



BULLETIN

FAL

FACILITATION OF TRANSPORT AND TRADE IN LATIN AMERICA AND THE CARIBBEAN

Identification of predominant economic agents and asymmetric regulation

Background

In recognition of the telecommunications industry's increasing importance for the growth and competitiveness of Latin American countries, this edition of the FAL Bulletin is based on the presentation given by Mr. Patricio Rozas of the Infrastructure Services Unit of the Economic Commission for Latin America and the Caribbean (ECLAC), at the International Forum on New Telecommunications and Broadcasting Models, organized by the Senate of the Republic of Mexico and held in Mexico City between 28 and 30 October 2013.

The presentation dealt with the subject of telecommunications regulation in Latin America, and was divided into the following sections: market structures resulting from the reform process in the telecommunications sector, some outcomes of the reforms, evidence indicating the need for market regulation, main characteristics of the industry, competition in highly concentrated markets, and regulatory challenges that the countries must address in order to improve efficiency in the sector.

I. Telecommunications market structures resulting from the reform process and options for competition

Latin America has moved from a situation of integrated state monopolies (providing local, national and international long-distance fixed-telephony services in each of the region's countries) towards competitive scenarios with features that clearly differ from the original situation. The level of differentiation depends mainly on the size of the market, as well as the

This issue of the FAL Bulletin was written by Patricio Rozas of the ECLAC Infrastructure Services Unit, based on his presentation to the International Forum on New Telecommunications and Broadcasting Models, held in Mexico City between 28 and 30 October 2013.

For more information, please contact patricio.rozas@cepal.org.

The views expressed in this document are those of the author and do not necessarily reflect the opinions of the organization.



Background



I. Telecommunications market structures resulting from the reform process and options for competition



II. Contrasting effects of the telecommunications reforms



III. Why regulate?



IV. Main characteristics of the telecommunications industry



V. Competition in highly concentrated markets



VI. Regulatory challenges

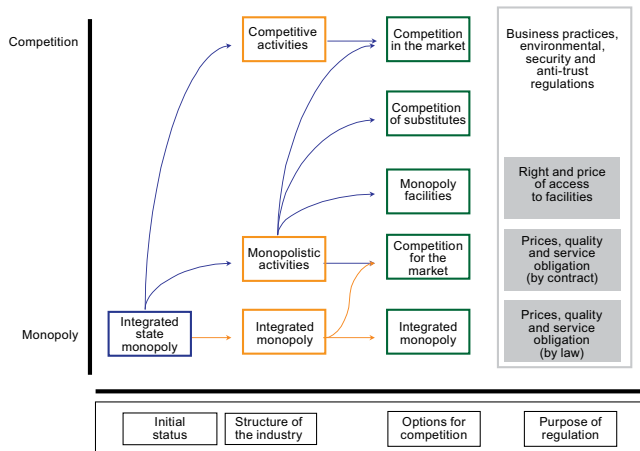


UNITED NATIONS

ECLAC

industrial organization and privatization policy applied to the original state monopoly, which explains why certain countries still have monopolies. Diagram 1 outlines the various changes that took place in the region's public telecommunications monopolies.

Diagram 1
OPTIONS FOR COMPETITION AND PUBLIC/PRIVATE COOPERATION



In this way, different industry and market structures have emerged in the telecommunications sector, resulting in different levels of competition (including the preservation of non-competition). These structures include the retention of the integrated monopoly when the market is very small. In some cases, integrated monopolies have passed into private hands, giving rise to situations of competition for the market (ex ante competition). In other cases, this possibility was not considered and the integrated monopoly continued to exist under the original conditions.

In most of the region's countries, the post-reform industrial structures that emerged in the telecommunications sector generally included the break-up of the previous public monopoly. The results show this was done to make privatization easier rather than to create the conditions of competition. In fact, the break-up of the monopolies sometimes led to the disaggregation of activities which then maintained a monopoly status, meaning that the industry consisted of activities with monopolistically competitive markets. In other cases, breaking up the public monopolies led to mixed situations in which some activities retained their original monopoly status, while others developed into more competitive market situations.

The subsequent development of new technologies resulted in the appearance of new business areas that not only revolutionized the telecommunications industry, but also revolutionized and complexified the sector's corporate

structures, which for the most part had emerged from the previous reform process. In many cases, the companies that formerly dominated in basic telephony strove to retain a dominant position in new segments (mainly mobile telephony and data and image transmission). In achieving this goal they were strengthened by brand internalization during the stage of the integrated state monopoly, and by the raising of barriers, some of a legal nature, to block the entry of possible competitors in new business areas.

Regardless of the levels of competition introduced into each segment or business area, post-reform telecommunications markets have also differed depending on whether the legal or regulatory framework accepted the property relations that go with the vertical or conglomerate integration of service providers. In some countries such property relations are denied through a requirement that the services be disaggregated.

In short, breaking up the original integrated monopolies and developing new business areas contributed decisively to the structuring of the telecommunications industry into constituent markets with several options for (mostly restricted) competition, ranging from the preservation of the monopoly to monopolistically competitive markets (including the competition of substitutes) and oligopolistically competitive markets.

II. Contrasting effects of the telecommunications reforms

By analysing the outcomes of the telecommunications sector reforms, we may identify effects that were beneficial for the countries in one sense, and negative in another.

It is most commonly asserted that from the 1990s onward, the sector modernized, reduced costs and increased technical and productive efficiency, and that these achievements went hand in hand with several improvements in the quality and the diversification of service provision. It is also pointed out that both the coverage and density of telecommunications increased, boosting the connectivity of territories and population segments that had hitherto been excluded. In short, in the last twenty years the sector has made a clear contribution to greater systemic competitiveness and to a better quality of life, and from this viewpoint it may be considered that the reforms were successful.

However, there are a number of problems that must also be taken into account in this assessment. First, we must mention the conflicts that have taken place between competitors in traditional basic telephony segments. During this seminar, several speakers have referred to the

implications, both in basic and mobile telephony, of there being a dominant actor with more than 60% or 70% of market share, which precludes the possibility of effective competition. As a result, it is likely that the efficiency gains delivered by new technologies are not fully passed on to other economic agents, and instead result in the generation of extraordinary profits.

The problem of predominant or dominant agents exists not just in Mexico, but is present in most of the countries of the region. It stems from several causes, with the sector's predominant or dominant enterprises falling among the most profitable in Latin America, even where some of their business lines are regulated. The main reason is the position that the dominant companies had previously achieved under the public monopoly before its segmentation and privatization. This entailed ownership of the networks to which new operators would have to connect when attempting to consolidate themselves in the market, should they be permitted to enter it. In many cases, this situation presented an insurmountable obstacle for potential entrants, it being revealed that infrastructure investment continued to carry significant weight in the structuring of the market, insofar as economies of scale remained considerable.

Also influential, albeit to a lesser extent, is the effect of traditional brands being better established, or in other words, users' habits of subscribing to a traditional network, which can form a significant obstacle to the entry of new suppliers. This leads to "network externalities", which occur when users prefer the network of an operator that has a larger number of users, so that they can connect more easily with a greater number of individuals. As such, an existing service provider with a large number of subscribers to its network has an effective advantage over potential competitors, who have to develop their own network.

Market entrants also tend to focus on segments that are more profitable and lower risk, which leads them to take fewer market positions in order to obtain a greater average profit per investment unit. This could mean that competition is limited to the most profitable market niches, while telecommunications services in other segments continue to be provided by the original operator.

It is therefore worth asking what percentage of market control should be set as a parameter for identifying when a company has become dominant or predominant. It is probably not possible to achieve this with accuracy, since the position of a company is largely determined by market characteristics (specifically, by the number of competitors and their territorial segmentation) and by the degree of diversification in different business areas. For example, a company that controls 40% of a market in which it

competes with another six companies, each with a 10% market share, is in a different position to a company that also controls 40% of the market, but which has only two competitors, with 35% and 25%, and even more so if the territorial positioning is different. Likewise, the position of a company that engages in several business areas, especially by using a shared infrastructure, in other words generating economies of scope, will differ from a company that only participates in the original market, even though they may have the same level of participation in said market. Nevertheless, legislation in a significant part of the developed world sets forth that a dominant position is reached when a company controls at least 40% of the market, when the two biggest companies control at least 50% of the market, or when the three biggest companies control at least 60% of the market.

It should also be recalled that a service provider with a large market share, as a result of constant innovation in order to maintain its position, is not necessarily dominant. If the relevant market contains products that are substitutes, but which differ significantly, then it may be that service providers with a lower relative market share could have a degree of dominance because other products on the market would not be close substitutes.

These essential characteristics of the post-reform telecommunications industry, which we have attempted to outline briefly, establish the foundations for regulatory activity in the sector. Regulation should prioritize an asymmetric regulation approach in order to strengthen competition in the various markets within the industry.

A second problem arising from telecommunications reform is the sharp decline in investment in fixed networks that followed the privatization of the public monopolies. Generally speaking, the goals of the economic agents that took control of the privatized telephone companies were the recovery their investment within the shortest term possible (exploiting the existing infrastructure), the development of business areas that would enable new technologies, and in some cases, internationalization. All of this led to lower investment in fixed networks.

Another negative effect of the reforms, closely connected to the previous one, relates to the short-termism of economic agents and national governments, which translated into a lack of ambition in establishing objectives. Even where governments tried to make the transfer of telephone companies conditional on compliance with objectives, these referred to quickly achievable targets for coverage or market completion, which were not appropriate to the sector's enormous potential for development, and therefore did not take into account the impact that this would have on other economic activity.

A further problem soon came to light, in that the development of the sector was subject to the degree of financial stability of the consortiums that controlled the operating companies. In several instances, privatized companies announced major expansion and modernization plans, only for their controllers to run into financial problems of various kinds. Not only did they then have to suspend the plans, but on most occasions had to sell on the companies they had acquired in the privatization process.

In short, restructuring the region's telecommunications services gave rise to various models for organizing the industry, even within in a single country, leading to regulatory difficulties and technology- and competition-related conflicts. These diverse models for industrial organization and the structuring of markets can be explained by the action of various factors whose influence often transcends the will of decision makers in governments and enterprises. For example, influence is exerted by differences in market size and structure, and by differences in the actual degree of competition that is possible within individual countries and services, depending on their specific features. Differences in price-setting processes and in the coverage, density and quality of the pre-existing service are also influential.

III. Why regulate?

Dominant enterprises frequently resist the economic regulation of telecommunications, persistently advocating the freedom to set tariffs and, in general, the least possible state intervention in defining lines of business development, on the assumption that the market on its own can resolve any difficulties that might emerge. Are they correct? What is certain is that the development of telecommunications in the region's countries presents a number of difficulties that make state intervention necessary.

Firstly, this is because the difficulties that surfaced on a competitive level have hindered the transfer of the sector's greater efficiency to the rest of the economy. This is a central theme of regulatory management. In their respective presentations, several members of this panel emphasized that regulation is specifically intended to guarantee this transfer of efficiency to other economic agents, a transfer that does not occur when markets do not function competitively because of the excessive predominance of a particular agent, or because said predominance has been captured by a small group of companies, which forces agents of demand to accept conditions of service in a completely imbalanced environment.

Secondly, state intervention is necessary because of the highly disparate levels of competition in various segments of the telecommunications industry, which creates serious distortions in the interrelationship between activities.

And thirdly, because in the majority of countries, despite attempts to break up the initial monopoly, structures have persisted which are supported by vertical integration and by an element which was not foreseen prior to the privatization of telephone companies: conglomerate integration. Different experiences point towards the emergence of monopoly profits and wealth effects that limit a more equitable distribution of well-being for the population as a whole.

IV. Main characteristics of the telecommunications industry

One of the most interesting questions raised at this forum is that of how to approach telecommunications regulation in accordance with the characteristics of the markets that established themselves after the reforms, and in particular following the break-up and privatization of public monopolies. In other words, can countries realize the objective of passing on the efficiency gains obtained by the dominant telecommunications companies to all economic actors, through neutral regulatory management within the sector's new industrial structure?

To tackle this problem, we must first make a brief reference to the new forms around which the telecommunications industry is structured.

The telecoms industry tends to present a set of characteristics that make it specifically unique and different from other economic infrastructure activities. First, it is an industry with a remarkable pace of technological innovation and, therefore, of obsolescence. Taking the example of mobile telephony, it is no coincidence that people have to change handsets relatively frequently, and often with the encouragement of the service provider, when the handset has not yet served its useful life for the provision of the contracted services. However, constant diversification by operators means that older handsets soon become incapable of channelling new services.

Second, as a consequence of the rate of innovation, this is an industry that is hugely expanding and diversifying its range of services. Unlike in the 1970s and 1980s, when the telecommunications business fundamentally consisted in basic telephony, today the convergence of voice, image and data transmission has given rise to countless services that complexify regulatory activity in the sector.

The third aspect refers to spaces for capital appreciation: analysis of the main telecoms companies' development and growth strategies increasingly suggests that economies of scale and optimum size in terms of efficiency are defined internationally rather than in the national economy, no matter how integrated the latter may be or how large the internal market (as in the case of Brazil). It is becoming clearer that operators are global and international, and that their business outlook favours regional or subregional markets, rather than national ones. Undoubtedly this affects the quality of the regulatory models that the countries may apply.

Another significant characteristic of the telecommunications industry is the emergence of economies of scope. Normally, the existence of economies of scale has a bearing on the market position of utilities companies, regardless of whether they are natural monopolies or not. Today, not only are economies of scale are being made through internationally defined optimum sizes; but the possibility of using a shared infrastructure to carry on different types of business, both regulated and unregulated, is also becoming important.

Lastly, consideration must be given to two of the specific features of dominant telecoms companies. Firstly, these companies are highly internationalized in terms of their ownership and in the extent of their operations; and secondly, they have frequently given rise to the formation of business groups or conglomerates in each of the countries where they operate.

It is therefore worth asking what is happening in national telecommunications markets and their corresponding regulatory systems, in circumstances in which corporate structures and operations are international. We are clearly no longer in the presence of traditional state monopolies, but rather oligopolistic markets in which global operators wage fierce competition. As a result, in many countries the weakest competitors have been forced out of the market, or absorbed by the strongest, resulting in higher levels of concentration.

V. Competition in highly concentrated markets

There is rising concern over the ability of economic theory to account for this process. In speaking of economic theory, we are really talking about neoclassical theory and the marginalist school, which in the late twentieth century became the sole expression of economic theory in a colossal theoretical denial driven by the economists of the Austrian School, whose pre-eminence peaked during the neoconservative revolution headed by Ronald Reagan and Margaret Thatcher.

What does a traditional approach of economic theory tell us about the oligopoly? This approach is based on the models of Bertrand, Cournot and Stackelberg, produced at different times between 1838 and 1934, and which maintained, with greater or lesser emphasis, that the main characteristic of an oligopoly is the interdependence of the agents who control supply. This means that each supplier takes into account the conduct of its competitors when taking decisions on prices and output. Accordingly, companies no longer consider market signals as exogenous and cease to be price takers, as is typical of perfectly competitive markets. This approach supposes the existence of fierce competition between suppliers (in telecommunications industry, between service providers), albeit always protected from the entry of possible new competitors by the high level of operations and the substantial investment required to operate effectively. The principal difficulty with this approach is that the analysis focuses on the setting of prices rather than examining the factors that cause market concentration, and as such fails to analyse the many forms that each industry and market may take. It is therefore no coincidence that the evolution of the traditional approach to the oligopoly has drifted towards game theory and has not been further developed in recent decades. It follows that many economists, regardless of their adherence to the traditional approach, have had to turn to conceptual elements from other fields of analysis in their attempts to describe the workings of markets, which today are largely oligopolistic.

It should therefore be understood that economic theory is much broader and richer than neoclassical theory and the marginalist approach founded by Alfred Marshall (and of course, than the neoliberal vision that emerged as an absolute truth from the 1970s onwards). A need has arisen for a careful review of the works on imperfectly competitive markets carried out in Cambridge by the group of economists led by Joan Robinson, under the auspices of Keynes, and which coincided with those of US economists such as Edward Chamberlin and Joe Bain.

Put simply, this body of work suggested the need to recover a post-Keynesian or neo-Keynesian approach, which was developed in a context of criticism for marginalist neoclassical theory, and which was subsequently ignored during the neoconservative revolution and the imposition of neoliberalism as the sole approach in economics. The main hypothesis of post-Keynesian or neo-Keynesian analysis postulates that oligopolistic competition is not price competition, but is based on the reduction of average costs as a result of new technologies, and on the relationship between products.



The proposed theoretical approach is much more appropriate for understanding the behaviour of companies that operate in imperfectly competitive markets, especially oligopolistic ones, as is currently the case in the telecommunications industry. By reviewing neo-Keynesian or post-Keynesian authors, it is possible to recover essential concepts, some of which, such as barriers to entry and monopolistic competition, have already been mentioned in this forum.

It is clear that consolidating an oligopoly may contribute to a country's development, either because oligopolies are more inclined to undertake research and development, or because they have more opportunity to carry out investment projects, which has a positive effect on jobs and wages. However, it must also be understood that this consolidation brings about conflicts of competition and problems of efficiency.

In this regard it seems absolutely necessary to rescue at least two aspects of the analysis of the oligopoly, as advanced by the neo-Keynesian or post-Keynesian approach. One is the idea put forward by Sylos Labini, another of the economists who must be retrieved from neoliberalism-induced oblivion. He suggests the need to evaluate the oligopoly in relation to its environment, for example in relation to its pricing policy, costs, decisions to introduce new products, impacts on jobs and wages in the sector, market segmentation, et cetera. The other idea worth considering is that formulated by US economist Joe Bain, who invented the concept of barriers to entry, and which states that oligopolies must be analysed in the context of the relationship between market structure, the conduct of companies, and the performance of the industry within the economy as a whole.

Based on these elements, we can to an extent reshape our understanding of how dominant market actors behave. For example, it is assumed that the basic objective of a dominant or predominant company is to attempt to maintain or increase its market share of the end user access network. It will also try to maximize profits by exploiting its status as the dominant company, and will attempt to create and strengthen barriers to the entry of new competitors. Predicting these behaviours is not to make value judgements on the conduct

of the dominant firm, but rather to understand it according to the rationality of the producer. It is necessary to identify the different competitive and regulatory conflicts that these motivations will cause, because this will define the content of future regulatory activities.

There are at least six aspects to be considered in relation to the maintenance or expansion of market power over end user access networks. Mergers and acquisitions are one example, as is predatory pricing over lengthy periods. Where the dominant oligopoly is present in several business areas, it can set below-cost prices in a market segment where it faces higher levels of competition, until it achieves the withdrawal of its competitors. The same thing occurs with discrimination in respect of interconnections and cross subsidies that derive, for example, from bundling services together or using the regulatory framework to prevent competitors from entering a market. This concept is known as the judicialization of conflicts, whereby the dominant company lodges a number of appeals with the courts in order to prolong a favourable situation that may be subject to modification by the regulatory body.

Something similar occurs with the second type of conflict that may reasonably be expected to arise in markets with these characteristics, when companies try to maximize profits by exploiting their position of dominance and control over end user access networks. For these purposes, the dominant oligopoly will attempt to shift the demand curve and maximize the profits resulting from vertical and conglomerate integration; it will also seek to overestimate its costs in the tariff-setting process and maximize profits by bundling together its services.

VI. Regulatory challenges

There follows a brief examination of the regulatory challenges that the countries of the region must address in order to increase the efficiency of the telecommunications sector.

The first challenge is that the supply of telecommunications services is concentrated among companies that are geared towards global or regional strategies, meaning that they may disregard compliance with national or local policy objectives, which strictly speaking are not their responsibility if there is no performance contract. Corporate business priorities will often be linked to the penetration of new markets, which may be attractive owing to their density or operating costs, instead of seeking to consolidate incomplete national markets in areas or territories that are insufficiently served. This implies that an expansion of non-competitive behaviours takes place at regional level, and a close relationship is developed between some of the main telecoms enterprises and financial groups that are highly exposed to unstable markets.



The second challenge is to build markets that operate competitively. This means making decision-making more transparent in terms of consumption and investment; breaking down legal barriers and reviewing acquired rights; eliminating situations of horizontal and vertical integration in the industry, and above all categorizing and sanctioning non-competitive behaviours such as the fixing of prices and market shares, cross subsidies, predatory pricing and discriminatory offers.

The third challenge is to defend user rights as set forth under international legislation. This means protecting the right to free choice, to truthful and timely information, to non-discrimination, to consumer safety and to health and environmental protection, as well as the right to redress and compensation, the right to education and the right to quality services.

The regulatory authorities must also consider challenges that are increasingly related to the greater sophistication of demand for telecommunications goods and services, driven by a large and increasing number of innovations (which, as stated above, quickly become obsolete) and by tumbling handset prices and service tariffs. Similarly, the multiple integration processes that are taking place in the region form the backdrop to an additional challenge that governments cannot ignore, which is the interconnection of communication systems.

Last but not least, Latin America is faced with the major challenge of beefing up its telecommunications regulators, which often were set up merely as a formality and with no real intent to mitigate or rectify the effects caused by the predominant failings in the telecommunications markets.

