsector. This

⁵⁶ INDOTEL lanza licitación favorecería a VIVA y a empresario Juan Ramón Gómez Díaz, available at: <https://acento.com.do/economia/INDOTEL-lanza-licitacion-favoreceria-a-viva-y-a-empresario-juan-ramon-gomez-diaz-8518066.html>

reform, which is envisaged by the DR's Plan on Frequencies Attribution, would promote the efficient use of spectrum over the long term.⁵⁷ In addition, reverse auctions could allow the state to re-acquire inefficiently used spectrum and address the risk of spectrum hoarding.⁵⁸

II.2. Improving enforcement is vital to prevent anticompetitive practices

29. Reaping the benefits of pro-competitive regulation requires coupling it with effective ex post enforcement against anticompetitive practices. Market-based instruments and infrastructure-sharing agreements increase the risk of anticompetitive practices, requiring a strong ex post competition enforcement framework. Network or infrastructure-sharing agreements can vary greatly in terms of the level of integration between network operators, and competition issues can arise when network sharing restricts competition or creates a dominant position in the market. The competition implications of infrastructure-sharing agreements reflect the extent of the cooperation between the parties. Agreements for sharing passive infrastructure tend to raise fewer concerns: because they do not involve significant information and forecast exchanges between competitors, they do not require the sharing of extensive network elements, and therefore they do not create a situation of high common costs. As the degree of cooperation increases (i.e., in active infrastructure sharing, spectrum sharing, or network roaming), the risk of collusion rises.

30. Key factors determining the potential for cooperation include geographic scope, market power, duration, and commercial independence. All else being equal, the broader the geographic scope of the agreement, the greater the risk of anticompetitive effects. Similarly, the greater the combined market shares of the operators involved, the more significant the impact of the infrastructure-sharing agreement will be on the overall market. While some infrastructure-sharing agreements are structural and effectively permanent (including active and passive infrastructure sharing), other forms of cooperation (such as national roaming) can easily be scaled back to avoid negatively impacting investments in mobile network infrastructure. One of the main benefits of infrastructure sharing is that, in contrast to a merger, operators continue to compete at different service levels, and it is therefore critical that each party to a network-sharing agreement should retain as much commercial freedom as possible.⁵⁹

31. Moreover, boosting competition in the telecommunications sector will require strengthening the institutional framework and developing the rules, guidelines, and administrative capacities necessary to effectively prevent, investigate, and prosecute anticompetitive practices. This applies to both cross-sectoral enforcement by ProCompetencia and sector-specific enforcement by INDOTEL. Reforms should strive to guarantee the full independence of regulators and ensure that they have adequate financial and technical resources, comprehensive implementation guidelines, and the capabilities required to execute their mandates. In addition, ensuring effective anticartel enforcement

⁵⁷ See Resolution no. 046-2020 and the Plan Nacional de Atribución de Frecuencias (PNAF).

⁵⁸ According to the study of *European Union, COWI and INDOTEL (2020)*, “*consultoría para la identificación de mercados relevantes sujetos a regulación ex ante en el sector de las telecomunicaciones de la república dominicana*”, presented in Resolution no. 047-2020, some operators have denounced the existence of these practices.

⁵⁹ For an example of this analysis, see: “Guidelines for the interpretation and application of article 5(2) of the Competition Law no. 21/1996 republished, as subsequently amended, on co-investments agreements, respectively on mobile network sharing agreements”. A summary of the guidelines is available at: https://ec.europa.eu/competition/ecn/brief/04_2014/brief_04_2014.pdf

through the rationalization of applicable exemptions, the establishment of a leniency framework,⁶⁰ the design of an appropriate fining system, and the prioritization of case work is especially important.

32. Introducing a cross-sectoral merger-review system can also help prevent anticompetitive market concentration in sectors related with telecommunications, with important implications for the digital economy. As mentioned above, competition law in the DR does not include a cross-sectoral merger-control framework. Given the strong relationship between the telecommunications sector and the digital economy, where an increasing number of mergers have been occurring, cross-sectoral merger review could be vital to guarantee contestable markets and innovation. A general merger-review system should focus only on those mergers that could have a significant anticompetitive effect on the market, as opposed to the universal notification model currently used in the telecommunications sector.

⁶⁰ Leniency policies are a tool to enhance anti-cartel enforcement. A leniency program destabilizes and deters cartels by giving any member the chance to come forward to the competition authority and reveal the existence of a cartel in exchange for total or partial amnesty from potential fines or other sanctions.

Bibliography

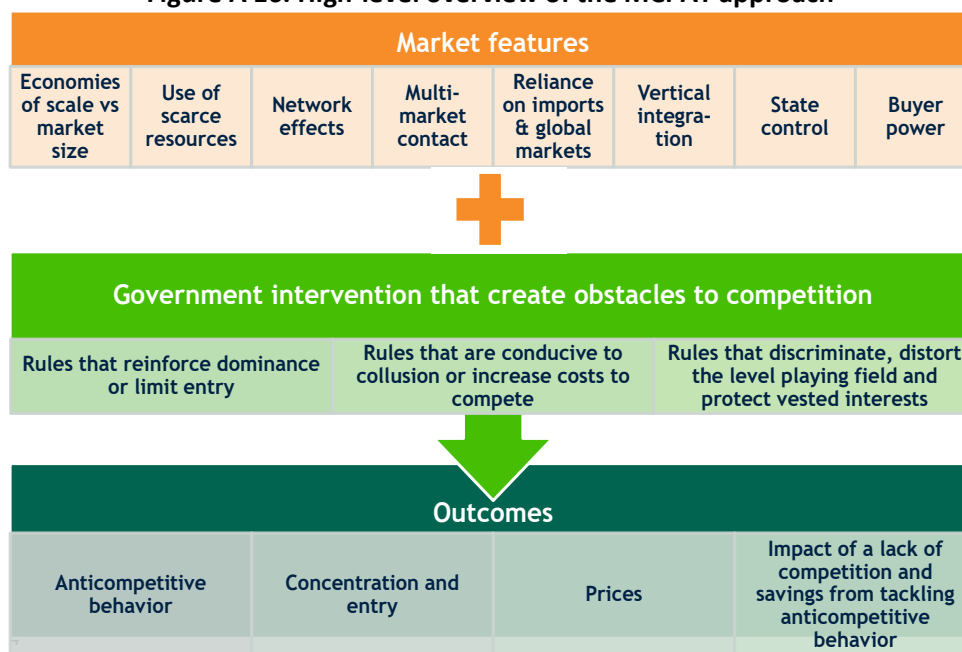
Annex: The World Bank’s Market and Competition Policy Assessment Tool (MCPAT)

The MCPAT is a methodological instrument of analysis developed by the WBG’s Markets and Competition Policy Cluster to identify specific problems at the market level and prioritize competition tools accordingly (markets to be prioritized as well as the tools vary by country – and in some cases, complement each other).

With a practical nature and a focus on implementation, this methodology has been developed based primarily on the experience of the WBG Competition Policy Cluster implementing pro-competitive reforms in more than 60 developing countries. Therefore, the MCPAT provides a standardized and comprehensive tool with which to i) understand competition dynamics created by market feature (including supply-side characteristics and buyer characteristics), and ii) identify and assess the potential anticompetitive effects of government intervention in markets (Figure 16). The interaction between these two elements can then be analyzed to determine the risk of anticompetitive behavior, both in terms of collusion and exclusionary abuse of dominance.

This assessment can inform the development and prioritization of effective strategies to promote competition through changes in policies, regulations and rules.

Figure A 16. High-level overview of the MCPAT approach

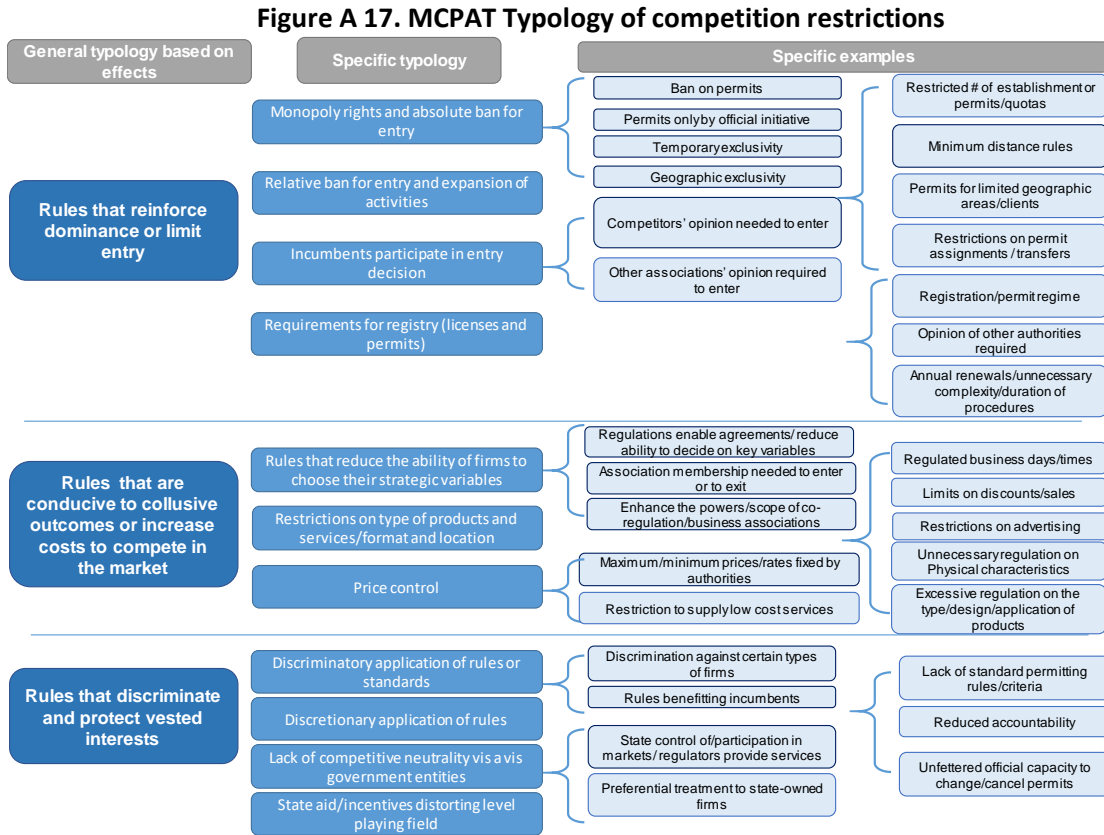


Source: Competition Policy Cluster 2016.

The MCPAT builds on the identification of those rules and regulations that may have anticompetitive effects on the basis of the following typology:

- (1) Rules that reinforce dominance or limit entry;
- (2) Rules that are conducive to collusive outcomes or increase costs to compete in the market;
- (3) Rules that discriminate and protect vested interests.

Within each of these categories, specific sub-typologies of rules have been identified and illustrated with specific examples. This typology feeds into a holistic step-by-step methodology to promote competition reforms (Figure 17).



Source: WBG's Market and Competition Policy Assessment Toolkit.

The analytical framework provided by the MCPAT provides a preliminary basis for assessing competition issues in specific sectors, such as telecommunications (Figure 18).

Figure A 18. Competition along the Telecom Value Chain

	International connectivity	Core network National backbone	Middle mile Backhaul	Access network Last mile	Final services to consumers
Definition	Network that provides connection of a national network to global networks	Transmission path that carries data gathered from the landing point of international communications infrastructure or a node in the national network to nodes for smaller local/regional networks within the country, and vice versa. i.e. Local or regional networks connect with the backbone for national long-distance interconnection/ transmission and to connect with each other. The connection points are known as network <i>nodes</i> .	Segment of a telecommunications network carrying data from the last mile (i.e. from a local network base station/cell tower to the core/ backbone network Backhaul capacity can be leased from a incumbent network operator by last mile service providers that lack their own infrastructure.	Portion of the telecommunications network chain that physically reaches the end-user's premises. Carries data from the customer to a local network base station. Two main technologies for broadband access: <ul style="list-style-type: none"> Fixed services associated with a physical location (Fixed wireline, fixed wireless (e.g. WiFi), satellite connection) Mobile services, which can be used from any location with coverage (2G, 3G, 4G (e.g. LTE), xG) 	Services used directly by consumers in daily activities.
Options for expansion and competition	<p>Sharing of international gateway facilities: including undersea cables, cable landing stations and satellite assets E.g</p> <p>Collocation at the landing stations: Allow rivals to install their own equipment in the cable landing station</p> <p>Connection services: services by the incumbent to operators who collocate their equipment in the landing station to connect national networks to the submarine cable system</p> <p>Access to non-owned cables: ability for operators to access capacity that is owned (or leased long term) by a third party on any submarine cable at a landing station</p>	<p>Active infrastructure sharing: Leasing of the capacity from backbone infrastructure provider Among potential providers are incumbent operator and utility companies</p> <p>Passive infrastructure sharing E.g leasing of ducts (where operator could deploy its own fiber cables) or leasing of dark fiber (which could be lit by own active equipment of the operator)</p> <p>Deployment of own infrastructure. Performance of civil works and laying down of own infrastructure (likely fiber) – requires right of way for fiber, highly capital intensive</p>		<p>Fixed network</p> <ul style="list-style-type: none"> Active sharing: <ul style="list-style-type: none"> Local loop unbundling (LLU): allowing multiple telecommunications operators to use connections from the local exchange to the customer's premises. Bitstream access: incumbent makes a high-speed access link to a customer's premises available to a third party) Passive sharing: Ducts, poles, cables Deployment of own infrastructure: requires right of way for fiber capital intensive but less so than for core and middle mile <p>Mobile network</p> <ul style="list-style-type: none"> Active sharing: <ul style="list-style-type: none"> Full Mobile Virtual Network Operator (MVNO): sharing of incumbent MNO's Radio Access Network (RAN) Light MVNO: Shares RAN, network routing, interconnection Roaming: Allows an operator to make use of another's network in a place where it has no coverage or infrastructure of its own. Passive sharing: Buildings, tower sites and mast Deployment of own infrastructure. 	<p>Fixed network</p> <ul style="list-style-type: none"> Voice Data Triple/multiple play – bundling broadband and other traditional services <p>Mobile network</p> <ul style="list-style-type: none"> Voice Text/SMS USSD Data OTT services: which allows for voice, text, data, payment services

Source: World Bank Group's Global Competition Team Policy Assessment Toolkit (forthcoming).